

5-2015

Access to Fresh Produce: A Corner Store Owner Perspective

Kelly C. Freeburg
St. Catherine University

Recommended Citation

Freeburg, Kelly C., "Access to Fresh Produce: A Corner Store Owner Perspective" (2015). *Master of Social Work Clinical Research Papers*. Paper 449.
http://sophia.stkate.edu/msw_papers/449

This Clinical research paper is brought to you for free and open access by the School of Social Work at SOPHIA. It has been accepted for inclusion in Master of Social Work Clinical Research Papers by an authorized administrator of SOPHIA. For more information, please contact ejasch@stkate.edu.

Access to Fresh Produce: A Corner Store Owner Perspective

by

Kelly C. Freeburg, BSW, LSW

MSW Clinical Research Paper

Presented to the Faculty of the

School of Social Work

St. Catherine University and the University of St. Thomas

St. Paul, Minnesota

in Partial Fulfillment of the Requirements for the Degree of

Master of Social Work

Committee Members

Michael Chovanec, Ph.D., LICSW, LMFT

Adam Kay, Ph.D.

Taiana Hayes, MSW, LGSW

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota, and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problems, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

Abstract

There is an understood difficulty for the average American to meet the daily nutritional recommendations; but to numerous of neighborhoods across the United States, access to healthy food items is scarce (Kirkpatrick, 2012; Weill, Cooper, Hartline-Grafton, & Burke, 2011). In low-income environments, it is common to find “corner stores.” Corner stores do not often carry as many items as compared to a grocery store, especially “healthy” items. Because of a biology professor’s experience with soil, crops, and an abundance of produce, the department and local health department staff started a delivery system to corner store sites which offers attractive, fresh produce to neighborhoods in North Minneapolis. The purpose of this study was to explore the value of a business relationship with a local fresh produce distribution business, BrightSide Produce Distribution, from a corner store owner perspective. Qualitative interviews were conducted with eight corner store owners in Northern neighborhoods of Minneapolis. The interviews explored the owners’ experiences; and 10 themes were developed. The findings of this study suggest that the realities in low-income environments make offering fresh produce quite difficult. The findings also indicate a fresh produce distribution system is highly appreciated, with cost being the number one contender. While this study is exploratory in nature, it holds implications for social work practice, policy, and future research.

Keywords: corner stores, fresh produce, distribution business, food justice, qualitative

Acknowledgements

First and foremost, I would like to thank my research chair, Dr. Michael Chovanec for guiding me through the research process and reminding me to keep my blinders on through it all. For the countless hours reading through my paper, the encouragement I received, and the creative suggestions, I am grateful. I would also like to thank my committee members, Adam Kay and Taiana Hayes, for connecting me to resources and programs, for providing feedback, and for the general interest in my topic.

In addition, I would like to extend many thanks to the participants of this study. I was pleasantly surprised by your availabilities for interviews and found your experience of managing a corner store quite astounding. I only hope the best for you in your business as you continue to prioritize the health of our community.

I would like to thank my God, family, husband, and friends. The previous two years have been full. God was the giver of peace when life felt chaotic. Pete, thank you for picking up the pieces when I could not. Friends and family, thank you for understanding my minimal free time and need for sleep. I would not be at this point in life without my family's investment in my personhood and my education. Thank you for your generosity.

Last but not least, this project is dedicated to the corner store owners who work tireless hours in some of the most unsafe parts of our city, serving those in the community who may have little.

Table of Contents

Introduction.....	1
Literature Review.....	5
Commonalities of Low-Income Urban Food Environments.....	6
Access Barriers to Fresh Produce.....	10
Consequences to Lack of Access	14
Efforts to Promote Healthy Eating Among Low-income Minnesotans	17
National Efforts to Promote Healthy Eating Among Low-Income Americans	20
Summary	21
Conceptual Framework.....	22
Method	25
Research Design.....	25
Sample Population.....	25
Protection of Human Subjects.....	26
Instrument.....	27
Data Collection.....	27
Data Analysis	28
Researcher Bias	29
Findings.....	30
Sample.....	30
Themes	31
Cigarettes.....	32
Little General Demand for Fresh Produce	32
Seasonal Demand	33
Waste/Spoilage.....	33
Visibility.....	34
Affordability.....	34
Benevolence	35

Consistency	35
Profitability.....	36
More Variety/Availability	37
Discussion	38
Sample.....	38
Low-Income, Urban Food Environment	39
Visibility.....	39
Affordability.....	40
Conclusion	46
References	48
Appendix A.....	58
Appendix B	59
Appendix C	61
Appendix D.....	62

Introduction

Food is not only a vital and essential part of living; food justice and access to fresh produce are trending topics in today's society. Food and food access are at the forefront in a variety of circles due to the ramifications of physical, financial, and mental health. According to a Centers for Disease Control report (2013) on fruit and vegetable intake, the average adult in the United States eats fruit 1.1 times per day and vegetables 1.6 times per day when half of an individual's plate should be filled with fruits and vegetables at every meal to maintain healthy living, as stated by some of the most recent government dietary guidelines. To tip the scales even more so, most nutritious foods are only available and accessible to certain groups of people due to various circumstances. There are notably high incidences of physical illness and mental health issues in impoverished areas that some research links to lack of access to fresh produce, foods that decrease the likelihood of diseases like cardiovascular disease, heart disease, and depression (Baker et al., 2006; Cummins, Flint, & Matthews, 2014; Hendrickson, Smith, & Eikenberry, 2006; Larson, Story, & Nelson, 2009; Martin, Ghosh, Page, Wolff, McMinimee, & Zang, 2014; Mobley et al., 2006; O'Malley et al., 2013; Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008; Widener, Metcalf, & Bar-Yam, 2011).

In a 2009 survey, 23.5 million Americans, including 6.5 million children, lived in a low-income environment with a supermarket that was more than one mile away (United States Department of Agriculture, 2009). In low-income environments, it is common to find "corner stores." Corner stores are essentially described as small convenience stores that tend to be on the corners in most low-income environments. Corner stores often do not carry as many items as compared to a grocery store, especially "healthy" items. Locally, in Minneapolis, corner store

customers were surveyed in 2012 and said that if fresh produce was more available and affordable, they would buy it (Minneapolis Health Department, 2013).

It is difficult to define “healthy food” due to the differences in ideas about nutrition; however, many organizations such as the National Cancer Institute and the American Heart Association “encourage the consumption of less fat, saturated fat, dietary cholesterol and sodium” and encourage the intake of vitamins and minerals found naturally in fruits and vegetables (Eat Smart Move More...North Carolina, 2014, p. 1; Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008, p. 254; Strolla, Gans, & Risica, 2006, p. 466). Concerning low-income families, members often financially prioritize a variety of basic needs. For this reason, it is valuable to explore and understand the barriers that low-income families have involving consumption of healthy foods.

First lady Michelle Obama said Tuesday that parents can't be expected to give their children healthy food if they don't have good options for groceries nearby. Obama, who is leading a nationwide effort to lower childhood obesity rates, spoke at a Chicago Walgreens store that had expanded to include fresh produce and grocery staples. She called it an example for other parts of the city and the country. ‘We can talk all we want about making healthy choices about the food we serve our kids, but the truth is that if parents don't have anywhere to buy these foods, then all of that is really just talk,’ Obama said (Tareen, 2011, para. 1-3).

The biology department at the University of St. Thomas in St. Paul, Minnesota, heads a program called the Stewardship Science team which integrates environmental research with community service (The UST Stewardship Science Program, n.d.). Although work is primarily in the research gardens, the program began working alongside the Corner Store Procurement

Project and the Minneapolis Healthy Corner Store Initiative. Individuals at the University of St. Thomas wondered how the produce could be distributed and profitable for the corner stores while the city projected a program to increase low environments' access to fresh produce (The UST Stewardship Science Program, n.d.). BrightSide Produce Distribution aims to assist in the access of fresh produce to at least 10 Minneapolis corner stores located in low-income environments; and the list is growing. Faculty members and students already involved at the University of St. Thomas and BrightSide Produce Distribution have invited all disciplines to become involved since one of their missions attempts to "build a more just and environmentally sustainable community" (The UST Stewardship Science Program, n.d., para. 3).

Social work is a field that can relate to building a just community. This problem of healthy food access is important to study as social workers mainly because of the involvement in social justice "with and on behalf of vulnerable and oppressed individuals and groups of people" (National Association of Social Workers [NASW], 2014). The profession of social work advances toward providing access to resources and equal opportunity to the lifestyles obtained more easily by others (NASW, 2014). Social workers see through a variety of lenses, but one being that of a person-in-environment perspective (NASW, 2005). Understanding the literature and connection between low-income environments and the risk of physical and mental health issues largely because of access barriers is important when working with clients. Social workers take into consideration here, not only the psychology of the anxious or depressed mind, but also the lifestyle, the environment, the education, and clients' general thoughts involving nutrition. With the goal to create a more just society, advocacy for improved access to nutritious food in low-income environments is one way to alleviate the health disparities seen in our current society.

The research question was, “What is the value of a business relationship with BrightSide Produce Distribution from a corner store owner perspective?” This question was answered using qualitative interviews with corner store owners in various neighborhoods of North Minneapolis.

Literature Review

Not only is it difficult for the average American to meet the daily nutritional recommendations; but to numerous of neighborhoods across the United States, access to healthy food items is scarce (Kirkpatrick, 2012; Weill, Cooper, Hartline-Grafton, & Burke, 2011). Most of these neighborhoods are home to individuals with low-income and are comprised of people of color (Hendrickson, Smith & Eikenberry, 2006; O'Malley, Gustat, Rice, & Johnson, 2013; Weill et al., 2011). Lower-income environments and harsh economic times stifle businesses like grocery stores and supermarkets. What is even more common in these environments are locations that may not have the refrigeration for produce, the means to access quality, low-price produce, or the priority of obtaining and selling healthy food items (Baker, Schootman, Barnidge, & Kelly, 2006; Mobley, Root, Finkelstein, Khavjou, Farris, & Will, 2006; Treuhaft & Karpyn, 2010; United States Department of Agriculture, 2009). The research attributes many chronic diseases with the low-income population because of little access to better, quality food choices, thus resulting in danger of obesity, cardiovascular disease, and diabetes (Baker et al., 2006; Cummins, Flint, & Matthews, 2014; Hendrickson, Smith & Eikenberry, 2006, Larson, Story, & Nelson, 2009; Martin, Ghosh, Page, Wolff, McMinimee, & Zhang, 2014; Mobley et al., 2006; O'Malley et al., 2013; Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008; Widener, Metcalf, & Bar-Yam, 2011).

Throughout the literature review, there will be an explanation of the areas that were most evident when the topic was researched. First, the commonalities of low-income, urban environments is explored. Secondly, the factors in access such as affordability, transportation, and availability are reviewed. Thirdly, the consequences of living without access to fresh

produce is examined. Lastly, with permission from the director of the local fresh produce distribution business, BrightSide Produce Distribution's name is disclosed and is described.

