ABSTRACT

USE OF PHOTOVOICE IN RAISING HEALTHY HEAD START CHILDREN

by Julia Loomis Kaesberg

In the state of Ohio, the obesity rates for low-income preschoolers are between 10.5% and 12.9%, depending on poverty level, which is higher than the national rates (U.S. Centers for Disease Control and Prevention, 2015e). This qualitative Photovoice study explored the barriers to raising healthy preschoolers from the insights of mothers and grandmothers (n=5) at one Midwestern Head Start location. Participants attended five 2-hour Photovoice sessions, which included a description of the research study, the Photovoice process, instruction on camera use, and multiple discussions of the images the participants generated. Constant comparative analysis was used in conjunction with grounded theory to analyze the data. Five major themes were formed from the data: stressors, a need for parenting strategies, unsafe environments, grocery shopping strategies and barriers, and family meals and cooking. The results from the Photovoice study provided insight into the unique challenges that Head Start families face, which may provide health educators and Head Start staff members with the information necessary to provide relevant educational interventions and resources to the families to assist them in raising healthy preschoolers.

USE OF PHOTOVOICE IN RAISING HEALTHY HEAD START CHILDREN

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Chapter One

Introduction

While obesity rates in children ages 2-5 have decreased from 13.9% in 2003-2004 to 8.4% in 2011-2012, rates still remain high in low-income children (U.S. Centers for Disease Control and Prevention, 2015e). In Ohio, the obesity rates for low-income preschools are between 10.5% and 12.9%, depending on poverty level (U.S. Centers for Disease Control and Prevention, 2015e). Understanding the contributing factors to obesity rates in children is important when creating effective programs and interventions in health education. Nutrition educators and health professionals need to become more aware of the factors contributing to the poor diet, inactivity, and obesity rates of children. Obesity factors are poorly understood among low-income families, including the relationships between race/ethnicity and socioeconomic status. Photovoice is one methodological approach to help uncover the realistic stories of populations who have unique conditions determining their nutrition, physical activity, and obesity patterns in their community.

Statement of the Problem

In the United States in 2014, 20.5% of children ages 12-19 were obese; 17.7% of 6-11 year olds were obese; and 8.4% of two to five year olds were obese (Burwell, Frieden, & Rothwell, 2015). Children between the ages of two and five have little control over their lifestyle and the foods they consume, in part because of a parents' influence on young children (Bibeau, Saksvig, Gittlesohn, Williams, Jones, & Young, 2011; Hall, Morgan, Burrows, Lubans & Callister, 2011; Natale, Messiah, Alsfour, Uhlhorn, Delamater, & Arheart, 2014). Due to parental influence and the problem of childhood obesity, the barriers need to be identified with caregivers of Head Start preschoolers in order to design an effective intervention.

Purpose of the Study

The purpose of this study is to explore the needs of children and their families within the Head Start program in Butler County, Ohio, in order to determine what the barriers to raising a healthy preschooler are for the families.

Significance of the Study

A review of literature has demonstrated that childhood obesity, parental influence, socioeconomic status, and lifestyle can lead to obesity. This study utilizes the Photovoice methodology to gain a deeper understanding of the factors that contribute to obesity, specifically in a low-income preschool population.

Research Questions

There are three main research questions to consider with this thesis: 1) How does the environment and socioeconomic status that Head Start students are raised in influence their nutrition, physical activity and obesity rates? 2) What skills and resources are needed for caregivers of Head Start children to give them healthy food and opportunities for physical activity? and 3) What are the barriers to raising healthy preschoolers?

Definitions

Nutrition

The World Health Organization defines nutrition as "the intake of food, considered in relation to the body's dietary needs" (World Health Organization, 2015). Good nutrition is part of a healthy lifestyle and can decrease one's chances of developing obesity.

BMI

Body Mass Index (BMI) is a calculation of person's body weight in kilograms divided by the square of the person's height in meters (U.S. Centers for Disease Control and Prevention, 2015a). BMI is a commonly used, inexpensive measurement for placing individuals in weight categories: underweight, normal or healthy weight, overweight, and obesity (U.S. Centers for Disease Control and Prevention, 2015a).

Overweight

Overweight is any adult with a BMI of 25.0 to 29.9 kg/m^2 (U.S. Centers for Disease Control and Prevention, 2015a). A child is considered to be overweight if their weight is between

the 85th and 95th percentiles of children of the same age and sex (U.S. Centers for Disease Control and Prevention, 2015b).

Obesity

Obesity is any adult with a BMI of 30.0 kg/m^2 or higher (U.S. Centers for Disease Control and Prevention, 2015a). In children, obesity is any child whose weight is equal to or greater than the 95th percentile for their age and sex (U.S. Centers for Disease Control and Prevention, 2015e).

Photovoice

Photovoice is a research methodology in which participants take photographs related to the research question in order to provide a visual insight into their challenges related to the research question. Participants then discuss their photographs in multiple focus group discussions to gain a deeper understanding of their situation and then create change in their community (Wang & Burris, 1997).

Food Insecurity

The United States Department of Agriculture (USDA) defines food insecurity as reduced quality, variety, or desirability of diet, with or without reduced food intake or disrupted eating pattern (Coleman-Jensen, Gregory & Rabbitt, 2015).

Needs Assessment

A needs assessment is a form of research in which the researchers seek to determine the strengths and resources available in a community, as well as to determine what is still required in the community. Needs assessments can include demographic data, surveys, focus groups, town meetings, or interviews with stakeholders. The goal of the needs assessment is to identify and develop services and solutions to the community's weaknesses, as well as to strengthen the current resources (Child Welfare Information Gateway, n.d.).

Head Start

Head Start is an early learning and preschool program that "promotes the school readiness of young children from low-income families through agencies in their local community" (Office of Head Start, 2015b). The comprehensive development services include early learning, health, and family well-being (Office of Head Start, 2015b).

Community Based Participatory Research (CBPR)

CBPR is a research approach that is equitable among researchers and participants and everyone shares knowledge and decision making. CBPR's ultimate goal is to understand a phenomenon and create an intervention that changes policy to improve quality of life for the community members (Israel, Parker, Rowe, Salvatore, Minkler, López, Butz, & Mosley et al., 2005).

Conclusion

The current research interest is to examine the needs of children and families in the Head Start program in Butler County, Ohio. This study will investigate the needs associated with childhood obesity in order to plan an intervention for parents of Head Start preschoolers.

Chapter Two

Review of Literature

The purpose of this study is to explore the needs of children and their families within the Head Start program in Butler County, Ohio, in order to determine what the barriers to raising a healthy preschooler are for the families. This chapter will include a review of the literature which will overview the topics of Obesity, Childhood Obesity, Defining Nutrition, Nutrition Environment, Race/Ethnicity and Obesity, Parental Influence on Child Nutrition, Parenting Behaviors and Childhood Obesity, and Photovoice.

Obesity

In 2014, 35% of adults in the United States were classified as being obese and 69% were classified as being either overweight or obese (National Center for Health Statistics, 2015). Obesity, caused by excess weight gain from both genetics and behaviors, can result from inactivity, poor dietary behaviors, food marketing, and a lack of education or skills (U.S. Centers for Disease Control and Prevention, 2015c). Currently, diet-related chronic diseases are among the leading causes of premature death in the United States (Mokdad, Marks, Stroup, & Gerderding, 2000; U.S. Burden of Disease Collaborators, 2012). According to the U.S. Centers for Disease Control and Prevention, these chronic diseases may include hypertension, Type 2 diabetes, coronary heart disease, sleep apnea, stroke, high LDL cholesterol, some cancers, and mortality (U.S. Centers for Disease Control and Prevention, 2015c).

Radford, Jones, and Winterstein (2015) state that the intense rise in obesity prevalence in the last 20 years can likely be attributed to poor nutrition, increased consumption of processed foods, and sedentary behavior. Obesity, considered by the authors to be preventable and reversible with treatment, is an epidemic that must be targeted with lifestyle changes. Another study examined obese individuals to determine if increasing self-efficacy for exercise and nutrition support would decrease obesity incidence. In this six-month program, one group received support of exercise and nutrition education (n= 138) and the other group relied on self-regulation (n=136) (Annesi, Johnson, & McEwen, 2015). The self-regulation group was found to have greater improvement for self-regulation skills in eating fruits and vegetables than the group that received nutrition education and self-regulation changes predicted self-efficacy for both

eating and exercise behaviors. The group that received exercise assistance was more likely to self-regulate exercise after the program concluded. These results demonstrate that nutritional knowledge may not be sufficient in creating self-regulatory behavior, but exercise assistance may be sufficient in creating self-efficacy which leads to sustainable self-regulation behavior (Annesi et al., 2015).

Childhood Obesity

While obesity rates have decreased in children 2-5 years old between 2003-2004 and 2011-2012, obesity rates remain high in low-income preschoolers (U.S. Centers for Disease Control and Prevention, 2015a). The National Center for Health Statistics (2015) reported that in 2014, 20.5% of children ages 12-19 were obese, 17.7% of 6-11 year olds were obese, and 8.4% of 2-5 year olds were obese. Children are considered obese when their weight is well above a normal or healthy weight based on their age and height. Causes of childhood obesity are similar to adult obesity and can include poor dietary habits, inactivity, food marketing and the environment created by their caregivers (U.S. Centers for Disease Control and Prevention, 2015d). Children who are obese are more likely to be obese as adults and suffer from the consequences later in their lives (Kelsey, Bjornstad, & Nadeau, 2014). As nutrition is a contributing factor to obesity, both in children and adults, the role of nutrition should be analyzed in depth.

According to a study by Whitaker, Wright, Pepe, Seidel, and Dietz (1997), preschoolers who are overweight or obese are five times more likely than a preschooler of normal weight to be overweight or obese in adulthood. However, the rate of obesity among preschoolers has decreased since 2008 (May, Pan, Sherry, Blanck, Galuska, Dalenius, Polhamus, Kettel-Khan, & Grummer-Strawn, 2013). The factors leading to this slight decline in obesity rates could not be identified and rates varied greatly between states and even in different areas within states. Authors suggest that state and local officials should work to find solutions and that needs assessments for individual areas should be conducted (May et al., 2013). Within this study, Ohio is one of the few states in which the obesity rates increased slightly from 2008 to 2011 with obesity rates in preschoolers rising from 12.2% to 12.4% (May et al., 2013).

Defining Nutrition

The World Health Organization (WHO) defines nutrition as "the intake of food, considered in relation to the body's dietary needs" (World Health Organization, 2015). To obtain a healthy lifestyle, proper nutrition, or the consumption of nutrient-dense foods, and a physically active lifestyle are essential (World Health Organization, 2015). The National Institutes of Health defines nutrition as "the science of food, the nutrients and other substances therein, their action, interaction and balance in relation to health and disease, and the processes by which the organism ingests, absorbs, transports, utilizes and excretes food substances" (U.S. National Library of Medicine, 2009). Head Start in Butler County, Ohio prepares meals in accordance with the Child and Adult Food Care Program (CACFP), which requires that meals provide at least 1/3 of children's daily nutritional requirements (Butler County Educational Service Center, 2015b). A common theme across nutrition definitions is that consuming nutritious foods contributes to an overall healthy lifestyle.

