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INDIVIDUALS' PERCEPTION OF THE DOUBLE VALUE COUPON PROGRAM AND ITS
ADMINISTRATIVE SCOPE IN SOUTHERN ILLINOIS: A QUALITATIVE STUDY

by

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B.A., Cleveland State University, 2013
M.Ed., Cleveland State University, 2015

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

Department of Public Health and Recreation Professions
in the Graduate School
Southern Illinois University Carbondale
August 2019

DISSERTATION APPROVAL
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A Dissertation Submitted in Partial
Fulfillment of the Requirements
for the Degree of
Doctor of Philosophy in Education
in the field of Health Education

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July 1, 2019

AN ABSTRACT OF THE DISSERTATION OF

Dominique Maria Rose, for the Doctor of Philosophy degree in Education in the field of Health Education, presented on April 24, 2018, at Southern Illinois University Carbondale.

TITLE: INDIVIDUALS' PERCEPTION OF THE DOUBLE VALUE COUPON PROGRAM AND ITS ADMINISTRATIVE SCOPE IN SOUTHERN ILLINOIS: A QUALITATIVE STUDY

MAJOR PROFESSOR: Dr. Aaron Diehr

This dissertation examined the dimensions of food access and its effects on food selection for individuals enrolled in the Supplemental Nutrition Assistance Program (SNAP); low income senior citizens; and recipients of the Women, Infants, and Children (WIC) benefit. This study investigated the use of the Link Up Illinois Double Value SNAP Nutrition Incentives Program (DVCP), a coupon with which recipients can receive twice as much fresh produce when redeemed at a farmers market. In addition, this study measured the organizational scope of administering the Double Value Coupon Program in the 12th Congressional District of Illinois. This information allows for the development of appropriate location-specific intervention strategies to increase use of the Link Up Illinois Double Value SNAP Nutrition Incentives Program and, consequently, the findings can lend themselves to strategies that improve upon consumption of fresh fruits and vegetables among low-income seniors, SNAP recipients, and WIC recipients.

This study used a qualitative research design to describe, understand, and interpret the use of the Link Up Illinois Double Value SNAP Nutrition Incentives Program. Specifically, data was collected using semi-structured interviews with various stakeholders who contribute to the operation of farmers markets, including health educators from the county health departments in the 12th Congressional District, stakeholders of the Link Up Illinois DVCP, farmers market managers and local farmers. Additionally, a focus group was conducted with individuals in

Jackson County who have access to, and who use, the Link Up Illinois Double Value SNAP Nutrition Incentives Program at the Carbondale Farmer's Market. The Health Belief Model was used as a framework for this study and guided interview and focus group protocols, as well as the interpretation of findings.

To examine the DVCP, the individuals who utilize the program perspectives were explored. Also, to explore barriers associated with administering the DVCP local health departments located in the 12th congressional district was chosen as data collection sites. The researcher used a purposeful sampling method for the study, intentionally selecting individuals who have experience with the research problem. There was a total of 11 interviews conducted with individuals who held an administrative role related to nutrition. In addition, the researcher conducted one focus group of community members who use the DVCP at the local farmers market.

The data indicated the many influences organizationally to implementing the DVCP. Some of which includes barriers with the development of partnerships within organizations and the establishment of support within the community. Stakeholders of the DVCP perceived that the discovery of new fresh produce, education of the DVCP, fruits and vegetables were the programs greatest strengths. Overall, participants described having positive experiences using the DVCP at the local farmers market. Participants described having more control over their selection of fresh produce for meals. However, participants were interested in purchasing different variations of fresh produces.

Based on the findings, this study is the first step in understanding what partnerships are needed between local farmer, farmers markets, and/or farm stands, and local organizations to implement the DVCP and to appropriately market to its intended constituents. The results of this

study can ignite future research that might ultimately influence policy to change organizational and political perspectives regarding solution-oriented change.

DEDICATION

For my mother, Valorie, your kindness, devotion, and selflessness goes undone, I love you with every chamber of my heart.

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Throughout the writing of this Dissertation I have received a great deal of support and assistance. I would like to express the deepest appreciation to my Dissertation Committee chair Dr. Aaron Diehr, whose expertise was invaluable in the formulating of the research topic and methodology in particular. You have been supportive of my career goals and actively worked to provide me with the time needed to pursue these goals.

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LIST OF ABBREVIATIONS

DVCP	Double Value Coupon Program
EBT	Electronic benefits transfer
FMNP	Farmers Market Nutrition Program
SFMNP	Senior Farmers Market Nutrition Program
SNAP	Supplemental Nutrition Assistance Program
WIC	Women, Infants, and Children

CHAPTER ONE

INTRODUCTION

This dissertation investigated fruit and vegetable consumption of low-income rural individuals across southern Illinois. Specifically, the study examined the dimensions of food access and its effects on food selection for individuals enrolled in the Supplemental Nutrition Assistance Program (SNAP); low-income senior citizens; and recipients of the Women, Infants, and Children (WIC) benefit. This study also assessed the use of the Link Up Double Value SNAP Nutrition Incentives Program (DVCP), a coupon with which recipients can receive twice as much fresh produce when redeemed at a farmer's market. Finally, the study assessed the organizational scope of administering the Double Value Coupon Program in 15 counties of southern Illinois. Chapter One discusses the purpose of the study and how the findings might be significant to the field of health education. Further, the chapter also outlines research questions, aims, positionality, theoretical framework, limitations, and delimitations for the study.

Background

The 2015-2020 Dietary Guidelines for Americans recommend individuals to “follow a healthy eating pattern over time to help support a healthy body weight and reduce the risk of chronic disease” (U.S. Department of Health & Human Services [HHS], 2015, p. 14). Yet, national surveillance data and numerous other research studies (Barnidge, Hipp, Estlund, Duggan, Barnhart, & Brownson, 2013; Casagrande, Wang, Anderson, & Gary, 2007; Ettienne-Gittens, McKyer, Odum, Diep, Li, Girimaji, & Murano, 2013; Prochaska, Sharkey, Ory, & Burdine, 2008) unfailingly indicate that low-income and rural populations are less likely to reach the recommended guidelines for fruit and vegetable consumption compared to high income populations (Kamphuis et al., 2006). Federal, state, and local governments have implemented

several programs to address the challenges of eating healthfully, including the Special Supplemental Nutrition Program for Women or Women, Infants, and Children (WIC), the Supplemental Nutritional Assistance Program (SNAP), and the Senior Farmers Market Nutrition Program (SFMNP), all of which are operated by local and state health departments. The aim of the SNAP program is to provide nutrition assistance to low-income individuals and families (United States Department of Agriculture (USDA), 2017). Likewise, the purpose of the WIC program is to assist low-income pregnant, breastfeeding, and non-breastfeeding postpartum women; infants; and children up to age five with obtaining nutrition education and supplemental foods.

Purchasing produce at farmers markets represents one method by which individuals can purchase healthful and seasonal fruits and vegetables to meet dietary guidelines. Indeed, farmers markets offer many benefits, including increasing fruit and vegetable access, availability, and consumption among communities (Centers for Disease Control and Prevention (CDC), 2011). Both food nutrition assistance programs (SNAP and WIC) have extended benefits to include farmers market purchases for fruits and vegetables through electronic benefits transfers (EBT) and “double value” farmers market coupons (USDA, 2008). This extension of benefits could partly address barriers associated with cost and availability of fresh fruits and vegetables for low-income households, as long as individuals have farmers markets in their communities. In addition to the WIC Farmers Market Nutrition Program (FMNP) and double value coupon programs, the Senior Farmers Market Nutrition Program (SFMNP) similarly allows low-income seniors to purchase fresh fruits and vegetables at farmers markets or roadside stands. Beyond addressing barriers of availability and cost of fresh fruits and vegetables, individuals who use these programs can establish a connection with those who grow the produce (CDC, 2011).

Exchanging information such as food production practices at the farmers market can affect food purchase behaviors. Clemmons (2008) examined information availability among consumers and explained that informedness can change individuals' purchasing decisions. Likewise, Carson, Hamel, Giarrocco, Baylor, and Mathews (2016) suggest the interactions at the farmers market can influence long-term food purchase behavior and ultimately individuals' health. Carson and colleagues (2016) argue that farmers market vendors have the opportunity to motivate individuals to try new produce, provide cooking tips, and discuss the benefits of locally grown foods. Further, the Link Up Illinois Double Value SNAP Nutrition Incentives Program (DVCP) allows the recipients of all three programs—SFMNP, SNAP, and WIC—to receive double the value of federal nutrition benefits spent at participating farmers markets throughout Illinois (Fair Food Network, 2017). Numerous studies have showed that although expansion programs exist, WIC and SNAP recipients continue to underuse both farmers markets and double value coupon programs (Freedman et al., 2017; Jillcott-Pitts, et al., 2015).

The use of both farmers markets and expansion programs is attributed to factors that influence food consumption. Factors that influence food choice include economic, physical, education, and social or community determinants. Some examples include cost, availability, education, and knowledge (Bellisle, 2006; De Iral-Estevez, et al., 2000; Kearney, Kearney, Dunne, & Gibney, 2000). Also, the attitudes and beliefs about fresh fruits and vegetables greatly influence food choice and consumption. Researchers have suggested that the amount of education an individual receives can significantly influence dietary behaviors throughout adulthood (Kearney et al., 2000). However, when individuals receive health information, they may not take action if they are unsure how to apply that knowledge. The attitudes of low-income individuals who are a part of federal assistance programs towards eating fresh fruits and

vegetables is inadequately researched (Gibney, 2004). Thus, a general understanding of how low-income individuals perceive the consumption of fresh produce and their food purchase behaviors would not only help in the formulation of healthy eating initiatives and interventions for these individuals, but it might also increase their farmers market participation.

Statement of the Problem

Despite continual state and federal guidance, fruit and vegetable consumption has remained below the recommended guidelines (Krebs-Smith & Kantor, 2001; National Cancer Institute, 2014). Although supermarkets and grocery stores sell over 100 produce items, it is important to note that in many geographical areas, sometimes the only stores that sell food—such as gas stations, convenience, or corner stores—offer little produce, an issue that is especially salient for low-income rural individuals (Larson et al., 2009). Thus, improving access alone does not necessarily increase the purchase of additional fruits and vegetables (Dibsdall, Lambert, Bobbin, & Frewer, 2003). Currently, there are no known statistics on the number of individuals that are enrolled in the SFMNP; however, 1,914,000 (or 15%) SNAP recipients, 225,159 WIC participants (in 2016), and 333 farmers markets exist in the state of Illinois (USDA, 2017a). Additionally, there are 44,419 SNAP households in the state of Illinois and 13 farmers markets within a 20-mile radius of the 62901-zip code (the area surrounding Carbondale, Illinois). The 12th Congressional District in Illinois covers the southern tip of the state and includes 11 counties: Alexander, Franklin, Jackson, Monroe, Perry, Pulaski, Randolph, St. Clair, Union, Jefferson and Williamson. There is a total number of 22 farmers markets within the 12th Congressional District, of which two (9%) implement the DVCP and 6 (27%) accept SNAP (Table 1).

Table 1

Farmers Markets within the 12th Congressional District of Illinois

<u>Health Department</u>	<u>County</u>	<u>Farmers Market</u>	<u>DVCP</u>	<u>SNAP</u>
Jefferson County Health Department	Jefferson	None	N/A	N/A
Perry County Health Department	Perry	Pinckneyville Farmers Market Du Quoin Farmers Market	No No	No No
Williamson/Franklin Bi County Health Department	Franklin / Williamson	Marion Farmers Market Marion VA Farmers Market Cannon Park Community Market Herrin Farmers Market West Frankfort Farmers Market	No No No No No	Yes No Yes Yes No
Southern 7 Health Department & Head Start	Alexander Hardin Johnson Massac Pope Union Pulaski	None None Leaf Food Hub None None Anna/Union County Farmers Market None	N/A N/A No N/A N/A No No	N/A N/A No N/A N/A No No
Jackson County Health Department	Jackson	Murphysboro Farmers Market Carbondale Farmer's Market Carbondale Community Farmers Market (Winter) Desoto Community Farmers Market Two Rivers Farmers Market Tower Island Chute Farmer's Market Ava Farmers Market	No Yes Yes No No No No	No Yes Yes Yes No No No
Randolph County Health Department	Randolph	Steeleville Farmers Market	No	No
Monroe County Health Department	Monroe	Monroe County Farmers Market, Columbia Monroe County Farmers Market, Waterloo	No No	No No
St. Clair County Health Department	St. Clair	Belleville Old Town Market Swansea Farmers Market Inc. Mascoutah Farmers Market	No No No	No No No

Furthermore, the population of the 12th congressional district is 693,736, and 16.4% (113,772) of individuals residing in the district have incomes below the poverty line in 2016 (U.S. Census, 2016).

Need for the Study

The purpose of the aforementioned programs (SFMNP, WIC, and SNAP) is to provide improved access to food and promote healthy eating through nutrition education programs. The average monthly benefit for a WIC recipient (per person) is \$52.16 (USDA, 2017b) and \$134.78 per month for a SNAP recipient (USDA, 2015). Further, the average seasonal benefit for SFMNP recipients is \$24.00 (USDA, 2015a). The Experimental Station (2017) implements the DVCP in Illinois which is one of eighteen states where the DVCP is available. While there are data regarding how much money recipients spend using the DVCP per month, research is needed to confirm where and how individuals spend their federal benefits, what local agencies see as impediments to the program, as well as what potential barriers might impede recipients from using the DVCP across rural southern Illinois.

The Carbondale Farmer's Market, a popular seasonal market in Carbondale, collected data for the 2016 market season. The data revealed there were 21 new SNAP customers and a total of \$1,365 in SNAP sales made at the market. The market did not record data for seniors or WIC recipients (Table 1). However, there was an increase in both sales and number of new customers at the Carbondale Farmer's Market in 2017. During the 2017 farmers market season, there was a total of \$13,968 worth of distributed SNAP sales and WIC checks at the farmers market (Table 2).

Table 2
Carbondale and Community Farmers Market Sales Data

Market	<u>Amount of Link Matched</u>					<u>Total Redeemed</u>	<u>New Customers</u>				<u>Transactions</u>			
	Total SNAP Sales	WIC	Senior	SNAP	Total		SNAP	WIC	Senior	Total	SNAP	WIC	Senior	Total
Carbondale														
2016	\$1,365	N/A	N/A	\$1,239	\$1,239	\$1,532	21	N/A	N/A	N/A	90	N/A	N/A	90
2017	\$11,285	\$2,790	\$1,525	\$9,653	\$13,968	\$13,356	160	122	44	326	674	558	275	1507
Carbondale Community														
2016	\$248	N/A	N/A	\$288	\$288	\$172	2	N/A	N/A	2	14	N/A	N/A	14
2017	\$11,443	N/A	N/A	\$783	\$904	\$864	19	N/A	N/A	23	55	N/A	N/A	55
Link Up Illinois Network		WIC/Senior										WIC/Senior		
2017	\$273,108	\$26,855		\$230,897	\$257,742	\$244,598	4,719	N/A	N/A	4719	15,575		2,064	17,639

Note: The total SNAP sales is the total number of SNAP recipients who used LINK to purchase food at the farmers market. The amount of link matched is the total number of double value coupons used at the farmers market. The total number of double value coupons for the Link Up Illinois Network is combined for WIC recipients and seniors due to the nature of the program, both are under one umbrella (i.e. the Farmers Market Nutrition Program). Data received from The Experimental Station

Of the aforementioned sales, about 20% were WIC recipients, 11% were seniors, and 69% were SNAP recipients (Table 2). Additionally, there were 326 new customers who used the DVCP, of whom 49% were SNAP recipients, 37.4% were WIC recipients, and 13.4% were seniors (Table 2). Although use of the DVCP requires individuals to be SNAP recipients, data were collected separately for senior, WIC, and SNAP recipients at the Carbondale Farmer's Market. The farmers market also documented the number of individuals swiping their Illinois Link card (EBT) or the total number of transactions to obtain tokens redeemable for meats and fresh produce. The data infer there was a significant increase in the total number of transactions from the 2016 to 2017 farmers market season, suggesting a greater number of SNAP, WIC, and senior citizens took advantage of the DVCP in 2017.

Purpose of the Study

The purpose of this case study was twofold. First, the study attempted to uncover barriers local health departments and farmers markets face to implementing the DVCP in their communities. Within the 12th Congressional District are eight local health departments and a total of 22 farmers markets. Local health departments or public health agencies focus on implementing population based preventative programs, promoting healthy activities, and enhancing the public's health (American Public Health Association [APHA], 1995). Public health agencies receive funding resources not only from non-profit or not-for-profit agencies, but also from national funding sources (APHA, 1995). Accordingly, local health department administrators would have a greater knowledge of the type of access their community has in terms of healthy foods. Additionally, individuals working for the health department would be able to provide a deeper insight as to what potential barriers exist in terms of implementing the DVCP in their community. Therefore, to assess the administrative scope of the DVCP in

southern Illinois, the researcher conducted semi-structured interviews with organizational leaders of the 12th Congressional District. Organizational leaders included community stakeholders, farmers, farmers market managers, and local health department administrators. Eight county health departments are located within the 12th congressional district: The St. Clair Country Health Department, Randolph County Health Department, Perry County Health Department, Monroe County Health Department, Jefferson County Health Department, Jackson County Health Department, the Bi-County Health Department, and the Southern 7 Health Department. Each county health department serves one or more counties and the researcher conducted interviews at each of the locations (Table 1).

Second, this qualitative study aimed to discover the perspectives of low-income individuals who utilize the DVCP. Developing a greater understanding of individuals' perceptions of the DVCP might reveal how individuals are utilizing their SFMNP, SNAP, and WIC benefits, in addition to discovering barriers or benefits of program utilization. The researcher conducted one focus group to examine the perceptions of individuals using the DVCP, including what particular elements of the program these individuals find most impactful. Participants were recruited from the Carbondale Farmer's Market; a flyer was be created and placed at the booth where the DVCP is implemented with aims of obtaining a representative sample of individuals who utilize the program. Conducting a focus group allowed for the triangulation of findings or the examination of consistency within different data sources (Denzin, 1978; Patton, 1999). This study includes three data sources: the perceptions of individuals who use the DVCP, the perceptions of organizational leaders of the local health departments, and the researcher's personal observations of behavior at the farmers markets. In qualitative research, the researcher is also an instrument in the study; therefore, observing behavior at the farmers

markets will allow the confirmation of various themes that might surface from the data. Using multiple approaches can assist in the facilitation of a deeper understanding of the research problem and overarching goal of this study, which is to understand barriers that are associated with implementing the DVCP in southern parts of Illinois.

Significance of the Study

There have been numerous research studies on the use of farmers markets (Conrey, Frongillo, Dollahite, & Griffin, 2003; Freedman et al., 2016; Jillcott-Pitts, et al., 2014) and their use among SNAP and WIC recipients (Freedman et al., 2017; Grin, Gayle, Saravia, & Sanders, 2013; Herman, Harrison, Afifi, & Jenks, 2008; Jillcott-Pitts, et al., 2015). Most researchers have suggested developing interventions to combat barriers to farmers market use, identifying how SNAP and WIC recipients use their benefits, and delineating challenges associated with the double value coupon program and nutrition outreach. Collecting rich descriptive information about this phenomenon will highlight impediments to providing opportunities for healthy food consumption among low-income individuals who live in rural areas. Within the first area of responsibilities for health education specialists, one sub-competency is to “assess social, environmental, and political conditions that may impact health education” (NCHEC, 2015, p. 33). By interviewing organizational leaders (including local health department administrators and other stakeholders invested in farmers markets), I was able to identify barriers and facilitators associated with providing incentives for low-income individuals to access farmers markets and the DVCP in rural southern Illinois. From these findings, I was able to suggest appropriate targeted health education/promotion interventions to improve fresh fruit and vegetable consumption and food purchase behavior.

Positionality Statement

When conducting qualitative research, it is important to understand *positionality*, which determines where one stands in relation to the “other” being studied (Merriam, Johnson-Bailey, Lee, Kee, Ntseane, & Muhamad, 2001). Merriam and colleagues (2001) explain that positionality rests on the status of whether the researcher is an insider or an outsider to a particular group under study. Background, experiences and perceptions can each shape an individual’s positionality. Other factors that influence positionality include sexual orientation, class, education, race, or gender (Narayan, 1993). Awareness of these characteristics can inform how the researcher can view their intended study as well as the research questions that are designed.

Access to healthy produce should not be considered a luxury or amenity for communities, yet food deserts nonetheless continue to exist. The development of a reputable food assistance program (DVCP) is one method by which policymakers might partly eliminate some disparities that exist in both urban and rural communities. Thinking about my own positionality as a researcher, I wanted to learn more about the experiences of individuals who use this program and barriers that other communities face when trying to implement a similar tool. When thinking about access to fresh produce, I thought about my childhood experiences. I was raised by a single mother who was enrolled in both WIC and SNAP and experienced poverty first-hand while living in a low-income urban community. Most of my childhood consisted of not having fresh produce readily available in my neighborhood and my mother having to travel over 10 miles to shop for fresh produce. Michelle Obama (2011) addressed the issue and stated, “We can give people all of the information and advice in the world about healthy eating and exercise, but if parents can’t buy the food they need to prepare those meals because their only options for

groceries are the gas station or local minimart, then all that is just talk.” Making healthy food affordable and accessible should be a priority in communities where it is unfortunately not available.

I have always been aware of my passion, which is to help individuals in low-income communities attain additional resources. I have been working in the field of community health education for more than five years in both urban and rural settings of the Midwest region of the United States. Within those five years, I served as a health education resource person, holding positions such as an outreach coordinator for a nonprofit organization that provided reproductive healthcare services to communities, a school health coach promoting healthier urban middle and high schools, and as part of a research team examining farmers market use in urban communities. I have been a part of community engagement, coalitions, and alliances to assist in resource development for low income communities. My educational background and experiences gave me an analytical viewpoint, which forms my perspective about the research topic.

Qualitative research seeks to provide an understanding of a problem through the experiences of individuals and their lived experiences (Creswell, 2014). According to Eisner (1998), qualitative research is realistic because of its instrument utility and insight. A relationship inevitably develops between participants and the instrument (that is, the researcher) (Bourke, 2014). My awareness as a researcher and data collection tool served as an integral aspect of the research process. I understood that at data collection sites I would be viewed as either an insider or outsider. However, “what an insider sees and understands will be different from, but as valid as what an outsider understands” (Merriam et al., 2001, p. 415). I understood that the cultural norms and positions of the communities may play a role in the perception of me

as a data collection tool. Therefore, I was as transparent as possible when engaging with participants about my positionality and research intentions.

Theoretical Framework

The present study features a qualitative research design. The researcher collected data using semi-structured interviews with various stakeholders who contribute to the operation of farmers markets, including health educators from the county health departments in the 12th congressional district, stakeholders of the Link Up Illinois DVCP, farmers market managers and local farmers. Additionally, I conducted a focus group with individuals in Jackson County who have access to and who use the Link Up Illinois Double Value SNAP Nutrition Incentives Program at the Carbondale Farmer's Market. The findings from these data will provide a more complete understanding of the research problem by examining the DVCP's scope, barriers to administration and access, and benefits from both organizational and recipient perspectives. Obtaining these holistic data might allow for the development of appropriate location-specific intervention strategies to expand the scope of the Link Up Illinois Double Value SNAP Nutrition Incentives Program, particularly in areas that might remain underserved. Consequently, data can be used eventually to increase consumption of fresh fruits and vegetables among low-income seniors, SNAP, and WIC recipients.

Theories provide a conceptual context for understanding behavior and are used in the health education/promotion field to identify and target influential variables that affect health behaviors in populations (Simmons-Morton, McLeroy, & Wendel, 2012). Theories also suggest methods that can be incorporated into health promotion practice based upon identified areas that require attention. While many theories could be applied to address the use of the Link Up Illinois DVCP and the fruit and vegetable consumption of senior citizens, SNAP recipients, and

WIC recipients, the health belief model (HBM) represents a strong foundation on which to examine this problem. The HBM was used to “explain change and maintenance of health-related behaviors as a guiding framework for health behavior interventions” (Glanz, Rimer, Viswanath, 2008, p. 45). Originally, the HBM was developed as a way to explain and predict preventive health behavior concentrating on both the utilization of health care services and health practices (Hochbaum, Rosenstock, & Kegels, 1952). Specifically, the HBM was developed in the 1950s as a public health response centered on prevention of disease and not the treatment of diseases (Rosenstock, 1974). As such, the creators of the HBM were more concerned about the utilization of preventative health care services, such as factors that influence individuals’ decision to obtain a chest x-ray for the early detection of tuberculosis (Hochbaum, Rosenstock, & Kegels, 1952).

The health belief model evolved from two major learning theories including the stimulus response theory (S-R) and the cognitive theory (Glanz, Rimer, & Viswanath, 2008). Stimulus response theories argue that learning results from events or *reinforcements*, which in turn activate behavior (Rosenstock, Strecher, & Becker, 1988). The term *reinforcement*, devised by Skinner (1938), postulates the frequency of behavior determines its consequences. On the other hand, cognitive theorists highlight the role of expectations held by individuals and their subjective value of any given outcome (Glanz, Rimer, & Viswanath, 2008). Therefore, researchers consider the HBM to be a *value expectancy theory* (Gibson & King, 2012). The interpretation of the HBM as a value expectancy theory is centered on two concepts: (1) the desire to prevent disease or wellness (value) and (2) the belief that a specific action will prevent disease or illness (expectancy) (Glanz, Rimer, & Viswanath, 2008).

The HBM posits that six constructs together aim to predict health-related behavior and

belief patterns (Hochbaum, Rosenstock, & Kegels, 1952). The scope of this research investigation will focus on four constructs of the HBM. *Perceived barriers* to taking action can be applied to understand the decisions of individuals who currently utilize the DVCP. Perceived barriers may relate to characteristics of the DVCP itself, such as beliefs about the cost (financial, psychological or materialistic) of using the DVCP at farmers markets to purchase fresh fruits and vegetables. Materialistic and financial cost might include affordability of fresh produce, transportation and convenience of the program, whereas psychological cost might include perception of taste of fresh fruits and vegetables.

Further, the construct *perceived benefits* reflects individuals taking preventive action to avoid a health risk (Glanz, Rimer, & Viswanath, 2008). The action a person chooses is influenced by his or her attitudes and beliefs regarding the action. In this study, I assessed individuals' perceptions about the benefits of using the DVCP and their current food purchase behaviors.

The HBM also notes that individuals require *cues to action* to remind them to engage in a particular health behavior. Cues to action can either be internal (i.e., created by the individual who performs the behavior) or external, such as education of the DVCP within the communities or media information regarding awareness of healthy eating as it related to illness or disease.

Lastly, the construct *self-efficacy* is the confidence in one's ability to take action (Bandura, 1977). Self-efficacy, a concept originally developed by Bandura (1977), was later added to the HBM and can be understood as a psychological concept that acts as a form of guidance whether or not to perform an action. Rosenstock and colleagues (1988) argued that self-efficacy serves as an explanatory variable and an important determinant of health behavior. Ultimately, self-efficacy reproduces confidence in one's social environment, behavior and

motivation (Bandura, 1977). Self-efficacy will be measured in two ways: (1) by the patterns and descriptions of DVCP usage as collected from individuals who use the DVCP and (2) by the description of local health department employees' knowledge and confidence in implementing the DVCP. Overall, the HBM postulates that an individual must believe that a change of a specific behavior will result in a valued outcome, and individuals must similarly feel self-efficacious to overcome perceived barriers to take action (Glanz, Rimer, Viswanath, 2008).

Research Questions

In line with the aforementioned theoretical constructs and research design, the following research questions were asked to guide the inquiry:

1. What factors have influenced local organizational administrators to use or reject the Link Up Illinois Double Value Coupon Program (DVCP) for farmers markets in their respective jurisdictions?
2. What do stakeholders of the DVCP perceive as the program's greatest strengths and weaknesses?
3. How do individuals receiving public assistance describe their experiences using the DVCP at the Carbondale Farmer's Market?