Commonalities of Low-Income Urban Food Environments

Location. Among several of the studies explored, location and distance away from a grocery store were the most recurrent in low-income environments as it relates to access to fresh produce (Baker et al., 2006; Hendrickson, Smith, & Eikenberry, 2006; Kirkpatrick, 2012; Larson, Story, & Nelson, 2009; Martin et al., 2014; Mobley et al., 2006; O'Malley et al., 2013; Story et al., 2008; Treuhaft & Karpyn, 2010). Much of the research describes low-income environments as "food deserts" or neighborhoods that are "food insecure" (Martin et al., 2014; Treuhaft & Karpyn, 2010, United States Department of Agriculture, 2009). It is in these neighborhoods that large grocery stores with available fruits and vegetables are not easily located. Disparities among the low-income population in Detroit were explored using census tracking to find the population's distance away from a grocery store. On average, black individuals were 1.1 miles further from the nearest supermarket than white individuals were (Larson, Story, & Nelson, 2009; Martin et al., 2014). Fewer supermarkets and longer distances to supermarkets have been examined, specifically in lower-income and mainly African American neighborhoods (Baker et al., 2006). Compared to the white population, minority populations are less likely to have accessibility to large grocery stores that stock a variety of fruits and vegetables on a regular basis (Martin et al., 2014). Morland, Wing, and Diez Roux (2002) and Baker, Schootman, Barnidge, and Kelly (2006) established the value of locating chain grocery stores in low-income environments, which is a rare occurrence. Ten thousand six hundred twenty three participants completed food frequency questionnaires. Places where individuals could purchase food were geocoded with census tracts. For each additional supermarket in the census tract, fruit

and vegetable intake increased by 32% for black Americans. An increase of 11% was found with white Americans when there was one or more supermarkets located in the census tract (Morland, Wing, & Diez Roux (2002). It is evident here that what is available for middle-upper class neighborhoods is not necessarily located in low-income environments. The distance away from grocery stores has a major effect on healthy food choices. In regards to access, these studies postulate the presence of fresh produce availability is impactful in providing healthy food choices.

Availability. Studies assessed the availability of fresh produce in a low-income environment. Without large grocery stores, low-income environments tend to be comprised of small corner stores. Researchers have found that corner stores lack many of the nutritional choices that are available in larger supermarkets or grocery store chains (Hendrickson, Smith, & Eikenberry, 2006; Jetter & Cassady, 2005; Martin et al., 2014). Jetter & Cassady (2005) studied the nutritional content of foods in corner stores and found there was less fiber and more fat in most of the available items. In most corner stores, prices are higher on all items, especially healthy choices, if available (Martin et al., 2014). Until 2008, Minneapolis did not have any requirements about the types of foods stocked in corner stores. The Minneapolis City Council then passed a staple food ordinance that requires at least “five varieties of perishable produce in their stores” (Minneapolis Department of Healthy and Family Support, 2012, p. 3). Corner stores are a convenience stop for most families. Hendrickson, Smith, and Eikenberry (2006) reference Koh and Caples’ study which assessed most low-income families’ priority of filling stomachs without necessarily focusing on quality ingredients. Most corner stores are stocked with snacks and non-perishable items with high energy content, all with a higher price tag. As evidenced

here, if a neighborhood is only comprised of corner stores, it poses difficulty in access to fresh produce.

Affordability. Several studies of low-income environments alluded to affordable settings that are not conducive to healthy food choices, such as fast food restaurants (Baker et al., 2006; Mobley et al., 2006; United States Department of Agriculture, 2009). Food at fast food restaurants is described and known as “cheap, high-fat and high sugar processed” (Treuhart & Karpyn, 2010, p. 7). Fast food restaurants are more likely to be seen in low-income environments compared to middle-to-upper class income neighborhoods. Researchers studied an urban area in St. Louis, Missouri with ethnic and racial findings from the 2000 U.S. census and a fast-food restaurant audit tool which included menu information from fast-food restaurant websites. In their study, primarily poor, African American communities had less healthy food options, even in fast food restaurants, compared to white or racially mixed communities (Baker et al., 2006). Another study used a sample size of 2692 women from five states enrolled in a low-income health program of the Centers for Disease Control and Prevention. Using the women’s zip codes and the zip codes of supermarkets, fast food restaurants, and exercise facilities, researchers found significantly lower Body Mass Index (BMI) and biomarkers for coronary heart disease (CHD) in women who could walk to a variety of these places and be more active. There was no significant findings regarding the access to fast food restaurants, however. Mobley, Root, Finkelstein, Khavjou, Farris and Will (2006) postulate that there may be a mixture of reasons as to why obesity and heart disease may be more prevalent in low-income environments, but consider fast food restaurants and the availability of cheap, higher fat content as a major contributing factor.

Nutritional assistance. When financial resources deplete, it is common that individuals with low-income seek financial assistance through funded food programs or food assistance

(Hendrickson, Smith, & Eikenberry, 2006). The largest and most well-known federally funded programs that assist families nutritionally are Supplemental Nutrition Assistance Program (SNAP) and Women, Infants, and Children (WIC). SNAP “offers nutrition assistance to millions of eligible, low-income individuals and families and provides economic benefits to communities” (United States Department of Agriculture, 2014, para. 1). The parameters within SNAP involve the allowance of purchases made for household foods, as well as seeds and plants that produce fresh produce (United States Department of Agriculture, 2014). This program does not discriminate “on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation or marital and family status” (United States Department of Agriculture, 2014, para. 1); however, the geriatric population aged 60 and older is targeted as a population underutilizing the benefits allotted to them and requires more encouragement and assistance in completing applications (Merlis, 2010). Women, Infants, and Children (WIC) offers “supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be a nutritional risk” (United States Department of Agriculture, 2014, para. 1). Over half of the infants in the United States participate in WIC (United States Department of Agriculture, 2015). Depending on the family’s season of life as listed above, eligibility usually lasts from six months to one year based off of the basis of the applicant’s gross income (United States Department of Agriculture, 2015). Participants are issued vouchers that can be used on certain food and liquid items such as whole wheat bread, fruits and vegetables, single strength juice, cheese, eggs, milk, beans and/or peanut butter (Snapshot of WIC Food Packages, 2010). Minnesota’s goal in offering the WIC program is simply to help new families learn about healthy food choices and stay healthy throughout a lifetime (Minnesota Department of Health, n.d.).

Another way food in low-income environments is obtained is through soup kitchens, food shelves and pantries, which tend to be more readily available to meet basic needs of individuals rather than choices of healthy food items (Henrickson, Smith, & Eikenberry, 2006; Akobundu, Cohen, Laus, Schulte, & Soussloff, 2004). Food shelves and pantries run into barriers and challenges when they rely on donations from the general public (Akobundu et al., 2004). Sources suggest that there is “relatively little research that has examined the nutritional quality of emergency food supplies in the United States” (Kirkpatrick, 2012, p. 16). However, researchers categorized products that were distributed by the Oregon Food Bank by food groups and compared them to the MyPyramid guidelines. In one year of warehouse distribution, 24.1 million out of 36.4 million (66%) pounds of food were from the five food groups including grains, fruit, vegetables, milk, and meat/beans (Hoisington, Manore, & Raab, 2011). Other researchers interviewed 20 managers selected from Feeding America food banks located across the United States. Managers voiced the importance of having fresh produce in the food banks because of the expense and low availability of produce in low-income communities. The struggle for many managers was the distribution process and finding the right time to deliver perishable items so that volunteer staff would not have to move the items later (Handforth, Hennick, & Schwartz, 2013). Much like the corner stores, food shelves do not often have the space or the refrigeration to support donations or distribution of fresh produce.

Access Barriers to Fresh Produce

Price. The lack of affordability for healthy food items is one of the most impactful barriers for families with low-income that has been established in the reviewed literature (Drewnowski & Eichelsdoerfer, 2010; Greger, Maly, Jensen, Kuhn, Monson, & Stocks, 2002; Ketting, Sinclair, & Voevodin, 2009; Kirkpatrick, 2012; Story et al., 2008; Weill, Cooper,

Hartline-Grafton, & Burke, 2011). Price is the final determinant in making a purchase. Ketting, Sinclair, and Veoevodin (2009) hypothesize that low-income families devote much of their budget to non-food expenses and have little left over to budget healthy food in order to reach a lifestyle of health. The study argues that low-income families would “struggle to consistently allocate 30-40% of their budget to healthy food” due to the need for payment of “rent (or mortgage), utility bills, school costs, medical costs and car running costs, as well as discretionary spending on alcohol and cigarettes, recreation, clothing, and holidays” (Ketting et al., 2009, p. 571). Research postulates that healthier food is higher in cost, especially in low-income neighborhoods (Weill et al., 2011). “When the non-negotiable forces impact low-income family members, healthier items, such as “high-quality proteins, whole grains, vegetables and fruit” are typically eliminated from the grocery list first (Drewnowski & Eichelsdoerfer, 2010, p. 1). Because of the high price of healthier food items, what is observed then, is the purchase of foods that are high in sugars and fats so that more money is saved and family members go less hungry (Drewnowski & Eichelsdoerfer, 2010; Story et al., 2008).

In a mixed method study conducted to explore barriers of healthy eating, 101 people, including men and women, para-professionals and nutrition/health professionals comprised a focus group for exploratory research. From the sample, 75 were Spanish-speaking. Questions were formed as the group discussed typical dietary habits. Through a telephone survey of 334 individuals, 238 self-identified as Hispanic. Cost was the second highest barrier after those who answered ‘nothing’ to open-ended questions regarding barriers to healthy eating. Twelve and three tenths percent of the population agreed about this in regards to fruit intake. Seven and two tenths percent of the population agreed to this in regards to vegetable intake (Strolla et al., 2006). Price of fruits and vegetables is critical in the decision to buy. When participants were asked

about the barriers to eating more fruits and vegetables, one non-Hispanic woman stated, “I love fruit...I would eat it every day if I had enough money to buy fruit” (Strolla et al., 2006, p. 471). Ketting (2009) infers that the “promotion of healthy food habits is unlikely to achieve the desired health outcomes for low-income families if the family cannot afford the healthy food” (p. 567). All of these studies reflect that the higher price of fresh produce prevents healthy eating in low-income households.

Availability. For the purpose of this literature review, availability can mean location of the store, quality of produce, and advertisement of food items. These circumstances are considered to be large barriers to accessibility of fresh produce. Research repeatedly examines the lack of availability to supermarkets that carry the freshest and more affordable items, leaving only a variety of corner stores, gas stations, and fast-food outlets (Treuhaft & Karpyn, 2010; Story et al., 2008; Kirkpatrick, 2012). Cited in Treuhaft and Karpyn (2010), the U.S. Department of Agriculture surveyed data that found 23.5 million people who live more than a mile away from a supermarket. Research also found, through an analysis of the nation, that 481 rural counties include residents who live more than 10 miles from a supermarket. Algert et al. (2006) also studied access to healthy food in an ethnic neighborhood located in Pomona, California using addresses for 3985 food pantry clients and 84 food stores in 2003. Only 41% of the food pantry clients were within walking distance of a store that offered fresh produce. The majority, 83%, had limited produce accessible to them. Neither store type was available for 13% of the food pantry clients (Algert et al., 2006).

Secondly, the quality of fresh produce is a determining factor in the access to healthy food items (Hendrickson, Smith, & Eikenberry, 2006; Larson, Story, & Nelson, 2009; Martin et al., 2014). The produce in low-income environments, if available, may not look appetizing in the

store and/or ripened too much by the time the individual or family partakes (Henrickson, Smith, & Eikenberry, 2006). Minneapolis Department of Health and Family Support (MDHFS) established the Healthy Corner Store program to increase the quality of fresh produce by teaching store owners about handling of the produce once a shipment arrived in order to improve appearance and appeal to the customer's eye (Minneapolis Department of Health and Family Support, 2012). The quality and attractiveness of produce is one element of availability that can deter or attract consumers.