Nutrition Environment

The United States Department of Agriculture (USDA) defines food insecurity as reduced quality, variety, or desirability of diet, with or without reduced food intake or disrupted eating patterns (Coleman-Jensen, Gregory & Rabbitt, 2015). The USDA does recognize a distinction between food insecurity, which is a household-level economic condition with limited or uncertain access to food, and hunger, which is the physiological condition that may result from food insecurity (Coleman-Jensen, Gregory, & Rabbitt, 2015). In the United States, 14% of households are food insecure (Coleman-Jensen, Gregory & Rabbitt, 2015). It is the position of the Academy of Nutrition and Dietetics that interventions for food insecurity are needed. For example, nutrition education should be included with all food and nutrition assistance programs and innovative programs should focus on economic self-sufficiency for families (Holben, 2006).

Having a low socioeconomic status may contribute food insecurity and higher weight for multiple reasons, many of which have been studied in depth. Processed foods are more affordable for families struggling financially. Eicher-Miller, Fulgoni, and Keast (2014) found that intake of processed foods greatly varied based on income status. While energy intake was not different between poverty-income ratios in their study, added sugar contributions were

always found to be higher for those in the low-income category. Lower income individuals also tended to have a greater energy contribution from processed foods than their higher income counterparts (Eicher-Miller et al., 2014). Data from the National Health and Nutrition Examination Survey (NHANES) from 2001 to 2010 revealed that there was an association between food insecurity and obesity in children 6 to 11 years old, however not between 2 to 5 year olds. This lack of association may be because of a small sample size for this age group (Kaur, Lamb, & Ogden, 2015).

Other studies have found that in older children, food insecurity is correlated with being overweight or obese (Alaimo, Olson, & Frongillo, 2001; Casey, Simpson, Gossett, Bogle, Champagne, Connell, Harsha, McCabe-Sellers, Robbins, Stuff, & Weber, 2006). Another study identified that children choose foods based on availability, low prices, and advertisements, with price being a major motivator both for the children and their parents (Bibeau et al., 2011). Since the 1970's, an estimated one-fifth of weight gain in the United States can be attributed to the intake of sugar-sweetened beverages alone (Woodward-Lopez, Kao, & Ritchie, 2011). Preschool children, in particular, consume an average of 12.3 ounces of milk (well below the recommended 16-20 ounces per day), 4.7 ounces of 100% juice, 5.0 ounces of fruit drinks, and 3.3 ounces of soda per day (O'Connor, Yang, & Nicklas, 2006). While the causes of this high consumption of sugary beverages may be vast, one possible reason may be the low cost of such beverages and other unhealthy foods.

Another study observed feeding habits and patterns of low-income mothers to determine if feeding habits were in line with current recommendations. Mothers and children were videotaped during meal time and recordings were analyzed. Results showed that the majority of mothers were not following nutrition recommendations and the mothers of healthy weight children were more encouraging of eating (Power, Hughes, Goodell, Johnson, Duran, Williams, Beck, & Frankel, 2015). Recommendations by the American Academy of Pediatrics (2004) suggest providing children with food and allowing them to choose what they eat. However, the majority of mothers spent a significant amount of time encouraging their children to eat and did not refer to hunger feelings and modeling of proper feeding practices. These results suggest that for mothers of overweight or obese children, proper feeding practices were not known or were not being followed, which may contribute to weight gain (Power et al., 2015).

Race/Ethnicity and Obesity

One possible contributing factor to obesity rates may be an individual's race/ethnicity. Ethnicity has two main designations in the United States: (1) non Hispanic or Latino, or (2) Hispanic or Latino. An individual's race can include American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander, or White (National Center for Education Statistics, n.d.). Children's race/ethnicity is associated with their obesity risk, which is likely tied to socioeconomic status and/or cultural values. In 2012, 22.4% of Hispanic children and adolescents were obese in the United States, 20.2% of blacks were obese, and only 14.1% of non-Hispanic whites were obese (U.S. Centers for Disease Control and Prevention, 2015b). While Echer-Miller et al. (2014) found that non-Hispanic whites had the highest energy intake and processed food intake in their sample, African Americans had the lowest intake of fruits, vegetables, and fiber. In addition, Hispanics had the highest intake of cholesterol. While Whites had the highest intake of processed foods, this could be explained by their significantly higher intake of milk, which in this study was considered a minimally processed food.

In another study of Latino mothers, Martinez, Rhee, Blanco, & Boutelle (2015) found that tradition in both feeding practices and beliefs influenced the overfeeding of their children. For example, mothers described that in their culture, being well fed is a sign of prosperity and that children should be "big and strong". Participants also described the tradition of having two afternoon and evening meals per day, with the evening meal consisting of calorie-dense foods such as pancakes or cookies. Mothers also reported that they often reinforced their children eating healthy foods by offering them unhealthy foods if they ate healthy foods first (Martinez, Rhee, Blanco, & Boutelle, 2015). All of these cultural values can influence a child's eating behaviors, and one of the strongest influences is what a child's parents consume.

Parental Influence on Child Nutrition

For young children especially, parents decide what their children eat when they are not in childcare or school settings. Bibeau, Saksvig, Gittlesohn, Williams, Jones, & Young (2011) found that teenage girls reported that what their parents brought into their house strongly dictated what they ate. In a European study by Vereecken, Inchley, Subramanian, Hublet, & Maes

(2005), parents were found to have more of an influence on children's eating habits at a young age because they are less likely to make decisions for themselves.

In a study of mainly overweight and obese fathers, the influence of fathers on their children was examined. Results showed a significant relationship between diet quality and vigorous physical activity among fathers and their children (Vollmer, Adamsons, Gorin, Foster, & Mobley, 2015). Multiple studies support the findings that parents are one of the most significant influences of their child's diet, physical activity, and ultimately, weight (Hall, Morgan, Burrows, Lubans, & Callister, 2011; Natale, Messiah, Asfour, Uhlhorn, Delamater, & Arheart, 2014; Hesketh, Goodfellow, Ekelund, McMinn, Godfrey, Inskip, Cooper, Harvey, & van Slujis, 2014). A review of nine qualitative studies conducted by Peters, Parletta, Campbell, and Lynch (2014) suggested that parents are usually unable to properly identify if their children are overweight or obese and that parents generally did not understand the importance of promoting positive eating behaviors to their preschoolers. The importance of having behavior change interventions for parents was also identified, in order to model proper behavior (Parletta et al., 2014).

<u>Parenting and Childhood Obesity</u>

The Academy of Nutrition and Dietetics claims that parents of young children may not have the parenting skills necessary to refuse to give their children energy-dense foods or manage a child's feeding practices (Hoelscher, Kirk, Ritchie, Cunningham-Sabo, 2013). While children in Head Start are receiving 1-2 meals during weekdays, their parents may not have the necessary skills and strategies to maintain those healthy practices at home (Hoelscher et al., 2013). One study by Swidle, Ward, Whiteside-Mansell, Brathwaite, Bokony, Conners-Burrow, and McKelvey (2014) found that parenting behaviors were more predictive of a child's fruit intake than their income level. In addition, parents who struggled with parenting strategies for encouraging fruit and vegetable intake were also found to lack parenting skills in other areas. Therefore, in low-income communities, parenting interventions and training in low-income areas are thought to be critical for managing weight of preschoolers (Swinder et al., 2014).

A study was conducted to determine the causes for compromised parenting in the Early Head Start programs (Beeber, Schwartz, Martinez, Holditch-Davis, Bledsoe, Canuso, & Lewis,

2014). A sample of 251 mothers and their toddlers in Northeastern and Southeastern Early Head Start were included in this study. The mothers who participated had some level of depression symptoms and often reported stress. Data collection included videotaping mothers for 45 minutes in their homes as well as one-on-one interviews and self-report questionnaires. Themes presented in the data analysis included maternal positive involvement, maternal negative control, and maternal developmental stimulation of the child. Maternal positive involvement included engaging the child in play and providing a warm touch. Findings suggested that interventions should extend past infancy and include instruction on preventing tantrums, engaging the child when they are bored, and increasing parental efficacy (Beeber et al., 2014). Negative control, which includes scolding and spanking, should be counteracted by instruction on self-regulatory control and targeting community parental norms within the Early Head Start location (Beeber et al., 2014). Lastly, developmental stimulation, which includes talking and teaching, was inconsistent across racial and ethnic groups. Teaching parenting strategies in this area should include acknowledging these differences and strengthening the mother's connection to their culture (Beeber et al., 2014). These studies suggest that it may be necessary to teach parenting strategies to low-income parents in the Head Start program.

<u>Photovoice</u>

Photovoice is an approach to Community Based Participatory Research (CBPR). CBPR is a research approach that is equitable among researchers and participants because everyone shares knowledge and decision making. CBPR's ultimate goal is to understand a phenomenon and create an intervention that changes policy to improve quality of life for the community members (Israel et al., 2005). CBPR ensures that the research reflects the concerns of the community, enhances the data and outcomes from the research, places equal weight on the researchers and the participants, and improves the health of the communities involved (Israel et al., 2005).

Photovoice, a form of CBPR, is a qualitative needs assessment tool created by Wang and Burris (1994) to allow people to record and reflect on their communities' strengths and weaknesses, to promote dialogue regarding the issue within the discussion groups, and to ultimately reach policymakers. Photovoice allows participants to take photographs of topics assigned by researchers in order to provide a deeper understanding of the issues at hand (Wang

& Burris, 1997; Watts, Lovato, Barr, Hanning, & Masse, 2015; McAllister, Wilson, Green, & Baldwin, 2005). While the advantages of Photovoice are vast, the main advantages include allowing facilitators to see problems from the point of the view of participants, enabling participants to share their stories, sustaining participation through the use of the camera, and identifying not only a community's weaknesses, but also its assets. Disadvantages include the danger of photographing unwilling people, photographing dangerous situations, and inconsistent analysis of the data if there are different researchers (Wang & Burris, 1997).

There are three theoretical foundations for Photovoice: critical consciousness, feminist theory, and documentary photography (Wang & Burris, 1997; Wang, 1999). Critical consciousness, or empowerment education, revolves around participants becoming aware of and vocal about their community's needs. This is completed through data collection, in the form of taking photographs. As the participants progress through the Photovoice process, they become more invested in the community's needs and their potential impacts (Wang & Burris, 1997). Because anyone can learn to use a camera, women and any other population can participate in Photovoice relatively easily, which is why feminist theory is central to Photovoice. Additionally, as a form of community-based participatory research, Photovoice acknowledges that the participants have greater insight into the community being studied than the researchers (Wang & Burris, 1997; Wang, 1999). Documentary photography, the final theoretical foundation, provides participants with the power to share their stories, just as photo journalists do (Wang, 1994; Wang, 1999).

The Photovoice process has three main elements: 1) building capacity for action, 2) facilitators, and 3) participants (Wang & Burris, 1997; Wang, 1999; McAllister et al., 2005). While the initial goal of Photovoice is to identify the weaknesses and assets of the community, action on the part of participants is the next desired step. This can be in the form of involving activists, policymakers, journalists, or elected officials and may be done in the form of a committee, board of directors, or advisory group. During the Photovoice process, the facilitator should serve both as a resource for information to the participants and as a guide to improving the teamwork among the participants. The facilitator also must work to understand the photograph as well as the photographer by asking questions about the photograph and the politics surrounding it. The ideal participants for a Photovoice project are people involved in selecting

and planning the process with access to the community (Wang & Burris, 1997; Wang, 1999; Oss, Leung, Buckley, & Wilson-Taylor, 2014). Head Start preschools are one such community. In addition, Photovoice allows individuals who have less access to creating meaningful images the power to create and share those images (Harley, Hunn, Elliott, & Canfield, 2015).