Assumptions

An assumption is something the researcher takes for granted as true that could thus influence the understanding of any findings derived from the study should the assumptions be factually inaccurate. Nonetheless, Leedy and Ormrod (2010) explained that, "assumptions are so basic that without them, the research problem itself could not exist" (p.44). The assumptions in this study included the following:

1. Participants will be willing to discuss the subject honestly during the interviews.

2. Some participants will be willing to discuss the subject in a group setting.

Limitations

Limitations are the boundaries or potential weaknesses in a research study. They are out of the researcher's control and can thus affect both design and results (Gliner, Morgan, & Leech, 2009). This study operated under the following limitations:

1. Participants will self-select to participate in the study; the researcher was unable to directly contact recipients of the WIC, SNAP, or SFMNP programs.
2. Participants will be recruited from nine locations. Whether participants who were a part of the program will be present at the day and time recruitment will be take place is beyond the researcher's control.
3. The condition of the weather during farmers market hours may have an influence on participants' ability or desire to sign up for the focus group.
4. Organizational employees have knowledge and experience in the subject.
5. The presence of the researcher during interviews is often unavoidable in qualitative research and can affect participants' responses.
6. The hours of operation for data collection at the organizations may have an influence on participants' ability to participate in the survey.
7. Findings from qualitative research must be interpreted with caution and cannot necessarily be generalized to other geographical settings.

Delimitations

Delimitations are boundaries imposed or created by the researcher (Gliner, Morgan, & Leech, 2009). Delimitations of this study included the following:

1. The researcher will restrict participation to individuals aged 18 and older.
2. The researcher will limit recruitment of participants to nine locations in the 12th Congressional District of Illinois: the Carbondale Farmer's Market, St. Clair Country Health Department, Randolph County Health Department, Perry County Health Department, Monroe County Health Department, Jefferson County Health Department, Jackson County Health Department, Bi-County Health Department, and Southern 7 Health Department.
3. The researcher will recruit participants who are strictly SNAP, WIC, and SFMNP recipients for the focus group.
4. I have chosen to specifically research food purchase behavior, access, and food selection of participants who are SNAP, WIC, and SFMNP recipients.
5. The quantity of qualitative interviews will be limited to 11 in person interviews.
6. The quantity of focus groups will be limited to one in person focus group at the Neighborhood Co-Op Grocery.
7. I will use purposeful sampling to recruit participants for the qualitative interviews.
8. I will limit the recruitment of participants for the qualitative interviews to organizational employees of designated locations including the Carbondale Farmer's Market, the St. Clair Country Health Department, Randolph County Health Department, Perry County Health Department, Monroe County Health Department, Jefferson County Health Department, Jackson County Health Department, the Bi-

County Health Department, and the Southern 7 Health Department.

Definition of Terms

1. *Double Value Program*: The Double Value Program doubles the value of federal nutrition (SNAP or food stamps) benefits spent at participating markets and grocery stores, helping people bring home healthier fruits and vegetables while supporting local farmers (Fair Food Network, 2017).
2. *Electronic Benefit Transfer (EBT)*: Electronic system that allows participants in the Supplemental Nutrition Assistance Program (SNAP) to authorize transfer of their government benefits from a federal account to a retailer account to pay for fresh foods.
3. *Farmers Market*: Two or more farmers that sell their own agricultural products directly to the general public at a fixed location. The agricultural products include fruits and vegetables, meat, fish, poultry, dairy products, and grains (USDA, 2017c).
4. *Farmers Market Nutrition Program (FMNP)*: The Farmers Market Nutrition Program (FMNP) is associated with Women, Infants and Children (WIC), a program that was established to provide fresh unprepared produce through farmers markets to WIC participants. FMNP is administered through a Federal/State partnership that provides grants to state agencies. Only farmers, farmers markets authorized by the state agency may accept and redeem FMNP coupons (USDA, 2008).
5. *Senior Farmers' Market Nutrition Program (SFMNP)*: The Senior Farmers Market Nutrition Program (SFMNP) targets low-income seniors who are at least 60 years old and have household incomes of no more than 190 percent of the federal poverty level. Eligible seniors receive coupons that can be used to buy eligible foods from farmers and farmers market that have been approved by the state agency to accept them. (USDA,

2016)

6. *Supplemental Nutrition Assistance Program (SNAP)*: The program previously known as Food Stamps, is a statewide program that offers nutrition assistance to low-income individuals and families (USDA, 2017h).
7. *Supplemental Nutrition Assistance Program (SNAP) Authorized Retailer*: An eligible “store” that applies to, and becomes authorized to, accept SNAP benefits as a form of payment. Among other requirements, to be an eligible “store,” a retailer must sell food for home preparation and consumption and meet at least one of the following criteria: (A) offer for sale, on a continuous basis, at least three varieties of qualifying foods in each of the following four staple food groups, with perishable foods in at least two of the categories — meat, poultry or fish, bread or cereal, vegetables or fruits, and dairy products; OR (B) more than one-half (50%) of the total dollar amount of all retail sales (food, nonfood, gas and services) sold in the store must be from the sale of eligible staple foods (USDA, 2017c).
8. *Women, Infants, and Children (WIC) Program*: The special supplemental nutrition program for Women, Infants, and Children (WIC) provides federal grants to states for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, as well as to infants and children up to age five who are found to be at nutritional risk (USDA, 2017d).
9. *Women, Infants, and Children (WIC) Farmers Market Vouchers*: Eligible WIC participants are issued FMNP coupons in addition to their regular WIC benefits. These coupons can be used to buy eligible foods from farmers, farmers markets, or roadside stands that have been approved by the state agency to accept FMNP coupons (USDA,

2017).

Summary

Throughout the years, there has been a widespread increase of shoppers at farmers markets in the United States. The number of farmers markets has increased from 1,755 in 1994, to more than 8,669 in 2016 (USDA, 2007). Still, certain populations, including low-income and rural populations, may not be using the farmers markets, despite their acceptance of public assistance benefits, including the Link Up Illinois Double Value SNAP Nutrition Incentive. The health belief model was used to guide this qualitative study. The health belief model, a value expectancy theory, attempts to explain the effect of individuals' attitudes and perceptions towards disease and how those perceptions and attitudes impact their health-related decisions (Hochbaum, Rosenstock, & Kegels, 1952). The purpose of this study was to uncover barriers local health departments face to implementing the DVCP, in addition to the attitudes and perceptions of individuals who utilize and have access to the program. This chapter outlined research questions, aims, positionality, theoretical framework, limitations, and delimitations for the study. Chapter Two discusses the historical context of farmers markets and the DVCP, and it also discusses in detail the conceptual framework for the study.

CHAPTER TWO

LITERATURE REVIEW

This chapter includes background information to provide the scope for the proposed study. Specifically, the chapter includes information about the historical context of food assistance programs, farmers markets, and double value programs. The chapter also examines how food environment relates to eating behaviors. Finally, the chapter discusses the theoretical framework for the study is discussed in detail.

Background

The Nutrition and Weight Status objectives for Healthy People 2020 support the notion that people must maintain a healthy weight and eat a healthful diet. Specifically, one of the leading health indicators and objectives (NSW-9) is to reduce the proportion of adults who are obese. Based on the midcourse review of Healthy People 2020, have been little to no detectable changes for this objective. The Dietary Guidelines for Americans suggest making small shifts in daily eating habits to improve health over the long run, in addition to encouraging the community to increase access to healthy food choices through farmers markets (ODPHP, 2016).

Increased fruit and vegetable consumption lowers one's risk of developing many chronic diseases and can also assist with weight management. The National Center for Health Statistics (NCHS) monitored the prevalence of obesity among adults and youth in the United States between 2011 and found that the prevalence of obesity was over 36% in adults and 17% in youth; higher in women (38.3%) than in men (34.3%); and higher among middle aged (40.2%) and older adults (37.0%) than in younger adults (32.3%) (Ogden, Carroll, Fryar, & Flegal, 2015). Comparably, research by Ogden, Lamb, Carroll, and Flegal (2010) showed there is a relationship between obesity prevalence and socioeconomic status. Ogden et al. (2010) revealed that among

women, obesity prevalence increases as income decreases; 29% of women who live in households with income at or above 350% of the poverty level, as well as 42% of those with income below 130% of the poverty level, are obese. The 2013 State Indicator Report on Fruit and Vegetables (Center for Disease Control and Prevention, 2013) discovered that fruit and vegetable consumption is higher in some states than in others. Part of the reason for the differences might relate to states having different levels access to fresh fruit and vegetables and other healthy foods. Improving access to fresh fruits and vegetables, such as utilizing farm-to-consumer approaches or farmers markets, can increase individuals' opportunity to purchase fruits and vegetables, which, in turn, may increase overall fruit and vegetable consumption (CDC, 2013; Larson, Story, & Nelson, 2009).

Food Environment

The eating behaviors of individuals may result from the interaction of several influences including the environment in which they live (Rahmanian, Gasevic, Vukminovich, & Lear, 2014). The concept of *food environment* includes community characteristics, stores, food prices, and restaurants. When fresh fruits and vegetables are not available in a food environment, individuals are less likely to eat them, know how to cook them, or be interested in fresh produce (Hearn, et al., 2013; Young, Karpyn, Uy, & Which, 2011). Farmers markets serve as a location for direct fresh produce purchases and have the potential to alleviate food deserts and increase access and consumption of healthy foods, specifically in rural areas (Sallis & Glanz, 2009). Sallis and Glanz (2009) reported research on food environment and described their findings suggesting ways to improve the diet and physical activity of individuals, in addition to ways that can control or reduce obesity. Sallis and Glanz's (2009) findings suggest that individuals who live in communities with ready access to healthy foods also tend to have more healthful diets,

whereas disparities exist in low-income communities. To expand, Morland, Wing, and Diez Roux (2002) conducted a study and found that African Americans' intake of fruit and vegetables were higher when they lived in close proximity to a supermarket. Likewise, access to fresh produce in neighborhoods was also associated with a lower prevalence of obesity and overweight adults and adolescents (Morland, Diez Roux, & Wing, 2006; Powell, Auld, Chaloupka, O'Malley & Johnston, 2007).

Transportation is another component of the built environment that can influence dietary intake. Dubowitz, Acevedo-Garcia, Salkeld, Lindsay, Subramanian, and Peterson (2007) conducted a qualitative study to assess challenges associated with transportation issues related to food shopping. Dubowitz et. al. (2007) used proximity to food purchasing outlets, such as supermarkets and fast food restaurants, as a measure to examine the built environment. The researchers employed focus groups to collect data on the attitudes of women and concluded that time and family activities influenced their shopping time and attitudes towards cooking and food preparation (Dubowitz et. al., 2007). Comparably, Laraia, Siega-Riz, Kaufman and Jones (2004) objectively examined access to food outlets (supermarkets, grocery, and convenience stores) and its influence on the diet quality of women. Laraia et al. (2004) surveyed 918 low to middle income pregnant women and measured their distance to the nearest food outlet. The results suggested that greater distance to supermarkets and convenience stores was associated with lower diet quality (Laraia et al., 2004). Individuals tend to make food choices based on the food outlets that are available in their immediate area, and as such, the uneven distribution of food outlets can be detrimental to individuals' diets and overall health status (Walker, Keane, & Burke, 2010).

In addition to built environment, household food insecurity also has an impact on health

outcomes. Pinstруп-Anderson (2009) states that a household is considered “food secure” when the individuals living in the house have the ability to acquire food. Multiple previous studies have shown that rural, low-income women who have children are at an increased risk for experiencing food insecurity (Gorimani & Holben, 1999; Holben, McClincy, Holcomb, Dean & Walker, 2004; Nord, Andrews, & Carlson, 2005). Coleman-Jenson, Nord, Andrews, and Carlson (2014) examined household food security in the United States and discovered that households with incomes near or below the Federal Poverty Level (FPL), households (with children) headed by single women or single men, and Black and Hispanic households had higher food insecurity rates than the national average. Additionally, the study’s findings represented 6.8 million households nationwide; 99 percent reported having worried at some time that their food would run out before they got more money to buy more food. WIC households might also be at risk for experiencing food insecurity (IDPH, 2004). Kropf, Holben, Holcomb, and Anderson (2007) investigated household food security and identified differences between women from WIC and WIC Farmers Market Nutrition Program (FMNP) recipients. The investigators discovered that food insecurity was negatively associated with perceived diet quality; specifically, perceived benefits and perceived diet quality for fruit and vegetable consumption were higher for recipients who were a part of the FMNP (Kropf et al., 2007). Kropf et al.’s (2007) findings imply that FMNP recipients may perceive they have a more healthful diet but are not necessarily more food secure.

In attempts to improve the diets of individuals, a rising number of countries have implemented taxes on unhealthy foods and drinks to address dietary-related diseases (Cobiac, Tam, Veerman, & Blakely, 2017). For example, Australia introduced a 10% tax on unhealthy foods and a 20% tax on sugar sweetened beverages (Sacks, Veerman, Moodie, & Swinburn,

2011; Veerman, Sacks, Antonopoulos, & Martin, 2016). Yet Franck, Grandi, and Eisenberg (2013) examined the disadvantages and advantages of implementing a junk food tax in the United States and concluded that a modest tax would unlikely affect obesity rates due to the wide acceptance of junk food in communities. However, research suggest a high tax (equal to or greater than 20%) may lead to measurable decreases in obesity rates combined with educational interventions (Powell & Chaloupka, 2009). Additionally, Andreyeva, Long, and Brownell (2010) argue that a high food tax would be most beneficial to low income individuals, populations at risk for obesity, and adolescents. Pomeranz (2015) questions if such taxes should exclude individuals who are recipients of the Supplemental Nutrition Assistance Program (SNAP) and argues that SNAP recipients could not be legally charged a junk food tax; instead, Pomeranz (2015) proposes that the base price of a product should be increased. Increasing the base price of a product could potentially deter consumption of junk and sugary foods from individuals, including SNAP recipients; however, most low-income individuals may not have access to healthier options, making the issue of taxation as a method by which to improve public health both ethically murky and potentially ineffective for populations most at need.

Food Assistance Programs

In an effort to supplement the diets of low-income Americans, the government created several programs to offer assistance for purchasing foods. Under the administration of Franklin D. Roosevelt, the “Food Stamps Plan” was implemented in 1939 to provide food assistance to low-income individuals through the purchase of food stamps (Caswell & Yaktine, 2013). The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 required all states to issue food stamp benefits via Electronic Benefit Transfer (EBT), and by 2004, all states used the new system (USDA, 2009). Electronic Benefit Transfer allows a recipient to authorize the

transfer of their governmental benefits from a federal account to a retailer account to pay for products received (USDA, 2014b). Recipients are issued a plastic card (similar to a bank card) and a personal identification number (PIN) (assigned or chosen). The EBT system replaced the paper system—which was associated with lost or stolen food stamps—thus reducing food stamp fraud (USDA, 2014b). The Food, Conservation, and Energy Act of 2008, also known as the 2008 Farm Bill (H.R. 2419), was passed into law by Congress and enacted on May 22, 2008 to provide a continuation of agricultural programs through the year 2012 (P.L. 110-234). The 2008 Farm Bill renamed the Food Stamp Program to the Supplemental Nutrition Assistance Program (SNAP), and it also improved benefits, modified program operations, and strengthened program integrity.

The annual SNAP State Activity Report stated that over two million (2,042,306) individuals and a little over one million (1,060,589) families were enrolled in SNAP in Illinois during the 2015 fiscal year (USDA, 2015). Furthermore, the number of individuals enrolled in SNAP has steadily increased in Illinois since 2010 (1,645,722) to 2014 (2,015,303). Likewise, the number of households enrolled in SNAP also steadily increased from 2010 (775,019) to 2014 (1,021,150) (Table 3).

Table 3

Illinois Enrollment in the Supplemental Nutrition Assistance Program (SNAP)

	2010	2011	2012	2013	2014	2015	2016
Individual	1,645,722	1,793,886	1,869,713	2,040,053	2,015,303	2,042,306	1,914,393
Household	775,019	859,785	914,287	1,017,190	1,021,150	1,060,589	996,092

Note. Data retrieved from the United States Department of Agriculture SNAP State Activity

Reports for the years 2010 through 2016.

The USDA (2015) reported that for fiscal year 2016, SNAP recipient individuals received \$132.37 SNAP dollars and households received \$254.41 SNAP dollars monthly in Illinois.

Women, Infants, and Children (WIC). The Child and Nutrition Act of 1922 created the Women, Infants, and Children (WIC) program, for which eligibility was limited to children up to four and for which participation excluded non-breastfeeding postpartum women (USDA, 2017d). In 1975, eligibility was extended to non-breastfeeding women and children up to five years old, and WIC was established as a permanent program (USDA, 2017d). Although eligibility was extended, to be eligible, all participants must have been at a nutritional risk with inadequate income (though there was no operationalized definition of inadequate income). In 1978, the Child Care Food Program Act (P.L. 95-627) defined “nutritional risk” and established income eligibility standards connected with income standards associated with reduced school meals (Government Publishing Office, 1978). In 1989, an additional income standard was enacted to establish similar eligibility guidelines as the Food Stamp Program, thereby lowering the income standard (P.L. 101-147). The Child Nutrition and WIC Reauthorization Act lowered the WIC income standard, simplified the application process, and established similar income eligibility for the Food Stamp Program and Medicaid (USDA, 2017f). Additionally, in 1999, the WIC program standardized the nutrition risk criteria for program eligibility and began assigning nutrition risk priority levels (Institute of Medicine, 1999). Eligibility criteria for the WIC program falls into one of three major categories. Women must either be breastfeeding, postpartum, or pregnant; have an infant (up to first birthday); or have children (up to their fifth birthday). Additionally, women must fall at or below 185 percent of the U.S. Poverty Income Guidelines, be a resident of the state to which they are applying and have a nutritional risk assessment performed by a health professional (USDA, 2017d).

Overall benefits of the WIC program include providing screening and referrals to other social services, health, and welfare programs; providing nutrition education and counseling at WIC clinics; and providing supplemental nutritious foods (USDA, 2017d). For fiscal year 2013, in Illinois, the average monthly benefit and cost for WIC recipients was \$48.16, with a total 280,463 of individuals enrolled (USDA, 2017b). Since, the number of recipients enrolled in the program has declined (Table 4).

Table 4

Illinois Enrollment in the Women, Infants, and Children Program (WIC)

Year	2013	2014	2015	2016	2017
Total Enrollment	280,463	265,923	247,594	225,159	211,367

Note. Data retrieved from the United States Department of Agriculture State Annual Level Data for total participation for the years 2013 through 2016. Data for the year 2017 is preliminary and subject to change.

In 2016 in Illinois, the average monthly benefit for WIC recipients was \$52.16, with a total of 225,159 participants enrolled (USDA, 2017b).

Farmers Market Nutrition Program (FMNP). The 1996 Federal Agriculture Improvement and Reform (FAIR) Act, or the 1996 U.S. Farm Bill, was effective for seven years, until 2002 (Nelson & Schertz, 1996). The 1996 Farm Bill modified provisions for price support, provided export subsidies, unlinked income support payments from farm prices, replaced deficiency payments, and eliminated area reduction obligations (Nelson & Schertz, 1996). The Farm Security and Rural Investment Act, or Farm Bill of 2002, was signed by President George W. Bush to replace the 1996 U.S. Farm Bill. The new bill provided funding for agricultural research centers, forest programs, nutrition programs, rural development projects, and school meals for low-income children. In addition, the Farm Security and Rural Investment Act of 2002 established the Farmers Market Promotion Program. The purpose of the Farmers Market Promotion Program was to award grants to increase consumption of, and access to, locally produced foods and to develop new market opportunities for farm operators participating in direct farm-to-consumer programs (i.e., farmers markets) (USDA, 2016b). The FMPP has awarded 879 grants for over \$58 million since the 2008 Farm Bill, and these grant investments have resulted in an increase in sales at farmer markets, more customer traffic at farmers markets, the establishment of new markets, and more opportunities for farmers (USDA, 2016b). In 2014, the current Farm Bill, or the Agricultural Act of 2014 (or Farm Act of 2014) was extended to authorize \$125 million for the Healthy Food Financing Initiative in order to make nutritious foods more accessible (USDA, 2014a). Additionally, the expansion of the Farm Bill renamed the Farmers Market Promotion Program (FMPP) to the Farmers Market and Local Promotion Program (USDA, 2014a).

The WIC Farmers Market Nutrition Act of 1992 established the Farmers Market Nutrition Program (FMNP). The purpose of this legislation was to authorize grants for state programs designed to provide nutritious unprepared foods (fruits and vegetables) from farmers markets to women, infants, and children who are nutritionally at risk, as well as to expand the awareness and use of farmers markets and increase the number of transactions. Women, infants over four months, and children certified to receive WIC or on a waiting list for WIC certification are eligible to participate in the FMNP. Eligible WIC participants are issued FMNP checks or coupons in addition to their regular WIC benefits; the check or coupons are then used to buy eligible foods from farmers at farmers markets and/or roadside stands that have been approved by an authorized state agency, such as a health department (USDA, 2008). WIC recipients can purchase fresh, nutritious locally grown fruits, vegetables, and herbs. Additionally, eligible foods may not be processed or prepared beyond their natural state (GPO, 2017). Furthermore, WIC recipients are eligible to receive no more than \$30, but no less than \$10, per recipient, per year (USDA, 2008).

Senior Farmers Market Nutrition Program (SFMNP). The Senior Farmers Market Nutrition Program (SFMP) was developed in 2001 by the United States Department of Agriculture (USDA) to improve the diets of low-income seniors, defined as individuals at least 60 years old who have household incomes of no more than 185 percent of the federal poverty level (USDA, 2016). The purpose of the SFMNP was to increase the consumption of agricultural commodities by aiding in the development and expansion of farmers markets, roadside stands, and community supported agriculture (CSA) programs; it also sought to provide fresh, nutritious, and unprepared locally grown fruits, vegetables, herbs, and honey from farmers markets, roadside stands, and community-supported agricultural programs to low-income seniors

(USDA, 2016). The SFMNP is coordinated through a state agency such as the State Department of Agriculture or Aging which implements, operates, and administers the program. Further, coupons are given to eligible SFMNP participants to buy eligible foods from farmers, roadside stands, CSA programs, or farmers markets that have been approved by the state agency to accept the coupons. In turn, the eligible vendors submit the coupons to the agency for reimbursement.

For the fiscal year of 2015, Illinois was awarded \$802,706 in grant monies for the SFMNP (USDA, 2015a). In addition, the number of federal recipients was 37,100, all of whom received a seasonal benefit of \$24.00 for fiscal year 2015 (USDA, 2015a). There were 472 farmers who accepted the SFMNP coupons; however, there were no markets, stands, or CSAs who accepted the program in the fiscal year of 2015 (USDA, 2015a). Presently, the SFMNP coupons are redeemable at 15 farmers market in the southern Illinois region. Four of the farmers markets are within the 62901 ZIP code, one of which is a winters farmers market, and the remaining three of which are open during the normal farming season.

Double Value Coupon Program. Double value programs are incentive programs that match the value (or dollar) of SNAP purchases made at participating farmers markets to spend on fresh produce. In Illinois, shoppers can use their LINK card (or SNAP EBT) to receive wooden tokens at the designated market stand. SNAP shoppers will receive an additional dollar in double value coupons for every dollar they use from their LINK card, for up to \$20 worth of value. The original double value program began at five farmers markets in Detroit, Michigan in 2009 and has since grown to over 150 sites (Fair Food Network, n.d). Due to the 2014 Farm Bill, there has been an expansion in funding, including over one hundred million in grants and funding opportunities, such as the Food Insecurity Nutrition Incentive grants program (FINI). The FINI grant program is administered by both the National Institute of Food and Agriculture

(NIFA) and USDA's Food and Nutrition Service (FNS), and its purpose is to increase the purchase of fruits and vegetables among low-income consumers participating in the Supplemental Nutrition Assistance Program (SNAP) by providing incentives at the point of purchase (NIFA, 2016).

NIFA (2016) has evaluated whether incentivizing the purchase of produce increases consumption and affordability. For example, the city of Aurora, Illinois was awarded \$30,000 in 2015 to provide bonus value tokens for all SNAP shoppers at weekly markets, allowing them to double their purchasing power for fresh produce (USDA, 2017g). Likewise, the New Mexico Farmers Marketing Association in Santa Fe was awarded \$99,999 in 2015 for their "Snap to Health: Double UP Food Bucks New Mexico" program that provided incentives at farmers markets and farm stands (USDA, 2017g). Along with Santa Fe and Aurora, The Experimental Station in Chicago, Illinois was awarded a FINI grant to increase access to fresh produce (NIFA, 2017). The Link Up Illinois Double Value SNAP Nutrition Incentive Program received funding to assist underfunded farmers markets in and outside of Chicago to implement the double value program in Illinois (NIFA, 2017). In southern Illinois, there are two farmers markets to which The Experimental Station has allocated funds as of 2018. The Carbondale Community Farmers Market and the Carbondale Farmer's Market in Carbondale, Illinois both match the value of SNAP purchases with double value coupons to spend on locally grown produce. Double value coupons can only be used to purchase fruits and vegetables at the famers markets. The overall goal of the Link Up Illinois Double Value SNAP Nutrition Incentive Program is to assist in the success of the local environments, assist and present families with healthier food choices, and help farmers get a financial boost (The Experimental Station, 2017).

Farmers Markets

Farmers markets remain a significant component in the United States food system, dating back to 1730 in Lancaster, Pennsylvania (Neal, 2013). At the foundation of a sustainable food system is *food security*—the notion that individuals have enough food available and also have adequate knowledge of nutrition (UUMFE, 2013). Communities can increase the sustainability of the nation’s food system by supporting local food producers while also providing distribution opportunities (e.g., farmers markets) to food producers. The advancement of farmers markets is significant to local communities. First, farmers markets help build and sustain local communities by addressing hunger and by providing a concept of a *local food system*. A local food system is used to describe a geographical distribution method; in this case, food is grown and harvested close to individuals’ homes as opposed to a global food system, in which produce and other foods are imported from geographically diverse locations (Feenstra, 1997). Second, local markets have the opportunity to offer agricultural education to members of the community at the point of purchase (Feenstra, 1997). Lastly, farmers markets use technology (Holt, 2015) to conduct transactions, such as EBT and other forms of payment beyond cash (e.g., credit cards, tokens, coupons) (Holt, 2015). In addition, farmers markets have added interactive experiences, such as cooking demonstrations and food sampling (Holt, 2015). The current structure of a farmers market is similar to past concepts, but the structure can vary somewhat state-to-state. Farmers markets are usually held in public spaces, either inside or outdoors, and each potentially has different characteristics determined by the cultural, social, economic, and political factors of a particular region. For instance, research by Markowitz (2010) concluded that the farmers market in Louisville, Kentucky successfully attracted low-income and African American individuals by placing the location near low income neighborhoods, through outreach and

subsidies, and by presenting a welcoming atmosphere. Likewise, Gerbasi (2006) examined an outdoors farmers market in Athens, Ohio and determined that this specific market offered a child-friendly and family-oriented environment that facilitated interaction among all cultural groups. As a result, the Athens community praised the local farmers market, offered continual support, and celebrated the farming culture (Gerbasi, 2006). Although the majority of farmers markets differ nationally, they all provide consumers opportunity to purchase food directly from the farmer who grew it and also to also engage more with the local community (Fair Food Network, n.d).

In April 2010, the U.S. Department of Agriculture's Agricultural Marketing Service (AMS) launched their campaign to collect information about farmers markets for the 2010 USDA National Farmers Market Directory (USDA, 2010). The USDA has counted the number of operating farmers markets from the time when the directory was first created in 1994 (USDA, 2010). Farmers markets are added and updated to the directory by representatives of state farmers associations, state departments of agriculture, nonprofit organizations, or by market managers at any time via online registration (USDA, 2010). The National Farmers Market Directory captures information about what types of products are sold, if SNAP or WIC is accepted, and what times markets operate (USDA, 2010). According to the United States Department of Agriculture (USDA, 2014), the number of markets listed in the USDA National Farmers Market Directory has increased more than fourfold from 1994 (1,744) to 2013 (8,144), and from 2013 (8,144) to 2017 (8,681), there has been an additional seven percent increase (Table 5) (USDA, 2017e).