Lastly, the advertisement of fresh food or junk food impacts healthy food choices. Jacobson (2007) and Nestle (2002) suggest that "the food industry spends billions of dollars yearly to promote highly processed and packaged foods while neglecting to advertise the benefits of fresh fruits and vegetables and other healthy food choices" (p. 40). Specifically, children are targeted with advertising which exposes them to sugary drinks, high-fat and sugary snacks and fast food. A study of 919 fifth and sixth graders was conducted in Melbourne, Australia using likert-scale surveys. Positive attitudes toward junk food were shown in students who watched more television. When a student viewed advertisements of nutritious food, there was a more positive attitude linked with these types of foods, although the consumption of them was not increased. The researchers found that it was the knowledge of nutritious foods that the children carried with them (Dixon, Scully, Wakefield, White, & Crawford, 2007). Adolescents' exposure to fast food, sweets, and sugary drink products was also prevalent in a study that observed 170 popular television shows for adolescents aged 12 through 17. From September 2003 to May 2004, there were a total of 238,353 30-second advertisements which introduced food-related items about one fifth of the time. Fast food was the top product viewed, 23% of total food advertisements (Powell, Szczypka, & Chaloupka, 2007).

Transportation. Transportation may not be the top barrier expressed in the literature, but it does impact food choices among low-income individuals and families (Algert, et al., 2006; Haynes-Maslow, Parsons, Wheeler, & Leone, 2013; Kettings et al., 2009; Treuhaft & Karpyn, 2010). Most individuals living in poverty either do not have access to a vehicle or may not be able to pay for the maintenance of the vehicle. In a qualitative study by Haynes-Maslow et al. (2013), 68 participants in the SNAP program from North Carolina voiced that transportation effected the elderly as well as those without a vehicle. These individuals could not get to stores or even the farmer's markets. An elderly participant said, "I'd love to go to Whole Foods...you know [but] I can't afford a car anymore. I could drive. I have vision, I'm capable. But I can't afford the insurance, and I don't drive" (Haynes-Maslow et al., 2013, p. 3). Individuals in urban settings may need to rely on the bus system or walking. The nature of the mass transit system may create physical hardship during transfers and multiple stops as well as risks for theft. In urban, low-income environments, there is possibility of significant distance between a house and quality produce (Haynes-Maslow et al., 2013; Kettings et al., 2009; Treuhalf & Karpyn, 2010). These studies indicate limited access to quality produce without proper transportation.

Consequences to Lack of Access

Physical. In the reviewed literature, the physical aspects involved in food access were the most resounding. Nearly every reviewed article's introduction attributed obesity, diabetes, cardiovascular disease, and a variety of physical health complications to the lack of access to fresh produce (Baker et al., 2006; Cummins, Flint, & Matthews, 2014; Henrickson, Smith, & Eikenberry, 2006; Larson, Story, & Nelson, 2009; Martin et al., 2014; Mobley et al., 2006; O'Malley et al., 2013; Story et al., 2008; Treuhaft & Karpyn, 2010; United States Department of Agriculture, 2009; Widener et al., 2011). The access disparities of low-income environments

noted by researchers included the location of stores as well as the effects of insecurity and crime (Mobley et al., 2006; O'Malley et al., 2013). Treuhaft and Karpyn (2010) reiterated research from the Centers for Disease Control suggesting rates of obesity in the African American population is 51% higher than in whites and 21% higher for Latinos. Liao, Tucker, Okoro, Giles, Mokdad, and Harris as cited in Baker et al. (2006) also shared findings about low-income, minority groups, and obesity. Twenty-one percent of the nation is considered obese with 38% being African American, 27% identifying as Hispanic and 37% of Native Americans. African Americans were isolated in their rates for diagnosed heart disease and diabetes, dying at a rate of 29% higher with heart disease than among non-Hispanic whites (National Center for Health Statistics, 2002) and being twice as likely than non-Hispanic whites to be diagnosed with diabetes (Centers for Disease Control and Prevention, 2005). Fast food restaurants, in particular, are located in low-income neighborhoods and are often accused for causing obesity. Larson, Story, and Nelson (2009) examined rates of obesity compared with location of fast-food restaurants using a snowball strategy to find relevant research studies from 1985 to 2008. Results indicated that those with healthier diets and lower levels of obesity were found in neighborhoods with limited access to convenience stores and fast-food restaurants. Rather, these individuals had greater access to supermarkets.

Fifteen focus groups from four communities in Minnesota, two rural and two urban, were studied using a survey which included major food categories and their unit of measure available, quality (when applicable), and price of food from stores in their neighborhoods (Hendrickson, Smith, & Eikenberry, 2006). Those that are living in the most poverty with the least access a supermarket tend to struggle with diseases related to the deficiency of nutrients (Hendrickson, Smith, & Eikenberry, 2006; Larson, Story, & Nelson, 2009). Research posits that a nutritious

diet can prevent chronic disease (Story et al., 2008). All of these articles highlight the physical effects that little access to a variety of nutritious foods can cause.

Financial. Studies claim food plays a large part in the development of diseases like diabetes, cardiovascular disease and obesity (Hendrickson, Smith, & Eikenberry, 2006; Martin et al., 2014). The financial consequences to the lack of access to fresh produce are enormous. In diabetes alone, the American Diabetes Association marks the rise in total costs of diabetes from \$174 billion in 2007 to \$245 billion in 2012 (American Diabetes Association, 1995-2014). Of the total costs in the United States involving diabetes, 62.4% is funded by the government programs (American Diabetes Association, 1995-2014). With this being well over half of the costs for care, this presents as an enormous cost to society, not to mention distress, mounting responsibilities, and the sacrifice of resources for both the individual with the chronic illness as well as caregivers (American Diabetes Association, 1995-2014). As a result of chronic symptoms, healthcare costs skyrocket and families' wallets deplete. Kirkpatrick (2012) suggests improving the financial circumstances of low-income individuals and families since there is such pressure to buy what is convenient and affordable rather than life-sustaining. Since more research is needed on this topic and reality suggests that low-income populations are still struggling financially, society is left to accept the financial toll to treat many diseases that could otherwise be preventable. Without access to fresh produce, these articles suggest financial consequences are extreme.

Mental. The mental consequences from eliminating fresh produce in one's diet is sizeable and is supported in literature involving the topic of nutrition (Compton, 2014; Dog, 2010; McIntyre, 2003; Muldoon, Putu, Fielden, & Anema, 2013; Sathyanarayana Rao, Asha, Ramesh, & Jagannatha Rao, 2008). Low-income households are more likely to have less access

to nutritional food. There is also higher risk for mental illness (Muldoon et al., 2013). Elevated risk and more serious diagnoses of anxiety, attention disorders and depression are among the data that suggests nutrient-rich foods have significance. Comparative of individuals who ate fruits, vegetables and food high in omega-3, those who had a diet of processed meat, sweets, fried foods and refined grains were more susceptible to symptoms of depression (Dog, 2010; Walsh, 2011). Muldoon, Putu, Fielden, and Anema (2013) highlighted that mental illness causing food insecurity is also a viable possibility. The National Health and Nutrition Examination Survey-III surveyed adolescents aged 15 and 16. It determined that those without access to sufficient and nutritious food were significantly more likely to suffer depressive disorders and suicidal ideation than peers who had access to sustainable food (Compton, 2014). Dog (2010) attests that “the Western diet consumed in a growing number of countries is devoid of many of the key nutrients critical for the proper functioning of the central nervous system” (p. 45). The literature infers that low-income environments lack the nutrients needed for mental health.

Efforts to Promote Healthy Eating Among Low-income Minnesotans

Minneapolis Healthy Corner Store Program. In the last five years, the Minneapolis Health Department has responded to food injustice for city dwellers. Ever since 2008, when a city ordinance was passed to ensure corner stores have at least five varieties of fresh produce, the Minneapolis Department of Health has made attempts to support corner store owners. The Minneapolis Healthy Corner Store Program seeks to offer more fresh and attractive produce to corner stores that are embedded in some of the poorest neighborhoods in South and North Minneapolis (Minneapolis Health Department, 2013). Neighborhood organizations working with the corner stores focused on displays of produce, marketing techniques such as signage, and

check-out items of produce rather than items with high sugar and/or salt (Minneapolis Health Department, 2013). Local responses showing significant results in Minneapolis are farmers markets, the Emergency Food Network, the staple food ordinance and BrightSide Produce Distribution (Minneapolis Health Department, 2013).

Farmers markets. Farmers markets are becoming a known supporter for elimination of access issues to fresh produce. Since 2010, the Minneapolis Health Department, Blue Cross Blue Shield and the Institute for Agriculture and Trade Policy have allowed low-income individuals who are eligible for Supplemental Nutrition Assistance Program (SNAP) an opportunity to access fresh produce and reward this behavior by offering an additional \$5.00 to spend at the farmers market once \$5.00 is spent on fresh produce. This partnership has granted buying power of healthy food items for many Minnesotans at 13 farmers markets in the city of Minneapolis (EBT at Farmers Markets, 2014). West Broadway Farmers Market in North Minneapolis is one of many urban farmers markets attempting to make a difference in food access containing a larger focus of that on healthy families and society as a whole. At the West Broadway market, growers in North Minneapolis are able to sell their fresh produce. The market not only offers North Minneapolis access to fresh fish, locally grown vegetables, and fruit; but a safe and positive event is experienced by people living in North Minneapolis (Brassard, 2013).

The Emergency Food Shelf Network. The Emergency Food Shelf Network, now known as The Food Group, supports multiple programs throughout Minneapolis and the surrounding areas to address fresh produce intake. The Bulk Food Program offers fresh produce and other items at less-than-retail-price to partnering agencies. Familiar and nutritious foods are being served to Minneapolis' West African, East African, Southeast Asian and Latino populations through the Culturally Specific Initiatives program. Fare for All, which accepts all

forms of payment, offers fruits, vegetables, and meats for purchase at well-below-retail-price to enable families more nutritiously balanced meals. Fresh produce is purchased by The Food Group from local farmers to disperse at the food shelves in the program called Harvest for the Hungry. If a low-income individual experiences more barriers like transportation or mobility, there is a program that delivers food to large apartment buildings throughout the metro area (Programs, n.d.).

A newer development based in the Wilder Foundation impacted poor areas of Minneapolis and St. Paul for the first time last summer. The Twin Cities Mobile Market involves a renovated, decommissioned city bus that brings fresh vegetables, fruit, dairy products, and meat to neighborhoods that do not carry stock of these items. The goal of the Twin Cities Mobile Market is to make healthy food accessible and affordable by bringing the produce to low-income communities (Boros, 2014).

BrightSide Produce Distribution. The University of St. Thomas has a mission, along with Minneapolis Health Department, to minimize food injustice in Minneapolis. Interest started after a biology professor found out about the Healthy Corner Store Program through the local news. Because of his experience with soil, crops, and an abundance of produce, the biology department and Minneapolis Health Department staff developed a relationship and started a delivery system to corner store sites. Now, BrightSide Produce Distribution utilizes multiple disciplines to organize and deliver fresh produce to corner stores in various neighborhoods of North Minneapolis by participating with a local distribution company which offers attractive, fresh produce at lower prices so that store owners are no longer required to shop at grocery stores for individual items (Minneapolis Health Department, 2013; The UST Stewardship Program, n.d.).