Studies using the Photovoice methodology in parents of Head Start preschoolers are limited. One study, conducted by McAllister, Wilson, Green, and Baldwin (2005), utilized the Photovoice methodology to determine school readiness of children. Seven families, all of whom were part of a larger study, participated in the Photovoice sessions. Themes that resulted from the sessions included social and emotional readiness, school environments and cultures, and roles and needs of parents. Parents in the study perceived schools to be filled with racism, class prejudice, violence and disrespect, and that socially preparing their children for this environment is the most important aspect. In addition, parent readiness was found to be important. In the case of these families, the parents relied on extended family and friends to support them, reporting that the current policy did not allow them to fully prepare themselves or their children for school (McAllister et al., 2015).

Watts, Lovato, Barr, Hanning, and Masse (2015) conducted a Photovoice study with 22 overweight and obese teenagers. Each teen was provided with a digital camera and was instructed to take photographs depicting assets and barriers to making healthy food and drink choices at school and in their community. Semi-structured interviews were held with each adolescent. Constant comparative analysis was utilized with each transcript. While the majority of participants were from wealthy families, most participants reported a high availability of unhealthy food and drink choices, especially in vending machines. Additionally, participants reported having a limited amount of money to spend at one time, which made the unhealthy choices more appealing. Despite unhealthy foods being more accessible, the majority of the adolescents expressed interest in eating a more balanced diet (Watts et al., 2014). While this study did not include low-income individuals and focused on adolescents instead of preschoolers, this study utilized similar methodology and provided insight into barriers and assets to healthy eating in this particular population (Watts et al., 2014).

Another Photovoice study included six single mothers in a low-income, disadvantaged area in Canada, with intentions to discover the benefits of conducting Photovoice studies.

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Findings indicated that the mothers felt a sense of accomplishment, had a deeper understanding of their reality, displayed increased optimism, felt a new sense of being unburdened, had an increased sense of agency, and felt that they were experts of their own lives (Valiquette-Tessier, Vandette, & Gosselin, 2015). A Photovoice study conducted by Miller and Vaughn (2015) studied girls and their mothers in relation to girls' health in their community. A community forum was held to display and discuss photographs taken during the Photovoice study. Attendees were given the opportunity to view the photographs and then reflect on them in a small group discussion. Additionally, they offered input on how to create change around the issues displayed in the photographs. Four recommendations for empowering girls were developed from the small group discussions: 1) strengthen existing programs, 2) offering youth leadership roles within the community, 3) increasing communication between girls and their parents and increasing the voice of girls in the community, and 4) conducting a needs assessment (Miller & Vaughn, 2015). This study demonstrated that the Photovoice projects could create insightful images for engaging communities in meaningful discussions that may initiate action (Miller & Vaughn, 2015).

A Photovoice project was also conducted by Oss, Leung, Buckley, and Wilson-Taylor (2014) with obese adolescents in New York City. The seven participants were ages 13-19 and were all recipients of government insurance. Themes from the transcripts included barriers, strategies, and influences related to healthy physical activity and nutrition behaviors. Common identified barriers to healthy lifestyles included an inability to grocery shop for themselves and the perceived high cost of healthy foods. One participant took a photo of a box of candy in a grocery store to demonstrate that it was an item that was inexpensive (Oss et al., 2014). To demonstrate the barrier of the lack of time to be physically active, one participant took a picture of homework, which identified the amount of time homework took and the stress that goes along with the amount of homework that needs to be completed. Another barrier to physical activity was the lack of a safe place to be active. A picture of a park in which shootings had taken place was presented by one participant. Strategies for leading a healthy lifestyle included moderation, controlling portion sizes, and finding a sport that was enjoyable. Participants in this study reported that the Photovoice methodology was enjoyable and that it increased their own awareness about their behaviors, strategies, and barriers to leading a healthy lifestyle (Oss et al., 2014). The above Photovoice projects demonstrate that the Photovoice Methodology is effective

in providing greater insight into health behaviors and barriers for leading healthy lifestyles and reducing problems that exist for families.

Summary

This chapter presented a review of literature related to obesity in children and their families. There were many factors related to obesity in preschoolers including socioeconomic status, race/ethnicity, and parental influence. Research suggests that a child in a family of low socioeconomic status has an increased risk of obesity. Children who are not Caucasian are more likely to live in a low-income community and be overweight or obese (U.S. Centers for Disease Control and Prevention, 2015b). Additionally, parents influence what their children eat and the amount of physical activity the child participates in (Vereecken, Inchley, Subramanian, Hublet, & Maes, 2005). There is a need for parenting strategies for low-income parents, especially those who are working long hours and experiencing stress (Beeber, Schwartz, Martinez, Holditch-Davis, Bledsoe, Canuso, & Lewis, 2014; Swinder et al., 2014). This study looks specifically at obesity in low-income, Head Start preschoolers through the "lens" of a Photovoice methodology.

Chapter Three

Methodology

This chapter outlines the setting for the study, the methodology utilized in participant recruitment, a description of the Photovoice process and methodology, a project timeline, and a description of the data analysis.

<u>Setting</u>

Head Start is an early learning and preschool program that "promotes the school readiness of young children from low-income families through agencies in their local community" (Office of Head Start, 2015b). The Head Start comprehensive development services include early learning, health, and family well-being. In 2014, 884,410 children were enrolled in Head Start programs across the country (Office of Head Start, 2015a). Nationally, 43% of children enrolled in Head Start are White, 29% are Black or African American, 2% are Asian, 4% are American Indian or Alaska Natives, 13% are unspecified, and 9% are biracial or multi-racial (Office of Head Start, 2015a).

Butler County Head Start enrichment services include education, family and community partnerships, family engagement, nutrition services, and student support services. Within nutrition services, children learn about nutrition through activities that involve families in teaching about healthy food choices. Nutritious meals are also served family style so they learn to serve and choose healthy foods themselves. The meals served provide one-third of the children's nutritional needs for the day in accordance with the Child and Adult Food Care Program (CACFP). A registered dietitian is also available to meet with parents and ensure that meals are meeting the dietary requirements (Butler County Educational Service Center, 2015b). For the purpose of this study, one Head Start location in Southwest Ohio was selected because of its large size, its high rate of parent engagement, the space availability for the project, and its status as a medically underserved area situated in a food desert.

In the state of Ohio, each Head Start location must collect relevant information on each child, including height, weight, and nutritional needs. In addition, children must receive breakfast if they have not eaten by the time they arrive at Head Start in the morning. The

nutrition guidelines are based on the requirements of the United States Department of Agriculture (United States Department of Agriculture, 2014).

Research Design

The current study consisted of a five-week Photovoice program at one Head Start location in Southwest Ohio. A written survey was given across multiple Head Start locations in Butler County, including the location where the Photovoice project took place. Data were collected during parent and child meetings. The multiple measures included child's height and weight (percentile was calculated), demographics, items related to the child's nutrition, the parent's nutrition, food availability, access to health information, childcare, and transportation. Demographics collected from the written survey included gender, age, and socioeconomic status. The survey results highlighted a need for further investigation which became the current Photovoice study. The purpose of this needs assessment was to determine the barriers to raising healthy preschoolers, particularly in Butler County low-income communities, in order to implement an effective intervention.

The current Photovoice study is a form of qualitative research with an interpretive lens. Interpretive studies try to understand a situation from the perspective of the participants. The current study borrowed from the phenomenological research approach. Phenomenological researchers seek to investigate "the meaning of the lived experience of a small group of people from the standpoint of a concept or phenomenon (Schram, 2006, pg. 98). Schram (2006) states basic assumptions within the phenomenological framework to be: (1) human behavior occurs and is understandable only in the context of relationships to things, people, events, and situations; (2) perceptions present us with the evidence of the world, not as the world is thought to be but as it is lived; (3) the reality of anything is not "out there" in an objective or detached sense but is tied to one's consciousness of it; (4) language is a medium in which meaning is constructed; and (5) it is possible to understand and convey the central meaning, or a particular concept or phenomenon as experienced by a number of individuals.

Photovoice is an approach to Community Based Participatory Research (CBPR). CBPR is a research approach that is equitable among researchers and participants because everyone shares knowledge and decision making. CBPR's ultimate goal is to understand a phenomenon and create an intervention that changes policy to improve the quality of life for the community

members (Israel et al., 2005). CBPR ensures that the research reflects the concerns of the community, enhances the data and outcomes from the research, places equal weight on the researchers and the participants, and improves the health of the communities involved (Israel et al., 2005).

Photovoice, a form of CBPR, is a qualitative needs assessment tool created by Wang and Burris (1994) to allow people to record and reflect on their communities' strengths and weaknesses, to promote dialogue regarding the issue within the discussion groups, and to ultimately reach policymakers. Photovoice allows participants to take photographs of topics assigned by researchers in order to provide a deeper understanding of the issues at hand (Wang & Burris, 1997; Watts, Lovato, Barr, Hanning, & Masse, 2015; McAllister, Wilson, Green, & Baldwin, 2005). While the advantages of Photovoice are vast, the main advantages include allowing facilitators to see problems from the point of the view of participants, enabling participants to share their stories, sustaining participation through the use of the camera, and identifying not only a community's weaknesses, but also its assets. Disadvantages include the danger of photographing unwilling people, photographing dangerous situations, and inconsistent analysis of the data if there are different researchers (Wang & Burris, 1997).

There are three theoretical foundations for Photovoice: critical consciousness, feminist theory, and documentary photography (Wang & Burris, 1997; Wang, 1999). Critical consciousness, or empowerment education, revolves around individuals becoming aware of and vocal about their community's needs. This is completed through data collection, in the form of taking photographs. As the participants progress through the Photovoice process, they become more invested in the community's needs and their potential impacts (Wang & Burris, 1997). Because anyone can learn to use a camera, women and any other population can participate in Photovoice relatively easily, which is why feminist theory is central to Photovoice. Additionally, as a form of community-based participatory research, Photovoice acknowledges that the participants have greater insight into the community being studied than the researchers (Wang & Burris, 1997; Wang, 1999). Documentary photography, the final theoretical foundation, provides participants with the power to share their stories, just as photo journalists do (Wang, 1994; Wang, 1999).

The Photovoice process has three main elements: 1) building capacity for action, 2) facilitators, and 3) participants (Wang & Burris, 1997; Wang, 1999; McAllister et al., 2005). While the initial goal of Photovoice is to identify the weaknesses and assets of the community, action on the part of participants is the next desired step. This can be in the form of involving activists, policymakers, journalists, or elected officials and may be done in the form of a committee, board of directors, or advisory group. During the Photovoice process, the facilitator should serve both as a resource for information to the participants and as a guide to improving the teamwork among the participants. The facilitator also must work to understand the photograph as well as the photographer by asking questions about the photograph and the politics surrounding it. The ideal participants for a Photovoice project are people involved in selecting and planning the process with access to the community (Wang & Burris, 1997; Wang, 1999; Oss, Leung, Buckley, & Wilson-Taylor, 2014). Head Start preschools are one such community. In addition, Photovoice allows individuals who have less access to creating meaningful images the power to create and share those images (Harley, Hunn, Elliott, & Canfield, 2015).

Questions asked by the researchers for each photograph followed the SHOWeD acronym (Wallerstein & Bernstein, 1988). An outline of these questions is listed below.

What do we **See** here?
What's really **Happening?**
How does this story relate to **Our** lives?
Why is this issue a problem?
How can be become **Empowered** with our new understanding on this issue?
What can we **Do** about these problems?

The SHOWeD questions were not asked directly or in this order, but the information answering these questions was gathered by the researchers for each photograph being studied (Wallerstein & Bernstein, 1988). For example, a participant may have answered the first three questions without any prompting from the researcher, other than asking them to describe their photograph. This process allowed the researchers to gain an in-depth understanding of the photographs and the issue they were depicting. Additionally, the SHOWeD questions provided the opportunity for participants to consider how they can create an impact in solving these issues (Wallerstein & Bernstein, 1988).