Table 5

Number of Farmers Markets in the United States

Year	1994	1996	1998	2000	2002	2004	2006	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Markets	1755	2410	2746	2863	3137	3706	4395	4685	5274	6132	7175	7865	8144	8268	8476	8669	8687	8713

Note. Data retrieved from the United States Department of Agriculture, Agricultural Marketing Services Division

More farmers market representatives have taken the initiative to register their market, thus resulting in an increase in market traffic. Due to the increase in popularity as well as the number of farmers markets over the years, one of the USDA's focal points is to support and help sustain market development in underserved areas to keep both old and new farmers flourishing through grants and programs. Hinrichs, Gillespie, and Feenstra (2004) have argued that the present popularity of farmers markets could be related to a number of factors, including the pleasant atmosphere of many farmers markets, consumers' rising interest in purchasing fresh local foods, and producers' renewed search for more profitable alternatives.

Farmers Market Operations

The operations of each farmers' market differs per city; however, many markets function independently with the help of nonprofit partners or the city itself. Almost all farmers markets have a market manager who enforces the market's bylaws and oversees the daily business of the market. In addition, the market manager is generally the point of contact for any questions or concerns (Farmers Market Coalition, 2017). While farmers markets may vary in type, such as being held either indoors or outdoors, all markets follow standard operating procedures. Vendors and the entire market in general have to follow environmental guidelines, licensing laws, and the market's own rules. In addition, the hours of operation, space payment (for vendors or the entire market), and any other regulations the vendor and the market have to abide by are set by the local government (Farmers Market Coalition, 2017).

Farmers markets have to follow a variety of both federal and state food safety regulations. President Barack Obama signed the Food Safety Modernization Act (FSMA) into law in 2011 to ensure that the U.S. food supply was safe, shifting the focus from one that responds to contamination to one that instead prevents it (FDA, 2017). The goal of the FSMA

was to prevent food-borne illness by achieving key milestones of prevention control. Prevention includes inspection and compliance, as well as ensuring that imported products meet U.S. standards are safe for U.S. consumers, responding effectively when problems emerge, and enhanced partnerships both domestically and foreign (FDA, 2017). The FSMA regulates the way foods are grown, harvested, and processed. As such, the type of food that is being sold determines the type of regulation. Products that are sold in Illinois may be regulated by state or local authorities as well as the federal government, and state and local government entities control commerce within the state (Schell & King, 2013). Ultimately, the FSMA gives the FDA the ability to order food recalls and enforce food safety protocols that reflect Good Agricultural Practices (GAP) on produce. GAP is a scheme of practices and procedures designed to ensure farms practice good food safety techniques to prevent foodborne illnesses (FDA, 1998; Schell & King, 2013). While there are practices and procedures for food handling, there are also policies on what farmers and vendors can actually sell at farmers markets, and these policies vary by state.

The Illinois Department of Public Health (IDPH) (2013) provides standards, guidelines and information to market managers and vendors as to what food items can be sold. Permitted items include fresh fruits and vegetables (minimally rinsed and unprocessed), grains, seeds, beans and nuts (whole unprocessed and un-sprouted), popcorn, fresh herb spring, dried herbs in bunches, and baked goods such as pies and honey (IDPH, 2013). Foods prohibited from sale or distribution include home canned foods, wild mushrooms, raw milk, and ice cream. However, depending on the product, a market vendor may be required to obtain a permit, license (for egg and meats), or public health inspection of their facility. The regulation of markets and vendors

ensures that farmers markets encourage healthful food consumption and improve the local economy while maintaining standardized health and sanitary requirements.

Farmers Market Assessment

There are various reasons individuals choose to purchase food from farmers markets. Previous research has suggested that individuals shop at local markets because the food options appear fresher than in supermarkets, provide health benefits, and are of high quality (Onozaka, Nurse, & McFadden, 2010; Thilmany, Bond, & Bond, 2008; Zepeda & Deal, 2009). Gustafson, Christian, Lewis, Moore, and Jilcott (2013) examined the association between several dietary indicators and food venue availability, food venue choice, and availability of healthy food within the venue. The researchers determined that individuals who prefer to purchase fresh produce were more likely to seek out farmers markets. However, the researchers mentioned that the results of their study consisted of individuals among a higher socio-economic population. Gustafson and colleagues' (2013) sample included 60% of individuals who earned over \$50,000 per year and 35% who had a college degree. The researchers concluded that individuals will travel for the type of food to meet their preferences; however, since the sample was socioeconomically advantaged, fruit and vegetable intake might potentially have been the same regardless of where participants shopped for food (i.e., supermarket vs. farmers market). Likewise, Velasquez, Eastman, and Masiunas (2005) investigated farmers market and farm stand customers' perception about locally grown vegetables and found that quality and freshness were two of the important reasons for shopping at farmers markets. Velasquez et al. (2005) focused on participants from two locations—which included 15 vendors and a female-to-male ratio of 2:1—and found that 67% of participants in the study were willing to pay a 10 cent or more premium for locally-grown produce (Velasquez et al., 2005). In addition to quality and

freshness, consumers choose to shop at farmers markets for the social aspect (Velasquez et al., 2013; Zepeda & Deal, 2009). Results of Velasquez et al.'s (2013) study showed that 90% of individuals visited the farmers market to enjoy the social atmosphere. Likewise, Zepeda and Deal (2009) conducted semi-structured interviews to understand consumers' reasoning for buying locally grown foods and found that 64% wanted to experience the interaction with farmers. Furthermore, Carson, Hamel, Giarrocco, Baylor, and Mathews (2016) reported that the interaction between vendor and consumer had an impact on food purchase behavior. Results of Carson et al.'s (2016) study similarly suggested these interactions have an impact on long term purchasing behavior, such as shopping for more locally produced foods.

Farmers Market Shoppers

The documentation of demographics trends among individuals who shop at farmers markets is well documented in the literature (Aguirre, 2007; Govindasamy, Italia & Adelaja, 2002; Kezis, Gwebu, Peavey & Cheng, 1998; Schupp, 2016). Schupp (2016) conducted a systematic review and discovered that most individuals who shop at farmers markets have professional degrees, are employed, are Caucasian, are female, and are middle-to-upper socioeconomic class. Additionally, there are differences in age, education, and income levels between those who shop at farmers markets and those who do not (Jekanowski, Williams & Schiek, 2000; Onianwa, Wheelock & Mojica, 2005; Wolf, Spittler & Ahern, 2005). Although there are demographic differences, Govindasamy et al. (2002) argued that the sociodemographic makeup of individuals who shop at farmers markets are not always a good representation of the overall population in the area. Govindasamy and colleagues (2002) recommend instead identifying potential target markets that are based on the socioeconomic and demographic characteristics.

Several studies have also determined that individuals who shop at farmers markets tend to look for specific food options (Onozaka, Gretchen, & McFadden, 2010; Thilmany et al., 2008; Zepeda & Deal, 2009). For instance, Thilmany and others (2008) examined how local sources of food and production connect with food choice dimensions. The researchers determined that perceived produce quality and purchase experience had an impact on individuals' willingness to pay for produce at the farmers market. Further, the results by Thilmany et al. (2008) suggest that the country of origin and labeling (such as the USDA's organic certifications program) are more important to shoppers. Overall, Thilmany and colleagues' (2008) findings suggest the importance of freshness, vitamins, and support for local farmers perceptions were higher for individuals who primarily shopped for groceries at farmers markets. Similarly, Zepeda and Deal (2009) found that food purchase behavior was motivated by values, beliefs, and the creation of norms, specifically that heavy organic shoppers actively pursue information about food, which in turn enables habits and behavior. Also, Zepeda and Deal (2009) reported that individuals who are organic food buyers valued knowing where their food came from and valued having a relationship with the farmers. Comparably, Onozaka, Gretchen, and McFadden (2010) explored individuals' perceptions of factors that were most important when choosing to buy fresh produce. Their results indicated that health benefits, freshness, and the food safety of local produce had the highest rating of importance compared to produce being organically grown, without pesticides, and visual appeal of produce (Onozaka et al., 2010). Additionally, the researchers found that individuals who shop at farmers markets reported stronger influences from people in their lives to shop in direct produce channels or farmers markets, arguing that this factor may be due to the transparent information flow (or dialogue) between consumer and vendor (or farmer).

Position of Farmers Markets in Illinois

Currently, there are about 330 farmers markets in the state of Illinois, 29 of which are within 50 miles of Carbondale, Illinois. The US Census Bureau (2016) describes Jackson County, Illinois as mostly urban, with a population of 60,218. However, in 2010, another 37.2% of the population in Jackson County Illinois was reported as rural (United States Census Bureau, 2016). Ratcliffe, Burd, Holder, and Fields (2016) define rurality in terms of density, land use, and distance, and they note that rural areas are the opposite of urban ones; that is, the population tends to be sparse, less dense, at a distance, and nonmetropolitan. The Jackson County area faces many challenges; three rural towns and cities are separated by the Shawnee National Forest which is between the Ohio and Mississippi rivers, and the area has an extensive amount of farmland. Rural areas in Jackson County may face challenges with accessibility to local food sources, which in turn may contribute to poorer health outcomes (Bardenhagen, Pinard, Pirog, & Yaroch, 2017).

To date, there is very limited research exploring southern Illinois farmers markets. Research by Wagner (1978) was one of the first studies exploring the Carbondale region. In this study, Wagner (1978) examined the economic, social, and demographic profiles of shoppers and farmer market growers while also measuring how the market meets the needs of its consumers and members. Results indicated that 11% of shoppers expressed that the atmosphere was important, 63% of the shoppers came to the market weekly, and 56% ranked freshness as the most important reason for shopping at the farmers market (Wagner, 1978). The second farmers market study was conducted by the Southern Illinois Center for Sustainable Future (2007). The Southern Illinois Center for Sustainable Future informally examined perception of the farmers market and factors that motivated consumers to shop at the market. Although the results of these

studies provide a foundation for future research in the rural area of southern Illinois, there is a need to examine not just farmers market demographics and presence, but also use of the newly adopted Link Up Illinois Double Value SNAP Nutrition Incentive Program and how it has affected both consumer purchase behavior and the business of the farmers markets themselves.

Conceptual Framework

Health Belief Model. According to Simmons-Morton, McLeroy, and Wendel (2012), theories are designed to foster understanding of, and make predictions about, particular subject matter. Theories provide conceptual context for understanding behavior, providing the health education/promotion and the public health field with logical variables that can be assessed, objectified, and targeted for intervention. Theories also suggest methods that can be incorporated into health promotion practice (Neutens & Rubinson, 2014). The Health Belief Model (HBM) will be used as a framework for the proposed investigation.

The Health Belief Model (HBM) has been a significant framework in the field of health education and public health for almost six decades (Glanz, Rimer, and Viswanath, 2008). Originally, the model was developed to identify why individuals were not utilizing free screening tests to detect and prevent disease (Hochbaum, 1958; Rosenstock, 1960, 1974). Hochbaum (1958) examined individuals' perceptions about their own beliefs about the benefits of early detection and susceptibility to tuberculosis by receiving a free chest X-ray (Hochbaum, 1958). The theory found that individuals will take specific action to screen for, prevent, or control illnesses if they perceive that (a) they are vulnerable to the consequences of the illness, (b) the course of action will be favorable in decreasing the severity of the illness, and (c) the projected barriers to taking action are overshadowed or outnumbered by the benefits (Glanz et al., 2008).

Very few studies have used the HBM to examine food insecurity or farmers market use. Shaikh, Byrd, and Auinger (2009) conducted a secondary analysis to determine if supplemental vitamin and mineral use among adolescents and children were associated with food security, physical activity, and nutrition in the United States. The researchers used the HBM as a framework to explain and predict health behaviors by concentrating on participants beliefs and attitudes (Shaikh et al., 2009). Additionally, the researchers in the study postulate that the HBM may explain why individuals choose to use vitamin and mineral supplements; for instance, individuals' perception that their diets are adequate could be related to the construct *perceived susceptibility*, or perhaps the ability to afford vitamin/mineral supplement could be explained by the concept *perceived barriers* (Shaikh et al., 2009). Furthermore, the results of the study suggested that sociodemographic factors that influence supplemental vitamin/mineral use are parallel to the factors related to maintaining a healthy body weight, greater physical activity, and nutritious diet (Shaikh et al., 2009). Comparably, a qualitative study by Zepeda and Deal (2009) incorporated the HBM in their research to determine why shoppers buy organic or local foods. The researchers used the model to frame customers' decisions about health motivation and diet (Zepeda and Deal, 2009). Based on the results of the study, the researchers concluded that the shopping and cooking habits of the consumers influenced behavior and attitudes, which in turn influenced knowledge and information seeking about locally grown foods. Zepeda and Deal (2009) suggest that the more information an individual receives, the more likely he or she will purchase fresh fruits and vegetables.

There are several constructs in the HBM, including *perceived susceptibility*, *perceived severity*, *perceived benefits*, *perceived barriers*, *cues to action*, and *self-efficacy*. For the purposes of the current study, four of the constructs was be examined (specifically, *perceived*

benefits, perceived barriers, cues to action, and self-efficacy). Ultimately, the current study examines the DVCP and its impact on the community nutrition environment. The HBM theorizes that unless individuals perceive an action is beneficial enough to reduce any possible threats, behavior change will not occur (Glanz et al., 2008). Pawlak and Colby (2009) examined the self-efficacy, barriers, and benefits of healthy eating among African Americans in North Carolina. The purpose of the study was to assess individuals' beliefs about healthfulness, consumption, and barriers to self-efficacy when eating a healthy diet, and the researchers found that participants considered the benefits of eating healthfully more important than any identified barriers to eating healthfully (Pawlak & Colby, 2009). In addition, participants who showed high awareness of foods associated with disease prevention had a good understanding of the nutrition content in selected foods (Pawlak & Colby, 2009). These findings are particularly relevant to one of the HBM's primary claims: that individuals are more likely to take action when they perceive potential benefits "outweigh" any barriers to engaging in healthy behavior (Glanz et al., 2008).

The construct *perceived barriers*, on the other hand, relates to an individual's perception about the cost of taking action. The "cost," or negative factors associated with taking action, may include tangible, psychological, or environmental barriers (Simons-Morton, McLeroy, Wendel, 2012). In this study, the perceived barriers to using the DVCP was examined by investigating individuals who have access to the program. In addition, institutional barriers to implementing the DVCP across other southern Illinois counties was also investigated. Timmerman (2007) examined barriers to eating healthfully among underserved women and explained that there are numerous internal and interpersonal barriers to lifestyle changes. Timmerman (2007) recommended four approaches to addressing barriers to health promoting- behavior: facilitating

change in public policy, individualizing interventions, forming collaborative partnerships, and using a positive deviance approach to build on community assets. A positive deviance approach identifies a number of individuals within a community who have better health outcomes (than the majority) and analyzing their behaviors to determine the best and most successful strategies to use that will promote successful outcomes within a community (Timmerman, 2007). Further, Timmerman (2007) suggested addressing barriers to access, such as the availability of grocery stores, in addition to barriers to cost by utilizing local community resources (food pantries, produce stands and farmers markets).

Local community resources have the potential not only to tackle the barrier of access and cost, but also to address availability. Quinn (2011) examined access, availability, and price at a farmers market in Philadelphia and used the HBM as a framework for the study. The findings suggested that higher levels of fruit and vegetable consumption were associated with lower prices (Quinn, 2011). Further, the researcher noted that when individuals believe that farmers markets are more expensive compared to grocery stores, then the price becomes a critical barrier and access to healthy foods does not actually increase (i.e., because the barrier is perceived to outweigh the potential benefit) (Quinn, 2011). Relatedly, Halimatou, Navaughn, Kara, and Abigail (2017) explored barriers associated with farmers market shopping and produce consumption using cross sectional surveys with two groups of SNAP recipients who were primary shoppers of their respective households. Their findings revealed that the common barriers to fruit and vegetable consumption were price of the fresh produce and lack of available transportation (Halimatou et al., 2017). Lastly, a more recent study by Di Noia, Monica, Cullen and Thompson (2017) investigated the perceived barriers to purchasing fruits and vegetables at the farmers market among inner city WIC-enrolled women. The researchers conducted 13 focus

groups and discovered that prominent barriers included convenience issues (operating time, location, and family responsibilities), transportation, and informational issues. Di Noia and colleagues' (2017) results suggest raising awareness of the importance of eating healthfully and designing interventions to promote both farmers market use and nutritional education during WIC appointments.

Further, the construct *cues to action* refers to approaches used to trigger an individual's readiness to change a health behavior. Hochbaum (1958) hypothesized that readiness to take action can only be brought on specific factors such as environmental cues, physical incidents, or media exposure (Glanz et al., 2008). In health education, events or cues might be internal, such as the perception of changing bodily states, or external, such as a post card reminder from the dentist (Rosenstock, 1974). In this study, the DVCP itself could act as a cue to action or nudge to eat healthfully. Cohen et al. (2017) conducted a longitudinal study to measure whether an intervention would increase the use of the Double Up Food Bucks (DUFB) (similar to the DVCP) among low income waiting room individuals in Ypsilanti, Michigan. The intervention included a brief verbal explanation of the DUFB program, written materials, a map of the highlighting the farmers markets locations and hours of operation, and an initial DUFB \$10 voucher. The researchers assumed that the participants whom were in the waiting room was not aware of the DUFB program, therefore the brief overview of the program and information (hours of operation, locations, and times) served as a cue to action for individuals to take advantage of the program and the free voucher. The researchers also conducted four surveys of DUFB program use and fruit vegetable consumption over 5 months and concluded that the clinically based intervention significantly increased consumption of produce consumption (Cohen et al., 2017). Results from the brief intervention in a waiting room, used here as a *cue to action*,

yielded significant future fruit and vegetable consumption among SNAP-enrolled participants (Cohen et al., 2017).

Lastly, the construct *self-efficacy* was added to the HBM in 1988 and is defined as “the conviction that one can successfully execute the behavior required to produce the outcomes” (Bandura, 1997, p. 79). Glanz et al. (2008) state that the original HBM was developed in the context of preventive health actions (like screenings) that did not involve complex behaviors. In the current study, *self-efficacy* was assessed by examining individuals’ confidence in shopping for produce using the DVCP. Further, the individual must feel competent, or self-efficacious, to overcome any perceived barriers to take action (Glanz et al, 2008). Deshpande, Basil, and Basil (2009) examined factors that influenced the eating patterns of college students, using the HBM to guide the investigation. The researchers measured eating self-efficacy by measuring confidence in college students’ ability to eat and maintain a nutritious diet (Deshpande et al., 2009). Their results suggested that barriers had a significant effect on self-efficacy. Borrowing from a socioecological approach, this study also attempted to uncover organizational *self-efficacy* (or perhaps more accurately, *collective efficacy* or *organizational efficacy*). Lunenburg (2011) postulates that *self-efficacy* impacts (1) the goals that employees choose for themselves (*high self-efficacy* will likely set high goals), (2) learning as well as the effort individuals exert on the job (individuals with high *self-efficacy* are likely to work harder at new tasks because they are confident they will be successful), and (3) the persistence with which individuals attempt new and challenging tasks (individuals with low *self-efficacy* who believe they are incapable will give up on a task when problems arise). Bandura (2009) argues that individuals cannot influence their own actions if they do not track their performances (in the workplace), which in turn plays an influential role in the effectiveness of goals as they relate to the overall impacts of the

organization. Individuals' confidence in their own workplace performance—or their confidence in their organization's overall efficacy to impact community health—may play an important role as to whether organizations choose to implement the DVCP in southern Illinois counties.

Ultimately, this study seeks to uncover and understand organizational leaders' perceptions of their organizations' capacity to implement the DVCP (or a similar program) to improve upon their operation as a resource for the community nutrition environment.

In sum, the Health Belief Model theorizes that in order for behavior change to occur and be maintained, an individual must feel threatened by their current lifestyle, believe that changing a specific behavior will result in a valued outcome at a reasonable cost, and feel capable of overcoming perceived barriers to taking action (Glanz et al., 2008; Simons-Morton, McLeroy, Wendel, 2012). Individuals enrolled in any of the three programs (SFMNP, WIC, and/or SNAP) are classified as low-income individuals, which in turn means that these individuals are classified as “impoverished” (US Census Bureau, 2016). The purpose of these governmental assistance programs is to increase affordability of food to low-income populations. With additional legislation to decrease food insecurity, farmers markets and programs such as the DVCP were developed. The constructs of the HBM can be employed to determine why some organizations do or do not implement the DVCP, and they can also be used to understand the impact of the DVCP among individuals who take advantage of the program. Collectively, these findings can lend greater understanding to the functionality of the overall community nutrition ecosystem across southern Illinois.

Qualitative Research

Qualitative research methodologies explore why a phenomenon occurs and are used to describe individuals' experiences (Creswell et al., 2011). The qualitative research approach

allows researchers to explore meanings and interpretations of constructs that are rarely observed in quantitative investigations (Jeanfreau & Jack, 2010). Conceptually, qualitative research is concerned with human behavior from the individual's perspective, and, methodologically, the data are analyzed by themes from descriptions of the participants and reported in their language (Minichiello, Aroni, & Minichiello, 1990). Additionally, qualitative research offers the "human" side of research and problems which is frequently different from behavior. Holloway (2005) argues that the qualitative researcher presents a holistic picture of the participants' reality. That is, it identifies factors such as gender roles, socioeconomic status, ethnicity and social norms (Mack, Woodsong, MacQueen, Guest & Namely, 2005). In other words, holistically, qualitative research reports and identifies the many factors that are involved in a problem, thus offering multiple perspectives that might not be adequately revealed in a closed-ended quantitative survey (Creswell, 2014).

Provided that qualitative research discovers participants subjective reality, there are many strategies to investigate this phenomenon. Conducting in-depth interviews and participant observations are two qualitative research strategies (Schmid, 1981). The former consists of the researcher using an interview guide to ask open-ended questions with the intention of sharing personal experiences (Jeanfreau & Jack, 2010). The latter consists of the researcher using field notes to document activities and behaviors of individuals at a research site or in their natural setting (Creswell, 2014). The natural setting is where participants experiences an issue or a problem, so that the researchers obtain up-close holistic information (Creswell, 2014). Another component of qualitative research is the researcher herself. Creswell (2014) argues that although qualitative researchers may use a protocol to gather data, they themselves act as "instruments". The researcher's role opens up ethical and personal issues that should be addressed including

personal background, history, culture, socioeconomic status, and the researcher's interpretations formed throughout the study (Creswell, 2014; Locke, Spirduso & Silverman, 2013).

All in all, Patton (2015) suggests there are several advantages to qualitative inquiry. The first is that this form of research illuminates meaning; qualitative inquiry investigates how individuals build and ascribe meanings to their experiences, and interviews and observations reveal those meanings and their implications (Patton, 2015). Qualitative inquiry elucidates how systems (cultural, organizational, family, community, or economic systems) function and the consequences for those who are involved (Patton, 2015). Furthermore, it involves the comparison of similarities and differences to uncover patterns and themes across cases to highlight diversity and deepen our understanding of a phenomenon (Patton, 2015).

Case Study Approach

Case study research is said to have originated in the fields of psychology, anthropology, and sociology (Harrison, Birks, Franklin & Mills, 2017; Merriam, 1998). Yin (1984) defines the case study approach as an investigation of a present-day phenomenon within its real-life environment when the limitations (between the phenomenon and the context) are uncertain and several sources of data are used. Case study research can also be used to explain a problem and to provide a basis to apply solutions to a given problem (Creswell, 2014). According to Yin (1984), there are three specific types of case studies: explanatory, descriptive, and exploratory. The present study used a descriptive approach, that is, it describes a phenomenon or intervention and the real context in which it occurred (Yin, 1984). Merriam (1998) defines the descriptive approach as being thick in narratives of the incident being investigated, mentioning that case studies offer insightful meanings that could be interpreted to assist future research, in turn advancing a particular field's knowledge base. The present study aims to identify barriers that

are associated with implementing the DVCP in southern regions of Illinois in addition to understanding the perspectives of individuals who utilize the DVCP. These findings could serve as insight for future research, thus potentially increasing program use and implementation in other counties of Illinois.

Summary

This chapter discussed the background of food assistance programs, specifically those programs connected with the Link Up Illinois Double Value Coupon Program. This chapter also discussed the history of farmers markets and the position of farmers markets in Illinois. Further, this chapter highlighted the theoretical background that was used as framework for this study. This study used the Health Belief Model as a framework to guide the investigation. In addition, the research questions (see Chapter 1) was explored using a qualitative case-study approach. The subsequent chapter describes, in detail, the study's methodological activities.

CHAPTER THREE

METHODS

This chapter discusses the methods of the proposed research investigation. Within the chapter, I explain how the necessary data and information were collected to address the purpose of the research investigation and the proposed research questions. This chapter outlines participant selection, data collection and analysis for the proposed study.

Case Study

To investigate the barriers that are associated with administering the Link Up Illinois Double Value SNAP Nutrition Incentives Program (DVCP) and to understand the perceptions of low-income individuals who use the DVCP, I employed a case study design. Schmid (1981) describes qualitative research from the perspective of the individual(s) being studied. There are two assumptions that are associated with qualitative research. First, Schmid (1981) argues that behavior is influenced by sociocultural, physical, and psychological environments which, cumulatively, form the foundation for naturalistic inquiry. Qualitative research involves interpretive and naturalistic approaches to subject matter by examining individuals and phenomena in their natural settings (Denzin & Lincoln, 1994). Using a naturalistic approach would allow for the description and interpretation of barriers local health department administrators face to administering the DVCP, as well as the perceptions of low-income participants who use the program. The second principle Schmid (1981) argues is that the qualitative approach assumes that human behavior goes beyond what the researcher can observe. In other words, the qualitative approach are the perceptions and meanings that are held by the participants. Equally, Krefting (1990) states that it is the researcher's responsibility to access both the subjective perceptions of the participants as well as their meanings within a given

context.

Case study research allows the exploration and understanding of multifaceted issues, and the approach is considered when a holistic, in-depth investigation is required (Creswell, 2014). Yin (1984) defines case study research as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (p. 23). A case study is distinctive and limited in scope; whether it represents a small geographical area or a limited number of subjects of interest, either is described and analyzed in detail (Creswell, 2014). This study investigated barriers local health departments face to implementing the DVCP, in addition to the attitudes and perceptions of individuals who currently use and have access to the DVCP. This investigation uncovered current problems local health departments face in terms of implementing the DVCP or a similar one and provide a basis to apply a solution. I analyzed multiple sources of evidence (i.e., data from DVCP participants and from DVCP administrators) within the context in which it naturally exists (i.e., at the farmers’ markets and in the administrative offices). The findings could increase program use, expansion of the program to the rural regions of Illinois, which ultimately would increase fruit and vegetable consumption among low-income individuals in Illinois.

Trustworthiness

Creswell (2014) explains that the concepts of validity and reliability do not hold the same meaning as in quantitative research. To ensure qualitative validity, I checked my findings for accuracy by applying certain procedures. Parallel to the positivist concept of reliability, qualitative studies focus instead on *transferability*; in other words, my approach to data collection and analysis should be well-described and consistent so that it might be duplicated by

different researchers and across other studies (Gibbs, 2007). There are several procedures that was used in this study to ensure methodological rigor. Creswell and Miller (2000) state that one of the strengths of qualitative research is that validity is assured by determining that the findings are accurate from the standpoints of both participant and researcher. This concern is addressed by ensuring that the interpretation of findings is trustworthy, authentic, and credible (Lincoln, Lynham, & Guba, 2011).

Trustworthiness measures the quality of research and refers to the extent to which the data, and the subsequent analysis of it, are believable (Jeanfreau & Jack, 2010). Creswell (2014) suggests that trustworthiness can be established by using four strategies: credibility, transferability, dependability, and confirmability. Trustworthiness refers to the “truth value” of the study’s findings and is assessed by the accuracy with which the researcher interpreted the participants’ experiences (Lincoln & Guba, 1985). To preserve credibility, I adopted Lincoln and Guba’s (1985) two mechanisms—triangulation and member checking. Triangulation is a method for judging the accuracy of data, and the technique requires the use of multiple data sources to build justification for themes (Creswell, 2014). Member checking is both a formal and an informal procedure, and it occurs continuously throughout the data collection process (Lincoln & Guba, 1985). Member checking serves a number of purposes: it provides participants the opportunity to assess their intentions; it gives them the opportunity to correct any errors of fact; and it also provides them with the opportunity to volunteer additional information and stimulate new information that may not have been mentioned previously (Lincoln & Guba, 1985). In this study, member checking was used to determine the accuracy of the findings by taking the final report of themes back to participants so they can check for an accurate representation and interpretation of their data.