National Efforts to Promote Healthy Eating Among Low-Income Americans

Supplemental Nutrition Assistance Program (SNAP). One of the largest and most well-known federally funded programs that assists nutritionally is the Supplemental Nutrition Assistance Program (SNAP). According to 2012 statistics, more than 47.5 million Americans participated in SNAP. Benefits can only be used toward fresh food items rather than non-food items or prepared foods (*Food Research and Action Center, 2013*). Studies have shown that the SNAP program benefits the quality of a household's food intake and gives necessary vitamins to children (Rose, Habicht, & Devaney, 1998). Based on a study of more than 17,000 caregivers of young children in six urban areas, SNAP participants in low-access areas had fewer hospitalizations compared to non-SNAP participants (Cook, Frank, Levenson, Neault, Heeren, Black, Berkowitz, Casey, Meyers, Cutts, & Chilton, 2006). The program waivers depending on government spending. According to the Food Research and Action Center (2011), "there was a sharp drop in the affordability and access challenge rate beginning in April 2009 among all households when changes in SNAP policy that Congress passed in February 2009 took effect" (Weill et al., 2011, p. 5). Ever since the recession, it has been a difficult fight between low-income household wages and the rate of food inflation, specific to fresh produce (Weill et al., 2011).

Fresh Fruit and Vegetable Program. The Fresh Fruit and Vegetable Program (FFVP) is aimed at school-aged children. With its roots beginning in the Farm Security and Rural Investment Act of 2002, pilot programs expanded into a national program under the Farm Bill in order to contest childhood obesity and to provide increased access to fresh produce (*Fresh Fruit and Vegetable Program, 2012*). School participation is determined by an application process and the percentage of students who are eligible for free and reduced lunch. As of 2012, 4,640 schools

nationwide were reimbursed for offering a variety of produce that the children may not otherwise have the opportunity to implement into their diets (*Fresh Fruit and Vegetable Program*, 2012). Studies have assessed that the FFVP eligible school children consumed an additional one-fourth cup of fruits and vegetables when compared to non-FFVP schools (Olsho, Klerman, & Bartlett, 2011).

Summary

In summary, the topic of food security, food access, and the consequences of a diet lacking nutrition has been researched and analyzed extensively by health care, public health, government programs, and social justice activists. Research relates the barriers to access of fresh produce typically found in low-income environments with chronic consequences in an individual's future. Access to fresh produce is one aspect among many that effect individuals in low-income environments, a common population served in the field of social work. The profession of social work declares and advances toward providing access to resources and equal opportunity to the lifestyles obtained more easily by others (NASW, 2014). Among the goal to create a more just society, social workers play a significant role in advocacy for increased access to nutritious food in low-income environments as one way to decrease health disparities. This research explored the impact of BrightSide Produce Distribution on corner store owners in Northern neighborhoods in Minneapolis.

Conceptual Framework

The conceptual framework used to analyze the data in this research project is the *conceptual framework of food security* proposed by Rainer Gross, Hans Schoeneberger, Hans Pfeifer and Hans-Joachim A. Preuss under the Improved Global Governance for Hunger Reduction and funded by the European Union (Figure 1). In the April 2000 version of Food and Nutrition Security definitions and concepts, there is a conceptual framework most closely related with the purpose of this project (Gross, Schoeneberger, & Preuss, 2000).

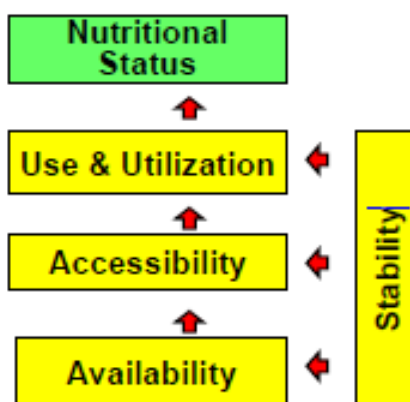


Figure 1. Food security and nutrition. This figure illustrates the elements in food security and nutrition (Gross et al., 2000, p. 5).

The *conceptual framework of food security* was developed after a multitude of food and nutrition security concerns throughout the last eight decades. The concept of “secure, adequate, and suitable supply of food for everyone” (p. 2) was now recognized as an international affair after the Hot Springs Conference of Food and Agriculture in 1943 under President Roosevelt. The definition and ways of handling food and nutrition on a global level has evolved throughout the years. Most recently, in the 1990s, a goal has evolved into providing freedom from hunger

and malnutrition. National governments around the globe are committing themselves to the human right of access to adequate food and nutrition (Gross et al., 2000).

The *conceptual framework of food security* is a framework grounded in the definition of food and nutrition security; and it involves three concepts. “Food and Nutrition Security is achieved if adequate food (quantity, quality, safety, socio-cultural acceptability) is available and accessible for and satisfactorily utilized by all individuals at all times to live a healthy and happy life” (Klennert, n.d., p. 5). In order to reach nutritional stability within a holistic approach, three concepts, *availability*, *accessibility*, and *utilization* are involved (See Figure 1). The first concept under food security is *availability*. “*Availability* refers to the physical existence of food, be it from own production or on the markets” (Klennert, n.d.). The second concept under food security is *accessibility*. “*Access* is ensured when all households and all individuals within those households have sufficient resources to obtain appropriate foods for a nutritious diet” (Klennert, n.d. p. 5; Riely, Mock, Cogill, Bailey, & Kenefick, 1995). The third concept under the way food flows is *utilization* or *use*. Utilization is referred to as a biological and a social concept in the *conceptual framework of food security*. For the purpose of this project, *utilization* was eliminated from the study because the researcher was interested mostly in the availability and accessibility to nutritious food items. *Availability*, *accessibility* and *utilization* must hold stability in order for the nutritional status to thrive.

This research viewed the *conceptual framework of food and nutrition security* as a useful framework when looking at fresh and quality produce for consumers living in a low-income, urban community, much like what was researched in this study. It appears that the goal of the local health department and BrightSide Produce Distribution is to begin at the foundation of the “food flow” by making quality, nutritious foods *available* to store owners and *accessible* for

customers and households. Helping create food and nutrition security is what BrightSide Produce Distribution, as well as the field of social work, continuously stresses in programming and in practice.

There are strengths and limitations of implementing the *conceptual framework of food security*. Strengths of the conceptual framework for food security and nutrition include a model for building nutritional status. Goals of nutritional status can be created when looking at the aspects of the framework. Terms are equally related to the framework as in the literature. *Availability, accessibility, and utilization* are clearly defined.

Limitations of using the *conceptual framework of food security* include little reviewed research regarding food security or insecurity that uses the framework in its entirety. People around the globe continually put this model to the test; and there may be few low-income environments that have the necessary elements to provide nutritional status. For example, store owners may find that the distribution of fresh produce impacts store revenue negatively, family schedules are not hospitable for time to prepare fresh produce, and the cost of fresh produce drives away the desire quickly. In order to achieve the stability of *availability, accessibility, and utilization* in a low-income environment, there is an overwhelming number of features that may need to be in place first.

This research project focused primarily on the *availability* and *accessibility* concepts found in the *conceptual framework of food security* when interviewing the corner store owners for their perspectives on access to fresh produce while partnering with BrightSide Produce Distribution.

Method

Research Design

This research project explored the value of a local organization's distribution to eight corner stores in North Minneapolis neighborhoods. This project evaluated BrightSide Produce Distribution's techniques and practice from the store owners' perspectives. The research design was a qualitative method design. To address the research question, a qualitative study was conducted through the use of interviews. Monette, Sullivan, and DeJong (2011) define qualitative research methods as those that seek to understand the personal and subjective experience of individuals. Within the qualitative data, questions focused on the evaluation of the BrightSide Produce Distribution as well as general thoughts on access to fresh produce in a low-income, urban environment. "Evaluation research refers to the use of scientific research methods to plan intervention programs, to monitor the implementation of new programs and the operation of existing ones, and to determine how effectively programs or clinical practices achieve their goals" (Monette, Sullivan, & DeJong, 2011, p.320). Evaluation research allowed corner store owners to share opinions about their business relationship with BrightSide Produce Distribution. Interviews were conducted in the local corner stores with the store owners.

Sample Population

In this research project, the researcher offered the opportunity to interview 12 corner store owners in North Minneapolis neighborhoods who have a business relationship with BrightSide Produce Distribution. Store owners have varying years of experience running their stores. Store owners were from differing cultures and ethnicities. Because of connections with the local health department, the sampling technique was purposive. The research participants

were selected because of the established relationship they have or previously had with BrightSide Produce Distribution. In order to increase interest in participation, a five-dollar gift card to a well-known coffee shop was distributed.

Protection of Human Subjects

In order to protect and minimize risk of the participants in this study, a proposal was submitted to the St. Catherine University Institutional Review Board (IRB) at an expedited level of review before data collection began. Relationships were formed with the city health department staff and volunteers at BrightSide Produce Distribution before the formal research was conducted to become educated about the owners and their cultures. Permission letters were collected from a health specialist with the local health department as well as the director of BrightSide Produce Distribution. Sufficient information was dispersed prior to contacting the corner store owner for an interview to allow for more time and space to make an educated decision (Appendix A, B, and D). The informed consent form and interview questions were dispersed at this time to allow for adequate review. At the interview, the informed consent form was read aloud and reviewed again before the participant signed (Appendix B). The consent form explained the purpose and background of the study, the confidential and voluntary nature of the study, risks of participating, and means for contacting the researcher. The store owner was encouraged to find a confidential space in their store, if possible. The researcher instructed the store owner to pause the interview if a customer arrived in order to maintain confidentiality. Each paper copy of the consent form was stored in a locked filing cabinet at the researcher's home and destroyed by May 18, 2015. Participants were able to withdraw from the study at any time or choose to waive a question. In order to maintain confidentiality, the stores' and the store owners' names are organized by using a number system. No store owners' names or store names

were identified on the audio-taped interviews nor can they be found in the findings section of this paper. The transcriptions of the interviews were only available to this researcher on a password-protected laptop computer. The transcriptions were destroyed immediately after the research project was submitted on May 18, 2015. The iPhone was locked with a password that was only known to this researcher. The recordings were destroyed by May 18, 2015. Any notes about themes and codes were kept in a folder, locked in this researcher's file cabinet at home, and destroyed by May 18, 2015.

Instrument

The researcher offered the opportunity to a maximum of 12 corner store owners in North Minneapolis neighborhoods. The questions were developed as a result of themes that arose in the literature as well as the need for an evaluation of BrightSide Produce Distribution. The interview questions began generally, questioning the store owner about the store and the customers it serves. Next, the researcher asked about the success and challenges of implementing a produce line in their stores. Then the questions explored the value of the business and services of BrightSide Produce Distribution as well as the store owners' hopes for reaching consumers' interests and wants. All questions ensured an open-ended design to encourage honest feedback. The interview questions were reviewed by the research committee members for bias reduction and increased validity. The in-person interviews were audio-recorded with the researcher's iPhone.

Data Collection

Data collection included the following steps:

1. Potential research subjects were identified through a purposive sample. The researcher used connections with the local government public health specialist to allow an interview opportunity to owners that have a business relationship with BrightSide Produce Distribution.
2. The public health specialist introduced the researcher to the store owners. The researcher explained the research and introduced the study in a face-to-face, introductory meeting (Appendix A). The researcher distributed the consent form (Appendix B) and demographic and interview questions (Appendix D) at this time.
3. The researcher called each store owner via phone to gauge interest in the research project and arranged an interview on-site, reminding each owner to have the completed demographic questions available (Appendix D).
4. The researcher conducted an interview, lasting approximately 4-15 minutes. The interview took place on-site, in a confidential space, if possible, to maintain the owner's and customers' privacy. The participant was reminded to pause the interview to help customers, if needed.
5. The participant was given an informed consent form to sign (Appendix B). The researcher reviewed the consent form verbally so the participant understood his rights and how the data would be used.
6. The researcher gave the store owner \$5 gift card to a well-known coffee shop.
7. The interview was audio-recorded on the researcher's iPhone for transcription purposes.