Participants

Four mothers and one grandmother of children in the Butler County Head Start program located in Southwest Ohio participated in the study. Participants were recruited at a parent meeting in which the project was described and a sign up sheet was passed around for interested parents and guardians. Parents and guardians on the sign up sheet were contacted by telephone to determine if they planned to participate. A day and time was determined based on availability of the researchers and respondents. Five respondents were able to attend the sessions.

This study was one part of a larger quantitative needs assessment that looked at factors contributing to obesity in multiple Butler County Head Start locations. The needs assessment was funded by the Office for the Advancement of Research & Scholarship at Miami University in Oxford, Ohio. Participants of the larger needs assessment included parents and guardians from several Head Start locations in Butler County, Ohio.

Research Process

The research process is described below. After approval from Miami University's Institutional Review Board, Head Start parents at one Butler County, Ohio Head Start location were contacted at a parent's meeting. Parents or caregivers who were interested in participating signed up and provided their name and contact information. Everyone who signed up were contacted by Dr. M. Elizabeth Miller and were asked if they were still available and interested in participating in the Photovoice sessions. If participants did not return the phone call, one follow-up call was placed.

After all calls were made, five respondents agreed to participate. The Photovoice sessions ran for five weeks which included three consecutive weeks, one week off for Thanksgiving, and two sessions in the two weeks following Thanksgiving. Sessions were held from 2:15 pm-4:15 pm on Tuesday afternoons in the Early Childhood classroom at one of the Head Start locations in Butler County, Ohio. Participants were provided with snacks and a $20 Kroger gift card for each session they attended. If a participant attended all five sessions, they received an extra $20 Kroger gift card at the final session.

The first session consisted of an introduction to the research, introductions of the researchers and the participants, and an orientation on the Photovoice methodology. An

instruction on camera use was provided. An outline of the camera tips is located in Appendix 1. All five participants were provided with a camera for use throughout the five weeks as well as a charger and SanDisk card for the camera. The participants were also given the prompt for the project, which was to take photographs that demonstrated their barriers to raising a healthy preschooler. In subsequent sessions, participants shared their photographs and discussed barriers to raising a healthy preschooler in the context of their own lives. When a participant shared their photo, it was displayed on a projector screen and all other participants were instructed to describe what they saw and what it meant to them in relation to the research question. After some discussion, the photographer explained the picture in terms of her own life and discussion continued around the photograph. Throughout the discussion, researchers prompted participants with occasional questions following the SHOWeD guidelines to provide greater insight. An outline of the sessions is located in Appendix 2.

Project Timeline

For the Photovoice project, participant recruitment took place during the month of October in 2014. The sessions took place every Tuesday between November 4th and December 9th, with the exception of November 25th. Transcriptions of the audio recorded sessions were completed in January, 2015.

Data Analysis

Transcriptions from the five Photovoice sessions were analyzed by hand and by using the online qualitative software called Dedoose (Dedoose, Version 7.0.21). Grounded theory, which is the discovering of theory through data, was used to guide the data analysis. Grounded theory develops a theory that emerges from the qualitative data instead of following the more traditional practice of fitting data into a preselected theory (Corbin & Strauss, 1998). The main goal of grounded theory is to form themes from the research coding process in order to develop a theory that explains the concerns of the population (Glaser & Strauss, 1967).

Grounded theory has been established as an acceptable guide for data analysis in Photovoice studies (Harley et al., 2015; Genius, Willows, Nation & Jardine, 2014; Watts, Lovato, Barr, Hanning & Masse, 2015). Wang and Burris (1997) state that codifying is identifying the issues, themes, or theories that emerge. Constant comparative analysis was used

in conjunction with grounded theory in the current study. Glaser and Strauss (1967) describe four stages of constant comparative analysis: (1) comparing coding data into as many categories as possible, (2) integrating categories and their properties, (3) setting the limits of the theory, and (4) writing the theory. The three types of coding used: (1) open coding, which is identifying concepts and their properties from the data, (2) axial coding, which is the process of relating categories to the subcategories, and (3) selective coding, which is the process of integrating and refining the theory (Corbin & Strauss, 1998). For each of the five transcriptions, each line was coded. After each transcript was coded, overall themes were formed to represent the major themes from each transcript. An analytic memo (Appendix 3) was written after the data analysis was complete. This analytic memo describes the formation and combination of major themes that created the theory.

Summary

This chapter outlined the Community Based Participatory Research approach utilized in data collection, subject recruitment, and the Photovoice process used by the participants. Additionally, the project timeline was provided and described. The five participants of the current study took photographs depicting the barriers to raising healthy preschoolers. Their photographs (n=9) were discussed in detail, using the SHOWeD questions as a guideline (Wallerstein & Bernstein, 1988). Sessions in which photographs were discussed were audio recorded and transcribed. Data were analyzed both by hand and through the online qualitative software, Dedoose (Dedoose, Version 7.0.21). Data analysis followed the guidelines for grounded theory and constant comparative analysis (Glaser & Strauss, 1967; Corbin & Strauss, 1998).

Chapter 4

Results

To answer the research questions, grounded theory and constant comparative analysis were used to create themes from the data. Transcripts for each of the four sessions in which photographs were discussed were used to conduct the analysis, both by hand and through the online data analysis tool, Dedoose. Nine photographs were generated as a result of the Photovoice process. The results of the thematic analysis included five major themes: *stressors, a need for parenting strategies, unsafe environments, grocery shopping strategies and barriers, and family meals and cooking.*

Participants

Four mothers and one grandmother of Head Start preschoolers at the location in Ohio participated in this Photovoice project. Because they all have children or grandchildren in the Head Start program, all participants are members of the community.

Theme 1: Stressors

The first theme that emerged from the data analysis was *stressors.* The two main stressors for participants were financial stress and stress related to a lack of time to prepare healthy meals and encourage healthy behaviors for their preschoolers.

Financial Stressors

Financial stressors included running out of food (or worrying about running out of food) and paying bills. The conversation on stress originated around the discussion of Kayla's photograph of a candle. In the photograph, the wax is melting and is close to the flame. Kayla explained that the stress in her life puts out her flame when it builds up and that she often feels overwhelmed and suffocated.

Figure 4.1: "…the little piece was the other part of the wick that broke off, so when you lit it, it did that because the other part was a barrier, that's why it's so small, but when that went away, it got bigger. I feel like, whenever you're stressed out, you have that thing pushing up against you. Whether it be kids or laundry or whatever is coming at you -- bills, money, whatever. When that's pushing up against you, you're weighed down. You can't breathe. Then once that goes away, you're back to normal and able to function properly."

Worrying about running out of food is another concern identified, "It's right up there with it for me. I mean, half the time, by the end of the month, I'm scraping by for food and it's just another stress." One mother explained that as soon as she feels she has managed her stress and has everything in order, something new comes up. Having to pay bills is another concern, "When bills pile up and then your kids need things and your house is a mess and then Christmas is coming up. It's like everything is like piling on top of you and you can't get out of it." Often times these stressors cause the participants to put nutrition lower on their priority list:

> It's like we have other things going on, other stresses. Someone's dealing with cancer, I lost this job, or this is like, you know, there's other things in life and they put nutrition to the side. I don't always put nutrition first but there are times when I feel like, 'Okay, I need to get it together.'

Time-Related Stressors

Time was identified as another contributor to stress in participants' lives, which in turn influences their ability to provide a healthy lifestyle for their preschoolers. This lack of time especially influenced their ability to cook healthy meals, "I was thinking about preparation through this whole thing and sometimes we don't prepare ourselves or don't have enough time to prep the dinner." Not having the time to prepare a nutritious dinner often leads to quick and unhealthy meals or eating fast food, "there's getting out of school and getting her settled down and, you know, before you know it it's 8:00. Well, you know, chicken nuggets would be okay tonight, or pizza, you know, instead of taking, you know, 2 hours to make a nutritious dinner or…."

Figure 4.2: "It's basically about barriers, there are always going to be barriers in the road you must get past. You must teach your children to get around these barriers."

In addition to a lack of time to prepare meals, participants stated that their own nutrition was not a priority when they were short on time. One participant said she only ate one meal in a typical day and another mother said she often misses breakfast because she is too busy preparing the kids for school and getting organized. Not having the nutrition for themselves then influences the energy they have to care for their children, "You feed the kids but then you just don't have enough time, energy. I think time is a big issue." Another mother shared, "I think a lot of times we just forget, we're taking care of everyone and everything else, we forget about ourselves."

Figure 4.3: Speed Limit Girl. "Never take life too fast, enjoy the little moments in life, life is a blessing and you don't want to miss out on your children growing up."

Despite the lack of time most participants experience, they all emphasized the importance of spending quality time with their children:

> You're not living in the moment, you're kind of living forward. And a lot of people tend to forget that we're right now, that we need to take advantage of the moment that we're in and not always look to the future as of what's going to happen or what we're gonna do. We need to treat time as it is.

Theme 2: Need for Parenting Strategies

   The participants identified a need for parenting strategies around dealing with picky eaters, enforcing limits on unhealthy behaviors, and providing consistency for their children when the children have multiple caregivers.

Picky Eaters

   Picky eating influences the foods that the caregivers prepare and serve their preschoolers. Most participants identified chicken nuggets as a staple food in their households because of picky eating:

> …she wants Wendy's chicken nuggets. So we say, OK, if you try this dinner, this 1 bite, if you don't like it, you don't have to eat it. 1 bite of everything and then we'll go get a Frosty after dinner. "No, let's just go get some chicken nuggets and a Frosty now." It's like a mindset with her. It's just ... chicken nuggets, chicken nuggets, chicken nuggets.

   Another mother listed the only foods that her child eats, "She eats chicken nuggets, french fries, peanut butter, sometimes pizza ... sometimes yogurt, sometimes peas. That's the only, she likes grapes and peas and that's the only fruit and vegetables. It's difficult, definitely." However, Head Start was identified as a resource that will help parents of picky eaters by encouraging their children to try healthy foods during lunch.

   One mother has a book for picky children that encourages trying two bites of new foods, "I got a book from one of the health things they had here last year and it talks about the 2 bite rule. So my son was like really big on that book, so we try to refer to it a lot. Like 'You've got to take 2 bites.'" The other participants expressed interest in learning similar skills to encourage their children to eat a wider variety of foods. Participants also agreed that there are situations when certain foods are expected to be served, such as a birthday celebration or a tea party.

Figure 4.4: "…she has a little tea set and I put a cookie on there and it kind of looks posed or however you want to say it. But it was just the thought process of, you know, you never have a tea party with carrots and celery, you know what I mean? It's always cookies and punch, and you know, so I just think that's teaching them early on to, the sweets is where it's at, you know."

Enforcing Limits on Unhealthy Behaviors

The participants were in agreement that it is difficult to enforce limits on unhealthy behaviors, especially with preschoolers.

Figure 4.5: The Look.
"having to look at this look every time that they want their way and you don't give it to them. And then they want to go do their thing and you want them to go to bed. And they want candy and you don't want them to have it."

The parents agreed that it is frustrating when children throw a fit, "Yeah, you get aggravated. 'Cause you know it's better for them if you don't give in, but you're like, 'I know if I give in, he'll go away and go back to bed.'" They also agreed that if limits aren't enforced, the behavior will continue:

If you give in a lot, for one it's not healthy for them. For two, they think they can get away with whatever and you're not gonna do nothing. So, you know, if you just tell them and never punish them, you know, never make them sit down, never go to the corner, you just tell them, and they're gonna be like, 'hah', you know, and do their thing you know, they think they can get away with more, if you give in, you know. Which I have that problem a lot...