Transferability refers to the likelihood that the findings of the study will be meaningful to others in a similar situation (Jeanfreau & Jack, 2010). Transferability, also called “fittingness,” determines whether research methods and findings are transferable to similar situations, populations, or phenomena (Streubert-Speziale, 2007). To address transferability, I used rich, thick descriptions to communicate the findings of this study. Creswell (2014) explains that using rich descriptions can place the reader into the research setting and provide an element of shared experiences, offering many perspectives about a particular theme. The aim of this study was to develop a better understanding of the barriers of not only implementing the DVCP but also the barriers of using it. Collecting rich descriptive information about this phenomenon highlights the hurdles both local health departments face in terms of implementing the DVCP and providing opportunities for healthy food consumption among individuals who live in rural areas. In addition, this information may initiate conversation between community stakeholders, farmers, and local administrators to improving the nutrition environment in rural areas.

Confirmability is a strategy used to ensure neutrality in the interpretation of the study’s findings. In other words, confirmability means that the findings are free from bias and are based instead on participants’ own responses and not any personal motivations of the researcher (Creswell, 2014). Establishing confirmability requires ensuring biases do not distort the interpretation of participant data so the researcher can fit them into a certain narrative. Polit, Beck, and Hungler (2006) suggest documenting the researcher’s decisions, thinking, and methods related to the study via a “paper-trail,” using methods such as transcripts or field notes to outline and describe the decision-making process. To lend confirmability to the study, I provided an audit trail highlighting every step related to data collection and analysis, and I used a reflexively journal to record my personal thoughts to protect against any biased interpretations.

These documents provided rationale for any interpretations of the data and help to establish accurate interpretations of participants' responses.

To check if the qualitative approach is reliable, Yin (2009) suggests documenting the procedures of the case study, including listing as many steps of the procedure as possible. Additionally, Yin (2009) recommends establishing a detailed case study protocol and database so that others can follow the procedure should they wish to conduct similar future research. I used two qualitative reliability procedures to make sure the approach was consistent and stable. First, I checked the transcripts of interviews to ensure that no mistakes or errors occurred during transcription (Creswell, 2007; Gibbs, 2007). Second, I made sure that coding of the data was consistent; to do so, I constantly compared the data with the developed codes (Creswell, 2007; Gibbs, 2007). Codes in qualitative research represent emergent concepts found in various data sources, such as documents, participant observation field notes, and interview transcripts (Saldana, 2016). In this study, the researcher transcribed data from interview transcripts, focus group transcripts, and observation(s) of the farmers markets. Thereafter, the researcher coded the data for emergent concepts, refined and recoded, and eventually formed into themes.

Health Belief Model Constructs

The Health Belief Model attempts to predict and explain behavior by concentrating on the attitudes and beliefs of individuals (Glanz, Rimer, Viswanath, 2008). The scope of this research investigation focused on four constructs of the Health Belief Model (HBM). The construct *perceived benefits* refer to taking action towards the prevention of disease or illness, and the direction of action that an individual chooses will be influenced by the beliefs regarding that action (Hochbaum, Rosenstock, & Kegels, 1952). In this investigation, I assessed individual's perception about the benefits of using the DVCP and their current food purchase

behaviors. In addition, I also assessed local administrator's perception of the food environment and implementation of the DVCP. Nevertheless, individuals may not take action toward a healthy behavior even if they believe that the benefits to taking action are effective. This may be due to *perceived barriers* of taking action. Perceived barriers may relate to the DVCP itself, barriers to implementing the program in various jurisdictions/counties of Illinois or lack of funding or staff. Perceived barriers could also be attributed to beliefs of the cost of fresh fruits produce and transportation barriers. The construct *cues to action* refers to the stimulus that is needed to prompt the decision-making process to accept the suggested health action (Hochbaum, Rosenstock, & Kegels, 1952). The cues could be internal (created by the individual who performs the behavior i.e. high blood pressure or cholesterol) or external (advise from others, flyer or promotion). Cues to action was measured by assessing individuals influences to shop at the farmers market and use the DVCP, in addition to education of the DVCP within communities regarding healthy eating programs. Lastly, the construct *self-efficacy* refers to the individuals level of confidence in performing the behavior, which is directly related to whether the individual performs the desired behavior (Bandura, 1977). Self-efficacy was measured by measuring individual's perceptions of the DVCP who use the DVCP and the description of local health department employee's knowledge and confidence in implementing the DVCP. Aligned with the research questions, the corresponding interview questions and HBM constructs are detailed in Table 6.

Table 6.
 Summary of Research and Interview Questions with HBM Constructs

Research Questions	Interview Questions	HBM Constructs
R1: What factors have influenced local organizational administrators to use or reject the Link Up Double Value Coupon Program (DVCP) for farmers markets in their respective jurisdictions?	1. What do you think might be some ways to both <i>improve</i> and to <i>sustain</i> the food environment in your jurisdiction?	Perceived Benefits
	1. What community or state partnerships do you feel are necessary to improve the community nutrition environment for disparate communities or populations? a. Are any of these partnerships currently established? i. (If “yes”) Which ones? ii. (If “no”) Why do you think they have not yet been established?	Perceived Barriers
	1. What do you know about the Double Value Coupon Program? What are your thoughts about it? a. Has your organization implemented a program similar to the DVCP? b. Have community members suggested implementation of the DVCP or any similar program?	Cues to Action
R2: What do stakeholders of the DVCP perceive as the program’s greatest strengths and weaknesses?	1. Speaking now on overall community health, what specific ways does your organization improve the nutrition of the communities you serve? a. Do you feel that the DVCP would “fill a gap” to improve the community nutrition environment? i. (If “yes”) Could you give me some specific examples of ways you foresee that it might help? ii. (If “no” or “it doesn’t”) Why do you feel it wouldn’t improve the community nutrition environment? Specifically, what areas do you feel would be ineffective? 2. What do you think are some of the benefits of <i>farmers markets</i> implementing the DVCP? a. For <i>shoppers</i> who use the DVCP, what do you think are some of the benefits for them?	Perceived Benefits

	<ol style="list-style-type: none"> 1. What do you think are some barriers to exposing and/or expanding the reach of the DVCP to your community? <ol style="list-style-type: none"> a. What do you think would be the best way(s) to reduce those barriers? 2. What are the demographics of individuals who seek out information about the DVCP? (Probing: Do they come from certain areas of town/the county? Do they share any particular demographic characteristics?) <ol style="list-style-type: none"> a. Are there any key demographic segments of the population that you think might not be adequately seeking out and/or receiving the benefits of the DVCP? <ol style="list-style-type: none"> i. (If “yes”) Why do you think that <i>difference</i> might exist? b. Are there individuals you think are receiving DVCP benefits but not <i>redeeming</i> them adequately? <ol style="list-style-type: none"> i. (If “yes”) What issues do you think might make it difficult for individuals to redeem their coupons? 3. What do you think are some of the barriers to exposure and/or expanding the reach of the DVCP throughout Southern Illinois? <ol style="list-style-type: none"> a. What do you think would be the best way(s) to reduce those barriers and expand/better market the DVCP? 	Perceived Barriers
R3: How do individuals receiving public assistance describe their experiences using the DVCP at the Carbondale Farmer’s Market?	<ol style="list-style-type: none"> 1. How do you think you personally benefit from using the DVCP? 2. Tell me about any experiences you’ve had with the DVCP. <ol style="list-style-type: none"> a. What would you consider some of your <i>best</i> experiences? Could you describe them? 	Perceived Benefits
	<ol style="list-style-type: none"> 1. Tell me about any experiences you’ve had with the DVCP. <ol style="list-style-type: none"> a. How about disappointments using the DCVP? Could you describe those as well? 2. What about the DVCP do you think needs improvement to make it better, more effective, or more useful to you and others who might benefit from it? 3. Suppose you were in charge of making <i>just one</i> change to the DVCP that would make it better, and let’s also assume that “money is no object.” What change would you make and why? 	Perceived Barriers
	<ol style="list-style-type: none"> 1. What are some factors that influence your decision to purchase fresh produce? <ol style="list-style-type: none"> a. How easy or difficult is it for you to get to places where you can shop for fresh produce? I’m referring specifically to transportation options. 	Cues to Action

	<ul style="list-style-type: none"> b. How does quality play a role in your decisions to shop for fresh produce? c. How does price influence your decisions to shop for fresh produce? d. What are your thoughts on the selection of fresh produce in the local community when shopping? e. Is access a significant factor when shopping for fresh produce? [If “yes”] Could you give me some examples of what you mean by <i>access</i>? <p>2. About how often do you shop at the Carbondale Farmer’s Market or Carbondale Community Farmers Market at the Carbondale High School?</p> <ul style="list-style-type: none"> a. What would you consider your greatest influences to shop at the farmers market? By <i>influences</i>, I mean people, things, or even emotions you might have. 	
	<p>1. Discuss your level of comfortability when using the DVCP at the market. Is it easy or hard to use? Could you give me some examples?</p>	Self-Efficacy

Site Setting and Selection

To examine the DVCP from the perspective of low income individuals who use the program, I chose the Carbondale Farmer's Market as a data collection site because it is the only market located in the Illinois 12th Congressional District that implements the program during the summer months (The Experimental Station, 2017). The Carbondale Farmer's Market has the authorization to administer the DVCP for Seniors, WIC recipients, and SNAP recipients. As such, the Carbondale Farmer's Market is authorized to conduct DVCP transactions, which take place at a designated table or market stand. At the designated location, SNAP recipients can use their Illinois electronic benefit transfer (EBT) or Link card to purchase tokens redeemable at farmers market stands selling fresh produce and meats. In addition, SNAP recipients can double the value of their tokens, and senior citizens and WIC recipients can double the value of their FMNP coupons by participating in the DVCP. The DVCP delimits recipients to using the double value "dollars" solely on fresh fruits and vegetables. Therefore, farmers market vendors who either do not participate in the program or who do not sell fresh fruits and vegetables are ineligible. Further, the Carbondale Farmer's Market partners with the Jackson County Health Department to implement the Link Up Illinois Double Value SNAP Nutrition Incentive Program.

To explore barriers associated with administering the Link Up Illinois Double Value SNAP Nutrition Incentives Program (DVCP), local health departments were chosen as another data collection setting. In particular, Women, Infants, and Children (WIC); the Supplemental Nutrition Assistance Program (SNAP); and the Senior Farmers Market Nutrition Program (SFMNP) are all administered by local and state health departments. Additionally, funding for the DVCP originates from federal grants. Therefore, some sort of partnership is needed between local organizations/stakeholders and local farmers/community members. Local health

departments located in the Illinois 12th Congressional District were chosen because of their geographic location and knowledge of food access within the counties they serve. Congressional districts are based on population. Like all states, Illinois must conform with the equal population requirements where the U.S. Constitution requires that each district have about the same population, or the same number of people (Levitt, 2018). As such, the 12th Congressional District spans 11 counties: Alexander, Franklin, Jackson, Monroe, Perry, Pulaski, Randolph, St. Clair, Union, Jefferson and Williamson (Figure 1).

Within those counties, eight local health departments serve the counties' residents. The Southern Seven Health Department & Head Start is located in Ullin, IL and serves seven counties including Alexander, Hardin, Johnson, Massac, Pope, Union, and Pulaski. Currently, no farmers market exists within a 10-mile radius of the Southern Seven Health Department & Head Start. However, there are two markets (the Leaf Food Hub and the Anna/Union County Farmers Market) that exist within the counties the Southern 7 Health Department and Head Start serve. The Franklin Williamson Bi-County Health Department is located in Marion, IL; it serves both Williamson and Franklin counties and has one farmers market located within 10 miles of the organization (Table 1). In total, within the Franklin/Williamson counties are five farmers markets. The Jackson County Health Department is located in Murphysboro, IL and has four farmers markets located within 10 miles of its address (Figure 2).

There are an additional three markets that exist within Jackson county. The Jefferson County Health Department is located in Mt. Vernon, IL; the Monroe County Health Department is located in Waterloo, IL; the Perry County Health Department located in Pinckneyville, IL; Randolph County Health Department located in Chester, IL; and St. Clair County Health Department located in Belleville, IL. No farmers market exists within 10 miles of either the

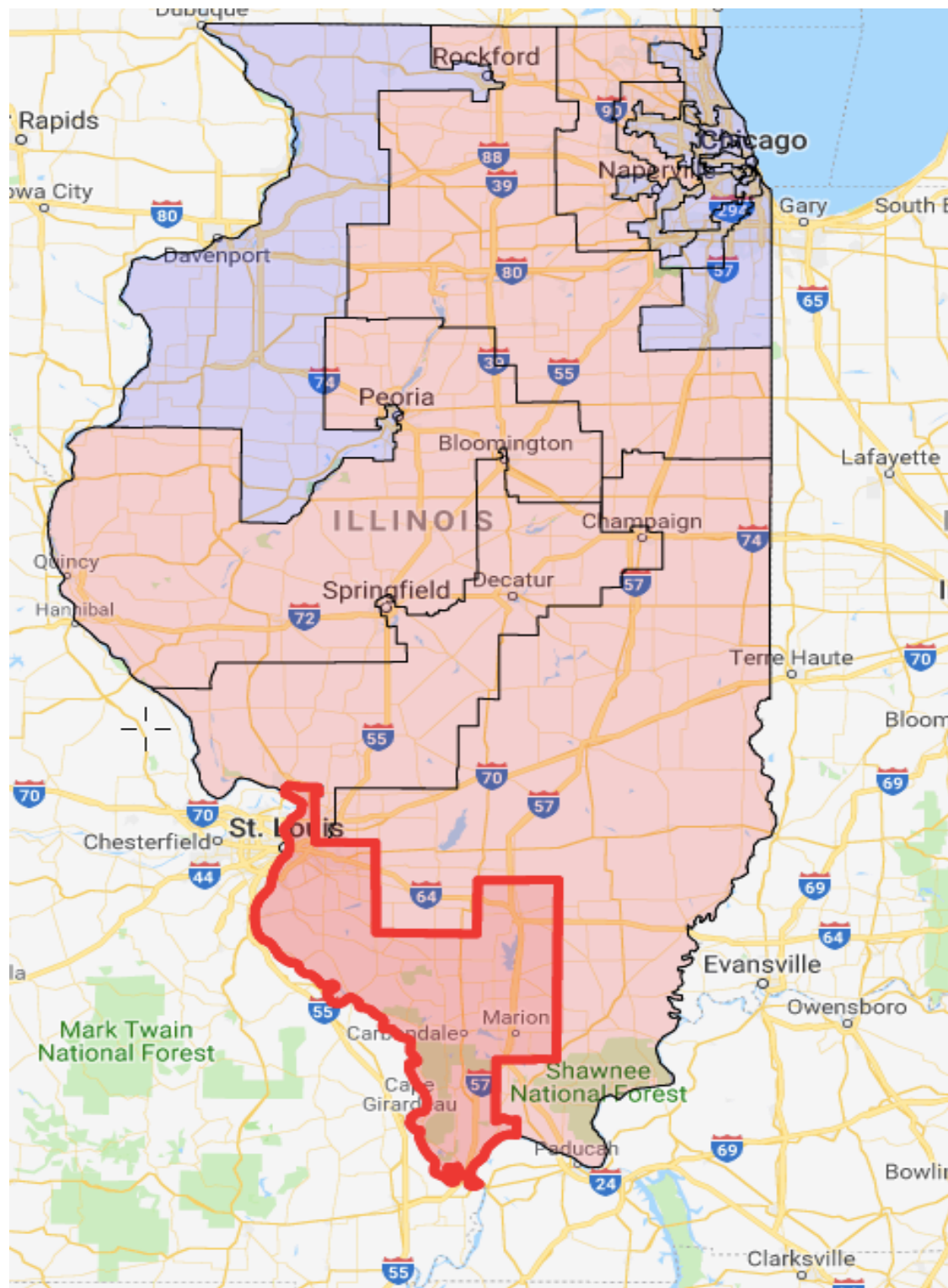


Figure 1. Illinois 12th Congressional District

Legend

Case study boundaries; counties within the 12th Congressional District

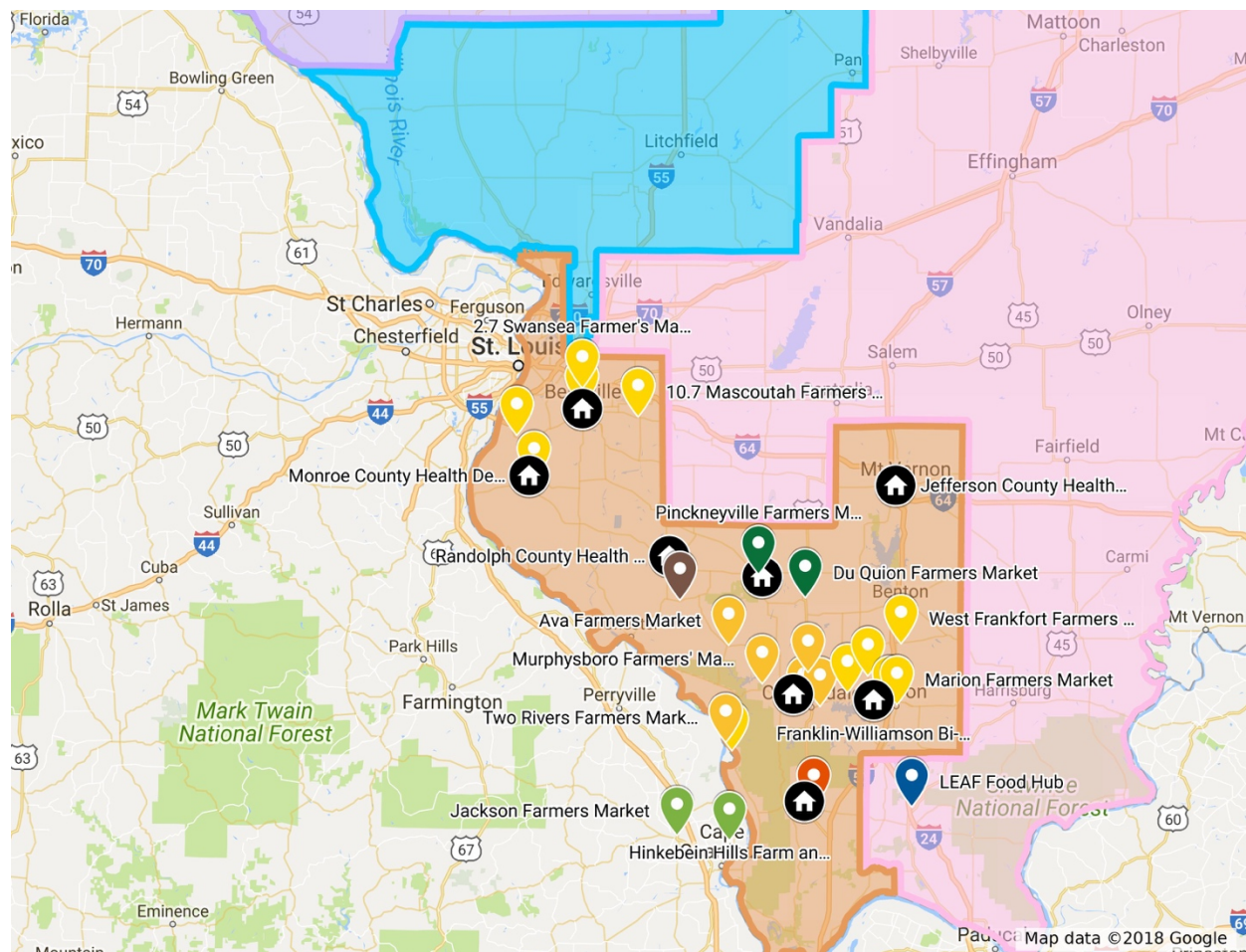


Figure 2. Farmers Markets and Health Departments within the 12th Congressional District

Legend

House: Local Health Departments within the 12th Congressional District

Marigold: Within 12th Congressional District, DVCP not implemented

Yellow: Less than 10 miles from Local Health Department


Green: Within 12th Congressional District, Accepts SNAP, WIC, SFMNP

Hunter Green: Less than 10 miles from Local Health Department, DVCP not implemented

Blue: Outside of 12th Congressional District

Brown: Within 12th Congressional District, Greater than 10 miles from Local Health Department

Orange: Within 12th Congressional District, Implements similar program

 Case Study Boundaries, 12th Congressional District

Jefferson County Health Department or the Randolph County Health Department. However, within Monroe County there are two farmers markets; St. Clair County has three farmers markets, and Perry County has two (Figure 2).

Participants

The researcher decided upon a purposeful sampling method for the study because it represents the most appropriate sampling method for naturalistic research (Isaac & Michael, 1995). I intentionally selected participants who have experience with the research problem (Creswell, 2007). Specifically, a total of 11 interviews were conducted for this study. Eleven interviews were conducted because there are 8 local health departments and 2 stakeholders involved in the DVCP in the 12th Congressional district. I selected individuals who have administrative roles related to nutrition (e.g., health educators) in each of the eight aforementioned local health departments. Additionally, to assist with triangulation of the data, I interviewed local stakeholders in the farmers markets and the DVCP, including the market manager at the Carbondale Farmer's Market and an administrator at the Neighborhood Co-Op Grocery in Carbondale, IL.

To understand the perceptions of low-income farmers market shoppers, I conducted one focus group with community members who use the DVCP at the Carbondale Farmer's Market. Focus groups are meetings conducted by the primary investigator or by a group leader using questions or interview guides to discuss a particular subject matter (Jeanfreau & Jack, 2010). Focus groups are considered to be effective when addressing sensitive topics, and they can elicit information from multiple participants (Strerbert-Speziale, 2007). Morgan (1996a) recommends a moderate sized focus group consisting of six to eight individuals. A moderate sized focus group has many advantages, including that participants have the opportunity to contribute to

dialogue and that the dynamic of the conversation is different from that of a larger group (Morgan, 1996a). Di Noia, Dorothy, Weber, and Debbe (2017) conducted a study similar to the one proposed herein that investigated perceived barriers to purchasing fruit and vegetables at farmers markets and held focus groups with 3-5 WIC enrolled women per group. Focus groups held by Di Noia and colleagues (2017) were guided by a written protocol and lasted about 45 minutes until saturation was reached. Freeman (2006) argues that one of the main strengths of a focus group is the interpersonal communication between the participants, highlighting similarities and differences of beliefs and attitudes among participants. The researcher conducted a moderate sized focus group of 7 participants to uncover similarities and differences among participants who are willing to convey their personal experiences with the DVCP. Morgan (1996b) argues that smaller groups are appropriate for emotionally charged topics which will in turn, generate higher levels of participant involvement. Additionally, smaller groups allow participants to more time to discuss their views and experiences with the given topic to which they are all highly involved (Morgan, 1996b).

Data Collection

To recruit participants for the research study, I contacted local health department administrators and farmers market stakeholders via telephone to schedule a time for face-to-face semi structured interviews. After establishing consent, the researcher scheduled interviews to take place at the participants' employment facilities (i.e., their natural settings), and the researcher used a standardized protocol to begin the interview process. I read the informed consent and offered an opportunity for the participant to refuse participation if so desired. Should participants refuse to participate, I immediately stopped the process and thanked them for their time. With consent of the participant, interviews were audio-recorded simultaneously using

two handheld recorders. If the participant refused to be audio recorded, the researcher instead took notes on the interview. I conducted 11 semi-structured interviews with the expectation of thematic saturation. However, if saturation were not met, I would have continued to recruit participants until no new themes were established (Creswell, 2007).

The interviews included open-ended questions to elicit rich, subjective data from the participants (Appendix E – G). There are several advantages of conducting interviews: (1) they are useful when participants cannot be observed, (2) they allow participants to provide historical information, and (3) and they permit the researcher to have control over the questions asked (Creswell, 2007). A standardized interview protocol was used during all of the qualitative interviews (Appendix E – G). The interview protocol contains an overview of the study, consent to participate and record the interview, and the interview questions. Creswell (2007) suggest probing for at least four to five questions for further explanation of participants' ideas. In this study, I included five probing questions to follow up and ask individuals to elaborate on their responses if needed. This study interviewed individuals who use the DVCP, individuals who hold an administrative role in local health departments, and stakeholders of the DVCP. Specifically, the researcher interviewed individuals who held an administrative role in the WIC or nutrition division of the local health department. Interview questions included “What do you know about the Double Value Coupon Program?, What are your thoughts about it?, and Has your organization implemented a program similar to the DVCP?” (Appendix E). Likewise, the researcher also interviewed local stakeholders such as the Farmers Market Manager. Interview questions include: “What do you think are some of the benefits of farmers markets implementing the DVCP?, For shoppers who use the DVCP, what do you think are some of the benefits for them?” (Appendix F).

To recruit participants for the focus group, I created a promotional flyer seeking individuals willing to participate in the study (Appendix A). To assist with promoting the focus group, I placed flyers at the Carbondale Farmer's Market, specifically at the Jackson County Health Department Stand where DVCP transactions take place. I also placed flyers at the Neighborhood Co-Op Grocery, the Jackson County Health Department WIC Division, and at Senior Adult Services. Eligibility for participation in the focus group is described on the promotional flyer with the following four criteria: (1) Current SNAP recipient; (2) 18 years or older; (3) Able to read, write, and speak English; and (4) Have experience with the DVCP. The recruitment flyer included a cell phone number and email address so participants can email or text the number for questions regarding the focus group (Appendix A). In addition, prospective participants were asked to call or text the number located on the flyer to indicate interest in participating in the focus group.

Prior to conducting the focus groups, approval from the Institutional Review Board (IRB) was obtained. The focus group was held at the Neighborhood Co-Op Grocery, which is adjacent to the Carbondale Farmer's Market where individuals can use the DVCP. The purpose of this location is to target individuals who utilize the program in a location that is easily accessible. In addition, an interview schedule was used to ensure that participants' time is respected. Breen (2006) recommends the following procedural steps: (1) welcome participants; (2) give an overview of the topic to participants; (3) give a statement of ground rules of the focus group and guarantee confidentiality; (4) follow with questions about the subject for participants, beginning with their general experience to specific problems; and (5) obtain demographic information from the participants. In this study, all five steps recommended by Breen (2006) were used in addition to following a written protocol to guide the focus group discussion (Appendix B). Participants

were asked to complete both the demographic sheet (Appendix C) and the consent form (Appendix D) prior to the focus group starting. The demographic sheet included information such as age, gender, educational attainment, ZIP code, and marital status (Appendix C). Upon consent of the participant(s), the discussion was recorded, and an outsider or volunteer was used to take notes of the main points of the discussion. Refreshments were provided, along with a \$10 gift card to the Neighborhood Co-Op Grocery upon completion of the focus group. The researcher asked questions pertaining to individual's experiences with the DVCP. Focus group questions include "How do you think you personally benefit from using the DVCP? and Tell me about any experiences you've had with the DVCP" (Appendix H). Immediately following the focus group, notes that were taken by the volunteer was be typed and recordings were transcribed.

Participant observation is suitable for collecting data on naturally occurring behaviors in their usual contexts (Creswell, 2007). Observation methods are useful to researchers in a variety of ways. Researchers are able to view nonverbal expressions, determine interactions within a given setting, gain an understanding of how individuals communicate with each other, and document how much time is spent on various activities (Kawulich, 2005). Observing individuals in their natural setting allows the researcher to gain first-hand experience with a setting, instead of guessing the context. In addition, it provides a chance to learn things that individuals may be unwilling to disclose in an interview. The degree to which the researcher involves him/herself in participation makes a difference in the quality and amount of data he/she will be able to collect (Gold, 1958). The researcher implored the participant as an observer stance, where the researcher is a participant in the group who is observing others and who is interested more in observing than participating (Gold, 1958; Kawulich, 2005). The aim of observing is to increase

familiarity with behaviors and practices of individuals who use the DVCP, local stakeholders, and administrators at the farmers markets. Merriam (1998) suggest that in order to determine what a researcher should observe “depends on the research question, but where to focus or stop cannot be determined ahead of time” (p. 97). Therefore, the purpose was to uncover barriers associated to implementing the DVCP and the perspectives of low-income individuals who utilize the DVCP. Conducting observations involves a variety of activities and considerations for the researcher, which includes deciding what and when to observe, keeping field notes, and writing up the findings (Kawulich, 2005). The researcher observed individuals at the farmers market every Saturday in July from 7 a.m. to 1 p.m. or during business hours of the market. In addition, the researcher took notes throughout the entire day of the interactions of farmers with DVCP recipients, and administrators/stakeholders with DVCP recipients. The researcher also recorded behaviors of the DVCP recipients, administrators and stakeholders. Merriam (1998) recommends paying attention to difference perspectives, for example focusing on a single individual, activity, interaction then the entire situation overall. In addition, she recommends concentrating on the first and last remarks of a conversation since these are most easily remembered (Merriam, 1998). The researcher carefully looked for interactions that occurred at the Carbondale Farmer’s Market, listened carefully to conversations, nonverbal expressions, and gestures, and also kept a running observation record as recommended by DeWalt and DeWalt (2002).