Data Analysis

Data analysis for the qualitative research was based on a grounded theory methodology perspective, so named because it requires the least amount of interpretation and moves from the

transcribed data to themes which will follow (Berg, 2009). Accordingly, data was drawn from the interview after review of the transcript by the researcher. The analysis began with a process called open-coding, a technique in which every sentence of the transcript is summarized with a few words to describe the main concept of the statement (Berg, 2009). Open-coding was completed by the researcher. Throughout the open-coding process, theoretical notations were made to guide the exploration of relevant theories and themes (Berg, 2009). Concepts that emerged from the transcript were noted, or coded, next to the text. Codes were then organized into categories. Recurring codes were grouped into themes and the transcript was reviewed again to ensure that codes corresponding to the research question were addressed by the themes that had not been established.

Researcher Bias

Bias can impact the research questions both negatively and positively. A potential area of bias to this particular study is reflected in the researcher's choice to live in a food desert in Minneapolis. Prior experiences in the neighborhood played a significant role in the examination of the proposed concepts, as well as insight into prices and food most commonly sold in corner stores. This interest and experience could have pushed leading questions. To counter any bias, questions were screened by a research committee.

Findings

The purpose of this research was to examine the value of a business relationship with BrightSide Produce Distribution from a corner store owner perspective in mostly low-income neighborhoods in North Minneapolis. This study aimed to gain a deeper understanding of the challenges and successes of managing a corner store and offering fresh produce to these particular neighborhoods. Additionally, the study examined the corner store owners' thoughts about items that are most often sold and customers' demand for fresh produce.

Sample

The sample for this research project consisted of eight corner store owners in various neighborhoods of North Minneapolis who are currently participating or recently partnered with BrightSide Produce Distribution. The sample design was purposive, so the participants were referrals from the BrightSide Produce Distribution director. There were a total of 12 stores visited with the local public health specialist to introduce the study. From the follow-up phone calls that were made to 12 stores, eight store owners agreed to participate in this study.

All of the participants in this study are corner store owners in various neighborhoods in the Northern part of Minneapolis. All eight participants were male. Two participants identified themselves as Hispanic or Latino. Two others identified as Black or African American. Two others identified specifically as Middle East when indicating the "other" category. One store owner identified as Asian, while the eighth participant identified as White. Five of the participants are the ages between 40 and 49 years old. The other two participants indicated 30-34 years old and 35-39 years old. One participant did not respond to the age demographic question. One participant acknowledged 1-2 years of management experience. Three participants disclosed

to 6-9 years of management experience. One participant listed 10-14 years of experience. Three participants responded with 15-19 years of management experience.

Interview data was gathered during a two-week period in February 2015 in the North Minneapolis neighborhoods. All interviews were conducted at the participants' stores. Two owners were able to participate in a more private section of the store because they had another employee to manage the cash counter. Six interviews were held over the cash counter in the front of the store and were paused if the owner needed to assist the customer. The duration of each interview fell between four and 15 minutes, depending on how much the participant had to share.

Themes

Participant responses to open-ended questions regarding the role in owning a corner store, the types of items mostly sold in the corner store, thoughts on customers' demand for fresh produce, successes and challenges in offering fresh produce and experience working with BrightSide Produce Distribution. The coding process of the interviews generated 10 qualitative themes. The themes were (a) Cigarettes, (b) Little Demand for Fresh Produce, (c) Seasonal Demand, (d) Waste/Spoilage, (e) Visibility, (f) Affordability, (g) Benevolence, (h) Consistency, (i) Profitability, and (j) More Variety/Availability. The following quotes are results of the open-ended questions asked to the participants of this study. Responses are correlated to the participants' management experience with fresh produce in a neighborhood corner store in North Minneapolis. For the purpose of this study, three or more participants that had similar responses were considered for a theme. For the purpose of this paper, all quotes are italicized.

Cigarettes

“Cigarettes” was one theme identified through the analysis of interview data. Six out of eight participants identified significant amounts of cigarette and snack food sales. This theme was related to the interview question, “What types of items do you most often sell to your customers?” The following quotes highlight a couple of the participants’ thoughts on this topic: *We sell a lot of cigarettes here, I mean like a lot of it, around \$6,000 per month. Yah, and we have beverage, sodas, juices, energy drinks, uh, we sell around \$3,000 per month. And we go through that stuff a lot. But cigarettes is number one seller always...* (Case 1, Page 1, Lines 5-7). Another owner reflected on customers’ purchases: *Cigarettes, number one. A lot of cigarettes and energy drink, it’s a huge. I mean pretty much like this guy, pretty much everyone grabs an energy drink in the morning and a pack of cigarettes. That’s the main item* (Case 4, Page 4, Lines 82-84). These findings suggest the demand for cigarettes may overshadow the need or desire for fresh produce.

Little General Demand for Fresh Produce

Another theme that emerged from the data analysis was customers’ little general demand on fresh produce in the area. This theme was identified when the researcher asked about the owners’ thoughts on consumers’ demand for fresh produce. In a variety of descriptions, five owners alluded to the low, little, or decreased demand for fresh produce in their neighborhood. One store owner responded: *Um, a neighborhood like this, especially in North Minneapolis, we don’t sell a lot of fruit. We sell a lot of chips, but not fruit. We sell almost .5% or 1% is fresh fruit* (Case 1, Page 1, Lines 10-11). Another store owner compared his store in the city to another one of his stores in a nearby suburb. *It’s not that big because around, I have a store in Brooklyn*

Park. I go through a lot of produce like mango, orange, mandarin, apple, pears. Over here the demand is not that high like down there (Case 5, Page 7, Lines 149-151). Yet a third store owner revealed his perception of the people he serves: Nobody has tried new things...It's hard. It's hard because people get used to the junk, the snack food, and it's hard to learn (Case 6, Page 11, Lines 226-228). Similarly to the theme above, the food that is high in sugar and fat and is ultimately cheaper may be overshadowing the need or desire for fresh produce.

Seasonal Demand

A third theme that surfaced from five out of the eight participants' answers relating to consumers' demand for fresh produce, suggested improvements for BrightSide Produce Distribution, as well as the general experience working with the business included comments about seasonal demand and the value of summertime business in Minneapolis. One owner said: *...We had a huge number of biking people in the summertime and they stop up here in the morning, or an apple in the evening and they just get a few apples to snack on the road. We sell more produce in the summer (Case 4, Page 5, Lines 104-106). Another owner offered feedback: Hopefully the summer will be good. The winter has been a little slow (Case 5, Page 10, Line 201). The third owner provided his thoughts: ...because in the summer they have a lot of options to get like peaches, watermelon, we used to get grapes a lot. But in the winter time, it's hard because you can't find it (Case 7, Page 15, Lines 318-320). The data from these store owners suggests a greater amount of fresh produce is bought as the weather improves in Minnesota.*

Waste/Spoilage

A theme that emerged from the question, "What challenges have you had in offering fresh produce to your customers?" was waste/spoilage. All but one owner mentioned the waste

that occurs in the stores as they attempt to sell fresh produce. One owner said: *The most challenging thing is the fruit and vegetable not credible things and doesn't have a long shelf time. So this is the only challenge of throwing away the spoiled food* (Case 7, Page 14, Lines 295-296). Another owner responded: *We end up throwing every week. Almost \$100-\$150 every week, that's \$500 average per month* (Case 1, Page 1, Lines 20-21). These quotes suggest that some owners are viewing fresh produce as a waste of money and product in their stores.

Visibility

Three out of eight corner store owners attributed the visibility of fresh produce as the link to selling more when the researcher asked about the consumer's demand for fresh produce as well as the challenges in offering fresh produce. One owner reminisced when he had a produce cooler: *Well, we had pretty good luck when we had a produce cooler, when it was visible to customers, and everybody was able to see it rather than asking about it* (Case 4, Page 4, Lines 85-86). Later the same store owner responded: *They ask, but if they have it right in front of their face, they totally grab it all the time* (Case 5, Page 5, Lines 100-101). Another store owner said: *We moved the location where the food was. We put it up front so people could see it* (Case 7, Page 13, Lines 269-270). The store owners view the location of the fresh produce in the store as an indicator for purchase.

Affordability

Affordability is another theme that emerged from the data analysis and includes the consumers' perspective as told by the store owners. Affordability of fresh produce was recognized by five out of eight store owners in differing interview questions. The following quote illustrates this theme: *Anything free, they're going to like it. We try to just give the*

customer healthy stuff or healthy food and we try to just most of the time we do it in the summer when the costs are a little bit down (Case 6, Page 10, Lines 211-213). Another owner reflected: *I'm going to price one piece of produce, let's say the orange, if it's 99 cents, I'm going to put it for \$2.00 because I want to make up for what I'm going to be throwing out. And nobody gonna, I mean if they gonna buy it, not all of the people are gonna buy it because they're going to know that's not cheap and they're not gonna buy it* (Case 7, Pages 15-16, Lines 327-331). The above quotes propose the owners' belief that price is the final determinant in the purchase of fresh produce.

Benevolence

Another theme that emerged from the data analysis encompassed benevolence or a sacrificial reverence for the community's health. Four out of eight participants expressed their sacrifice and benevolence to the community at large. The following quote illustrates this: *If some lady comes with the kid, we try to give them free, so it doesn't cost. We don't charge. Even if the kid likes apple or something, we just offer it for free to just let him have an opportunity to taste* (Case 6, Page 10, Lines 216-218). Another corner store owner said: *It's like any other inventory you have in the store, so I might as well get it since it's good for the environment, for people, helping people, and money-wise, you're selling it and you get profit from it* (Case 7, Page 14, Lines 301-303). These quotes suggest some of the owners offer fresh produce as an opportunity to influence and encourage healthy choices for individuals and families in the neighborhood.

Consistency

Consistency in service was another theme that emerged from the data analysis. Two participants have experience working with BrightSide Produce Distribution but do not currently

use its business for varying reasons, mostly cost. One participant chose not to answer the questions asked about the relationship with the local business, while another responded about his past experience. Of the seven participants, seven voiced the value of BrightSide Produce Distribution's consistent contribution to their corner store. *They are always here on time, on the same day, therefore I don't have any complaints about them. They're doing a good job* (Case 2, Page 3, Lines 48-49). Another corner store owner expressed: *Their schedule has been nice time. They come around this time every Saturday* (Case 8, Page 18, Lines 386-387). These quotes suggest the owners' appreciativeness for the consistent and timely service delivered by BrightSide Produce Distribution.

Profitability

The profitability of produce was a theme identified in data analysis by three out of seven participants who answered the following question, "Is there any way your experience with BrightSide Produce Distribution could be improved? List the ways this business could serve you better." One store owner responded: *I'm not going to say that they are too much expensive, but they are also not cheap. So it would be nice if they would work with us also for the pricing and in two ways, like if they drop the pricing, so if we both drop the price we will encourage people to buy more* (Case 7, Page 16, Lines 337-340). A store owner with previous experience relayed his thoughts: *But their prices was really bad. Prices we paid were 75 cents for an apple and I was able to get it for a quarter. So you've got 50 cent gap. When I buy it for 75 cents, I have to sell it for 99 cents. When a few go bad, you can't even afford the margin to put it that much. So you have to upper your margin, the customer quit buying for a dollar or a dollar and a quarter. It's kind of tough because it's not the best deal out here* (Case 4, Pages 6-7, Lines 129-133). For many of the store owners, the profitability of the fresh produce has an impact on the business.