The participants agreed that they are in need of strategies for saying no to unhealthy behaviors as well as other activities for their children to participate in. One mother suggested a more affordable alternative to boy's and girl's scouts or a class that teaches the children manners and provides them with role models. She also suggested that she is in need of guidance and support around effective parenting. One example of this is taking the children to someone's house for a break from parenting:

Kind of like the buddy system, too. Grandma, take them to grandma's house for a while. I do that a lot, too, even, she, my mom passed away while I was in high school, but my, their father's mother, she watched them for me a lot while I was working, you know, just while he wasn't around. She would call and say, 'hey, bring the kids over for a couple

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hours.' That gave me time, I still would be doing something, I wasn't completely resting, but it gave me time to clean the bathroom.

The participants agreed that having a class on parenting strategies would be helpful, especially if the class involved activities for the children to do during it. In addition to support, having inspiration messages was identified by participants to be motivating and encouraging and the majority had a sign or poster with an inspirational message somewhere in their house or on their phone.

Figure 4.6: "Believe There Are No Limits but the Sky" is hanging in my home as a reminder to myself and my children that ... although we may not be where we want to be now, but we can get anywhere we want to be. Like, we can get there. We may not be here now, so just look forward to a better day, or don't stop, don't give up, keep trying.

Multiple Caregivers

The final subtheme of the need for parenting strategies theme was the difficulty of having multiple caregivers for children that each have their own parenting styles and influences on their children. These other individuals included the children's fathers and grandparents as well as participants' friends who watch their children. One mother explained that her son asks for salt on everything because he sees his grandmother put salt on foods when he is at her house:

He sees grandma doing it and grandma already has like, high blood and stuff, so she doesn't even really need it, but I don't want him to think it's okay, it's okay for a little bit but not too much. Like, she keeps the salt shaker by her bed. So they think it's okay. But it's not.

Another mother stated that she and her child's father have different approaches to parenting which makes consistency and punishment difficult:

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Like I can see what he gets away with with his dad. When he comes back with me, I see first hand how he acts with this father and what he's allowed to get away with and I think it's ridiculous. So, parenting in two separate houses has a big factor on how your child's behavior is.

Watching friend's children was also identified as a barrier to consistent parenting because other parents have different rules and expectations for their children, "I babysit my friend's kids and they get away with a heck of a lot more than I let my kids get away with." The participants agreed that keeping rules consistent across all of the caregivers for their children is difficult and that strategies for maintaining consistency are needed.

Theme 3: Unsafe Environments

Participants described their neighborhoods as not being conducive to outdoor play and that their living environments often influence the health of their children.

Living Conditions

Problems with living conditions that were described by caregivers were unsanitary living conditions and a lack of space for active indoor play. One mother explained that her apartment in subsidized housing is infested with mice, despite repeated calls to management and visits from the exterminator:

I've complained and they've came and sprayed. I was just telling them I've done five requests for them to come and do the sprays. They'll do a spray, initial spray, and then they'll do a follow-up. I've done it literally, like I was telling them every month since its occurred and they haven't went away.

The mother expressed embarrassment over having mice in her apartment and was concerned that her children were becoming accustomed to living with them. She believes that the mice came from a neighbor who never took her trash out or cleaned her unit, "If they don't go clean that stuff out, they'll never go away. I have a reoccurring problem." She is also concerned about the effects the mice may have on her children's health, "before we use a utensil, we have

to wash it or rinse it off with really hot water. It's stressful. I hate it." Another mother said she also has mice in her house, but her cat controls them and it has not been much of a problem.

Another concern with living conditions is the small amount of space some of the families have for active indoor play. One family lives in a trailer park, which limits the physical activity her sons can get while indoors:

> ...they're running up and down the hall. It's a lot, you get a lot more agitated in a smaller space than you would like a bigger house, because then you're like, I know that they're playing but it's like, oh my God. You're going to fall through the floor. That's what you're going to do.

Another mother agreed that small space would limit her child's physical activity. However, because they have a larger space, she is able to get enough active play time, "she definitely gets exercise for more than 60 minutes in a day. If you have a smaller space, that's going to be hard, but she runs around my kitchen, dining room and living room."

Outdoor Play

Outdoor play was also identified as difficult because of unsafe neighborhoods. One mother fears that her neighbors may harm her children, "I think it, because I used to let my boys play outside and then, when I knew the neighbors. Now, we have new neighbors and the one stares all the time. It freaks me out so I don't let them go outside because it makes me uncomfortable."

Figure 4.7: "we would let the boys play outside but my door was open and I was right there. You're not getting out of my sight. You have from the edge of our driveway to the little cul de sac area which is basically the length of our trailer. That's their play area."

There was also a consensus among participants that they feared strangers talking to, harming, or taking their children, "You always have to be cautious. Know who your neighbors are. I would say that because I live in a complex, so I know my kids are going to want to play with their kids. I need to know who is who." The participants also agreed that they use caution

when going outside and often choose not to walk around their neighborhood, "I walk to Kroger, that's it. I don't go on that side of the park." One grandmother feels safe walking close to home, but not further than five or six blocks away. She also stated that her husband preferred they walk with a stick for protection when they go on walks, despite feeling relatively safe.

Figure 4.8: "Parents must protect their children from any danger. Always keep the children safe."

The community is also perceived by the participants to be lacking in safe outdoor activities for families. For example, there are no free community pools to go to in the summer. The only option available is a splash pad, which was described by participants as not being ideal for many children, "I think that they should bring back some pool. We used to have two pools, now we have none, and they only have splash pads. Not all kids like that. Like the other kids, they don't like to run through the sprinkler." Another mother stated that younger kids don't like the splash pads either because the water is cold and it sprays them in the face.

When asked if there were community parks available, one participant explained the lack of good parks and community sports, "they're kind of like outdated and old. There's not very many, it gets kind of boring for kids, so I feel like there should be more of a group organization-type of thing. Community kickball, something like that."

Community events are also problematic for the participants. For example, one fourth of July community barbeque was shut down by the police:

> ...this year, I think it was kind of an all-day event, where they barbecued and had inflatables out for the kids, and then, when it was time to do the fireworks, the police told them they couldn't do it. I felt like that was wrong because they waited until the last minute, and if they knew they were going to shut it down, they should have served them a notice earlier in the day or something because they had already done it before, and they knew that they were going to do it again.

Theme 4: Grocery Shopping Barriers and Strategies

  The fourth theme developed from the photo discussions was *grocery shopping barriers and strategies.*

Grocery Shopping Barriers

  Grocery shopping barriers identified by participants included shopping with their children, transportation issues, being unfamiliar with the store, running out of money at the end of the month, marketing towards children, not knowing how to read nutrition labels, using food stamps, and not knowing how to comparison shop.

  The first barrier, shopping with their children, was identified by participants as a barrier because their children want them to purchase unhealthy foods and distract them from making healthy and cost effective food choices:

> It's time consuming and then you have to focus on, like you said, planning this out or focusing on what are we going to eat for this week, or this month or how to stretch this money out, but you can't because the kids are over here begging for Ho-Ho's and doughnuts and stuff.

  Marketing of foods, another barrier identified by participants, is often aimed at children. Examples of products include Scooby Doo fruit snacks, Daminals yogurt, and Little Debbie's Donuts. Participants explained that this marketing encourages their children to want unhealthy foods. One mother described her view on marketing, "It seems like things are advertised for the kids 'cause they know when you bring your kids in the store, it's hard to say no. Especially if the kid throws a fit in the store."

Figure 4.9: Logo, No Label: "I just named it, 'Logo, No Label', because, um, clearly you can still see the logo of it, donuts, that Little Debbie Donuts sign, but, um, but you never really can see the labels that they have because, um…the marketers display the products to us to see what it is and who it's made by...I feel like you can always see the logo on things, but you can't always see the label behind it."

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Transportation also influences the shopping experience for the participants, as a lack of transportation often determines where they buy their groceries. The participants do the majority of their grocery shopping at Kroger, Sav-A-Lot, Aldi, and Wal-Mart. There was a consensus among participants that in Southwest Ohio, Kroger is best for purchasing meats and produce, has the largest selection, and is most convenient. However, Kroger is perceived to be the most expensive of the above grocery shopping locations:

> With Kroger, I'll look more in the fruits and vegetables and more of the meat area. Because sometimes I can get, if they're just marking down the stuff, then I hit that area really quick. And then sometimes you can find better deals on fruits and vegetables.

Aldi and Sav-A-Lot are perceived by the participants to be less expensive and better for purchasing non-perishable groceries, "'I usually do my canned stuff at Sav-A-Lot." However, these stores are less convenient and require driving further. One mother described, "Well, Kroger's has higher prices than the other ones because it's right across the street. So I can walk there, but if I don't have as much money, I may go and spend more gas to get lower grocery price."

Not understanding nutrition labels also influences how participants' grocery shop and make food choices. Because they don't fully understand how to interpret the nutrition labels, they generally make selections based on price and not on nutritional value. "As far as the labels, a lot of people don't really read labels. They don't know what they mean, they don't know how to read them."

In selecting items based on price, participants also stated that they didn't know how to comparison shop. When asked if they knew what cost comparison was, none of the participants knew how to find the best deal and compare similar products.

Using food stamps was identified as another barrier to grocery shopping and purchasing healthy foods. One mother explained that she receives who food stamps in the middle of the month and buys healthier foods when she runs out of the food stamps:

> I think I buy more nutritional when I don't have the money because I get the fruits thing and you'll get a bunch of bananas for just a dollar something, so I feel like it's kind of

different when I'm more stressed in the situation. I may buy the more nutritional food, is what I'm saying. I don't know, as far as preparing them, but I think, as far as buying, I do get more nutrition.

However, the majority of the participants hold a negative view of the government workers who provide their food stamps, "Yeah, they don't ... They don't really care about nobody. They're just trying to get you off the phone." Another mother explained that calls from food stamps representatives were often unpredictable, "They usually call you and do a phone interview. If you don't answer, you're screwed. They do like 7:00 in the morning."

Grocery Shopping Strategies

In response to the barriers identified by participants, strategies that are already utilized when grocery shopping were discussed and included using coupons, selecting items by price, shopping for the month, making shopping lists, and shopping later in the day.

Couponing was seen as an asset to grocery shopping, especially in purchasing non-food items and buying in bulk:

> You look for sales and then you'll have a coupon on that like, they had 6-packs of Dove for like a dollar something. They were clearance. I had a bunch of coupons and I ended up being able to get 3 bucks for 12 6-packs of the bar soap.

Kroger was identified as the grocery store with the best coupons, including the online coupons, "At Kroger, you can load coupons to your card and then you pay for coupons as well. That helps." Other participants expressed that they are not good at using coupons effectively, which hinders their ability to save money, "I've tried, but I don't know how to get the best deals. I'm horrible at couponing."

One participant explained that the biggest factor in the foods she purchased was the price of the food, and not the nutrients it provides, "I would just look for cheaper prices. You could have your whole big noodle section. They are all the same noodle. I go for the cheaper ones." Another mother stated that she shops for the entire month at one time, "I try to shop for the month. I don't try to do shop every day. I hate shopping every day and I try to go for the month. That way, I know I have food for the month." There was also a consensus that shopping later in

the day was better, "I usually try to shop later, though. Because if you go early, then everybody and their mama is in Kroger."