Data Analysis

The audio recorded interviews were transcribed verbatim into a Microsoft Word document and spot-checked for accuracy. Participants were assigned pseudonyms and any data was labeled solely with these pseudonyms to protect confidentiality. Data were organized,

managed and coded using the qualitative data software ATLAS.ti 8. Coding is the process of organizing the data by grouping chunks of text and writing a word that representing the category (Creswell, 2007). Coding involves using the actual language of the participants and using a term to represent or label the language into categories. There are two main cycles of the coding process. Saldana (2016) explains that during the first cycle, the researcher preliminarily codes the data based on concepts that may include long sentences, pages, or single words. The second cycle of the process includes the process of refining or reconfiguring the codes (Saldana, 2016). There are also various ways that the data might be coded. For instance, data could be process coded, using words or phrases, or descriptively coded, using one word; codes can also be used to summarize or condense data (Saldana, 2016). To guard against excessive subjectivity, an independent coder analyzed the transcripts to compare with the primary investigator's initial coding results. If discrepancies were present, the two coders discussed their findings to reach consensus. In the event that consensus cannot be reached, a third reader would have been identified to code the data.

Summary

This chapter discussed the research design, method, sampling procedures, data collection, and analysis for this study. Also, the chapter outlined participant recruitment and measures to determine validity of the study. The next chapter presents data from the semi-structured interviews of local stakeholders and administrators of the local health departments in the 12th congressional district, along with the data from the focus group comprised of individuals who utilize the DVCP.

CHAPTER FOUR

DATA INTERPRETATION

This chapter describes the steps involved in the qualitative analysis and interpretation of the data, including the coding process. Additionally, it presents the profiles of individuals who participated in interviews and the focus group, including a summary of demographic information for all participants in the study. The succeeding chapter assesses whether and how the data illuminated and answered the research questions of this study.

Introduction: The Research and the Researcher

In analyzing the data, part of the process implies my understanding of how to make sense of the data. According to Malterud (2001), “a researcher’s background and position will affect what they choose to investigate, the angle of investigation, the methods judged most adequate for this purpose, the findings considered most appropriate, and the framing and communication of conclusions” (483-484). Using this form of practice with the data meant taking a step back from my everyday position, including personal attributes such as my attitudes, knowledge, or experiences about the research subject. As such, my feelings ranged from being familiar with participants’ views, to unfamiliar feelings that were difficult for me to process. Understanding I would encounter these variant levels of familiarity encouraged me to explore the data with a sense of flexibility, openness, and creativeness with participants. To foster reflexivity, I developed and maintained a reflexive journal, as recommended by Lincoln and Guba (1985). The purpose of the reflexive journal was to make regular entries throughout the entire research process, including notes on the logistics of the study (data collection, the nutrition environment, access, and transportation); methodological decisions (coding data and thematic development);

the reasons for the decisions; and most importantly, reflections on the research process in terms of my own values, opinions, and beliefs.

Data Collection

Data were collected between June and July 2018. Data collection consisted of a demographic questionnaire (Appendix C) along with three versions of an open-ended qualitative interview protocol (Appendix E-G). The open-ended interview protocol included scripts for individuals who held an administrative role in nutrition at a local health department and for farmers market stakeholders. The focus group includes an outline which describes in detail the protocol and questions used for data collection (Appendix B).

Data Analysis

The de-identified qualitative data were transcribed verbatim into a Microsoft Word document. All participants were provided with pseudonyms and are referred subsequently by those pseudonyms. The data were organized, managed and coded using the qualitative data software ATLAS.ti 8, an electronic qualitative data analysis package. Statistical Package for the Social Sciences (SPSS) version 24 was used to analyze demographic data, and the demographic characteristics of the sample are presented below.

Summary of Demographics

There was a total number of 19 individuals who participated in the study. Of this sample, the average age of participants was 42.11 years ($s:17$, range: 18-74). The majority were female (89.5%), White (68.4%), and college educated (63.2%), with 56.2% reporting full-time employment status (see Table 7). Of the total number of participants, there were 11 interviews conducted with individuals who held an administrative role in nutrition at a health department

Table 7
All Demographic Information of Participants

Variable	n	SD
Age (years, N=19)	42.11	17.16
Variable	n	%
Gender		
Female	17	89.5
Male	2	10.5
Race/Ethnicity		
White	13	68.4
Black or African American	4	21.1
American Indian or Alaska Native	1	5.3
Hawaiian Native or Pacific Islander	1	5.3
Employment Status		
Full Time	10	52.6
Part Time	6	31.6
Unable to Work	2	10.5
Not Employed	1	5.3
Level of Education		
College Undergraduate Degree	6	31.6
Graduate or Professional Degree	6	31.6
Some College or Technical School	5	26.3
Some High School and GED Certificate	1	5.3
6 th Grade	1	5.3
Government Benefits		
None	10	52.6
SNAP Benefits	7	36.9
WIC Benefits	2	10.5

Table 8
Interview Demographic Information

Variable	n	SD
Age (years, N=11)	47.54	10.90
Variable	n	%
Gender		
Female	10	90
Male	1	9
Race		
White	9	81.8
Black or African American	2	18.2
Employment Status		
Full Time	9	81.8
Part Time	2	18.2
Level of Education		
Graduate or Professional Degree	6	54.5
College Undergraduate Degree	5	45.5
Government Benefits		
None	10	90
WIC Benefits	1	9

(see Table 8). A majority of the individuals who held an administrative role in nutrition were full-time employees (81.8%) and had attained a graduate professional degree (54.5%). The average age of participants was 47.54 years ($s:11$, range: 33-69). An additional eight individuals participated in the focus group (see Table 9). A majority of those individuals were female (87.5%), White (50%), and employed part time (50%). The average age of individuals in the focus group was 34.62 years ($s:22$, range: 18-74), and over half reporting having completed some college or technical school (62.5%). A majority were SNAP recipients (87.5%).

Research Methodology Applied to the Data Analysis

Development of coding protocol. Following all data collection (interviews, focus group, and field notes), I transcribed recordings verbatim into Microsoft Word documents. Transcripts were typically between 10 and 15 single-spaced pages in length, and I read through all of them to ensure descriptive validity and gain an overall understanding of each session. I labeled each of the transcribed participant narratives including each change of narrative between researcher and participant, thus allowing a clearer presentation of data when final themes and codes were described and supported by quotations. I then followed the three coding cycle processes as described by Saldana (2016). A combination of descriptive and in vivo coding was used.

For the first coding cycle, the data were coded into Microsoft Excel using what Saldana (2016) refers to as an elemental coding method. One of the sub-categories of this method includes descriptive coding, which gives a synopsis of a word or phrase and the basic topic of the passage of qualitative data (Saldana, 2016). Two advantages of descriptive coding is its usefulness when comparing the impact of findings across different studies and the documentation and analysis of material products and physical environments (Saldana, 2016).

Table 9
Focus Group Demographic Information

Variable	n	SD
Age (years, N=8)	34.62	21.84
Variable	n	%
Gender		
Female	7	87.5
Male	1	12.5
Race		
White	4	50
Black or African American	2	25
American Indian or Alaska Native	1	12.5
Hawaiian Native or Pacific Islander	1	12.5
Employment Status		
Part Time	4	50
Unable to Work	2	25
Full Time	1	12.5
Not Employed	1	12.5
Level of Education		
Some College or Technical School	5	62.5
College Undergraduate Degree	1	12.5
Some High School and GED Certificate	1	12.5
6 th Grade	1	12.5
Government Benefits		
SNAP Benefits	7	87.5
WIC Benefits	1	12.5

The goal of this initial coding cycle was to acquire a summary the overall composition of the data and to categorize the data in an organizational manner. After the first cycle was complete, an independent coder verified the initial descriptive codes.

The first-to-second cycle coding method consisted of an eclectic coding method. This method is used for refining the first cycle coding choices (Saldana, 2016). I employed an eclectic coding method because it is ideal for beginning qualitative researchers who are learning how to code data. This method is also considered a form of open coding to break down the data for interpretation (Glaser & Strauss, 1967; Saldana, 2016). For the first-to-second cycle coding, I conducted a line-by-line analysis of the data, paying particular attention to detail and adding more codes to the data. After the first-to-second cycle coding method was complete, here too, an independent coder verified the open codes. There was a total of 20 discrepancies present in this coding cycle. The two coders established a time and a date to meet to discuss the findings and reach consensus, following which 12 codes were eliminated, and 8 codes were refined.

The goals of the second coding cycle included reorganizing and reanalyzing data that were coded, as well as categorizing the codes thematically or conceptually (Saldana, 2016). Pattern coding was used for the second coding cycle. By definition, pattern codes allow the researcher to group summaries (or details) into a smaller number of categories, themes or concepts; they are comprised of explanatory or inferential codes that help identify an emerging theme or explanation (Saldana, 2016). During this stage of the coding process, I analyzed and sorted the codes into categories to detect consistent and overarching themes for the data. I reviewed first and first-to-second cycle codes to assess their “commonality” and assigned a pattern code. As such, I used the pattern coding method to develop a statement that describes a

major theme, or “a pattern of action, a network of interrelationships, or a theoretical construct from the data” (Saldana, 2016, p. 238).

Reaching level one consensus. During each phase of the coding cycle, an independent coder or third-party validated and independently coded the data. Two of the key reasons of having data analyses validated by others include member checking and interrater reliability. Member checking was used to provide participants the opportunity to assess whether their intentions were accurately represented in the transcripts, giving them the opportunity to correct any errors of fact (Lincoln & Guba, 1985). Following each interview, participants had the opportunity to review each transcript before the coding process. The majority of participants trusted the process and did not want to review the transcripts, while others were emailed a copy of their transcript and verified their information.

Interrater reliability, on the other hand, involves a researcher independently reviewing and exploring the interview and focus group transcripts, data analysis, and emerging themes (Campbell, Quincy, Osseman, & Pedersen, 2013). Ensuring interrater reliability can serve as potential safeguard against researcher bias and could provide additional insights into theme development (Burnard, Gill, Stewart, Treasure, & Chadwick, 2008). For the purposes of this study, an independent coder reviewed the data for each of the coding cycles previously mentioned. This process entailed reading and re-reading data to search for, and identify, emerging themes in addition to searching for overall understanding of the data. Intercoder agreement was made after each coding cycle. Intercoder agreement requires that two or more coders are able to reconcile through thoughtful discussion any coding discrepancies that may have occurred for the same unit of text (Campbell et al., 2013; Garrison, Cleveland-Innes, Kool, & Kappelman, 2006).

Participant Profiles

Local health department program managers in nutrition and farmers market stakeholders participated in semi-structured, face-to-face interviews in the participants' natural settings, and I conducted, recorded, and transcribed a total of 11 interviews. Three researcher-developed protocols guided the interviews of individuals who held administrative roles in nutrition at local health departments (WIC or the nutrition division); local stakeholders, including a farmer who held a role at the local farmers market; a farmers market manager; and an administrator of a local organization that was active in the implementation of the Double Value Coupon Program (DVCP). The interviews included open-ended questions (Appendix E – G) and included five probing questions to follow up and ask individuals to elaborate on their responses. Interviews averaged 50 minutes in length and was recorded upon consent. The following data is presented in narrative form, wherein data are arranged to tell the story of participants.

Rachel R. Rachel R. is a full-time health department program coordinator with an educational background in food and nutrition. In terms of her work experience, she stated, “Straight out of college, I began my career at the health department in 1995.” Prior to her position with the health department she worked with local non-profit organizations, specifically “faith-based organizations implementing food banks who assist low-income individuals and seniors residing in rural neighborhoods” during her time at a southern university. Rachel’s health department serves all ages, educational levels, and households. She expressed that her city has a “very limited number of grocery stores” and that about “50% of individuals [who] come in...say they need additional nutritional assistance” in addition to the assistance they already receive (i.e., WIC and/or SNAP benefits). Rachel mentioned that she has “no knowledge” of the DVCP and that there were no implementation suggestions from any local community members. As a

program coordinator for the health department, she noted that individuals residing in that specific county have access to the “fruit and vegetable voucher where individuals can get fresh, frozen, or canned fruits and vegetables.” Although Rachel had no knowledge of the DVCP, she mentioned that the DVCP would “absolutely” fill a need within the community. She regretfully conceded that “a lot of our clients probably don’t even know what a farmers market is or know where to find them.” To improve the nutrition of the community, Rachel alluded to education and stated that the health department offers “nutrition and health education, diabetes education programs, and smoking cessation programs to all clients who are in need.” To improve the food environment of Rachel’s community, she argued that “making things more accessible to our clients [is important because] transportation is a big issue for some people.” Rachel’s energetic stance on the nutrition environment ignites passion at her organization, and she was very excited to speak about her organization and the programs offered.

Mary M. Mary M. is part-time employed in an administrative role in nutrition at her local health department. She graduated from a nearby southern state university, from which she attained her Bachelor of Science in Nursing. Mary has worked for the health department for over five years and has had various leadership positions throughout her employment. According to Mary, her health department serves about “95% white individuals, 2.5% African-American, [and] 2.5% Hispanic.” She describes the county her organization serves as “a pretty healthy county” where only about “25% of individuals mention that they need additional nutritional assistance” along with what they may currently be receiving. Mary had never heard of the DVCP and stated that her organization has not previously tried implementing a similar program. In spite of not having knowledge of the DVCP, Mary agreed that “the DVCP would fill a gap” to improve the nutrition environment and provide nutrition education to improve the health of the

communities. Although characterizing her county as “uppity and wealthier,” she pointed out that one of the barriers of exposing the DVCP to members of the community and her organization is the “stigmatization of being on nutritional assistance and how individuals don’t want to be seen as needing additional assistance.” Mary observed that although her organization has many resources to provide to individuals in the community, not too many people utilize their programs. Mary is very passionate about nutrition and the health of others, and one of her goals is to combat the stigma of receiving nutritional assistance.

Katrina B. Katrina B. is a full-time health department program coordinator working at her local health department that serves two counties. She graduated from a nearby southern university where she pursued a graduate degree in health care management. Katrina has worked for the health department for a little over four years and resides in a nearby community. Katrina expressed that, between the two counties, her health department serves “92% white, 4.62% Black non-Hispanic, 2.94% Hispanic, [and] 1.16% Asian in the last month.” Katrina’s health department serves all ages and family sizes, where “the average size was 2-6 individuals.” She pointed out that there are many challenges of eating healthy in the county, but the most significant challenge is cost, remarking, “It seems like healthier foods cost more than non-healthy foods in this county.” Additionally, she noted that roughly “50-75% of individuals come in and mention they need additional nutritional assistance.” To improve the nutrition of the community, Katrina’s health department implements a WIC program, has a case management program, and provides nutrition education on site and at various public health functions in the community. Further, the health department at which Katrina works also implements the farmers market vouchers and collaborates with the Southern University Extension to conduct cooking and nutrition education courses for individuals in the community. Katrina was very familiar with,

and receptive of, the DVCP due to the fact that a previous health educator at her health department was in charge of implementation of the program. Katrina mentioned, “My lack of staff or employees prohibits me of implementing this wonderful program; however, I’m not so sure if community members would take advantage.” She continued remarking, “This is a big issue... We can’t even get them [community members] to use the first ones,” referring, in this case, to the fruit and vegetable voucher currently implemented within their organization. Katrina is very passionate about her work and its impact on the community’s nutrition and is continuously thinking of new ways to increase her community members’ fruit and vegetable redemption rate.

Laila J. Laila J. holds a director position for a health department southeast of Missouri, where she has been working for over 10 years. She obtained her undergraduate and graduate degree from a southeastern university where she “fell in love with community-based interventions and programming.” Laila’s health department serves all demographics, and she mentioned that her community serves “a large indigent population,” referring to “Medicaid eligible people...SNAP benefit eligible, and individuals who are a little higher than the poverty zone.” She described the educational level for the community as “very low, usually some high school or graduates of high school.” Laila stated that some of the challenges of eating healthy in the community “is that people don’t know how to prepare the foods, prepackaged foods are easier, and a lot of moms have not been raised to see their mother cook.” She argued that “the simplicity of opening up the chicken nuggets is just easier for them than making the meal or cooking dry beans.” Although Laila was not aware of the DVCP and no one in her organization or community suggested the implementation of the program, she stated that 25% of individuals seek additional nutrition assistance for food. To improve the nutrition of the communities, her

organization implements “nutritional teaching through WIC (during visits), educational brochures, and nutrition classes in the community in partnership with the Southern University Extension.” Laila has a strong opinion on the nutrition environment her organization serves and describes the community as “a package culture” in which she hopes one day to make a change one cooking class at a time.

Samantha S. Samantha S. is the program coordinator for a southwestern health department which is in proximity to Missouri. Samantha is from a small community, and she graduated from a small university near East St. Louis. She continued her education by pursuing her graduate degree in nursing while acting as nurse for the health department. Samantha had been recently promoted to nurse manager after working for the organization for three years. According to Samantha, their health department serves “mostly white and black families, low to middle income” and of all ages. She mentioned that one of the challenges of eating healthy is “the price of healthy foods” and that “individuals complain about the prices of healthy food and the access to it.” She also noted that there are about 10% of individuals who come into her organization and mention they need additional nutritional assistance. She stated that she was familiar with the DVCP and stated that no one in her organization has tried to implement the program. In order to improve the nutrition environment, her organization provides nutrition education: “We assess their diets, do a comprehensive assessment of what they are eating, and implement a case management program.” One of the barriers Samantha would foresee with implementing the DVCP “would be getting the word out” due to the fact that the farmers market voucher program that is currently implemented in their county is “seeing low redemption rates.” To improve her county’s food environment, she suggested organizations and businesses “provide better food options,” and to sustain the food environment, she urged businesses to “keep their

stores here [i.e., local].” Samantha made very positive comments pertaining to the DVCP and said that “some of our families could really benefit because they have a larger family and they are able to get more than one coupon to assist the nutritional needs of the household.” Overall, Samantha works very diligently to educate members of the community about the current fruit and vegetable incentive program, and she has high hopes for the implementation of the DVCP in her community.

Jennifer J. Jennifer J. works as a program coordinator within the Department of Health Education at a southern health department in rural Illinois. Jennifer has worked in various capacities within the health department, including managing the DVCP table at the farmers market and working as a recycling educator, and she is very passionate about the nutrition environment her organization serves. Although Jennifer was not aware of the demographic groups her organization serves, she did have demographic information of individuals who use the DVCP. According to Jennifer, over the course of a six-week survey at the farmers market, 73% of participants were female, 77% were non-Hispanic White, and about 35% of respondents were between the ages of 56 and 70 years old. The six-week survey also collected self-reported weight information, and Jennifer reported that 33% of respondents were overweight and 24% were obese. A total of 45% of individuals reported their health status as being in a state of “good health.” Jennifer commented on many challenges of eating healthfully in her community, one of which included [individuals having] “a desire to eat healthy.” Jennifer further explained that, for some individuals, “a knowledge of what is healthy, access to transportation, access to food, and number of low-income folks that rely on the food pantry” are all challenges individuals face in her county. She remarked only 30% of community members visit the health department and need additional nutritional assistance. In terms of community member reaction to the health

department's services, she noted that "a number of people comment about how the double value coupon program gives them the extra money to get additional food and how that makes a difference for their family." Jennifer views the DVCP as "a valuable program...it puts fresh food on individuals' tables and makes fresh and healthy food more accessible [to those] who wouldn't otherwise have access." She feels that the DVCP would not fill the gap in her community because there are not enough individuals who would use the program, thus giving her a "fear the program [would] lose funding" due to lack of both an administrative and organizational structure. However, she remarked that the double value coupon program would, in fact, make the gap a smaller. Jennifer referenced challenges, which included "getting people to understand food and nutrition trends, such as Blue Apron, quick-prepared meals in the frozen section, and ordering groceries from a smart phone are not beneficial to a healthy lifestyle." Jennifer is an advocate for the community her organization serves and hopes that the DVCP stays around a little longer.

Patricia P. Patricia P. is a program coordinator of a southern health department located in a rural county. She resides on her farm with her husband and three girls in the same town as her organization. She attained both her undergraduate degree and master's degree in nursing. Patricia has worked for the health department for roughly five years, where she specifically manages the WIC division and nutrition education department. The health department where she works serves all ages, races, family sizes and education levels. She mentioned, "The average ages of individuals would be 17 and up...most individuals who patronize the health department are just below the poverty line...and roughly 60% white and 40% black." Furthermore, "a small percentage, roughly 10%" come into the health department needing additional nutritional assistance. Patricia listed cost as one major challenge to eating healthfully in the area:

“convenience foods are cheaper to get, [whereas] eating healthy is more expensive.”

Additionally, she noted transportation is “a huge issue” in her “rurally spread out” county.

Patricia was very aware of the DVCP in Carbondale, Illinois and stated, “It’s a very valuable program...[O]ur county just hasn’t taken off with it because we have very old farmers.” Alluding to that generational gap among farmers, she claimed, “most farmers are 70 years old; it’s a change and a program that they are just not used to.” Although her county or organization has not officially implemented the DVCP with grant funds (such as the Food Insecurity and Nutrition Incentive [FINI] grant program), she pointed out that her organization and community has collaborated to implement a similar program in their community. More specifically, they implemented a similar program called “Dollar Days” in 2017, for which individuals (a) do not have to be on SNAP or Link to participate, (b) would receive nutrition education through a farmers market class, and (b) would have the option of receiving a pre-made pack of fresh fruits and vegetables that ultimately turns into a dinner recipe or meal. Patricia alluded to her similar program has “successfully reached a 40% redemption rate of vouchers through the use of the farmers market course.” Other ways her organization improves the nutrition of her county is through “community outreach, pamphlets, and through the collaboration with Southern University Extension.” In order to reduce the barrier of organizational collaboration to expand the farmers market’s reach in her county, Patricia remarked, “We need to change the perspectives of the farmers and the farmers market and [reduce] the generational gap of farmers within the community.” Generally, Patricia is passionate about the sustainability of her program and very proud of its success so far in comparison to other national programs.

Carrie C. Carrie C. is a native of southern Illinois area and currently lives with her husband and two children. Carrie graduated from a southern university with both her

undergraduate degree and Master of Business Administration (MBA) in marketing. According to Carrie, she has over “15 years of experience in the marketing field.” She works for an independent cooperation that provides “wholesome foods economically...to promote the health of the individual, community and earth.” Carrie understands there is a need to “support organizations [that] need assistance reaching their target population through visible marketing,” including social media or any traditional platforms. She described the individuals her organization serves as “45 and older, [with] a higher education level, and [comprised of] single families.” Carrie’s organization gives local business owners or farmers the opportunities to sell fresh fruits and vegetables to local community members. Recently, the DVCP was implemented at her organization, and she claims that “word of mouth” has been the major promotion effort so far, with over “3000 coupons...distributed” in the two weeks after the program started. Other ways the DVCP has been promoted include flyer distribution and marketing on the organization’s website. Carrie discussed some of the many benefits of organizations implementing the DVCP, including “being able to bring money into an area where it’s definitely needed.” She continued: “It’s an opportunity for grocery stores to give someone access and power to be able to purchase healthy foods, and it gives individuals more buying power to work toward a healthy meal for their family instead of buying frozen or convenience food.” Similar to the other interviews, Carrie argued that some barriers to expanding the reach of the DVCP throughout southern Illinois are cost and education, i.e., “knowing that there are these resources available and explaining to individuals how the program works and what they really get out of it.” Additionally, she remarked, “It’s just challenging to figure out how you’re going to make a meal...and some people may not know necessarily how to cook or prepare something.” All in all, Carrie is passionate about supporting local products, businesses, and, more specifically,

farmers. She expressed that “the double value coupon program is a great program. We are supporting the farmers that can start their own farm, grow it, and increase production, and people are receiving double their value for fresh fruits and vegetables; it’s a win-win.”

Alyssa A. Alyssa A. holds a leadership position on the board of a southern Illinois farmers market. Alyssa lives with her husband and her son’s dog about 20 minutes away from a rural town. She is an avid gardener and grows an assortment of plants and flowers that she sells at the southern Illinois farmers market. She has held her leadership position for over 5 years and describes the demographic of the farmers market as “mostly white, middle to upper class students and staff, with a small amount of minority groups.” She expressed that most individuals who seek out information about the DVCP reside on the north side of the community, “where more of the low-income people reside.” She noted, too, the presence of “a lot of students who receive the Link card who [shop] at the market.” She mentioned that most of the demographic patterns of shoppers share the same goals when shopping at the farmers market (referencing students) and that “more people of color may be shopping now because they’re using the Link card” (referring to the number of new individuals using and sharing information about the DVCP). A majority of individuals who typically do not seek out or receive the benefits of the DVCP are “individuals who don’t have vehicles to get there on Saturday morning,” These differences exist, she argued, because “of the stereotype as to what the market is about...A lot of people think it’s too expensive to shop at the farmers market, or that its only for rich people. White people, maybe they feel more comfortable...but I’m hoping to change that.”

When discussing the benefits of farmers markets implementing the DVCP, Alyssa said that “it certainly helps the low-income population and encourages them to eat more healthy fruits and vegetables—locally grown—which is a big benefit, [and it also helps] our farmers.” Benefits

for program recipients included shoppers being able to pick their own fresh fruits and vegetables “from a big variety.” Concurrent with previous interviews, she identified barriers to expanding the reach of the DVCP as organizational capacity, noting “the paperwork involved, and the [intensive] bookkeeping.” Alyssa is a huge advocate for the DVCP and the use of farmers markets in general, and she closed her interview by remarking

The market started in 1975, so it’s come a long way. I think when it started there were maybe five vendors and now it’s just a big community gathering and lots of vegetables, that’s nice. You want people to shop there.

Alyssa was very open in proclaiming the value of the farmers market and is perceived by other farmers and vendors as an asset for the community.

Frank S. Frank S. is a farmer, and he comes from a generation of farmers. Frank’s father and grandfather owned over 500 acres of farm land where they grew and produced a variety of fresh fruits and vegetables, including zucchini, tomatoes, peppers, squash, and potatoes. He grew up in a small rural town, where he attained his undergraduate degree in horticulture. His two sons also attended the same institution, and in due time, they will take over the family business. Frank holds a leadership position on the board of a nearby farmers market where he “runs the meetings, makes sure everybody is following the rules, makes sure they pay their dues, and, overall, is in charge of the organization.” Frank is also a vendor at the nearby market, where he sells his fresh produce to the local community. He is a very passionate farmer and is very interested in assisting individuals in need. When asked to describe the demographic trends of farmers market shoppers, he explained that “they are all over the board, definitely younger, more white, single family, middle class individuals.” Frank strongly believes that “Hispanic individuals are not visiting or taking advantage of the double value coupon program,” and he argues that there is a high rate of

individuals moving in and out of the county which, in his opinion, is a strong indicator of why individuals are not redeeming the DVCP. Concurrent with previous interviews, Frank stated that the DVCP has been advertised through their “stationary sign at the farmers market, on the individual vendor stands..., and [via] word of mouth.” Alluding to benefits of the DVCP, Frank expressed that “more people coming was a major benefit of implementing the program” and that an additional benefit was “shoppers receiving a bigger variety of nutritious food than they can receive at a grocery store and better quality.” We discussed some barriers to expanding the reach of the DVCP, and Frank expressed that “where the money comes from is the biggest organizational barrier” to expansion. Given that agriculture is a major industry in the United States and is an important source of income, I had assumed farmers were primarily concerned with producing and selling food. Frank’s expressiveness and advocacy for the farmers market, the program, and community members eating nutritious food was unexpected. Frank noted that, as with most grant-funded programs, eventually there is an end date for funding. Regarding his hopes for program sustainability, he mentioned “we have to keep this program going somehow...and we are going to try to do it ourselves.”