More Variety/Availability

Lastly, the increased variety was a theme that was identified by three participants after the researcher asked, “Is there any way your experience with BrightSide Produce Distribution could be improved? List the ways this business could serve you better.” One store owner responded: *And hopefully we could improve the program and have more items in the future in order to satisfy more customers* (Case 2, Page 3, Lines 55-56). Another store owner noted: *Sometimes they don't have what I want. How could they improve in the future? They could ask every person, every business that they go to, ask them what you like or what sells in the store. Just ask what sells...They're doing it well most of the time, but sometimes they don't have some items we need* (Case 6, Page 12, Lines 240-244). Still another store owner commented: *I mean, if I want to see something, I want to see more produce, more of a variety, no matter what the winter or summer* (Case 7, Page 16, Lines 334-335). These quotes suggest the owners' belief that offering a greater variety of fresh produce may cause increase in sales.

Although convenience was not coded in the interviews but once, it is an important suggestion for BrightSide Produce Distribution to consider. One store owner suggested: *But I think if [BrightSide Produce Distribution] can package the grapes at a size that we can put in the cooler instead of the big bags; that would be really helpful. If they package like little package, then we can sell. People sometimes just want to carry a little. The snack-size, we would go through a lot of them* (Case 5, Page 9, Lines 176-179).

Discussion

The purpose of this study was to provide understanding of a corner store owner perspective while providing fresh produce to North Minneapolis neighborhoods and to better evaluate the business practice of BrightSide Produce Distribution. The literature discusses similar barriers of availability (or lack thereof), affordability (or lack thereof), the overarching commonality of low-income environments comprised of corner stores, and the need for nutritional assistance to provide healthier options for low-income individuals and families. In this section, comparisons will be made from the findings of this study and what has been postulated in previous research.

Sample

The researcher sample consisted of eight corner store owners of various neighborhoods in North Minneapolis out of the 12 offers that were made. The majority of the store owners have significant management experience ranging from one to 19 years. Key characteristics that may have influenced responses included gender, years of management experience, experience with interviews, and personal and professional biases about fresh produce as part of city regulation and business practice. Since all participants identified as male, there was little room for gender diversity. Those with lesser years of management experience may have not been exposed to various business practices involving produce distribution. These owners are accustomed to visiting with the local health department and other distribution agencies, but it may have been one of the first times these participants were involved in a research study given their career. With a city that is progressing toward access to fresh produce for all, store owners could easily have represented their own bias as it relates to fresh produce for individuals and families in the neighborhood and their financial struggles as business owners. The environment was most

notably filled with cheap, but addicting products like cigarettes, sugary drinks, and snack foods with small displays of fresh produce throughout. The themes that the store owners discussed were remarkably similar to some items discussed in the literature.

Low-Income, Urban Food Environment

This research study exhibited similarities to prior research in regards to availability of fresh produce in a low-income environment. Store owners confirmed that many of the customers are consumers of the cigarettes, snack foods, and energy drinks. Many owners discussed their great efforts, but lesser ability to stock fresh produce, and small consumer demand in order to sell an abundance of fresh produce. For city dwellers that have transportation, the owners in this study continue to look for the competitive edge against the large supermarkets that offer large varieties of produce. In previous research, fewer supermarkets and longer distances to supermarkets were present, specifically in lower-income and mainly African American neighborhoods (Baker et al., 2006). Compared to the white population, minority populations are less likely to have the availability of large grocery stores that stock a variety of fruits and vegetables on a regular basis (Martin et al., 2014). Instead, researchers have found that the corner stores lack many of the nutritional choices (Hendrickson, Smith, & Eikenberry, 2006; Jetter & Cassady, 2005; Martin et al., 2014).

Visibility

In this study, three of the eight research participants noted their efforts to make fruits and vegetables visible and appetizing. Some changed the area in the store in which the produce was stored. Others made and displayed signs. Still others displayed the fruit differently and have joined BrightSide Produce Distribution for the sheer fact that the produce looks appetizing. This

supports literature that the quality of fresh produce is a determining factor in the access to healthy food items (Hendrickson, Smith, & Eikenberry, 2006; Larson, Story, & Nelson, 2009; Martin et al., 2014). It may still pose difficulty in sales as evidenced in this study because the majority of the corner stores appeared to be filled with processed and packaged foods that are greatly funded in the food industry today (Jacobson, 2007; Nestle, 2002).

Affordability

Five out of the eight participants in this study described the low demand for fresh produce, whether it be choice, family pattern, or income-based. In the participants' responses of benevolence to their community, it appeared like the community appreciated the taste and benefits of the fruit; however, it was the price that was the determinant. In the literature, Kettings, Sinclair, and Veoevodin (2009) hypothesize that low-income families devote much of their budget to non-food expenses and have little left over to budget healthy food in order to reach a lifestyle of health. Kettings (2009) infers that the "promotion of healthy food habits is unlikely to achieve the desired health outcomes for low-income families if the family cannot afford the healthy food" (p. 567).

Researcher Reaction

In the introductory stage, information flyers were distributed to potential participants. Surprisingly, each corner store owner was found to be open and willing to participate. Some wanted to schedule the interview upon first contact. In order to comply with the interview process, a phone call to schedule the interview was made approximately one week later. This researcher found that only one of the store owners read through the materials that were left at the first face-to-face introduction. Only one participant completed the demographic section upon the

researcher's arrival. One store owner re-scheduled twice with the researcher due to store traffic and conflict in staffing schedule. All of the interviews were extremely relaxed. This researcher was disappointed with the overall time spent at each store and wished it was greater. The greatest difficulty was to retrieve more information from all of the store owners. It is possible that the store owners were hesitant with some of their answers because of the association between a student from the University of St. Thomas and the university's involvement with BrightSide Produce Distribution despite information on the consent form that their participation would not impact their relationship with University of St. Thomas nor BrightSide Produce Distribution. They essentially answered each question cleanly and precisely. It appeared the English language was not the primary language for any of the store owners; and this could be seen as a limitation. It is curious how the researcher's comfort level may have unconsciously impacted the interviews while being in an unknown environment. Anticipation of the store owner scheduling the interview when other employees were working was not a reality; and it became uncomfortable, at times, when customers wondered what the researcher was doing behind or near the check-out counter. It was interesting that the longest interviews correlated to the participant's full attention on the researcher and the questions. Of course, the shorter interviews involved interruptions while the store owner assisted his customers. This researcher was not surprised about the overwhelming challenges in offering fresh produce in this mostly low-income environment in Minneapolis and the outstanding purchases of cigarettes and "junk food", but was greatly saddened by the grasp of addiction. This researcher expected store owners to discuss more about the more recent city ordinance which requires a certain amount of fresh produce in the store. A couple of store owners discussed this briefly. A theme was originally developed surrounding Women, Infants, and Children (WIC) as many store owners mentioned the federally funded

program in the interviews, but under review, owners seemed to have conflicting information or an unclear understanding of the rules and regulations.

Limitations and Recommendations for Future Research

There were several limitations encountered with this project. First, the number of participants offered a small sample size. Because of the purposive sample, it left many other corner store owners in the area out of the study. The majority of the store owners were also from one distinct group of neighborhoods in Minneapolis. Due to the voluntary nature of the study, not all corner store owners that have a business relationship BrightSide Produce Distribution were required to participate. This study cannot be generalized to all low-income areas Minneapolis or around the nation, although some elements may be similar. Due to time limitation and volunteer rates of past projects, city dwellers were not interviewed.

Recommendations for future research could include experiences from consumers of the corner stores in order to explore how better access to fresh produce allows households to make healthier food choices. If this study were to be repeated, one might increase the sample size by offering a greater incentive and a more open schedule for interviews to occur. One could also work with the local health department on a greater scale to work with other stores who do not have a relationship with BrightSide Produce Distribution or a fresh produce distribution business.

Other limitations included limited interview times for what was expected. The researcher believes that the store owners' inexperience with interviews, English as a non-primary language, and busy store hours were culprits in short interview times. In future studies, the researcher should ask more follow-up questions to each of the store owners. It would be best if the researcher could devote time to observe the distribution process in order to ask questions that relate to observed business practice. A recommendation for future research could include an

interview with store owners at a neutral location so that the store owner can concentrate fully on the questions rather than distractions involving customers' and employees' needs. Focus group could offer increased conversation and foster more creative ideas while discussing. Greater incentive may spur owners to share more details.

Yet other limitations involved the interview schedule used in the study. The first question of the interview seemed like it included too many elements or was not asked in the corner store owners' business language. Many corner store owners did not share in great detail what managing the store looked like for them. A recommendation for future research includes discussion of the different roles of store owners in separate questions. Future research could also ask corner store owners what community leaders or social workers could do to assist in the low-income neighborhoods of North Minneapolis.

Implications for Social Work

This study provides understanding of the challenges particularly in an urban, low-income environment from a business standpoint. Social workers working in low-income, urban environments that are home to many corner stores as well as other resources should be educated about the challenges and facts surrounding access to fresh produce as well as the clients' barriers. As the affordability of fresh produces poses one of the greatest threats against healthy food options, social workers should be accustomed to the government programs, like SNAP and WIC, which provide access to affordable and healthy food. Social workers should also be familiarized with community efforts that offer fresh produce at low or no cost, like food shelves that take a "healthy food" stance or community gardens, or reward programs that are located at the local farmers' markets, for example. Clinical social workers often assist clients that have co-morbid problems. Education about the effects of healthy eating could assist in a clearer, balanced mind.

Social workers can refer to educational classes within the community or cooking lessons often held at co-ops and community centers. Whether a clinical or generalist social worker, assistance may be needed by clients to gain access to certain programs that can foster healthy eating.

At a macro-level, social workers can continue to advocate for the means by which low-income individuals and families can have access to fresh produce like other Americans. The Food Research and Action Center (FRAC) recommends items that social workers find themselves working with legislators at a policy level. “Adequate access to affordable and healthy food starts with enough jobs and better wages for low-income workers” (Weill, Cooper, Hartline-Grafton, & Burke, 2011, p. 15). Extensions or enlargement of benefits for programs like SNAP, WIC, and other food programs is necessary for allow access to healthy food. Social workers can be involved in their city politics as part decision-makers for local businesses and advocates for accessible grocery stores that offer a variety of fruits and vegetables at affordable prices.

Social workers may not realize the benefit of working with business owners, however this study indicates the great compassion the corner store owners have in their community. Corner store owners may be a potential resource that social workers can refer to. Social workers who assist families in the Twin Cities may refer to certain businesses that offer affordable produce. Educating store owners about how to better utilize the national food programs or fresh produce distribution in the North Minneapolis is essential after conducting this research. For now, connections between corner stores in North Minneapolis and a local university is providing a sustainable way to offer fresh produce to mostly low-income neighborhoods in the city. Social workers’ involvement in community health could potentially offer more education and coaching

about affordability and visibility of fresh produce to make a greater impact in the communities in which they serve.

Conclusion

The purpose of this research project was to explore the value of a business relationship with BrightSide Produce Distribution from a corner store owner perspective. There are multiple strengths resulting in this study. A significant strength of this study included more information for BrightSide Produce Distribution. Before this study, the business minimally researched the stores in which it collaborates with; so this study is valuable and informative for the business practice. This research may become a valuable source of information for the local health department as well as the business itself and may raise awareness for other corner store owners. Major recommendations offered by the store owners include affordability of fresh produce, convenience-packing for consumers, and continued coaching and support from Minneapolis' health department. Another strength is that the researcher gained cultural experience and may positively be able to voice needs of urban corner store owners as a result of the project. Lastly, this research benefits BrightSide Produce Distribution' goal of exploring its impact in the Northern neighborhoods of Minneapolis. Qualitative methods allowed BrightSide Produce Distribution the opportunity to hear voices of business partners.