Planning for shopping was the final strategy identified, "I start with the recipes and then I go through my list and I go that way when I'm shopping for the whole month and I don't get as much because I don't need as much." One participant also explained that having a plan before shopping is helpful to avoid spending excess money.

Theme 5: Family Meals and Cooking

Family meals and cooking, which included food safety and cooking skills, as well as meal planning skills formed the theme of *Family Meals and Cooking.*

Family Meals

A lack of family meals, particularly meals at a dining room table, was identified by all participants as the norm for them. One participant stated that her family does not own a dining room table and eat most of their meals sitting on the couch and watching television. Another mother said that there is no set meal time for her family and that they often eat separately, "And whoever comes to the dinner, comes to the dinner table. My son ... I ate a little bit ago or I got this to do or I got ... everybody's just got their own thing going really. My show's on. That's a big one."

Even when meals are eaten together on the couch, another participant explained that conversation is often limited, "we do try to initiate conversation with her, but it's usually, she's involved in the TV. Because if you would put on the Weather Channel or some kind of ... CNN, or...she's going to flip over that."

When asked if the participants would eat dinner as a family at a table, given they were provided with one and educated about the benefits of family meals, they agreed eating at a table would be beneficial, "I think we would if we had a table. Mallory would like it. Mackenzie is growing up. Rob wouldn't have a problem with it. I think that we could definitely do this."

Cooking and Meal Planning

Cooking skills of the participants were discussed in relation to limitations of cooking skills and food safety knowledge and procedures. In order to make a nutritious dinner, participants had the perception that they did not own enough cooking utensils, including pots and pans, Tupperware containers, and knives. "I don't even have like a cookie sheet. I have like a foil one that I keep washing until it, you know, breaks."

In addition to a lack of cooking utensils, food safety was a concern for the caregivers. One mother explained that a lot of people she knows do not know how long you can save food or keep it unrefrigerated, "Yeah, and some of them don't even know that you can only refrigerate food for so long, you know, or you'll get sick. Or they won't put it in the refrigerator and they'll just eat it again in the morning or the next day or something." There was also a misconception among participants that frozen foods were not fresh, "I always thought freezing food and heating it up was gross. I don't know why but it is kind of ... Not that I don't eat frozen stuff but I just kind of felt like that wouldn't be good because it wouldn't be fresh."

Planning meals was also identified by participants to be a challenge and barrier to cooking nutritious meals, "A lot of people don't manage their time, I know I really don't. It's something I need to work on, but managing your time so you can kinda have time to try to…" One mother explained that a lack of knowledge on how to plan for and prepare a meal may explain this lack of cooking among families:

> I say I don't know how to cook sometimes. But the truth is, we all know how, but I mean, if you can go Google something, Google a recipe, you can do it. It's right there for you. So, a lot of people don't go to, you know, research the things like recipes, or, you know, what's nutritious or, what, you know, how much of this should I get a week? Things like that. Some people don't even care about it, they just, you know, eat.

Another mother stated that she had to teach herself to cook because her mother generally prepared frozen foods. Participants agreed that in order to meal plan effectively, you have to make a schedule and get a head start or catch up on other responsibilities.

Summary

In summary, this Photovoice project allowed the caregivers of Head Start children to identify their barriers to raising healthy preschoolers. Throughout the process, the participants were able to create meaningful visuals that represented their own stories. The themes developed through constant comparative analysis of the transcriptions of the Photovoice sessions included stressors, enforcing limits on unhealthy behaviors, unsafe environments, grocery shopping barriers and strategies, and family meals and cooking. Figure 10 is a logic model of the inputs, activities, and potential outcomes of the Photovoice project. The next chapter is a discussion of the findings, the Photovoice process, limitations of the research, recommendations for future research, and implications for practice.

Inputs

Researchers

Participants

Head Start Staff

Resources:

-Program Curriculum

-Grant from the Miami University Office of Advancement of Research and Scholarship

-Exhibition supplies

-Cameras

-Participant incentives (snacks and Kroger gift cards)

Activities

Individual:

-Participant recruitment, introduction to Photovoice, consent process

-Participant training
- Photo ethics
- Photovoice philosophy
- Photography skills

Interpersonal:

-SHOWeD Photovoice discussion sessions

Organizational:

-Focus group with Head Start staff

Community:

-Future Community Photo exhibit

-Meeting with Head Start staff

Potential Outcomes

Themes:

-Stressors
-Need for parenting strategies
-Unsafe environments
-Barriers and strategies for grocery shopping
-Family meals and cooking

Actions:

-Exhibit photographs to policy makers and community members

-Improve resources available for Head Start parents (provide recipes, coupons, cooking utensils, space for active play on weekends)

-Improve education for Head Start parents (parenting strategies, grocery shopping strategies)
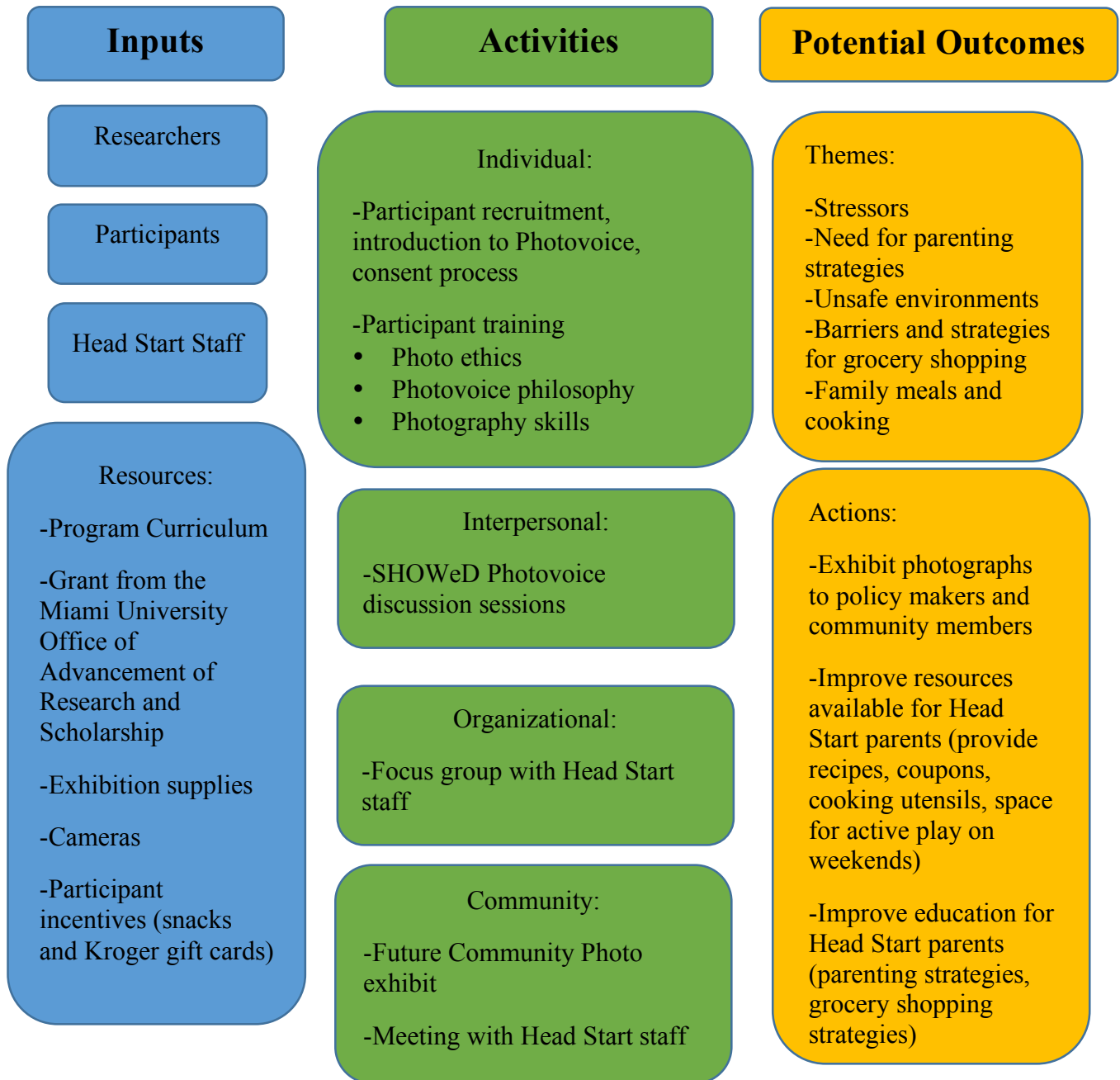
Figure 4.10. Logic Model for Inputs, Activities, and Potential Outcomes of Photovoice adapted from the Socioecological Logic model for Guiding Photovoice Efforts (Strack, Lovelace, Jordan & Holmes, 2010; Miller, 2010).

Chapter 5

Discussion

This Photovoice project with Head Start mother's and grandmother's served as a part of a larger needs assessment to better understand the barriers to raising healthy preschoolers. This study also encouraged the participants to be advocates for their child's health and community. A discussion of the themes, the Photovoice process, implications for future research, implications for practice, and study limitations are included in this chapter.

<u>**Barriers to Raising Healthy Preschoolers**</u>

From the Photovoice focus group sessions, five major themes were identified: *stressors, a need for parenting strategies, unsafe environments, grocery shopping barriers and strategies, and family meals and cooking.*

Financial stressors were identified by participants as barriers to cooking nutritious foods because worrying about running out of food and paying bills often took precedent over nutrition. Yoshikawa, Aber, and Beardslee (2012) also found that poverty may induce chronic stress because parents are worrying about meeting the basic needs of their children. In addition to financial stress, participants identified time related stress as a barrier to providing a healthy lifestyle for their preschoolers. Kidwell, Nelson, and Van Dyk (2015) found similar results, showing that parenting stress was significantly correlated with lower health-related quality of life scores in their children as well as increased doctor visits. Participants also stated that their own nutrition was not a priority when they were short on time. Another study also found that low-income mothers feel they don't have time to cook or eat meals themselves because of caring for their children and going to work (Dubowitz, Acevedo-Garcia, Salkheld, Lindsay, Subramanian, & Peterson, 2007). Interventions with similar populations could focus on teaching stress and time management techniques to caregivers, as well as teaching basic financial planning, specifically around grocery shopping and meal planning.

Parenting strategies, the second theme developed from the data, included the need for effective strategies around picky eaters, enforcing limits on unhealthy behaviors, and providing consistency for their children when the children have multiple caregivers. Participants stated that

picky eating influences the foods they purchase, prepare, and serve to their preschoolers. Martin-Biggers, Spaccarotella, Hongu, Alleman, Worobey, and Byrd-Bredbenner (2015) also found that picky eating is a barrier for families preparing and eating healthy meals. Participants also struggled to set and enforce limits on unhealthy behaviors, such as eating candy. Herman, Malhotra, Wright, Fisher, and Whitaker (2012) also found that low-income mothers had difficulty with setting limits on sweets and snack foods because of their children's nagging and not having the appropriate strategies to combat those behaviors. Having multiple caregivers, such as a father in another household or grandparents, was also stated by participants to influence their children's behaviors and make consistency in parenting more difficult. This was seen in the previous study, as children's fathers and grandparents gave them unhealthy foods (Herman et al., 2012). This information can be used to design programs that incorporate parenting strategies into the curriculum, as this has been identified as a need for low-income families. Head Start teachers should continue to encourage the preschoolers to try new foods while in class, as well as encourage the children's parents to support those teachings at home.