Cathy T. Cathy T. is a full-time social worker at a family counseling center southeast of Missouri. She earned her graduate professional degree at a southern university with a concentration in social work. Cathy has an administrative role in nutrition within her organization, which promotes healthy physical and mental health development. According to Cathy, her organizations serves “60% Caucasian, 40% African American, all ages and family sizes, [with] educational level ranges [from] elementary school [to] some college education.” Cathy’s organization serves six southern Illinois counties, as well as an adjacent Kentucky small metropolitan area and some parts of Missouri. She identified many challenges to eating

healthfully, mentioning that “there are no grocery stores in Albert County [and that] individuals have to travel to Portage County or to the state of Kentucky to buy groceries,” distances that range from 10 to 50 miles from Cathy’s organization. In addition, she noted a high percentage of homeless individuals: roughly “10% of individuals are homeless, and mental health is a big issue in this part of Illinois.” When discussing the DVCP and farmers market, Cathy expressed “there is no farmers market or program [nearby, and that] the nearest market is in Umberg County”; however, she did concede that “someone in the community has tried to implement the DVCP about 2 to 3 years ago.” Although Cathy’s organization offers mental health services, she mentioned that, “[her organization] does not offer services that the community needs; there is a need to access housing programs and nutrition... There is a serious lack of resources in this community.” Some barriers to expanding the DVCP in her community include “housing, jobs, and transportation..., [specifically that] most people work out of state and out of the community.” which acts as a huge barrier for implementation of the program. Cathy has very strong opinions about her county and community and feels that “the DVCP is a good program to bring produce into the area; however, there is a serious need for nutritional programs other than WIC...there is a huge injustice for [program recipients].”

Focus group participants. To understand the perceptions of individuals who take advantage of the farmers market and the DVCP, I conducted a focus group with local DVCP users. The moderate sized focus group consisted of eight individuals who had the opportunity to express their personal experiences with the DVCP. Using focus group data from participants assists with the triangulation of data sources, including perceptions of organizational leaders of local health departments and my own personal observations of behavior at the farmers markets.

The focus group occurred subsequently after Saturday business hours of the local southern Illinois farmers market. The location of the focus group was approximately 600 feet away from the farmers market, in the semi-private meeting room of a cooperative grocer. The focus group took about roughly 45 minutes to an hour, and following the last question, participants received their gift card and left the meeting room.

Focus group participants had been asked to describe factors that influenced their decision to purchase fresh produce. Participants responses included statements such as “wanting to be healthy and feeling more comfortable having fresh fruits and vegetables other than getting canned items that could be going bad or aren’t as nutritious.” Analogous with the interviews, focus group participants had been asked the level of difficulty getting to places to shop for fresh produce. One participant, Jeannie, responded that “it is nearly impossible for me to get to these places because I have to rely on other people and their cars, and if our schedules don’t match, I’m just not going to make it,” whereas Sharon responded, “It’s fairly easy to get somewhere...usually I just go to Wal-Mart or Aldi, and then I go to the [cooperative grocer] maybe one or twice a month.”

Quality was an important influence on individuals’ decisions to shop for fresh produce. For many of the participants, grocery shopping at multiple food retail organizations became the method by which they achieved their personal shopping goals. Victoria explained

I’ve noticed that Wal-Mart’s produce isn’t the best, so I only shop with Kroger sometimes—it’s a little more cheaper, but whenever they came out with the double couponing [DVCP] here at the [cooperative grocer], it really evens out by budget, so now I am coming nonstop to the [cooperative grocer] and the farmers market.

As with many shoppers, price was often the most influential determining factor when shopping for fresh produce. Camille mentioned, "...price is the number one factor, and then quality second when shopping for fresh fruits and vegetables; I most definitely want to get a good price for everything." Bailey concurred, remarking, "If the price is really high, then I would not buy it. I would buy something less healthy for sure. Sometimes prices are just ridiculous."

Additionally, a majority of participants agreed that good variety is key when shopping for fresh produce. Victoria stated, "Sometimes they don't have what I want, but I understand that it might not be in season," and, similarly, Sam expressed, "I do like shopping for different type of fruits and vegetables, but sometimes what is on the shelf is not fresh and will spoil by the time I get around to eating it." Pretty agreed and mentioned, "I wish people told us that we needed to eat the fresh grapes right away before they mold. Most times I have to throw food away because it goes bad so fast."

Another significant factor when shopping for fresh fruits and vegetables included access. Sharon explained, "I wish I had access to different kinds of fruits...wild fruit...you know, dragon fruit. Because sometimes strawberries may be a little boring, so you kind of want something different." Similarly, Camille stated, "I was looking for exotic fruits as well. I went to both the [cooperative grocer] and the farmers market and even other places in search for more exotic fruits, but [I found] nothing. I wish that we had more access to that." On the other hand, Sam commented, "I wish that I could shop at just one store. I have to shop at multiple places to find what I want, [and] traveling four miles just to find one orange is such a waste of time to me."

Most of the participants utilized the DVCP more than once a year and were very comfortable using the program. They expressed very positive feedback about the program, and they shared personal anecdotes about the farmers market including a farmer's famous peaches and the live musicians. Victoria explained, "It's really different since I began shopping at the farmers market. The quality is better. I could never find fresh basil in a regular supermarket, so you find fresh herbs. No disappointments, I think that it's very good."

Lastly, participants offered several suggestions for improvements, including "tripling the program" or the value of the coupons received. Similarly, to responses gathered from the interviews, participants suggested advertising more, emphasizing advertising on the nearby college campuses.

Data Summary

The data presented indicates that there are many organizational influences with regard to implementing the DVCP, some of which include barriers to the development of partnerships within organizations and the establishment of support within the communities. Most participants in the study had some knowledge of the DVCP; however, organizational barriers such as staffing, perceived knowledge of implementing a grant funded program, and access were prevalent factors prohibiting implementation of the DVCP. Moreover, stakeholders of the DVCP perceived that the discovery of new fresh produce, education about the DVCP, and the availability of fruits and vegetables were the program's greatest strengths. Weaknesses included limited hours of operation and administrative issues at the designated DVCP (transaction) table. Overall, individuals in the focus group described having positive experiences using the DVCP at the local farmers market, including having more control over their selection of fresh produce for meals though they were interested in purchasing different variations of fresh produce (such as

exotic fruits). Briefly, participants were overall positive about the DVCP and very interested in implementing the program in their respective jurisdiction. Individuals who utilize the program were interested in receiving more benefits, expanding the program beyond the farmers markets normal hours of operation, and using social media to promote both the local farmers market and the DVCP.

Summary

The purpose of this chapter was to provide details of the data interpretation process. This chapter discussed the researcher's reflexivity and position on the subject, and it provided information on the qualitative analysis procedures. There was a brief reiteration of data collection procedures and a demographic summary of all the individuals who participated in this study. I provided a detailed description of the coding process, including the establishment of intercoder agreement and level one consensus via an independent coder. Lastly, this chapter delivered narratives of participants as outlined by the protocol (see Appendix E-G). The following chapter reintroduces the study's overarching research questions and describe in detail the most salient themes gleaned from the data analysis.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

This chapter synthesizes and examines the data with consideration to the study's research questions, literature review, and conceptual framework. The chapter presents a discussion of the results, including patterns and themes derived from analysis and interpretation of the data, as well as limitations to the study's findings. This final chapter concludes with potential implications resulting from the study, including recommendations for further research.

Introduction

The purpose of this multiple case study was to uncover barriers to implementing the Double Value Coupon Program (DVCP) as perceived by members of local health departments and other stakeholders in their respective communities. This qualitative study also aimed to discover the perspectives of low-income individuals who utilize the DVCP, which would in turn, reveal how individuals are utilizing their Senior Farmers Market Nutrition Program (SFMNP), Supplemental Nutrition Assistance Program (SNAP), and Women Infants and Children (WIC) benefits.

The Health Belief Model (HBM) has been used as a conceptual framework to guide this project. I conducted 11 semi-structured, in-depth interviews with individuals who held an administrative role at either the local health department or the local farmers market and one focus group comprised of community members who utilize the farmers market and the DVCP. To assist with triangulation of the multiple data sources, I incorporated my personal observations into the findings of this project. My personal observations included interactions of individuals at the Carbondale farmers market (nonverbal expressions, gestures, and interactions) and an observation of all communities located in the 12th congressional district.

Research Questions

The following research questions were used to guide this study:

1. What factors have influenced local organizational administrators to use or reject the Link Up Illinois Double Value Coupon Program (DVCP) for farmers markets in their respective jurisdictions?
2. What do stakeholders of the DVCP perceive as the program's greatest strengths and weaknesses?
3. How do individuals receiving public assistance describe their experiences using the DVCP at the Murdale Farmers Market?

Discussion of the Results

Themes and subthemes. Theme development is the main product of data analysis that acts as a descriptor, element, or concept organizing a group of repeating ideas, thus allowing the researcher to answer the study questions (Ayres, Kavanaugh, & Knafl, 2003; Ryan & Bernard, 2003). I established themes by converging multiple sources of data to represent the perspectives of all participants. Saldana (2016) explains that themes are not to be confused with the process of *coding*; rather, themes are the outcomes of the coding process.

As a result of data interpretation, five themes and four subthemes emerged, addressing all three research questions. I discuss the findings after a brief overview of the key themes and subthemes. The first theme identified was *organizational capacity*. I explored factors local health department administrators face when determining whether or not to implement the DVCP. A subtheme of organizational capacity included *support*. This subtheme derived from participants' concerns with both community and financial support and can also apply to the farmers markets administrators' perspective, as the markets themselves also include an administrative scope.

The second theme identified was *exposure*. This theme points to experiences participants have had with the DVCP; whether they have heard about the program or have participated, this theme speaks to participants knowledge and perception of the program. This theme also includes participants' experiences with fresh fruits and vegetables, and their familiarity with farmers markets.

Purchasing power is the third major theme identified. Purchasing power expresses participants' ability to purchase fresh and healthy produce, thus giving participants the ability to spend money in other areas. This theme is the focal point of the strengths and weaknesses of the DVCP. Three subthemes identified under this major theme included *affordability*, *variation*, and *quality* as relate to fresh fruits and vegetables.

The fourth theme that emerged from the data is *innovation*. I examined what about the DVCP needed improvement, and technological enhancements were the number one recommendation, followed by social media presence and expansion. The final theme that emerged from the data is *values*. The theme of values relates to participants' normative beliefs regarding fresh produce, including preparation, cooking and shopping for fresh produce. Both themes point to participants experiences with the farmers market and when utilizing the DVCP.

Theme one: Organizational capacity. This first theme informed research question one: "What factors have influenced local organizational administrators to use or reject the Link Up Illinois Double Value Coupon Program (DVCP) for farmers markets in their respective jurisdictions?" The overarching goal of this research question was to explore individuals' perceived benefits, barriers, and cues to action to implementing the DVCP in the county their organization serves. The theme *organizational capacity* represents the conceptual elements of both the health department administrators and participants who held an administrative position at

the farmers market.

To explore participants *perceived benefits* of the DVCP, individuals were asked to indicate “ways to both improve and to sustain the food environment” in their respective counties. A participant who held an administrative role at the local farmers market suggested “continuing with the farmers market [despite approaching the end of grant funding for the DVCP].” Likewise, a participant who held an administrative role within a health department suggested, “permanent funding” for the DVCP. Similarly, another frequently mentioned response included “expanding the program to all counties or statewide,” indicating the need both to sustain and grow the DVCP.

Perceived barriers of the DVCP were also examined, and participants were asked, “What community or state partnerships do you feel are necessary to improve the community nutrition environment for disparate communities or populations?” The most repeated attribute participants mentioned was “governmental partnerships.” The governmental partnerships alluded to those at the regional, statewide, and federal levels, as well as those that exist between governmental programs such as the Supplemental Nutrition Assistance Program (SNAP) and the Women, Infants, and Children (WIC) program. One participant declared that, “there is a need to build relationships and partnerships with the SNAP program and doctors’ offices [because] surprisingly, a lot of the doctors do not know what WIC is.” Participants mentioned other partnerships, including “the development of a food council, [partnerships with] faith-based organizations, collaboration between doctor offices [and] grocery stores, and partnerships with the public housing authority.” Participants had been asked, “What do you think would be the best way(s) to reduce those barriers?” Participants strongly believed that building relationships and improving communication among the multiple organizations would minimize the barriers low-

income individuals experience.

Support. *Support* was a subtheme within the concept of *organizational capacity*. This subtheme captured administrative barriers faced by practitioners at local health department organizations. For instance, most participants stated that barriers to implementation of the DVCP included “staffing issues, uncertainty of funding, and lack of staff to effectively collaborate.” One participant stated, “here we’ve been struggling with staff.” This particular participant specified that there were numerous leadership changes, which “messes with the fluidity of [their] programming.” In addition, community support was also a consistent attribute. Participants who held an administrative role proclaimed the need for more individuals to take advantage of the DVCP. Finally, participants also discussed the need for financial support. Remarks from participants included those related to instability of funding for the DVCP and the need to sustain the program with local funding through partnerships and collaboration within the county.

The construct *cues to action* was explored in research question three by assessing participants knowledge of the DVCP, whether a similar program was implemented, and if a community member suggested implementation of the DVCP in their community. Most participants were knowledgeable of the DVCP, specifically, 72% of the interview participants and 88% of the focus group participants had previous knowledge of the DVCP. Although the DVCP is a statewide grant funded program, a particular county wanted to provide additional nutrition assistance to their community members. Particularly, this participant collaborated with local a business owner to provide “fruit and vegetable dollars” to local community members and also partnered with two farmers to implement “Farmers Market Dollar Days” in the parking lot of her organization opposed to the farmers market. This participant revealed that their program started in 2017, the farmers accept them, and they have a signed agreement. This data revealed

that although the participants organization did not have the capacity or provide support to assist with the implementation of similar program like the DVCP, this participant had enough drive to implement the program and collaborate with local business owners on her own. Additionally, this data speaks to the tenacity of the participants willingness to assist her community, she in turn received support from the community to sustain the program for over two years. More importantly, this participant provided external cues to action to individuals who took advantage of the “dollar days” program. She provided education of the program (which included eligible food, produce that was in season, and information about the farmers) in addition to providing recipes along with the premade produce bags for participants. These two elements reminded community members to engage in healthy eating activities, provided awareness of the program and produce options at the market.

Theme two: Exposure. The next theme developed from investigating if participants thought there were any benefits of farmers markets implementing the DVCP in their local community. The second theme, *exposure*, informed research question two, which was aligned with the construct *perceived benefits*. Many participants expressed that the DVCP was extremely beneficial and allowed participants to “discover new fresh fruits and vegetables, the farmers market, and learn about the DVCP.” One participant argued that “individuals have to be open to new things before they will try [them]; the first impression is the last one, especially for fruits and vegetables or unfamiliar produce.” Participants also voiced that stereotypes about perceived cost at farmers markets can be reduced if more individuals were exposed to fresh fruits and vegetables. *Exposure* also manifested itself as a theme from participants’ responses to the question of whether the DVCP would “fill a gap” to improve the community nutrition environment. Many participants believed the DVCP would, in fact, fill a nutritional or financial

gap in their communities. A few participants claimed that having a farmers market in their communities would increase accessibility of fresh produce to their community members.

Participants suggested that if the DVCP program were implemented, there would be a significant increase in fruit and vegetable consumption. Some participants were especially interested in the implementation of both a program and a farmers market due to the lack of accessibility of fresh produce in their counties.

The concept *perceived barriers* was also aligned with research question two, and local health department administrators were asked to discuss “barriers to exposing and/or expanding the reach of the DVCP to [their] communit[ies].” Responses included hours of operation of the farmers market—tying also into the theme *organizational capacity*—and advertisement of the DVCP. Some claimed that hours of operation deterred individuals from visiting the farmers market, as elucidated by one participant who noted, “For single mothers or working mothers/parents, we don’t all have the luxury of waking up as early as 8:00 am to get the kids ready and go to an outdoors market. They unfortunately have to work or take their kids to doctors’ appointments due their schedules throughout the week.” As such, the limited hours of the farmers market acted as a barrier to individuals being interested in—and thus exposed to—both the farmers market and the DVCP. Similarly, advertisement of the DVCP was a considerably sizable barrier. Participants who had knowledge of the DVCP claimed that very few individuals eligible to receive the benefits of the program remain unaware that it even exists. For instance, two participants mentioned that students (a relevant population, given that the DVCP is implemented in a city where a sizeable population includes students and faculty of the local university) and the local low-income population do not visit the farmers market as much as they might otherwise had they known of its existence.

Participants had been asked to identify the best ways to reduce—or provide solutions to minimize—potential barriers of expanding the reach of the DVCP. Responses included partnerships, education, and community support. Specifically, participants advocated that partnerships with local faith-based institutions and the formation of a food policy coalition—which would specifically “assess and address food access and issues”—would be attainable and reasonable solutions to reduce potential barriers. Moreover, participants urged that education needs be at the forefront. Participants interviewed in the study improved their nutrition environments by offering programming and nutrition education. Some collaborated with local institutions in offering cooking classes for community residents, recipes for participants who are eligible for WIC, and programming (such as tobacco cessation initiatives). Community support has been highlighted as a particularly distinctive solution. One participant argued that “strengthening community support for the program, whether it's selling a bumper sticker or a reusable shopping bag or something like that, [would result in] proceeds [going to the DVCP].” This specific participant urged the community to “step up and step in” to assist other community members by getting the word out so individuals could take advantage of the DVCP.

Theme three: Purchasing power. I also explored the personal experiences of individuals who have used the DVCP and how they might have personally benefited from the program. The theme *purchasing power* informed research question three: “How do individuals receiving public assistance describe their experiences using the DVCP at the Murdale Farmers Market?” This particular research question was aligned with the HBM construct of *perceived benefits*. One DVCP recipient spoke about the many benefits of the program, mentioning that “it helps put food in [her] fridge.” Another DVCP recipient shared, “When I cook, I use that program; you know, it’s a real help... [with] a lot of things we can’t afford...It really helps.” In

addition, three subthemes emerged from the theme *purchasing power*: affordability, variation, and attractiveness.

Affordability. The subtheme of *affordability* emerged with the discussion of DVCP recipients' decisions regarding whether it made sense to purchase fresh produce. Participants were asked, "What are some factors that influence your decision to purchase fresh produce?" Overwhelmingly, the number one determining factor when making the decision to shop for healthy food was price. Participants were very decisive when it came to making that choice. One explained, "If the price [were] really high, then I would not buy it. I would buy something less healthy." Another DVCP recipient spoke about price and mentioned, "[Price] is super-important just because if I don't have enough money from my job or from my SNAP benefits, if I can't afford the fresh fruits and vegetables, then I'm probably just going to be eating ramen for that time period."

Attractiveness. The second determining factor for participants when making the decision to shop for healthy food was *attractiveness*. This subtheme related strongly to the HBM construct *cues to action* and helped to inform the answer to research question three. Participants were asked, "How does quality play a role in your decision to shop for fresh produce?" A few participants indicated they were *multi-grocer shoppers* given their preference on the quality of produce and the level of importance they placed on the attractiveness of fresh produce. One explained, "[Quality] is definitely important for me, especially for my fruits. I don't like bruises on any of them. I probably won't buy it if there are any bruises or if they look spoiled." Another stated:

I think quality is really important because if a fruit or vegetable [is] gross, then I won't touch it or get it. I would have to go to another store just to find fruits and vegetables.

Sometimes I don't have the extra money to spend on gas to travel to another store. If I don't have the extra money, then I won't buy fruits or even vegetables that paycheck.

Most participants were willing to shop at more than one store for fresh fruits and vegetables if their income permitted, whereas others were not. Participants unwilling to shop at multiple stores indicated that transportation was an issue for them. They were asked, "How easy or difficult is it for you to get to places where you can shop for fresh produce?" One remarked, "It is nearly impossible for me to get to these places because I have to rely on other people and their cars, and if our schedules don't match, I'm just not going to make it." This statement lent credibility to the notion that individuals may be willing to shop for, and purchase, fresh produce in their neighborhoods, though many may be unable to do so due to lack of transportation.

Variation. This final subtheme surfaced within the dialogue around the assortment or variety of fresh produce in their respective local communities. Participants were asked, "What are your thoughts on the selection of fresh produce in the local community when shopping?" Participants were not impressed and debated whether their community might have an unfavorable selection and lack of variety. One participant stated, "I wish there [were] more access to different kinds [of fruit]. Like more or what's wild, you know, [like] dragon fruit? Because sometimes strawberries may be a little boring, so you kind of want something different." Another noted, "sometimes they don't have what I want, but I understand that it might not be in season, but it's still always the same stuff." Throughout this theme and its resulting subthemes, the HBM construct *cues to action* informed the understanding of whether individuals were intrinsically or extrinsically motivated to purchase fresh produce from their respective local farmers markets.

Theme four: Innovation. I also explored ways to make the DVCP more efficient or useful to current DVCP recipients. Participants were asked, “What about the DVCP do you think needs improvement to make it better, more effective, or more useful to you and others who might benefit from it?” The responses to this particular question generated the fourth theme, *innovation*. Participants suggested technological advances such as gaining a social media presence, thereby promoting expansion of the program. One participant claimed, “They could make a Facebook page for it and promote it. The farmers market is on Facebook but does not post things like the [DVCP] program. They should work together and post together.” Another participant agreed, stating, “I love Instagram, and they can promote it like a business or tweet! Twitter is fun and you can capture every second.” In these instances, participants implied both the farmers market and DVCP were not collaborating enough to attract individuals to the market and were not using social media appropriately to communicate incentives and programming. Individuals also spoke about technological advances as related to distribution of available incentives. One participant suggested, “I kind of wish they would put it on the [LINK] card... They give us paper coupons, when they could just upload it onto the card.” Another participant added, “We all use our phones... I know that she mentioned social media because we always get notifications from every app that we have, [but] why [doesn’t] the program make an app instead of coupons?” Similarly, another participant agreed, “They should make an app for the market to track the program and the number of users; if people get a notification that the market is open and to visit certain stands that accept the market, they would be in big business!”

Further suggestions included expansion of the program. Participants were interested in receiving even *more* benefits, along with receiving added education about the fresh produce. One participant mentioned, “I would give more—triple it instead of doubling the incentive. Maybe

more people will use it.” With regard to education, another participant stated, “I wish they would tell me how to make the vegetables that I’ve never cooked. Sometimes I want to buy the foods but don’t want them to go to waste.” Another innovative technique suggested was the use of meal kits. One participant claimed, “I would have them develop a cheaper meal-prep kit; it should at least be an option... I know there are ones at Kroger, and they’re almost \$20, so if it [were] even half that price, that would be helpful.” Another participant concurred: “I agree... because I don’t have time to sit there and try to come up with a recipe or try to find a recipe, so if they had those meal kits, it would be a lot easier.” The suggestions of education and recipe availability both informs the *cues to action* construct, in that individuals may be more susceptible to cooking fresh produce if they receive more information at the time of purchase.

Theme five: Values. The final theme developed from investigating individuals’ influences to shop at the farmers market. Participants were asked, “What would you consider to be your greatest influences to shop at the farmers market?” Responses were centered on people, emotions, or things that informed their influence on their decision to shop. One participant’s response was

My greatest influence is my sister; she goes every year, more than twice a month. She cooks for her kids and husband with most of what she purchases at the farmers market. I think that seeing her be able to use the program and her telling me how much money she has saved influenced me to just visit.

Similarly, another participant spoke to her family’s normative beliefs and stated

My grandmother used to have this large garden in her backyard, and on Sunday mornings, we used to go in the back and pick fresh greens and vegetables for dinner. We don’t do that anymore, and I would like to start again. My first step in doing so would be

purchasing fresh fruits and vegetables at the market. I want my family to get familiar with fresh vegetables early and one day be able to start our own garden in the back yard.

Participants were also asked to assess their level of comfortability when using the DVCP at the market, and most responses indicated that individuals thought the process was easy. Specifically, one participant stated, “I think that the overall transaction is easy when receiving the coupons and actually using them with a farmer [vendor]” whereas another participant stated, “I wish that this process was easier... The coupons are only for fresh fruits and vegetables, [so] I wish they already had a prepared bag made for us to just grab and go.” This information informed the construct of *self-efficacy*, given that most participants thought that the process was fairly easy to use, though, based on participants’ responses, there nonetheless remains room for improvement.

Discussion

This case study uncovered barriers local health departments and farmers markets face when implementing—or deciding whether to implement—the DVCP in their communities. In addition, this case study discovered the perspectives of DVCP recipients and how they presently use the program. Research question one framed my understanding of local health department administrators’ knowledge and perspectives on implementation of the DVCP. A total of 11 of these individuals were interviewed, and most had a minimum understanding of the DVCP goals. Participants were very considerate and well-informed of their local communities and explained their perceptions of what they perceived to be needed to improve and sustain their respective food environments.

Whereas participants exclaimed that macro-level access was a predominant factor in improving the food environment for their local communities, others put matters into their own

hands and described specific changes they had made for their communities. For example, one participant collaborated with community members (that is, farmers, local businesses, and her own organization) to develop a program that offered discounted fresh fruits and vegetables, education, and “farm fresh” meal kits. Nonetheless, organizational capacity of participants’ organizations varied considerably, thus ultimately determining what the participants were able to do regarding developing partnerships outside of their respective organizations.

Notwithstanding, all of the participants in the study claimed that the DVCP was “good, worth it, and valuable”; yet only one of the 11 organizations, as of 2018, has tried to implement the program in their respective community. Further, participants’ solutions to implementing the program in their respective communities were the exact same responses they felt that were necessary for improving their community nutrition environments—partnerships. There were two significant partnerships mentioned that participants felt would be crucial in improving the food environment and access to fresh produce for the community: grocery store collaboration and community support.

Ultimately, the development of programs within a community should begin with the community members themselves. In order for programs to be effective and reach their target populations, community members should inform every step of the process in informing and implementing programs and/or projects to ensure true change is tailored specifically to their particular communities. Gupta (2019) argues that grassroots programming must meet the needs of individuals who are typically economically disadvantaged and who would likely thus use their own knowledge to solve their own localized problems. Therefore, before community members can support a program, individuals from the community (including local university researchers) should be the initial contact and collaborators within any particular project. Building this sort of

coalition should first begin with the gathering of community members, then building support from surrounding community organizations. In the present study, participants mentioned there should be a partnership with grocery stores and programs. One recent study revealed that a cooperative agreement between the consumer food environment [grocery store] and community members was critical in improving the community food environment in rural or small counties (Gustafson, et al., 2019).

With regard to community member perspectives, local health department administrators mentioned that the DVCP would fill a gap to improve the community nutrition environment—with the exception of one participant, “I don’t think it fills the gap, but it helps make the gap smaller, maybe a little. Not enough people use it, in my opinion.” This participant argues that “...without the program, those LINK customers most likely would not bother coming to the farmers market.” Sustaining the DVCP would only partially “fill the gap;” systems level change and thinking would ensure a solution for food insecurity takes into account solution-oriented research (Abson, et al., 2017; Meadows, 1999). Systems thinking would ultimately assist in finding the most significant places for an intervention to change the long-term behavior of a nutritional ecosystem (Senge, 1996). This shift would move the focus away from events and patterns of behavior (that is, whether individuals utilize the DVCP) to systemic structures (such as what influences the patterns and what relationships exist among the individual parts) and other underlying mental models (like values, beliefs, and assumptions about healthy eating).

Within the scope of this study, the final research question assessed individuals’ lived experiences of using the DVCP at the most popular local farmers market in this study’s delimited geographical area. From my personal observations at the farmers market, the designated table where the DVCP transaction took place seemed to be overwhelming for both the customer

service representatives and the DVCP recipients. There was a clear technological deficit with the customer service representations; one participant mentioned that he could not access the POS tool for the first 30 -60 minutes, thus preventing him (and potentially other DVCP recipients) from utilizing the program.

Yet, overall, participants mentioned the program was easy to use, though the market itself had an unfavorable selection of wild or exotic fruits and vegetables. It was my personal impression that participants were bored eating the same fruits, though they did make recommendations for wanting to receive additional recipe and meal kits. Ironically, one of the local health department administrators offers both an education course (prior to the local farmers market/stand) with educational lessons on meal kits to their local patrons. Perhaps, if the local rural farmers market offered educational materials, pre-made fresh produce bundles, and recipes for “meal-kits,” the program might be more attractive to its recipients. Additionally, participants might require additional education regarding fruits and vegetables that are “in-season.”