The researcher was curious about the evaluation of corner store owners that offer fresh produce to mostly low-income areas in North Minneapolis while utilizing a produce distribution business like BrightSide Produce Distribution. The participants of this study brought years of experience and voices from corner store owners that was difficult to find in previous literature reviews. The typical corner store owner in this study is bombarded by many challenges as he follows government rules and regulations and listens to his customers for their wants and needs, as he, too, must value his profit. Working with BrightSide Produce Distribution seemed to be extremely beneficial to store owners since the remaining items in their stores are also set up with

distribution systems on a much larger scale. All the while, the owners continually deal with the challenges of the neighborhood regarding limited demand for fresh produce and the cost of providing such access to low-income individuals and families.

A research participant speaks of his sacrificial service to the community while also utilizing the supportive business of BrightSide Produce Distribution as a way to better serve the community of North Minneapolis:

We try to provide them [customers] with whatever we can and whatever, even sometimes special orders I go pick it up for them if they want anything special. But since the program started with the, with those kids in the college, things have been consistent and that helps a lot because we have the items all the time, therefore, people know that we carry the items all the time...I consider it in my store a success because we, we provide the neighborhood some vegetables and fruits that is needed for our customers (Case 2, Page 2, Lines 29-35).

References

- Akobundu, U.O., Cohen, N.L., Laus, M.J., Schulte, M.J., & Soussloff, M.N. (2004). Vitamins A and C, calcium, fruit, and dairy products are limited in food pantries. *Journal of The American Dietetic Association*, *104*(5), 811-813. Doi: 10.1016/j.jada.2004.03.009
- Algert, S.J., Agrawal, A., & Lewis, D.S. (2006). Disparities in access to fresh produce in low-income neighborhoods in Los Angeles. *American Journal of Preventative Medicine*, *30*, 365-370. doi: 10.1016/j.amepre.2006.01.009
- American Diabetes Association. (1995-2014). *The cost of diabetes*. Retrieved from <http://www.diabetes.org/advocacy/news-events/cost-of-diabetes.html>
- Baker, E.A., Schootman, M., Barnidge, E. & Kelly, C. (2006). The role of race and poverty in access to foods that enable individuals to adhere to dietary guidelines. *Preventing Chronic Disease: Public Health Research, Practice, and Policy*, *3*(3), 1-11. Retrieved from www.cdc.gov/pcd/issues/2006/jul/05_0217.htm
- Boros, K. (2014). Minneapolis approves 'mobile food markets' for poor areas. *Minnpost*. Retrieved from <http://www.minnpost.com/political-agenda/2014/05/minneapolis-approves-mobile-food-markets-poor-areas>
- Brassard, S. *West Broadway Farmers Market set to nourish North Minneapolis for a third year*. Retrieved February 1, 2015, from [http:// www.insightnews.com/community/10904-west-broadway-farmers-market-set-to-nourish-north-minneapolis-for-a-third-year](http://www.insightnews.com/community/10904-west-broadway-farmers-market-set-to-nourish-north-minneapolis-for-a-third-year)

- Centers for Disease Control and Prevention. (2005). National diabetes fact sheet: U.S. Department of Health and Human Services. Retrieved from http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2005.pdf
- Centers for Disease Control and Prevention. (2013). State Indicator Report on Fruits and Vegetables. 1-14. Retrieved from <http://www.cdc.gov/nutrition/downloads/state-indicator-report-fruits-vegetables-2013.pdf>
- Compton, M.T. (2014) Food insecurity as a social determinant of mental health. *Psychiatric Annals*, 44(1), 46-51. doi: 10.3928/00485713-20140108-08
- Cook, J.T., Frank, D.A., Levenson, S.M., Neault, N.B., Heeren, T.C., Black, M.M., Berkowitz, C., Casey, P.H., Meyers, A.F., Cutts, D.B., & Chilton, M. (2006). Child food insecurity increases risks posed by household food insecurity to young children's health. *The Journal of Nutrition*, 136(4), 1073-1076. Retrieved from <http://jn.nutrition.org/content/136/4/1073.full.pdf+html>
- Cotterill, R., & Franklin, A. (1995). The urban grocery store gap. *Food Marketing Policy Center*, University of Connecticut. Retrieved from ageconsearch.umn.edu/bitstream/161547/2/ip8.pdf
- Cummins, S., Flint, E., & Matthews, S.A. (2014). New neighborhood grocery store increased awareness of food access but did not alter dietary habits or obesity. *Health Affairs*, 33(2), 283-291. doi: 10.1377/hithaff.2013.0512
- Dog, T.L. (2010). The role of nutrition in mental health. *Alternative Therapists in Healthy & Medicine*, 16(2), 42-46. Retrieved from

<http://search.ebscohost.com.ezproxy.stthomas.edu/login.aspx?direct=true&db=cmh&an=51774505&site=chc-live>

Eat Smart Move More...North Carolina. (2014). *Defining healthy foods*. Retrieved from <https://www.eatsmartmovemorenc.com>

EBT at Farmers Markets. (2014, July 11). Retrieved November 8, 2014, from <http://www.ci.minneapolis.mn.us/health/living/community-gardens>

Fresh Fruit and Vegetable Program. (2012, February 24). *Federal Register*. Retrieved from http://ezproxy.stthomas.edu/login?URL=http://go.galegroup.com.ezproxy.stthomas.edu/p/s/i.do?id=GALE%7CA281079217&v=2.1&u=clic_stthomas&it=r&p=ITOF&sw=w&asid=b0f397ede1623b19b8844efe6089b80c

Dixon, H.G., Scully, M.L., Wakefield, M.A., White, V.M., & Crawford, D.A. (2007). The effects of television advertisements for junk food versus nutritious food on children's food attitudes and preferences. *Social Science & Medicine*, 65, 1311-1323. doi: 10.1016/j.socscimed.2007.05.011

Drewnowski, A. & Eichelsdoerfer, P. (2010). Can low-income Americans afford a healthy diet? *National Institutes of Health*, 44(6), 246-249. doi: 10.1097/NT.0b013e3181c29f79

Greger, J.L., Maly, A., Jensen, N., Kuhn, J., Monson, K., & Stocks, A. (2002). Food pantries can provide nutritionally adequate food packets but need help to become effective referral units for public assistance programs. *Journal of The American Dietetic Association*, 102(8), 1126-1128. doi: 10.1016.S0002-8223(02)90249-X

- Gross, R., Schoeneberger, H.P., & Preuss, H.A. (2000). *The four dimensions of food and nutrition security: Definitions and concepts*. Germany: InWEnt – Internationale Weiterbildung und Entwicklung gGmbH. pp. 1-17. Retrieved from www.foodsec.org
- Handforth, B., Hennick, M., Schwartz, M.B. (2013). A qualitative study of nutrition-based initiatives at selected food banks in the Feeding America network. *Journal of the Academy of Nutrition and Dietetics*, 113(3), 411-415. doi: 10.1016/j.jand.2012.11.001
- Haynes-Maslow, L., Parsons, S.E., Wheeler, S.B. & Leone, L.A. (2013). A qualitative study of perceived barriers to fruit and vegetable consumption among low-income populations, North Carolina, 2011. *Preventing Chronic Disease*, 10, 1-10. doi: 10.5888/pcd10.120206
- Hendrickson, D. Smith, C. & Eikenberry, N. (2006). Fruit and vegetable access in four low-income food deserts communities in Minnesota. *Agriculture and Human Values*, 23, 371-383. doi: 10.1007/s10460-006-9002-8
- Hoisington, A., Manore, M.M., & Raab, C. (2011). Nutritional quality of emergency foods. *American Dietetic Association*, 111(4), 573-576. doi: 10.1016/j.jada.2011.01.007
- Jacobson, M. (2007). Food matters. *Journal of Community Practice*, 15(3), 37-55. Retrieved from <http://fc9en6ys2q.search.serialssolutions.com>
- Jetter, K.M. & Cassady, D.L. (2005). The availability and cost of healthier food alternatives. *American Journal of Preventive Medicine*, 30(1), 38-44. doi: 10.1016/j.amepre.2005.08.039

- Kettings, C., Sinclair, A. J., & Voevodin, M. (2009). A healthy diet consistent with Australian health recommendations is too expensive for welfare-dependent families. *Australian and New Zealand Journal of Public Health*, 33(6), 566-572. doi: 10.1111/j.1753-6405.2009.00454.x
- Kirkpatrick, S.I. (2012). Understanding and addressing barriers to healthy eating among low-income Americans. *Journal of the Academy of Nutrition and Dietetics*. 112(5), 617-620. doi: 10.1016/j.jand.2012.02.009
- Klennert, K. (n.d.). *Achieving food and nutrition security: Actions to meet the global challenge*. Germany: Internationale Weiterbildung und Entwicklung gGmbH. pp. 1-230. Retrieved from http://www.fao.org/docs/eims/upload/219148/food_reader_engl.pdf
- 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*. doi: 10.1016/j.amepre.2008.09.025
- Martin, K.S., Ghosh, D., Page, M., Wolff, M., McMinimee, K., & Zhang, M. (2014). What role do local grocery stores play in urban food environments? A case study of Hartford-Connecticut. *Plos One*, 9(4), 1-11. doi: 10.1371/journal.pone.0094033.g001
- McIntyre, L. (2003) Food security: More than a determinant of health. *Policy Options*. Retrieved from www.chumirethicsfoundation.ca
- Merlis, M. (2010). Resource tests and eligibility for federal assistance programs: Effects of current rules and options for change. *AARP Public Policy Institute*. 1-25. Retrieved from

<http://www.aarp.org/research/ppi/econ-sec/low-income/articles/2010-01-resource-tests.html>

Minneapolis Department of Health and Family Support. (2012). *Minneapolis healthy corner store program: Making produce more visible, affordable and attractive*. 1-44. Retrieved from http://www.health.state.mn.us/divs/oshii/docs/Mpls_Healthy_Corner_Store.pdf

Minneapolis Health Department. (2013). *The Minneapolis healthy corner store program: Summary report*. 1-34. Retrieved from <http://www.minneapolismn.gov/www/groups/public/@health/documents/webcontent/wcms1p-117774.pdf>

Minneapolis Health Department. (2013). *Testing an evaluation model for assessing the efficacy of the Minneapolis Health Corner Store program*. 2-19. Retrieved from <http://www.minneapolismn.gov/www/groups/public/@health/documents/webcontent/wcms1p-115543.pdf>

Minnesota Department of Health. (n.d.). *Women, Infants and Children (WIC) Program*.

Retrieved from <http://www.health.state.mn.us/wic/>

Mobley, L.R., Root, E.D., Finkelstein, E.A., Khavjou, O., Farris, R.P. & Will, J.C. (2006). Environment, obesity, and cardiovascular disease risk in low-income women. *American Journal of Preventative Medicine*, 30(4), 327-332. doi: 10.1016/j.amepre.2005.12.001

Morland, K., Wing, S., & Diez Roux, A. (2002). The contextual effect of the local food environment on residents' diets: the atherosclerosis risk in communities study.

American Journal of Public Health, 92(11), 1761-1767. Retrieved from
deepblue.lib.umich.edu/bistream/handle/2027.42/57740

Monette, D. R., Sullivan, T. J., DeJong, C. R., & Hilton, T. P. (2011). *Applied social research: A tool for the human services*. (9th ed.). Belmont, CA: Brooks/Cole Cengage Learning.