The third theme, *Unsafe Environments*, included living conditions and unsafe neighborhoods for outdoor play. One participant explained that her home was infested with mice, making her living conditions in public housing unsanitary for her family. Northridge, Ramirez, Stingone, and Claudio (2010) found that children in public housing had higher rates of asthma than children in independent housing, which may be associated with the higher prevalence of cockroaches, rats, and water leaks. Participants were also concerned with the lack of indoor space in their homes or apartments for their children to have room for active play. Maitland, Stratton, Foster, Braham, and Rosenberg (2014) found that the amount of space in families' houses affected the physical activity levels of their children. There are also no parks that the participants feel are safe enough for the families and no public swimming pools available for their use. A lack of outdoor play due to unsafe neighborhoods was a barrier to physical activity that mothers identified. Cecil-Karb and Grogan-Kaylor (2009) found that if parents perceived their neighborhoods as unsafe, they restricted physical activity in their children and had them participate in sedentary activities indoors. Parents who are concerned with a lack of space for active play could be taught strategies to keep their children active without needed large spaces, such as dancing, jumping, or acting out a storybook.
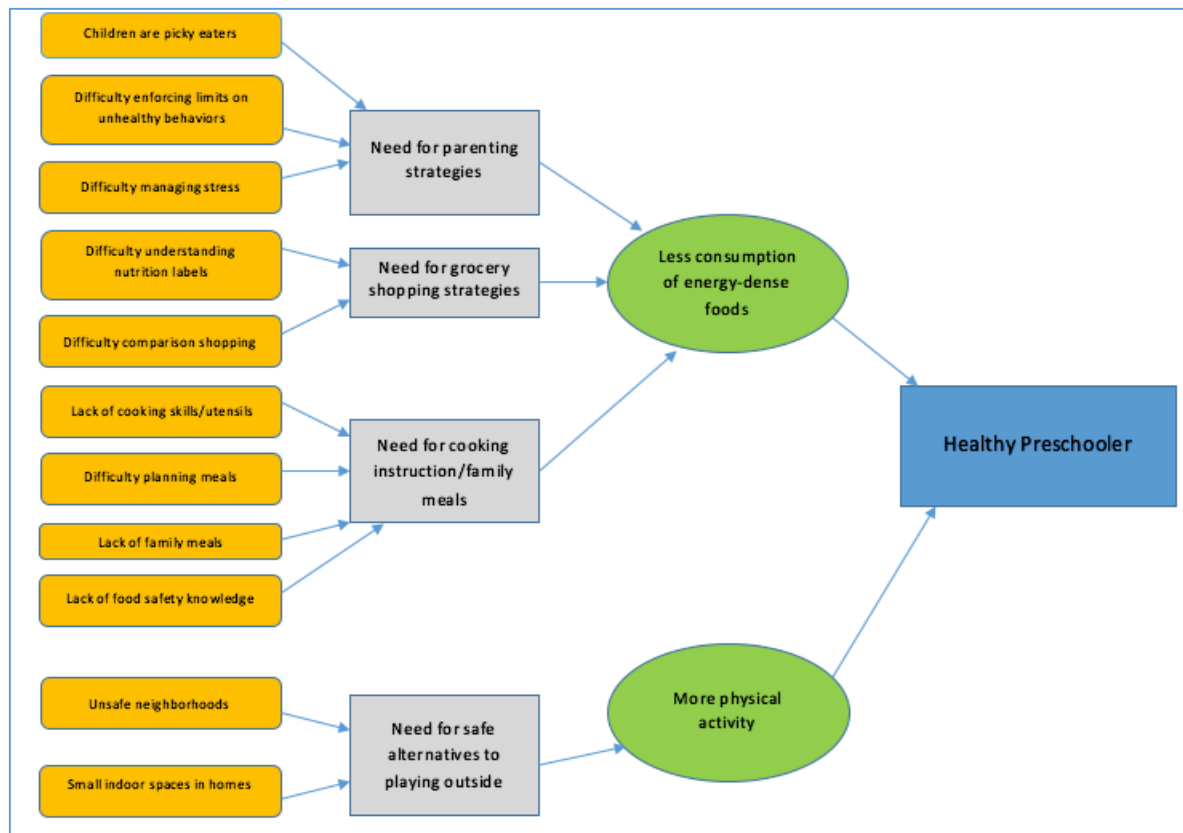
Figure 5.1: Conceptual model of the themes as described by the participants.

Grocery shopping barriers and strategies was another theme that emerged from the data. Barriers for participants included shopping with their children, transportation, being unfamiliar with the store, shopping at multiple stores, running out of money at the end of the month, marketing towards children, not knowing how to read nutrition labels, using food stamps, and not knowing how to comparison shop. Shopping with children was identified by participants as challenging because their children want to buy unhealthy foods. The children were also identified by the mothers to be a distraction from making healthy and cost effective food choices. O'Dougherty, Story and Strong (2006) found that parents shopping with their children purchased more than ½ of the foods their child requested, with the majority being sweets and snacks. Participants also expressed that marketing towards children, including using cartoon characters on packaging, influenced what their children asked for and consumed. A review of multiple studies found that familiar or unfamiliar cartoons on foods caused children to be more likely to request those foods and that the children also had a higher intention to eat them (Kraak & Story, 2015).

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Another barrier for participants is having to shop at multiple stores to get the lowest prices on different items. Yousefian, Leighton, and Hartley (2011) reported that respondents of their survey go to multiple grocery stores to purchase different items based on price, quality, and the availability of coupons. Participants also stated that they do not know how to properly read and understand nutrition labels, which meant that they often shop based on the price of the products, and not on nutritional value. Wojcicki and Heyman (2013) found that WIC participants were less likely to use nutrition fact labels, a health claim on the packaging, or check the calories from carbohydrates when purchasing food. The final major barrier for participants was running out of food stamps at the end of the month. Another Photovoice study also found that when their families had food stamps available, their refrigerator was full and they had more food available to them (Heldelberger & Smith, 2015). Grocery store tours would be an effective intervention for low-income families and education could focus on budgeting and reading nutrition labels.

Grocery shopping strategies that were identified by participants included using coupons, selecting items by price, shopping for the month, making shopping lists, and shopping later in the day. Couponing was seen by participants as an asset to grocery shopping, especially when buying non-food items. Yousefian et al. (2011) also found that using coupons was a central grocery shopping strategy for low-income parents and coupons often determined where they shopped and what they purchased. Participants also stated that planning for grocery shopping was a strategy they often utilized to avoid spending excess money. Wiig and Smith (2008) also found that some low-income mothers find planning for their shopping to be an effective strategy, specifically by choosing what to buy based on ads they see before going to the store. The strategies used by these participants could be emphasized when working with other similar populations.

The final theme, *family meals and cooking,* included family mealtime, the need for food safety information, cooking skills, and meal planning skills. Participants reported that they rarely ate meals at a dining room table and one participant did not own a table. The majority of meals for participants were on the couch, watching television. Skala, Chuang, Evans, Hedberg, Dave, and Sharma (2012) found that in a low-income sample, only 55% of Hispanic families and 46.1% of African American families ate meals at a table. Educating families on the importance of family meals for developing healthy eating habits could be emphasized in interventions.

A barrier to cooking identified by participants was not having the proper cooking utensils, including pots and pans, cookie sheets, Tupperware containers, and knives. Landers and Shults (2008) found that in a sample of 24 low-income families, 84.4% owned a baking sheet, 79.2% had measuring cups, and 73.2% had a casserole dish. Food safety was also a concern, as the participants did not know how long you can save food or keep it unrefrigerated. Quinlan (2013) conducted surveys with a low-income population to determine food safety knowledge and behaviors. The individuals eligible for federal food subsidy benefits lacked knowledge and safe behaviors around food safety (Quinlan, 2013). Planning meals was also a barrier for participants to cook healthy meals, due to poor time management. Morris, Goto, Wolff, Bianco, and Samonte (2015) also found that low-income parents struggle with planning meals in advance, which decreases their likelihood of cooking. Cooking classes could be provided to low-income families with preschoolers that incorporate quick and easy recipes, teach basic food safety procedures, and provide cooking utensils for the families.

The Photovoice Process

This study was a participatory research needs assessment using Photovoice to better understand the barriers to raising healthy preschoolers, specifically in the low-income, Head Start preschool population. The purpose of Photovoice is to record and reflect on the participants' views of the communities' strengths and weaknesses, to promote dialogue regarding the issues within the discussion groups, and to ultimately reach policy makers. The participants' work has resulted in implications for practice and research. Consistent with other Photovoice studies, participants felt empowered after the project (Oss et al., 2014; Valiquette-Tessier et al., 2015). The participants also reported having more awareness about the barriers they face that affect their children's health:

> For me it will be awareness. I think that just bringing up the stuff and verbally discussing it as a group, certain issues and factors that are beneficial and some that are not to children's health, I think that's helpful just to get that out and speak about it amongst each other.

In the future, the participants will display their photographs and share their stories. The participants expressed interest in sharing their stories with college students, as well as policy makers in Columbus, Ohio. This project built the capacity for action in the participants and their future exhibitions will create an impact at both the community and the state levels, which will allow them to share their realistic stories in a larger forum.

Implications for Future Research

There is a lack of Photovoice studies looking at the low-income preschool population's specific needs. Future research on the barriers to raising healthy preschoolers should focus more specifically on the need for kitchen tools and utensils for low-income families, the role of coupons in grocery shopping, and the lack of safe space for outdoor play. There were limited studies demonstrating the need for providing kitchen utensils and tools to low-income families with preschoolers. This study demonstrated that this may be key to allowing families to cook healthy meals. Additionally, the role of coupons in purchasing decisions is not well documented in the literature. Lastly, a lack of outdoor space for active play was identified as a key barrier to raising a healthy preschooler by participants. No studies have been found in the literature that analyze the amount of safe outdoor space available in low-income communities in the United States.

Future research also could determine if the conceptual model provided (Figure 5.1) applies to other low-income Head Start preschool locations. Other Photovoice studies could be conducted at different Head Start locations outside of Ohio to determine if similar barriers exist or if these challenges are unique to this one Head Start location.

Implications for Practice

This research study provided insight into the unique challenges that low-income Head Start families in this community face while raising preschoolers. The research was important because the challenges that these families face may impact the health outcomes of their children. The parents and caregivers need strategies and education for raising healthy preschoolers. Head Start staff members can use this information to provide education and resources to the families that meet their unique needs, including providing parenting strategies, cooking tools, and cooking lessons to families. Head Start could also use the information provided from participants

to work to find a safe place for children to engage in active play when not at school. This could be done by allowing families to use the playground or gym during non-school hours.

Health educators can use the Photovoice methodology and the results from this study to design curriculums that will meet the needs of their communities. Health education topics could include teaching parenting strategies and education around picky eaters and enforcing limits on unhealthy behaviors, cooking lessons, grocery store tours, education on comparison shopping, and education on reading and understanding nutrition facts labels.

I recommend using the Photovoice methodology for future studies with Head Start families. Photovoice can be used as part of a needs assessment to gain insight into the participants' barriers to raising healthy preschoolers and also encourages the participants to be an active part of the research process and advocate for their needs. I also recommend providing incentives to the participants for attending the sessions, as that likely contributed to the attendance of the participants in this study.

Limitations

Due to the Thanksgiving holiday, the sessions were not in five consecutive weeks, which may have affected participant retention. Only two of the five participants attended all five sessions. Additionally, no demographic data was collected from the participants. Finally, because only five participants from the Head Start location were included in the study, all possible photographs and themes may not have been represented, as other participants may have had other ideas that also represented their community.