Local health department program coordinators, managers, and farmers and stakeholders view the DVCP as a positive program model. The Double Value Coupons distributed as EBT incentives had a high redemption rate (Table 2) suggesting an increased awareness of the DVCP, farmers markets, and fresh produce. The DVCP has the ability to tackle food disparities and cost barriers to purchasing fresh produce. The findings in the present study suggested similar barriers to fruit and vegetable access to those in prior studies assessing bonus incentive programs. Haynes-Maslow, Auvergne, Mark, Ammerman and Weiner (2015) examined how fruit and vegetable programs addressed barriers to access and consumption as perceived by low-income individuals from 2011-2012 and revealed cost, cooking and nutrition knowledge, convenience, quality, availability, transportation, and variety were the top barriers to accessing and consuming

fresh produce. Additionally, the present findings related to the implementation of the DVCP are consistent with those of prior studies assessing implementation improvement. Payne, Wethington, Olsho, Jernigan, Farris and Walker (2013) interviewed farmer/vendors, market managers, and program administrators about their perspectives on promotion and redemption of the incentive coupons; knowledge and attitudes regarding the program; experiences with markets and products; and facilitators and barriers to program participation. Their results indicated that the participants viewed the incentive program as positive, where areas of improvement included improving the administrative system to increase consistency and timeliness of tracking the incentive coupons.

Limitations. The findings from this study has to be interpreted with some limitations in mind. For one, this study is limited in scope and used a qualitative methodology with a sample comprised of diverse individuals involved in local farmers markets who had been nonetheless sampled via convenience. Additionally, this study focused solely on the 12th Congressional district, comprised of eight local health departments and two stakeholders involved in the DVCP in southern Illinois. To assess the administrative scope of the DVCP, participants had been recruited from nine locations. Whether participants were present at the day and time of recruitment was beyond the researcher's control.

Another limitation was whether organizational employees had the knowledge and experience in the subject of this specific inquiry. Some participants did not understand some questions presented and could not provide a response upon receiving clarification of the question. Further, the hours of operation for data collection at the organizations had an influence on participants' ability to participate in the survey. For example, due to distance and time, as well as participants' responsibilities at their respective organizations, one participant refused to

participate in the study and another rescheduled multiple times. In addition, the presence of the researcher during interviews is often unavoidable in qualitative research and can potentially affect participants' responses. Some participants may have felt obligated to answer certain questions, and if they did not know a specific answer, they may have researched the answer in the moment.

A second limitation concerns the sample size of the focus group. Participants self-selected to participate in the study; the researcher was unable to directly contact recipients of the WIC, SNAP, or SFMNP programs. To maintain the privacy of WIC, SNAP, or SFMNP recipients, flyers had been distributed throughout the community to recruit participants for the focus group. Further, the condition of the weather during farmers market hours could have had an influence on participants' ability or desire to sign up for the focus group. In addition, only one focus group had been conducted given time constraints of the researcher.

Ultimately, the findings from this qualitative research study should be interpreted with caution and cannot necessarily be generalized to other geographical settings. Finally, the Health Belief Model did not necessarily account for—or, rather, explain—individuals' attitudes, beliefs, or any other determinants that might dictate a person's readiness to change their health behavior, as would be expected from an inductive qualitative inquiry.

Implications. The findings of this study can be used to show that the DVCP is beneficial to WIC, SNAP, and SFMNP recipients. These data can be used to inform local public health initiatives and researchers not only to implement similar programs in their counties but possibly expand these programs in areas where food access is insufficient. Results from the semi-structured interviews revealed local health department administrators are interested in the DVCP and find the program valuable enough to implement in their respective counties. However, given

a lack of organizational support (i.e., funding, staff, and resources), implementing the DVCP or a similar program may be impractical. Accordingly, seeking state budgetary support to expand these efforts—especially within rural communities that lack healthy food environments and thus remain fatalistically prohibitive for individuals to seek access to healthy foods—must be emphasized by health policy researchers to inform the platforms of our local and state politicians. Put simply, we continue to disenfranchise our citizens who are at the greatest need.

Regarding future research, we should consider conducting a community assessment in the 12th congressional district and neighboring counties. Community assessments are generally performed by community-based researchers and practitioners to provide a method for examining strengths and resources, as well as concerns of a particular population or community (Kretzmann & McKnight, 1996). Community assessments are used for a variety of purposes and have been increasingly employed to examine food-related concerns in communities (Jacobson, 2007; Pothukuchi, 2004). More specifically, conducting a community food assessment—the examination of the local food system along the continuum of production to consumption, which includes growing, processing, distribution, and eating (Pothukuchi, Joseph, Burton, & Fisher, 2002) would be most beneficial. A community food assessment would provide answers to questions about the ability of existing community resources to provide adequate and nutritionally-sound amounts of acceptable foods to households in the community (Cohen, 2002). The purpose of conducting a community food assessment would give researchers and practitioners the opportunity for information exchange to determine what communities have, what they lack, and to offer informed recommendations to the community. In addition, this approach might represent an opportunity for grassroots development of programs that would include permanent and engaged members of the community. Grassroots programming would

build community support for a healthy, sustainable food system and might also reduce barriers to equal access to healthy, affordable, and nutritious foods in all neighborhoods and regions (Cohen, 2002).

Secondarily, future research should consider using the Self-Determination theory to examine what types of motivation most strongly influence individuals' decisions to shop at farmers markets. Self-Determination theory is a significant theory of motivation that defines and addresses sources of motivation both intrinsically and extrinsically. Defined by Ryan and Deci (2002) intrinsic motivation is the inherent tendency to seek out challenges, to investigate, and to learn. Where extrinsic motivation refers to the performance of an activity in order to attain some separable outcome or reward (Ryan & Deci, 2000). Using the Self-Determination theory to examine individuals decision to shop at farmers markets would explicitly determine whether individuals value the farmers market or the DVCP. More importantly, the Self-Determination theory focuses on how cultural and social factors facilitate or undermine individuals' sense of volition and initiative (Ryan & Deci, 2000). Considering participants lived experiences of using the DVCP this information would be important in determining if individuals would continue to shop at the farmers market if the DVCP were longer available. By focusing on individuals motivation, the Self-Determination theory addresses not only the central questions of why individuals do what they do, but also the cost and benefits of socially regulating or promoting behaviors (Ryan & Deci, 2000).

Finally, future researchers should consider using a systems-thinking approach to improve the nutrition environment of the community. Systems thinking helps researchers find the most important places for an intervention that might change the long-term behavior of a system. Using systems-thinking tools might help inform researchers, practitioners, and policy makers to ask the

right questions towards understanding the best places to “leverage change” in a system. Leverage points include “places within a complex system... such as a company, program, [or] economy “...where one small shift can produce big changes in everything.” (Meadows, 1999, p. 1).

Currently, according to Meadows (1999) the DVCP and similar programs offer changes solely in the form of physical events. These parameters are defined as modifiable characteristics such as taxes and incentives that spend time, money, and energy on programming. Meadows (1999) identifies these leverage points as “shallow” places in which interventions are comparatively easy to implement yet bring about little change to the overall functioning of a system (as a whole). Abson et al. (2017) argue that policy interventions and dominant scientific research must reinforce each other. In other words, more shallow interventions are chosen in both research and policy, perhaps because of their ease of implementation. Accordingly, my recommendation is that further research should focus on deeper issues of structures, values, and goals that shape the overall food system, especially in rural and underserved areas.

Conclusion

This present study has revealed that the DVCP is a valuable program not only to its recipients but also to local health department administrators. My identification and rhetorical analysis of the common characteristics of the program has shown that local health department administrators would be willing to implement the program given enough support and organizational capacity. As such, this study is the first step in understanding that partnerships are needed between local farmers, farmers markets, and/or farm stands and local organizations to implement the DVCP and make it appropriately marketable to its intended constituents. Building capacity has the potential to improve the nutrition environment for lower-resource individuals who may not be able to access the DVCP. Finally, more research in to systems

change is necessary to understand the nature, value, and historical context of food insecurity, in addition to finding sustainable solutions to promote food security in low-resource communities. The results of this study can ignite future research that might ultimately influence policy to change organizational and political perspectives regarding solution-orientated change.

REFERENCES

- Abson, D. J., Fischer, J., Leventon, J., Newig, J., Schomerus, T., Vilsmaier, U., Wehrden, H., Abernethy, P., Ives, C. D., Jager, N. W. & Lang, D. J. (2017). Leverage points for sustainability transformation. *A Journal of the Human Environment*, 46(1), 30-39.
- American Public Health Association. (1995). The role of public health in ensuring healthy communities. Retrieved from <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/30/10/48/the-role-of-public-health-in-ensuring-healthy-communities>.
- Andreyeva, T., Long, M. W., & Brownell, K. D. (2010). The impact of food prices on consumption: a systematic review of research on the price elasticity of demand for food. *American Journal of Public Health*, 100(2), 216-222.
- Aguirre, J. A. (2007). The farmer's market organic consumer of Costa Rica. *British Food Journal*, 109(2), 145-154.
- Alber, J. M., Green, S. H., & Glanz, K. (2017). Perceived and observed food environments, eating behaviors, and bmi. *American Journal of Preventative Medicine*, 54(3), 423-429.
- Ayres, L., Kavanaugh, K., & Knafl, K.A. (2003). Within-case and across-case approaches to qualitative data analysis. *Qualitative Health Research*, 12(6), 871-873.
- Bandura, A. (2009). *Cultivate self-efficacy for personal and organizational effectiveness: Handbook of principles of organization behavior*. New York, NY: Wiley.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. London: Macmillan.
- Bardenhagen, C. J., Pinard, C. A., Pirog, R., & Yaroch, A. L. (2017). Characterizing rural food access in remote areas. *Journal of Community Health*, 42(5), 1008-1019.
- doi:10.1007/s10900-017-0348-1

- Barnidge, E. K., Hipp, P. R., Estlund, A., Duggan, K., Barnhart, K. J., & Brownson, R. C. (2013). Association between community garden participation and fruit and vegetable consumption in rural Missouri. *International Journal of Behavioral Nutrition and Physical Activity*, *10*(1), 128. doi:10.1186/1479-5868-10-128
- Bellisle, F. (2006). The determinants of food choice. Retrieved from <http://www.eufic.org/en/healthy-living/article/the-determinants-of-food-choice>.
- Bourke, B. (2014). Positionality: Reflecting on the Research Process. *The Qualitative Report*, *19*(33), 1-9.
- Burnard, P., Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Analysing and presenting qualitative data. *British Dental Journal*, *204*, 429-432.
- Campbell, J. L., Quincy, C., Osserman, J., & Pedersen, O. K. (2013). Coding in-depth semistructured interviews: Problems of unitization and intercoder reliability. *Sociological Methods & Research*, *42*(3), 294-320.
- Carson, R. A., Hamel, Z., Giarrocco, K., Baylor, R., & Mathews, L. G. (2016). Buying in: the influence of interactions at farmers' markets. *Agriculture and Human Values*, *33*(4), 861-875.
- Casagrande, S. S., Wang, Y., Anderson, C., & Gary, T. L. (2007). Have Americans increased their fruit and vegetable intake?: The trends between 1988 and 2002. *American Journal of Preventive Medicine*, *32*(4), 257-263.
- Caswell, J. A., & Yaktine, A. L. (2013). History, background, and goals of the supplemental nutrition assistance program. In *Supplemental nutrition assistance program: Examining the evidence to define benefit adequacy*. Washington, DC: National Academies Press. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK206907/>.

Centers for Disease Control and Prevention. (2011). *Strategies to prevent obesity and other chronic diseases: The CDC guide to strategies to increase the consumption of fruits and vegetables*. Atlanta: US Department of Health and Human Services. Retrieved from https://www.cdc.gov/obesity/downloads/fandv_2011_web_tag508.pdf.

Centers for Disease Control and Prevention. (2011a). Impact of the built environment on health. Retrieved from <https://www.cdc.gov/nceh/publications/factsheets/impactofthebuiltenvironmentonhealth.pdf>.

Centers for Disease Control and Prevention. (2013). *State indicator report on fruits and vegetables*. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services.

Cobiac, L. J., Tam, K., Veerman, L., & Blakely, T. (2017). Taxes and subsidies for improving diet and population health in Australia: A cost-effectiveness modelling study. *PLoS Medicine*, *14*(2), e1002232.

Congress. (2008). H.R.6124: Food, conservation, and energy act of 2008. Retrieved from <https://www.congress.gov/bill/110th-congress/house-bill/6124>.

Cohen, A. J., Richardson, C. R. Heisler, M., Sen, A., Murphy, E. C., Hesterman, O. B., Davis, M. M., & Zick, S. M. (2017). Increasing use of healthy food incentive: A waiting room intervention among low-income patients. *American Journal of Preventive Medicine*, *52*(2), 154-162.

Cohen, B. (2002). Community food security assessment toolkit. Washington, DC: Economic Research Service.

- Coleman-Jensen, A., Nord, M., Andrews, M., & Carlson, S. (2014). *Household food security in the United States in 2010*. Washington, DC: USDA.
- Conrey, E. J., Frongillo, E. A., Dollahite, J. S., & Griffin, M. R. (2003). Integrated program enhancements increased utilization of farmers' market nutrition program. *The Journal of Nutrition, 133*(6), 1841-1844.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.) Thousand Oaks, CA: Sage Publications.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.
- Creswell, J. W. & Miller, D. (2000). Determining validity in qualitative inquiry. *Theory into Practice, 39*(3), 124-130
- Denzin, N. K. (1978). *Sociological methods*. New York NY: McGraw-Hill.
- Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of qualitative research*. Thousand Oaks, CA: Sage Publications.
- Deshpande, S., Basil, M. D., & Basil, D. Z. (2009). Factors influencing healthy eating habits among college students: An application of the health belief model. *Health Marketing Quarterly, 26*(2), 145-164.
- DeWalt, Kathleen M. & DeWalt, Billie R. (2002). *Participant observation: a guide for fieldworkers*. Walnut Creek, CA: AltaMira Press.

- Dibsdall, L. A., Lambert, N., Bobbin, R. F., & Frewer, L. J. (2003). Low-income consumers' attitudes and behaviour towards access, availability and motivation to eat fruit and vegetables. *Public Health Nutrition*, 6(2), 159-168.
- Di Noia, J., Monica, D., Cullen, K. W. Thompson, D. (2017). Perceived influences on farmers market use among urban, WIC enrolled women. *American Journal of Health Behavior*, 41(5), 618-629.
- Dubowitz, T., Acevedo-Garcia, D., Salkeld, J., Lindsay, A. C., Subramanian, S. V., & Peterson, K. E. (2007). Lifecourse, immigration status and acculturation in food purchasing and preparation among low-income mothers. *Public Health Nutrition*, 10(4), 396-404.
- Ettienne-Gittens, R., McKyer, E. L. J., Odum, M., Diep, C. S., Li, Y., Girimaji, A., & Murano, P. S. (2013). Rural versus urban Texas WIC participants' fruit and vegetable consumption. *American Journal of Health Behavior*, 37(1), 130-140.
- Fair Food Network. (2017). Double up food bucks: A win for families, farmers and communities. Retrieved from <http://www.doubleupfoodbucks.org/about/>.
- Farmers Market Coalition. (2017). Resources: Education. Retrieved from <https://farmersmarketcoalition.org/education/qanda/>.
- Feenstra, G. W. (1997). Local food systems and sustainable communities. *American Journal of Alternative Agriculture*, 12(1), 28-36.
- Franck, C., Grandi, S. M., & Eisenberg, M. J. (2013). Taxing junk food to counter obesity. *American Journal of Public Health*, 103(11), 1949-1953.
- Freedman, D. A., Flocke, S., Shon, E. J., Matlack, K., Trapl, E., Ohri-Vachaspati, P., . . . & Borawski, E. (2017). Farmers' market use patterns among supplemental nutrition

- assistance program recipients with high access to farmers' markets. *Journal of Nutrition Education and Behavior*, 49(5), 397-404.
- Freedman, D. A., Vaudrin, N., Schneider, C., Trapl, E., Ohri-Vachaspati, P., Taggart, M., Cascio, A., Walsh, C., & Flocke, S. (2016). Systematic review of factors influencing farmers market use overall among low income populations. *Journal of The Academy of Nutrition and Dietetics*, 116(7), 1136-1155.
- Garrison, D., Cleveland-Innes, M. Kool, M., & Kappelman, J. (2006). Revisiting methodological issues in transcript analysis: Negotiated coding and reliability. *Internet and Higher Education*, 9, 1-8.
- Gerbasi, G. T. (2006). Athens farmers market: Evolving dynamics and hidden benefits to a southeast Ohio rural community. *American Geographical Society's Focus on Geography*, 49(2), 1-6.
- Gibbs, G. R. (2007). Analyzing qualitative data. In U. Flick (Ed.), *The Sage qualitative research kit*. Thousand Oaks, CA: Sage Publications.
- Gibney, M. J. (2004). European consumers' attitudes and beliefs about safe and nutritious foods: concepts, barriers and benefits. Proceedings of the International Food Conference: Thinking beyond tomorrow, Dublin, 4, 17-18.
- Gibson, P., & King, C. (2012). Health behavior theories and research: Implications for suicidal individuals' treatment linkage and adherence. *Cognitive Behavior Practice*, 19(2), 209-217.
- Glanz, K., Rimer, B. K., & Viswanath, K. (Eds.). (2008). *Health behavior and health education: theory, research, and practice*. San Francisco: CA. John Wiley & Sons.

- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York, NY: Aldine de Gruyter.
- Gliner, J. A., Morgan, G. A., & Leech, N. L. (Eds.). (2009). *Research methods in applied settings: An integrated approach to design and analysis*. New York: NY. Taylor & Francis Group.
- Gold, Raymond L. (1958). Roles in sociological field observations. *Social Forces*, 36, 217-223.
- Gorimani, E. T., & Holben, D. H. (1999). WIC program participants in rural Appalachia may be prone to food insecurity: A pilot study. *Journal of the American Dietetic Association*, 99(9), A25.
- Government Publishing Office. (1978). Public law 95-627: Child care food program. Retrieved from <https://www.gpo.gov/fdsys/pkg/STATUTE-92/pdf/STATUTE-92-Pg3603.pdf>.
- Govindasamy, R., J. Italia, & A. Adelaja. (2002). Farmers markets: Consumer trends, preferences, and characteristics. *Journal of Extension*, 40, 1-7.
- Grin, B. M., Gayle, T. L., Saravia, D. C., & Sanders, L. M. (2013). Use of farmers markets by mothers of WIC recipients, Miami-Dade County, Florida, 2011. *Preventing Chronic Disease*, 10(E95), 1-11.
- Gupta, S. J. (2019). Understanding the feasibility and value of grassroots innovation. *Journal of the Academy of Marketing Science*, 1-25.
- Gustafson, A., Christian, J. W., Lewis, S., Moore, K., & Jilcott, S. (2013). Food venue choice, consumer food environment, but not food venue availability within daily travel patterns are associated with dietary intake among adults, Lexington Kentucky 2011. *Nutrition Journal*, 12(1), 1-11.

- Gustafson, A., McGladrey, M., Stephenson, T., Kurzynske, J., Mullins, J., Peritore, N., Cardareli, K., & Vail, A. (2019). Community-Wide Efforts to Improve the Consumer Food Environment and Physical Activity Resources in Rural Kentucky. *Preventing Chronic Disease, 16*, 1-7.
- Halimatou, A., Navaugh, F. Kara, J., & Abigail, P. (2017). Farmers' market use associated with fruit and vegetable consumption among low-income populations: A cross sectional study from southern Arizona. *Journal of Nutrition and Health Sciences, 4*(2), 201.
- Harrison, H., Birks, M., Franklin, R., & Mills, J. (2017). Case study research: Foundations and methodological orientations. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 18*(1).
- Haynes-Maslow, L., Auvergne, L., Mark, B., Ammerman, A., & Weiner, B. J. (2015). Low-Income Individuals' Perceptions About Fruit and Vegetable Access Programs: A Qualitative Study. *Journal of Nutrition Education and Behavior, 47*(4), 317–324.
- Hearn, M. D., Baranowski, T., Baranowski, J., Doyle, C., Smith, M., Lin, L. S., & Resnicow, K. (2013). Environmental influences on dietary behavior among children: Availability and accessibility of fruits and vegetables enable consumption. *Journal of Health Education, 29*(1), 26-32.
- Herman, D. R., Harrison, G. G., Afifi, A. A., & Jenks, E. (2008). Effect of a targeted subsidy on intake of fruits and vegetables among low-income women in the special supplemental nutrition program for women, infants, and children. *American Journal of Public Health, 98*(1), 98-105.
- Hinrichs, C., Gillespie G., & Feenstra, G. (2004), Social learning and innovation at retail farmers markets, *Rural Sociology, 69*(1), 31-58.

- Hochbaum G, Rosenstock I, Kegels S. (1952). Health Belief Model. United States Public Health Service. Retrieved from http://www.infosihat.gov.my/infosihat/artikelHP/bahanrujukan/HE_DAN_TEORI/DOC/Health%20Belief%20Model.doc.
- Hochbaum, G.M. (1958). Public Participation in Medical Screening Programmes: A Socio-Psychological Study. Washington DC: Government Printing Office.
- Holben, D. H., McClincy, M. C., Holcomb, J. P., Dean, K. L., & Walker, C. E. (2004). Food security status of households in Appalachian Ohio with children in Head Start. *Journal of the American Dietetic Association*, 104(2), 238-241.
- Holloway, I. (2005). *Qualitative research in health care*. McGraw-Hill Education.
- Holt, S. (2015). 5 ways Americans farmers' markets have evolved. Retrieved from <http://civileats.com/2015/08/05/5-ways-americas-farmers-markets-have-evolved/>.
- Inglis, V., Ball, K., & Crawford, D. (2008). Socioeconomic variations in women's diet: What is the role of perceptions of the local food environment? *Journal of Epidemiological Community Health*, 62(3), 191-197.
- Institutes of Medicine. (1996). *WIC nutrition risk criteria: A scientific assessment*. Washington, DC: National Academies Press.
- Inui, T. S., Yourtee, E. L., & Williamson, J. W. (1976). Improved outcomes in hypertension after physician tutorials a controlled Trial. *Annals of Internal Medicine*, 84(6), 646-651.
- Iowa Department of Public Health (IDPH). (2004). Extent of food insecurity among Iowa WIC participants. Retrieved from <http://www.idph.state.ia.us/wic>.
- Illinois Department of Public Health (IDPH). (2013). Illinois farmers market food safety: A guide for vendors, market managers, and consumers. Retrieved from

<http://www.dph.illinois.gov/sites/default/files/publications/Farmers-Market-Food-Safety-Guide.pdf>.

- Isaac, S., & Michael, W. B. (1995). *Handbook in Research and Evaluation for Education and the Behavioral Sciences*. San Diego, CA; Educational and Industrial Testing Services.
- Jacobson, M. (2007). Food matters: Community food assessments as a tool for change. *Journal of Community Practice, 15*(3), 37–55.
- James, D. (2004). Factors influencing food choices, dietary intake, and nutrition-related attitudes among African Americans: Application of a culturally sensitive model. *Ethnicity and Health, 9*(4), 349-367.
- Jekanowski, M., D. Williams, & W. Schiek. (2000). Consumers' willingness to purchase locally produced agricultural products: An analysis of an Indiana survey. *Agricultural and Resource Economics Review, 29*(8), 43–53.
- Jeanfreau, S. G., & Jack Jr, L. (2010). Appraising qualitative research in health education: Guidelines for public health educators. *Health Promotion Practice, 11*(5), 612-617.
- Jilcott, S. B., Wade, S., McGuirt, J. T., Wu, Q., Lazorick, S., & Moore, J. B. (2011). The association between the food environment and weight status among eastern North Carolina youth. *Public Health Nutrition, 14*(9), 1610-1617.
- Jilcott-Pitts, S. B., Gustafson, A., Wu, Q., Leah-Mayo, M., Ward, R. K., McGuirt, J. T., Rafferty, A. P., Lancaster, M. F., Evenson, K. R., Keyserling, T. C., & Ammerman, A. S. (2014). Farmers' market use is associated with fruit and vegetable consumption in diverse southern rural communities. *Nutrition Journal, 13*(1), 1-11.
- Jilcott-Pitts, S. B., Wu, Q., Demarest, C. L., Dixon, C. E., Dortche, C, J., Bullock, S. L., McGuirt, J., Ward, R., & Ammerman, A. S. (2015). Farmers' market shopping and

- dietary behaviours among supplemental nutrition assistance program participants. *Public Health Nutrition*, 18(13), 2407-2414.
- Johansson, L., Thelle, D. S., Solvoll, K., Bjørneboe, G. E. A., & Drevon, C. A. (1999). Healthy dietary habits in relation to social determinants and lifestyle factors. *British Journal of Nutrition*, 81(3), 211-220.
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.
- Kamphuis, C. B. M., Giskes, K., Bruijn, G. D., Wendel-Vos, W., Brug, J., & Lenthe, F. J.V. (2006). Environmental determinants of fruit and vegetable consumption among adults: A systematic review. *British Journal of Nutrition*, 96(4), 620-635.
- Kawulich, B. (2005). Participant Observation as a Data Collection Method. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 6(2).
doi:<http://dx.doi.org/10.17169/fqs-6.2.466>
- Kearney, M., Kearney, J. M., Dunne, A., & Gibney, M. J. (2000). Sociodemographic determinants of perceived influences on food choice in a nationally representative sample of Irish adults. *Public Health Nutrition*, 3(2), 219-226.
- Kezis, A., T. Gwebu, S. Peavey, & H.-T. Cheng. (1998). A study of consumers at a small farmers' market in Maine: Results from a 1995 survey. *Journal of Food Distribution Research*, 29(1), 91-99.
- Krebs-Smith, S. M., & Kantor, L. S., (2001). Choose a variety of fruits and vegetables daily: Understanding the complexities. *Journal of Nutrition*, 131(2), 487S-501S.
- Kretzmann, J., & McKnight, J. P. (1996). Assets-based community development. *National Civic Review*, 85(4), 2329.

- Kropf, M. L., Holben, D. H., Holcomb, J. P., & Anderson, H. (2007). Food security status and produce intake and behaviors of special supplemental nutrition program for women, infants, and children and farmers' market nutrition program participants. *Journal of the American Dietetic Association, 107*(11), 1903-1908.
- Laraia, B. A., Siega-Riz, A. M., Kaufman, J. S., & Jones, S. J. (2004). Proximity of supermarkets is positively associated with diet quality index for pregnancy. *Preventive Medicine, 39*(5), 869-875.
- Larson, N. I., Story, M. T., & Nelson, M. C. (2009). Neighborhood environments: Disparities in access to healthy foods in the U.S. *American Journal of Preventive Medicine, 36*(1), 74-81.
- Levitt, J. (2018). Where are the lines drawn? Retrieved from <http://redistricting.ils.edu/where.php#equalpop>
- Lincoln, Y. S., Lynham, S. A. & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences revisited. In N.K. Denzin & Y. S. Lincoln. *The Sage handbook of qualitative research* (4th ed., pp. 97-128) Thousand Oaks: Sage.
- Lincoln, Y. S. & Guba E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Locke, L. F., Spirduso, W. W., & Silverman, S. J. (2014). *Proposals that work*. Newbury Park, CA: Sage.
- Lunenburg, F. C. (2011). Self-efficacy in the workplace: Implications for motivation and performance. *International Journal of Management, Business, and Administration, 14*(1), 1-6.
- Mack, N., Woodsong, C., MacQueen, K. M., Guest, G., & Namey, E. (2005). Qualitative research methods: a data collectors field guide. Retrieved from

<https://www.fhi360.org/sites/default/files/media/documents/Qualitative%20Research%20Methods%20-%20A%20Data%20Collector's%20Field%20Guide.pdf>.

Malterud, K. (2001). Qualitative research: Standards, challenges and guidelines. *The Lancet*, 358, 483-488.

Meadows, D. (1999). *Leverage points: Places to intervene in a system*. Hartland, VT: Sustainability Institute.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass Publishers.