Muldoon, K. A., Putu, K.D., Fielden, S. & Anema, A. (2013). Food insufficiency is associated with psychiatric morbidity in a nationally representative study of mental illness among food insecure Canadians. *Social Psychiatry & Psychiatric Epidemiology*, 48(5), 795-803. doi: 10.1007/s00127-012-0587-3

National Association of Social Workers. (2005). *NASW Standards for Clinical Social Work in Social Work Practice*. Retrieved from <http://www.socialworkers.org> on November 5, 2014

National Association of Social Workers. (2014). *Code of Ethics of the National Association of Social Workers*. Retrieved from <http://www.naswdc.org/pubcs/code/code.asp>

National Center for Health Statistics. (2002). Health, United States. Retrieved from <http://www.cdc.gov>

Nestle, M. (2002). *Food politics: How the food industry influences nutrition and health*. Berkeley, CA: University of California Press.

Olsho, L., Klerman, J., & Bartlett, S. (2011). Food and nutrition service evaluation of the Fresh Fruit and Vegetable Program: Interim evaluation report. *Abt Associates*. Retrieved from: <http://www.fns.usda.gov/ora/MENU/Published/CNP/cnp.htm>

- O'Malley, K., Gustat, J., Rice, J. & Johnson, C.C. (2013). Feasibility of increasing access to healthy foods in neighborhood corner stores. *Journal of Community Health, 38*, 741-749. doi: 10.1007/s10900-013-9673-1
- Powell, L.M., Szczypka, G., & Chaloupka, F.J. (2007). Adolescent exposure to food advertising on television. *American Journal of Preventative Medicine, 33*(4), 251-256. doi: 10.1016/j.amepre.2007.07.009
- Riely, F., Mock, N., Cogill, B., Bailey, L., & Kenefick, E. (1999). Food security indicators and framework for use in the monitoring and evaluation of food aid programs. *Food and Nutrition Technical Assistance*. 1-45. Retrieved from <http://chs.ubc.ca/archives/>
- Rose, D., Habicht, J.P., & Devaney, B. (1998). Household participation in the Food Stamp and WIC programs increases the nutrient intakes of preschool children. *The Journal of Nutrition, 128*(3), 548-555. Retrieved from <http://jn.nutrition.org/content/128/3/548.full.pdf+html>
- Sathyanarayana Rao, T., Asha, M., Ramesh, B., & Jagannatha Rao, K. (2008). Understanding nutrition, depression and mental illness. *Indian Journal of Psychiatry, 50*(2), 77. Retrieved from <http://www.medknow.com>
- Story, M., Kaphingst, K.M., Robinson-O'Brien, R. & Glanz, K. (2008). Creating healthy food and eating environments: Policy and environmental approaches. *The Annual Review of Public Health, 29*, 253-272. Doi: 10.1146/annurev.publhealth.29.020907.090926

Strolla, L.O., Gans, K.M. & Risica, P.M. (2006). Using qualitative and quantitative formative research to develop tailored nutrition intervention materials for a diverse low-income audience. *Health Education Research*, 21(4), 465-476. doi: 10.1093/her/cyh072

Tareen, S. (2011). Michelle Obama discusses food access in Chicago. *Huffington Post Chicago*. Retrieved from <http://www.huffingtonpost.com>

The Food Group. (n.d.). *Programs*. Retrieved from <http://thefoodgroupmn.org/programs/>

The UST Stewardship Science Program. (n.d.). *Corner store procurement*. Retrieved from <http://www.ust-stewardship-science.com>

Treuhft, S. & Karpyn, A. (2010). The grocery gap: Who has access to healthy food and why it matters. *Policy Link and the Food Trust*, 5-39. Retrieved from http://thefoodtrust.org/uploads/media_items/grocerygap.original.pdf

United States Department of Agriculture. (2009). *Access to affordable and nutritious food: Measuring and understanding food deserts and their consequences*. 1-141. Retrieved from http://www.ers.usda.gov/media/242675/ap036_1_.pdf

United States Department of Agriculture. (2014). *Food and Nutrition Service: Supplemental Nutritional Assistance Program*. Retrieved from <http://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program-snap>

United States Department of Agriculture. (2014). *Food and Nutrition Service: Women, Infants, and Children (WIC)*. Retrieved from <http://www.fns.usda.gov/ebt/general-electronic-benefit-transfer-ebt-information>

United States Department of Agriculture. (2010). *Snapshot of the New WIC Food Packages*.

Retrieved from <http://www.fns.usda.gov/sites/default/files/Snapshot-WIC-Children-WomenFoodPkgs.pdf>

United States Department of Agriculture. (2015). *Women, Infants and Children (WIC)*. Retrieved

from <http://www.fns.usda.gov/wic/who-gets-wic-and-how-apply#Who Gets WIC?>

Walsh, R. (2011). Lifestyle and mental health. *American Psychologist*, 66(7), 579-592. doi:

10.1037/a0021769

Weill, J., Cooper, R., Hartline-Grafton, H., & Burke, M. (2011). A half-empty plate: Fruit and

vegetable affordability and access challenges in America. *Food Research and Action*

Center, 1-17. Retrieved from: http://frac.org/pdf/half_empty_plate_dec2011.pdf

Widener, M.J., Metcalf, S.S. & Bar-Yam, Y. (2011). Dynamic urban food environments: A

temporal analysis of access to healthy foods. *American Journal of Preventative*

Medicine, 41(4), 439-441. doi: 10.1016/j.amepre.2011.06.034

Appendix A

Face-to-Face Introduction to the Study

Access to Fresh Produce: A Corner Store Owner Perspective

Hi, my name is Kelly Freeburg and I am a graduate student in the School of Social Work at St. Catherine University and the University of St. Thomas. This study is part of my requirements for a masters in Social Work and it is supervised by my professor, Dr. Michael Chovanec, in the School of Social Work. I am conducting a research project on the value of a business relationship with a produce BrightSide Produce Distribution from a corner store owner perspective.

I am requesting your participation and contribution to this study because of your business relationship with BrightSide Produce Distribution. I am looking for your feedback on your store, the successes and challenges of working with a produce distributor and your thoughts about access to fresh produce in your community through an interview that will last 30-45 minutes. This is the consent form and the interview questions I will be asking if you participate. I will be following-up with you within 1 week in order to gage your interest in helping me with this research. Thank you for your time and consideration.

Appendix B

Research Information and Consent Form

Access to Fresh Produce: A Corner Store Owner Perspective

Introduction:

You are invited to participate in a research study exploring the value of the business relationship with your produce BrightSide Produce Distribution partner. This study is being conducted by Kelly Freeburg, a graduate student at St. Catherine University and the University of St. Thomas School of Social Work under the supervision of Dr. Michael Chovenec, a faculty member in the School of Social Work. You were selected as a possible participant in this research because of your involvement with BrightSide Produce Distribution. Please read this form and ask questions before you agree to be in the study.

Background Information:

The purpose of this study is to explore the value of the business relationship with your produce BrightSide Produce Distribution and the access to fresh produce as a result of that relationship. Approximately 8-10 store owners are expected to participate in this research.

Procedures:

If you decide to participate, you will be asked to review and sign this form and expand on questions asked by the interviewer. The interview questions are attached for your convenience. The interviews will take about 30-45 minutes over one session.

Risks and Benefits of being in the study:

The study has minimal risks. First, there is the inconvenience of your time and production. Second, there may be discomfort in sharing about the store's relationship with the produce distributor. Participants must be aware that I am an outside source and not part of BrightSide Production Distribution or the local health department. Individuals associated with BrightSide Produce Distribution and the local health department will have no knowledge of who participates in the study. If you do not want to answer a question, there is no requirement that you do so.

The benefits to participation are direct in that the participants are able to voice opinions about what is working and what could be improved upon. Little research has been conducted about corner stores, specifically in North Minneapolis. The benefits to participation may encourage other store owners in the neighborhood to offer fresh produce in their stores.

Compensation:

If you participate, you will receive a \$5 gift card to Starbucks, complimentary of myself.

Confidentiality:

Any information obtained in the interview will be kept confidential. In any written reports or publications, no one will be identified or identifiable. Signed informed consent forms will be stored in a locked filing cabinet in my home and destroyed by May 18, 2015. In order to maintain confidentiality, the store owner's and store's name will remain confidential to the public, as well as on the recording.

I will keep the research results in a locked laptop computer or in a password protected recording device in my home and only myself and my advisor will have access to the records while I work on this project. I will finish analyzing the data by May 18, 2015. I will then destroy all original reports and identifying information that can be linked back to you. The interview recording will be destroyed by May 18, 2015, as well.

Voluntary nature of the study:

Participation in this research study is voluntary. Your decision whether or not to participate will not affect your future relations with BrightSide Produce Distribution, the local health department, or St. Catherine University in any way. If you decide to participate, you are free to stop at any time without affecting these relationships.

Contacts and questions: If you have any questions, please feel free to contact me, Kelly Freeburg at freexxx@stthomas.edu. You may ask questions now, or if you have any additional questions later, the faculty advisor, Michael Chovanec, mgxxxxxxxx@stkate.edu, will be happy to answer them. If you have other questions or concerns regarding the study and would like to talk to someone other than me, you may also contact Dr. John Schmitt, Chair of the St. Catherine University Institutional Review Board, at (651) 690-xxxx or jsxxxxxxxx@stkate.edu.

You may keep a copy of this form for your records.

Statement of Consent:

You are making a decision whether or not to participate. Your signature indicates that you have read this information and your questions have been answered. Even after signing this form, please know that you may withdraw from the study.

I consent to participate in the study. I agree to be audio-taped on an Iphone recording.

Signature of Participant

Date

Signature of Researcher

Appendix C

Phone call/Prior Discussion to the Interview

Access to Fresh Produce: A Corner Store Owner Perspective

Phone call:

Hello, I am Kelly Freeburg, the graduate student working on my Masters in Social Work at the St. Catherine University and University of St. Thomas School of Social Work. We were introduced about one week ago by the public health specialist. I am calling to schedule the interview if you are interested in participating. What does your next week look like? Please think about times that would be better for you and your store's customers. I look forward to meeting with you on (this date).

Prior discussion to the interview:

Hi, Thank you again for your time and helping me complete this part of my educational requirements. Is there a space that you feel more comfortable so that you're able to see your customers come in? Feel free to pause the interview at any time. We can pick up where we left off. I would like to get started by reviewing the consent form with you. Upon signing I will give the gift card to you as many thanks for helping me with this project. Do you have the demographic questions answered? I will also take that at this time. Let's review the informed consent...

Appendix D

Demographic Questions and Interview Questions

Access to Fresh Produce: A Corner Store Owner Perspective

***Please complete these demographic questions prior to our interview. Please circle the one you most identify with.**

***Please review these questions before we meet. If it is helpful, you may make notes under the questions.**

Participant demographics:

Ethnicity: American Indian or Alaska Native Asian Black or African American Other

Hispanic or Latino Native Hawaiian or Other Pacific Islander Two or More Races White

Gender: Male Female

Age: under 24 25-29 30-34 35-39 40-49 50-59 60+

Years of Management: less than one 1-2 3-5 6-9 10-14 15-19 20+

1. What's your role in ordering, purchasing and managing inventory?
2. What types of items do you most often sell to your customers?
3. What are your thoughts on the consumers' demand for fresh produce?
4. What successes have you had in offering fresh produce to your customers?
5. What challenges have you had in offering fresh produce to your customers?
6. Have you had experience working with a fresh produce distributor? If so, please describe your general experience working with the business.
7. Is there any way your experience with the BrightSide Produce Distribution could be improved? List the ways that this business could serve you better.