Merriam, S. B., Johnson-Bailey, J., Lee, M., Kee, Y., Ntseane, G., & Muhamad, M. (2001). Power and positionality: Negotiating insider/outsider status within and across cultures. *International Journal of Lifelong Education*, 20(5), 405-416.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey Bass Publishers.

Minichiello, V., Aroni, R., & Minichiello, V. (1990). *In-depth interviewing: Researching people*. Australia: Longman Cheshire.

Morgan, D. L. (1996a). *Focus groups as qualitative research*. Los Angeles, CA: Sage Publications.

Morgan, D. L. (1996b). Focus groups. *Annual Review of Sociology*, 22, 129-152.

Morland, K., Wing, S., Roux, A. D., & Poole, C. (2002). Neighborhood characteristics associated with the location of food stores and food service places. *American Journal of Preventive Medicine*, 22(1), 23-29.

- Morland, K., Roux, A. V. D., & Wing, S. (2006). Supermarkets, other food stores, and obesity: The atherosclerosis risk in communities study. *American Journal of Preventive Medicine*, 30(4), 333-339.
- Narayan, K. (1993). How native is a “native” anthropologist? *American Anthropologist*, 95(3), 671-686.
- National Cancer Institute (NCI). (2014). Usual dietary intakes: Food intakes, US population, 2007-10. Retrieved from <http://appliedresearch.cancer.gov/diet/usualintakes/pop>.
- National Commission for Health Education Credentialing, Inc. (NCHEC) & Society for Public Health Education. (2015). *A competency- based framework for health education specialist*. Whitehall, PA: Author.
- National Institute of Food and Agriculture (NIFA). (2017). Food insecurity incentive (FINI) grant program. Retrieved from <https://www.nifa.usda.gov/program/food-insecurity-nutrition-incentive-fini-grant-program>.
- Neal, A. (2013). Meet me at the market: The evolution of a farmers market. Retrieved from <https://www.usda.gov/media/blog/2013/08/7/meet-me-market-evolution-farmers-market>.
- Nelson, F. J. & Schertz, L. P. (1996). Provisions of the federal agriculture improvement and reform act of 1996. Retrieved from <https://www.ers.usda.gov/publications/pub-details/?pubid=42097>.
- Neutens, J. J. & Rubinson, L. (2014). *Research Techniques for the Health Sciences* (5th ed.). San Francisco, CA: Pearson.
- National Institute of Food and Agriculture (NIFA). (2017). Food insecurity nutrition incentive (FINI) grant program. Retrieved from <https://nifa.usda.gov/program/food-insecurity-nutrition-incentive-fini-grant-program>.

- Nord, M., Andrews, M., & Carlson, S. (2005). Household food security in the United States, 1999. Department of Agriculture. *Economic Research Service*, 39.
- Office of Disease Prevention and Health Promotion (ODPHP). (2016). Top 10 things you need to know about the 2015-2020 dietary guidelines for Americans. Retrieved from <https://health.gov/news/dietary-guidelines-digital-press-kit/2016/01/top-10-things-you-need-to-know/>.
- Ogden, C. L., Lamb, M. M., Carroll, M. D., & Flegal, K. M. (2010). *Obesity and socioeconomic status in adults: United States 1988-1994 and 2005-2008*. NCHS data brief no 50. Hyattsville, MD: National Center for Health Statistics.
- Ogden, C. L., Carroll, M. D., Fryar, C. D. Flegal, K. M. (2015). *Prevalence of obesity among adults and youth: United States, 2011-2014*. NCHS data brief no 219. Hyattsville, MD: National Center for Health Statistics.
- Onianwa, O., G. Wheelock, & M. Mojica. (2005). An analysis of the determinants of farmer-to-consumer direct-market shoppers. *Journal of Food Distribution Research*, 36(1), 130–134.
- Onozaka, Y., Nurse, G., & McFadden, D. T. (2010). Local food consumers: How motivations and perceptions translate to buying behavior. *Choices: The Magazine of Food, Farm & Resource Issues*, 25(1), 7-12.
- Pawlak, R., & Colby, S. (2009). Benefits, barriers, self-efficacy and knowledge regarding healthy foods; perception of African Americans living in eastern North Carolina. *Nutrition Research and Practice*, 3(1), 56-63.
- Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Service Research*, 34(5), 1189-1208

- Patton, M. Q. (2015). *Qualitative research and evaluation methods*. Los Angeles, CA: Sage Publications.
- Payne, G. H., Wethington, H., Olsho, L., Jernigan, J., Farris, R., & Walker, D. K. (2013). Implementing a farmers' market incentive program: perspectives on the New York City Health Bucks Program. *Preventing Chronic Disease*, 10, 1-9.
- Pinstrup-Andersen, P. (2009). Food security: definition and measurement. *Food Security*, 1(1), 5-7. doi:10.1007/s12571-008-0002-y
- Polit, D. F., Beck, C. T., & Hungler, B. P. (2006). *Essentials of nursing research: Methods, appraisal, and utilization*. New York, NY: Lippincott.
- Pomeranz, J. L. (2015). Implications of the Supplemental Nutrition Assistance Program tax exemption on sugar-sweetened beverage taxes. *American Journal of Public Health*, 105(11), 2191-2193.
- Pothukuchi, K. (2004). Community food assessment: A first step in planning for community food security. *Journal of Planning Education and Research*, 23, 356-377.
- Pothukuchi, K., Joseph, H., Burton, H., & Fisher, A. (2002). What's cooking in your food system: A guide to community food assessment. Venice, CA: Community Food Security Coalition.
- Powell, L. M., Auld, M. C., Chaloupka, F. J., O'Malley, P. M., & Johnston, L. D. (2007). Associations between access to food stores and adolescent body mass index. *American Journal of Preventive Medicine*, 33(4), 301-307.
- Powell, L. M., & Chaloupka, F. J. (2009). Food prices and obesity: Evidence and policy implications for public health nutrition. *The Milbank Quarterly*, 87(1), 229-257.

- Prochaska, J. D., Sharkey, J. R., Ory, M. G., & Burdine, J. N. (2008). Assessing healthful eating among community dwelling rural older adults using self-reported fruit and vegetable consumption via a community-wide mail-out health status assessment. *Journal of Nutrition for The Elderly*, 25(2), 101-112.
- Quinn, A. (2011). Price, access and education at Philadelphia farmers' markets. Retrieved from http://jdc.jefferson.edu/mphcapstone_presentation/36.
- Rahmanian, E., Gasevic, D., Vukminorovich, I., & Lear, S. A. (2014). The association between the built environment and dietary intake – a systematic review. *Asia Pacific Journal of Clinical Nutrition*, 23(2), 183-196.
- Ratcliffe, M., Burd, C., Holder, K., & Fields, A. (2016). Defining rural at the U.S. Census Bureau. Retrieved from https://www2.census.gov/geo/pdfs/reference/ua/Defining_Rural.pdfhttps://www2.census.gov/geo/pdfs/reference/ua/Defining_Rural.pdf.
- Rosenstock, I. M. (1974). The health belief model and prevention health behavior. *Health Education Monographs*, 2(4), 354-386.
- Rosenstock, I. M. (1960). What research in motivation suggests for public health. *American Journal of Public Health and the Nation's Health*, 50(1), 295-302.
- Rosenstock, I. M., Strecher, V. J., Becker, M. H. (1988). Social learning theory and the health belief model. *Health Education Quarterly*, 15(2), 175-183.
- Ryan, G. W. & Bernard, H. R. (2003). Techniques to identify themes. *Field Methods*, 15(1), 85-109.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.

- Sacks, G., Veerman, J. L., Moodie, M., & Swinburn, B. (2011). 'Traffic-light' nutrition labelling and 'junk-food' tax: a modelled comparison of cost-effectiveness for obesity prevention. *International Journal of Obesity*, 35(7), 1001.
- Sallis, J. F., & Glanz, K. (2009). Physical activity and food environments: solutions to the obesity epidemic. *The Milbank Quarterly*, 87(1), 123-154.
- Schell, R., & King, W. (2013). Guide to Illinois laws governing direct farm marketing: For farmers and other entrepreneurs. Retrieved from <http://www.ilstewards.org/wp-content/uploads/2013/09/ISA-LegalGuide-web-1.pdf>.
- Schmid, H. (1981). The foundation: Qualitative research and occupational therapy. *American Journal of Occupational Therapy*, 35(2), 105-106.
- Schupp, J. L. (2016). Just where does local food live? Assessing farmers' markets in the United States. *Agriculture Human Values*, 33(4), 827-841.
- Senge, P. M. (2014). *The fifth discipline fieldbook: Strategies and tools for building a learning organization*. Crown Business.
- Shaikh, U., Byrd, R. S., & Auinger, P. (2009). Vitamin and mineral supplement use by children and adolescents in the 1999-2004 national health and nutrition examination survey: Relationship with nutrition, food security, physical activity, and health care access. *Archives of Pediatrics & Adolescent Medicine*, 163(2), 150-157.
- Simons-Morton, B., McLeroy, K. R., & Wendel, M. (2012). *Behavior theory in health promotion practice and research*. Burlington, MA: Jones & Bartlett Publishers.
- Skinner, B. F. (1938). *The behavior of organisms*. New York, NY: D. Appleton & Company.
- Streubert-Speziale, H. J. (2007). Designing data generation and management strategies. In Streubert-Speziale, H. J., Carpenter, D. R. (Eds.). *Qualitative research in nursing:*

Advancing the humanistic imperative. Philadelphia, PA: Lippincott Williams & Wilkins (pp. 35–56.)

The Experimental Station. (2017). Link up Illinois. Retrieved from

<https://experimentalstation.org/linkup-overview>.

Thilmany, D., Bond, C., Bond, J. K. (2008). Going local: Exploring consumer behavior and motivations for direct food purchases. *American Journal of Agricultural Economics*, 90(5), 1303-1309.

Timmerman, G. M. (2007). Addressing barriers to health promotion in underserved women. *Family & Community Health*, 30(1), 34-42.

United States Department of Agriculture. (1964). Pilot food stamp program: Impact on retail food store sales in Avoyelles Parish, La. Retrieved from

<https://naldc.nal.usda.gov/download/CAT87201931/PDF>.

United States Department of Agriculture. (2007). National count of farmers market directory listings. Retrieved from

<https://www.ams.usda.gov/sites/default/files/media/National%20Count%20of%20Operating%20Farmers%20Markets%201994-2016.jpg>.

United States Department of Agriculture. (2008). WIC Farmers' Market Nutrition Program.

Retrieved from <http://www.fns.usda.gov/WIC/FMNP/FMNPfaqs.htm>.

United States Department of Agriculture. (2009). USDA, Food and Nutrition Service, Supplemental Nutrition Assistance Program, Fiscal Year 2009, Benefit Redemption Division Annual Report.

United States Department of Agriculture. (2010). USDA to update national farmers market

directory in 2010 to track and highlight. Retrieved from <https://www.ams.usda.gov/press->

release/usda-update-national-farmers-market-directory-2010-track-and-highlight.

United States Department of Agriculture. (2014). Why local food matters: The rising importance of locally grown food in the US food system. Retrieved from <https://www.ams.usda.gov/sites/default/files/media/Why%20Local%20Food%20Matters%20The%20Rising%20Importance%20of%20Locally%20Grown%20Food%20in%20the%20U.S.%20Food%20System.pdf>.

United States Department of Agriculture. (2014a). 2014 Farm bill highlights. Retrieved from https://www.rd.usda.gov/files/2014_USDA_Farm_Bill_Highlights.pdf.

United States Department of Agriculture. (2014b). Supplemental nutrition assistance program (SNAP); A short history of SNAP. Retrieved from <https://www.fns.usda.gov/snap/short-history-snap>.

United States Department of Agriculture. (2015). Supplemental nutrition assistance program state activity report. Retrieved from <https://fns-prod.azureedge.net/sites/default/files/snap/2015-State-Activity-Report.pdf>.

United States Department of Agriculture. (2015a). Senior farmers' market nutrition program fiscal year 2015 profile. Retrieved from <https://www.fns.usda.gov/sites/default/files/sfmnp/SFMNP-Profile-Data-FY2015.pdf>.

United States Department of Agriculture. (2016). Senior farmers' market nutrition program. Retrieved from <https://www.fns.usda.gov/sites/default/files/sfmnp/SFMNPFactSheet.pdf>.

United States Department of Agriculture. (2016a). Farmers market promotion program 2016 report. Retrieved from <https://www.ams.usda.gov/reports/farmers-market-promotion-program-2016-report>.

- United States Department of Agriculture. (2017a). Snap community characteristics of Illinois. Retrieved from <https://www.fns.usda.gov/ops/snap-community-characteristics-illinois>.
- United States Department of Agriculture. (2017b). WIC program: Average monthly benefit per person. Retrieved from [https://www.fns.usda.gov/sites/default/files/pd/25wifyavgfd\\$.pdf](https://www.fns.usda.gov/sites/default/files/pd/25wifyavgfd$.pdf).
- United States Department of Agriculture. (2017c). Definitions of farmers markets, direct marketing farmers, and other related terms. Retrieved from <https://www.fns.usda.gov/eat/definitions-farmers-markets-direct-marketing-farmers-and-other-related-terms>.
- United States Department of Agriculture. (2017d). Women, infants, and children (WIC). Retrieved from <https://www.fns.usda.gov/wic/women-infants-and-children-wic>.
- United States Department of Agriculture. (2017e). Local food directories national farmers market directory. Retrieved from <https://www.ams.usda.gov/local-food-directories/farmersmarkets>.
- United States Department of Agriculture. (2017f). Reauthorization of child nutrition act. Retrieved from <https://www.fns.usda.gov/tags/reauthorization-child-nutrition-act>.
- United States Department of Agriculture. (2017g). FINI grant program. Retrieved from <https://www.fns.usda.gov/snap/FINI-Grant-Program>.
- United States Department of Agriculture. (2017h). Supplemental Nutrition Assistance Program. Retrieved from <https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program-snap>.
- U.S. Food and Drug Administration (FDA). (1998). Guide to minimize microbial food safety hazards for fresh fruits and vegetables. Retrieved from <https://www.fda.gov/downloads/Food/GuidanceComplianceRegulatory>

- ryInformation/GuidanceDocuments/ProduceandPlanProducts/UCM169112.pdf.
- U.S. Food and Drug Administration (FDA). (2017). Food safety modernization act. Retrieved from <https://www.fda.gov/food/guidanceregulation/fsma/>.
- U.S. Census Bureau. (2016). Quick facts: Jackson county Illinois. Retrieved from <https://www.census.gov/quickfacts/fact/table/jacksoncountyillinois,US/PST045216>.
- U.S. Census Bureau. (2016). Quick facts: Carbondale Illinois. Retrieved from <https://www.census.gov/quickfacts/fact/table/cartervillecityillinois,carbondalecityillinois/PST045216>.
- U.S. Census Bureau. (2016). My congressional district. Retrieved from <https://www.census.gov/mycd/?st=17&cd=12>.
- U.S. Government Publishing Office. (2017). Electronic code of federal regulations: Part 248: WIC farmers' market nutrition program (FMNP). Retrieved from https://www.ecfr.gov/cgi-bin/text-idx?SID=a6828ac000f6e75ae4679d5beecb637c&mc=true&node=pt7.4.248&rgn=div5#se7.4.248_19.
- U.S. Department of Health and Human Services and U.S. Department of Agriculture (HHS). (2015). *2015–2020 Dietary Guidelines for Americans*. (8th ed). Retrieved from <http://health.gov/dietaryguidelines/2015/guidelines/>.
- Veerman, J. L., Sacks, G., Antonopoulos, N., & Martin, J. (2016). The impact of a tax on sugar-sweetened beverages on health and health care costs: a modelling study. *PloS One*, *11*(4), e0151460.

- Velasquez, C., Eastman, C., & Masiunas, J. (2005). An assessment of Illinois farmers' market patrons' perceptions of locally-grown vegetables. *Journal of Vegetable Science*, *11*(1), 17-26.
- Walker, R. E., Keane, C. R. & Burke, J. G. (2010). Disparities and access to healthy food in the United States: A review of food deserts literature. *Health and Place*, *16*, 876-884.
- Wagner, M. (1978). How Farmers Markets Serve the Community and the Producer. (Unpublished thesis). Southern Illinois University, Carbondale, IL.
- Wolf, M. A. Spittler, & J. Ahern. (2005). A profile of farmers' market consumers and the perceived advantages of produce sold at farmers' markets. *Journal of Food Distribution Research*, *36*(1), 192–201.
- Yin, Y. K. (1984). *Case study research: Design and methods*. Thousand Oaks: CA. Sage Publications.
- Young, C., Karpyn, A., Uy, N., Wich, K., & Glyn, J. (2011). Farmers' markets in low income communities: impact of community environment, food programs and public policy. *Community Development*, *42*(2), 208-220.
- Zepeda, L., and D. Deal. (2009). Organic and local food consumer behaviour: Alphabet theory. *International Journal of Consumer Studies*, *33*(6), 697–705.

Appendix B

Focus Group Outline

Focus Group Outline

Welcome/Intro: (6 minutes)

Introductions: Hello my name is Dominique Rose and I am conducting this research for my dissertation project at SIUC.

Purpose of the day: The purpose of having you here today is to learn about your thoughts and perspectives of the DVCP that you take advantage of here in Carbondale.

How the day will run: We will first begin by having you sign and read the consent form, following which we will begin with questions; thereafter, we will conclude our discussion and then you will receive your gift card.

Consent form. Hand out folding name cards and ask participants to write a pseudonym (a “fake name” they would like to be called and referred to as during the study) on the card.

Body:

Guidelines: First, if I could ask you to please put away any phones so that we are not interrupted and so nobody has any concern about their responses leaving this room. Also, I want all of us to be able to keep track of what people are saying. We will only have one person talking at a time, so I would please ask you to let anyone who is talking finish before you begin; if you’d like, you can place your name card flat on the table, and I will know to call on you next. Also, everything you say will be kept confidential.

Just to get started, please introduce yourself to the rest of the room *using your fake name* and let us know any other information about you that you might wish to add. Let’s begin:

Questions:

Question 1 = 6minutes

Question 2 = 6 minutes

Question 3 = 6 minutes

Question 4 = 6 minutes

Question 5 = 6 minutes

Question 6 = 6 minutes

Question 7 = 6 minutes

Closure: Are there any final comments?

Closing: (5 minutes)

Thank you so much for participating in this important focus group. I understand that your time is valuable, but please know that you have made an important contribution to the

research field and my education. Hopefully we can use these findings to make real improvements to the nutrition environment in communities across southern Illinois.

If you think of any additional thoughts or questions in the future, please do not hesitate to contact me. I will provide you each with my contact information. Thank you so much!

Dismissal

Appendix C

Participant Demographic Sheet

Demographic Questions

1. What is your zip code? _____
2. In what year were you born? _____
3. Are you...?
 - Male
 - Female
 - Trans
 - Prefer not to answer
4. What is your race? (Please select all that apply.)
 - White
 - Black or African American
 - American Indian or Alaska Native
 - Asian
 - Hawaiian Native or Pacific Islander
 - Other: _____
5. Are you of Hispanic, Latino, or Spanish origin?
 - Yes
 - No
6. How would you describe your current employment status?
 - Full time (35 hours a week or more year-round)
 - Part time (fewer than 35 hours a week year-round or seasonal work)
 - Unemployed but actively seeking employment
 - Not employed and not actively seeking employment (student, retired, home-maker, disabled, etc.)
7. What is your highest level of education?
 - 8th grade or less
 - Some high school
 - High school graduate or GED certificate
 - Some college or technical school
 - College undergraduate degree
 - Graduate or professional degree
8. Do you currently receive any of the following government benefits?
 - SNAP (Supplemental Nutrition Assistance Program or “Food Stamps”)
 - WIC benefits

- Cash assistance including TANF, SSI, SSDI, or GA (but not including social security benefits)

Thank you for taking the time out to complete this survey.

This project has been reviewed and approved by the SIUC Human Subjects Committee. Questions concerning your rights as a participant in this research may be addressed to the Committee Chairperson, Office of Sponsored Projects Administration, SIUC, Carbondale, IL 62901-4709.

Phone (618) 453-4533. E-mail: siuhsc@siu.edu

Appendix D

Qualitative Research Consent Form

Consent Form

Individuals Perception of the Double Value Program and the Administrative Scope in Southern Illinois: A Qualitative Study**Consent to Participate in Research**

I (participant), agree to participate in this research project conducted by Dominique Rose, graduate student in the department of Public Health and Recreation Professions.

I understand the purpose of this study is to understand the administrative scope of the Double Value Program and the perspective of individuals who utilize the program in southern Illinois.

I understand my participation is strictly voluntary and may refuse to answer any question without penalty. I am also informed that my participation will last 45 minutes.

I understand that my responses to the questions will be audio/videotaped, and that these tapes will be transcribed/stored and kept for 365 days in a locked file cabinet. Afterward, these tapes will be destroyed.

I understand questions or concerns about this study are to be directed to Dominique Rose, 618-453-2777, dmarose@siu.edu or her advisor Dr. Aaron Diehr, 618-453-2777, aaron@siu.edu.

I have read the information above and any questions I asked have been answered to my satisfaction. I agree to participate in this activity and know my responses will be tape recorded. I understand a copy of this form will be made available to me for the relevant information and phone numbers.

“I agree _____ I disagree _____ to have my responses recorded on audio/video tape.”

“I agree _____ I disagree _____ that Dominique Rose may quote me in his/her paper”

Participant signature and date

This project has been reviewed and approved by the SIUC Human Subjects Committee. Questions concerning your rights as a participant in this research may be addressed to the Committee Chairperson, Office of Sponsored Projects Administration, SIUC, Carbondale, IL 62901-4709. Phone (618 453 4533. Email: siuhsc@siu.edu.

Appendix E

Qualitative Administrative Interview Protocol

Administrative (Health Department) Protocol - Questions

Interview Questions:

1. What are the demographics of the individuals you serve through your agency in terms of race, age, family size, and education level?
2. What do you think are some of the challenges of eating healthfully in your county/community?
 - a. Roughly what proportion of individuals come in and mention they need additional nutritional assistance?
3. What do you know about the Double Value Coupon Program? What are your thoughts about it?
 - a. Has your organization implemented a program similar to the DVCP?
 - b. Have community members suggested implementation of the DVCP or any similar program?
4. Speaking now on overall community health, what specific ways does your organization improve the nutrition of the communities you serve?
 - a. Do you feel that the DVCP would “fill a gap” to improve the community nutrition environment?
 - i. (If “yes”) Could you give me some specific examples of ways you foresee that it might help?
 - ii. (If “no” or “it doesn’t”) Why do you feel it wouldn’t improve the community nutrition environment? Specifically, what areas do you feel would be ineffective?
5. What do you think are some barriers to exposing and/or expanding the reach of the DVCP to your community?
 - a. What do you think would be the best way(s) to reduce those barriers?
6. What community or state partnerships do you feel are necessary to improve the community nutrition environment for disparate communities or populations?
 - a. Are any of these partnerships currently established?
 - i. (If “yes”) Which ones?
 - ii. (If “no”) Why do you think they have not yet been established?
7. Finally, what do you think might be some ways to both *improve* and to *sustain* the food environment in your jurisdiction?
8. Do you have any further insight you would like to provide either about the overall nutrition environment in southern Illinois or about the DVCP?

Thank you for taking the time to assist me in this research. If you have any questions, please feel free to contact me or my advisor listed on the consent form.

Appendix F

Qualitative Farmers Market/Manager Interview Protocol

Farmers Market and Market Manager Protocol – Questions

Interview Questions:

1. How would you describe the general demographic trends of the shoppers you serve in terms of race, age, family and education level?
2. What are the demographics of individuals who seek out information about the DVCP? (Probing: Do they come from certain areas of town/the county? Do they share any particular demographic characteristics?)
 - a. Do they follow the same demographic patterns as the *overall* demographics of shoppers served by the market, or do they differ in any particular ways that you notice?
 - b. Are there any key demographic segments of the population that you think might not be adequately seeking out and/or receiving the benefits of the DVCP?
 - i. (If “yes”) Why do you think that *difference* might exist?
 - c. Are there individuals you think are receiving DVCP benefits but not *redeeming* them adequately?
 - i. (If “yes”) What issues do you think might make it difficult for individuals to redeem their coupons?
3. In what ways have the DVCP been promoted that you have noticed? You can speak to word-of-mouth, advertising, and any other sorts of methods or materials you might use.
4. What do you think are some of the benefits of *farmers markets* implementing the DVCP?
 - a. For *shoppers* who use the DVCP, what do you think are some of the benefits for them?
5. What do you think are some of the barriers to exposure and/or expanding the reach of the DVCP throughout Southern Illinois?
 - a. What do you think would be the best way(s) to reduce those barriers and expand/better market the DVCP?
6. What community or state partnerships do you feel are necessary to improve the nutrition environment for disparate communities or populations?
 - a. Are any of these partnerships currently established?
 - i. (If “yes”) Which ones?
 - ii. (If “no”) Why do you think they have not yet been established?
7. Finally, what do you think might be some ways both to *improve* and to *sustain* the DVCP?
8. Do you have any further insight you would like to provide either about the overall nutrition environment in southern Illinois or about the DVCP?

Thank you for taking the time to assist me in this research. If you have any questions, please feel free to contact me or my advisor listed on the consent form.

Appendix G

Qualitative Stakeholder Interview Protocol

Stakeholder Protocol – Questions

1. How would you describe the general demographic trends of the individuals you serve in terms of race, age, family and education level?
2. In what ways have the DVCP been promoted that you have noticed? You can speak to word-of-mouth, advertising, and any other sorts of methods or materials you might use.
3. What do you think are some of the benefits of *organizations* implementing the DVCP?
 - a. For *individuals* who use the DVCP, what do you think are some of the benefits for them?
4. What do you think are some of the barriers to exposure and/or expanding the reach of the DVCP throughout Southern Illinois?
 - a. What do you think would be the best way(s) to reduce those barriers and expand/better market the DVCP?
5. What community or state partnerships do you feel are necessary to improve the nutrition environment for disparate communities or populations?
 - a. Are any of these partnerships currently established?
 - i. (If “yes”) Which ones?
 - ii. (If “no”) Why do you think they have not yet been established?
6. Finally, what do you think might be some ways both to *improve* and to *sustain* the DVCP?
7. Do you have any further insight you would like to provide either about the overall nutrition environment in southern Illinois or about the DVCP?

Thank you for taking the time to assist me in this research. If you have any questions, please feel free to contact me or my advisor listed on the consent form.

Appendix H

Focus Group Questions

1. Welcome and rules (see *Focus Group Outline* for details)
2. What are some factors that influence your decision to purchase fresh produce?
 - a. How easy or difficult is it for you to get to places where you can shop for fresh produce? I'm referring specifically to transportation options.
 - b. How does quality play a role in your decisions to shop for fresh produce?
 - c. How does price influence your decisions to shop for fresh produce?
 - d. What are your thoughts on the selection of fresh produce in the local community when shopping?
 - e. Is access a significant factor when shopping for fresh produce? [If "yes"] Could you give me some examples of what you mean by *access*?
3. About how often do you shop at the farmers market at Carbondale Farmer's Market or Carbondale Community Farmers Market at the Carbondale Community High School?
 - a. What would you consider your greatest influences to shop at the farmers market? By *influences*, I mean people, things, or even emotions you might have.
4. How did you first learn about the Double Value Coupon Program (DVCP)?
 - a. About how long have you used the DVCP?
 - b. Discuss your level of comfortability when using the DVCP at the market. Is it easy or hard to use? Could you give me some examples?
5. How do you think you personally benefit from using the DVCP?
6. Tell me about any experiences you've had with the DVCP.
 - a. What would you consider some of your *best* experiences? Could you describe them?
 - b. How about disappointments using the DVCP? Could you describe those as well?
7. What about the DVCP do you think needs improvement to make it better, more effective, or more useful to you and others who might benefit from it?
8. Suppose you were in charge of making *just one* change to the DVCP that would make it better, and let's also assume that "money is no object." What change would you make and why?
9. Lastly, before we leave, I am going to ask you to fill out a brief one-page demographic survey. Please do not put your name anywhere on the survey. When you're finished, please bring it to me, and I will hand you an envelope with your gift card in it. Thank you for your participation!

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