Conclusion

This Photovoice study, which was part of a larger needs assessment for Head Start locations in a Southwest Ohio county, resulted in five major themes of the barriers to raising healthy preschoolers: *stressors, a need for parenting strategies, unsafe environments, grocery shopping barriers and strategies, and family meals and cooking.* Nine photographs were generated and shared by the five participants in the study. A conceptual model (Figure 5.1) was developed from the themes and demonstrates that the participants in this Head Start location are in need of parenting and grocery shopping strategies as well as cooking instruction to encourage

less consumption of energy dense foods to their children. The caregivers also need safer alternatives to playing outside, which would encourage more physical activity in their children. The ultimate goal of this education would be to have a healthier preschooler. This Photovoice study provided insight into the participants' unique challenges, while also providing them with skills in advocacy and promoting dialogue on the issues they face. Future studies could be done with parents at other Head Start locations and education for parents could include education around picky eaters and enforcing limits on unhealthy behaviors, cooking lessons, grocery shopping tours and education on comparison shopping and understanding nutrition facts labels.

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Appendices

Appendix 1: Camera Tips

Your Camera 101
Get your camera ready to go the day before the event.
Make sure you have all the memory cards you need and that they are empty.
Make sure to charge your camera the night before.

THE BASICS

1) **On/Off**: The power button is located on the top of the camera, along with the zoom. Rotate the top button to the right to zoom in to the subject (tight) and rotate to the left to zoom out (wide).

2) **Batteries**: Your Samsung camera does not require batteries. Instead, it has a battery pack like your cell phone. To access the battery, turn the phone over and slide out the panel on the right side of the camera. Your memory card can be accessed in this same slot. To charge your camera, simply plug the entire camera into an outlet, computer, or laptop using the import on the right side of the camera and the cord included in your camera box.

3) **Taking Pictures**: Press and hold the circular button within the zoom on the top of the camera. Pressing the button halfway focuses the picture and pressing the button all the way takes the picture.

4) **View Pictures**: To view pictures taken, press the playback button on the bottom left of the back panel. Use the left and right sides of the wheel button to move forward and backward through photos.

5) **Deleting Photos**: In the playback mode, press the trash can button located on the right bottom side.

6) **Settings**: These settings are displayed on the back panel of the camera on the wheel. Use the wheel as up/down and left/right directions to select different options in each of these settings. Select using the center "OK" button.
> -Flash: to turn on or off the flash manually, press the lightning arrow button located on the wheel on the back of the camera.
> -Timer: To set the camera to take a picture in ten seconds, press the timer button on the right.
> -Display: Press the "DISP" button on the top of the wheel to make the specifications appear or disappear on the side of the view screen.
> -Macro Shots: To take a picture at a distance of a few inches from the object, select the flower button at the bottom of the wheel and select the "MACRO" option on the screen that comes up. This will allow for focused shots from a few inches distance.
> -Settings: the camera will automatically make adjustments for low lighting, night lighting, and outdoor lighting.

7) Wi-Fi Capabilities: Press the up arrow button and scroll on the top menu bar to "Wi-Fi." Select the globe button icon and select a website. Enter login information. Camera has capabilities to select 20 files for uploading. If you have any complications with the Wi-Fi settings, refer to the "Quick Start Guide" located in your camera box.

Photography 101

Tips about the mechanics of your camera and how to set up a successful composition.

1. Shutter Lag
Tip: *Keep the camera still for a few seconds even after you depress the shutter release button.* For conventional cameras, the time lag from the moment your finger depresses the shutter release button till the moment the shutter opens is virtually negligible. On the other hand, for most digital cameras, there is a noticeable time lag.

2. Zooming v. Getting Closer
Tip: *To cut down on camera shake, get closer!*
We often have a habit of just zooming in rather than getting closer to our subject. Sometimes, you don't have an option, and zooming is all you can do. However, when you zoom in a lot, any movement in your frame becomes bigger as well as the image itself. You may find shaky or out of focus pictures when you zoom too much.

Also, you can see more of the background when you keep the camera zoomed out. So if you want to see more things in the background, move closer.

3. Lighting
Tip: *Put the main source of light BEHIND you*
You need light to get a picture, so make sure the main source of light (the sun, a lamp, a window, whatever) is behind you so the light falls on the subject. If you shoot into the light, the camera will expose for the bright light behind the subject, and the subject may be too dark.

4. Low Light – long exposure v. flash
Tip: *In dark situations, take one shot with the flash and one with long exposure.*
When there isn't enough light to take a picture, you camera often wants you to use a flash. Flashes can be OK, but they can also separate your subject from the background, make them look a little "ghostly", and they can reflect off of some surfaces. When your camera uses a flash for a picture, take the same picture again, but turn off your flash. This will require you to hold the camera (and the subject) as still as possible, so it may not always work. When it does though, you can get much more pleasing results.

5. The Rule of Thirds

Tip: *When composing your picture, think of drawing a tic-tac-toe board over it. Put objects along these lines and at their intersection.*

The "rule of thirds" applies to photography, painting, drawing, etc. Putting things along the lines created by the imaginary tic-tac-toe board will help make your composition visually interesting! Try placing object here instead of directly in the middle of the frame.
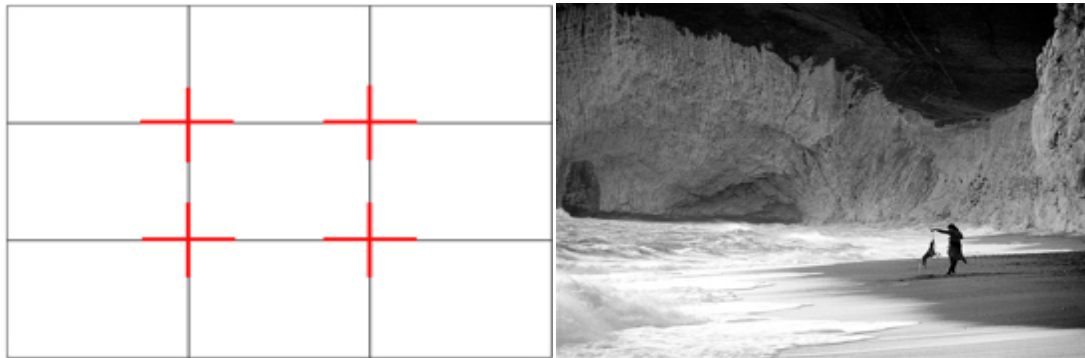
And lastly… Shoot Shoot Shoot!!!!

Tip: take LOTS of shots!

This is digital. It won't cost more if you shoot 1,000 images, so shoot, shoot, shoot! The only way to ensure great images is to take a lot of not-so-great shots and pick out the cream of the crop.

Appendix 2: Sessions Outline

Session	Program Content	Date
Session 1	Administer consent and pre-measures Orientation to overall project Overview of ethical considerations & safety issues of Photovoice Using cameras Strategies for taking high quality photos Practice photo taking Photo assignment #1 Barriers to raising healthy preschooler	November 4th, 2014
Session 2	Selection of photo from assignment #1 Group discussion of photos using SHOWeD	November 11th, 2014
Session 3	Group discussion of photo assignment #1 Photo assignment #2 Things that help you raise healthy preschooler	November 18th, 2014
Session 4	Selection of photo from assignment #2 Group discussion of photos using SHOWeD	December 2nd, 2014
Session 5	Group discussion of photo assignment #2 Discussion and planning of photo exhibit Administer consent and post-measures Project evaluation and celebration Wrap up	December 9th, 2014

Appendix 3: Analytic Memo

This analytic memo describes the process of forming and combining the themes and subthemes from the qualitative data analysis.

When participants were asked how they approached taking the pictures, approaches varied, including writing ideas before taking pictures, thinking of barriers, thinking about healthy kids, posing pictures, and walking around the neighborhood to look for ideas.

A subtheme of "spending time with kids" was developed from the discussion of the "Speed Limit Girl" picture. Participants explained that this picture meant to them that you should slow down and enjoy the time you have with your kids while they are young. Other codes within this theme included: teaching your children to overcome different barriers and take different paths, staying in the moment, the consequences of not spending time with your kids, and that some people don't care about nutritious meals or spending quality time with their children. This subtheme was combined with the subtheme of time/stress to make the larger theme of "stressors" because all of them revolved around time and fit together nicely. The theme of stressors was divided into two major subthemes: financial stress and time-related stress (which includes the "spending time with kids" subtheme). In terms of financial stress, codes of running out of food (or worrying about running out of food) and paying bills were major contributors. The time related stress discussion was prompted by Kayla's picture of the candle. In the photograph, the wax is melting and is close to the flame. Kayla explained that the stress in her life puts out her flame when it builds up and that she often feels overwhelmed and suffocated. There was a consensus among participants that this stress they so often experience inhibits their ability to cook healthy meals for their families. There was also a discussion that some parents may not have the inspiration to raise healthy kids. Teaching gender roles, safety, and religion, as well as acknowledging their children's accomplishments and being honest to their children. Participants identified values that they wanted to pass on to their children as gratitude, having a positive attitude, perseverance, and strong decision making skills. Inhibitors to those values were identified as kids doing what they see or know, a lack of opportunities, and cartoons including Disney hidden messages. The caregivers all stated that they would like their children to have role models and someone to teach them values.

The <u>need for parenting strategies</u> was discussed in multiple sessions. Many participants described having difficulty saying "no" to their children. This idea started with the conversation of one photograph of a child who was upset because he could not have Halloween candy right before bed. The participants expressed the difficulty around denying something to their kids when they are throwing a tantrum. Parents expressed that they need support, help with discipline, role models for their children, and a parent/child class. The current educational resources available were also discussed and included Women Infants and Children, Job and Family Services requirements, a community baby shower (although this may not exist anymore), "High Hopes", and midwives as educators. Other topics included the influence of other caregivers on their children's health and discipline, education at the doctor's office, picky eaters, incentives as government benefits, cooking and meal planning classes, and trying recipes before purchasing the ingredients and making them themselves. Around the topic of picky eaters, one participants explained using the "two bite rule", which is telling their child they must take two bites of new foods to try them. This rule comes from a book that the child enjoys. The participants also agreed that they are in need of parenting strategies around dealing with picky eaters. Head Start was identified as a resource for picky eaters.

The <u>environment theme</u> was developed in response to a photograph of a tree with "danger" tape around it. The participants explained that they feared their neighborhoods and different dangerous situations their children may encounter. Teaching children what's dangerous was discussed and included fears of creepy neighbors, other children influencing their children, other adults influencing their children, and strangers. A current program the exists for children in the neighborhood is a park program. Needs include a community pool, community sports/activities, and organized community events. All participants agreed they do not let their children play outdoors alone. In another session, environment was also discussed in relation to mice in apartments, unsanitary neighbors, and unsanitary living conditions. In the third transcript, environment was discussed in response to a participant's picture of her trailer park. As asset of the neighborhood was that everything is nearby, including a CVS, Kroger, and the dollar store. Fast food is also nearby, which is frequented when participants are "feeling lazy" or are short on time.

Grocery shopping barriers and strategies were discussed in multiple sessions. Barriers included shopping with kids, cooking and meal planning, transportation, picky eaters, not being familiar with the store, using food stamps, running out of money at the end of the month, and not knowing how to comparison shop. Strategies included selecting by price (and not by nutritional value), planning for shopping trips, making lists, shopping later in the day, shopping for the month, and using coupons. One participant learned to use coupons from her sister, and many use coupons on their Kroger cards, as Kroger is thought to have the best coupons. However, most coupons participants use are for non-food items. Where participants shop was also discussed, and Aldi, Marsh, Sav-A-Lot, Kroger, and Wal-Mart were all identified. At Kroger, most participants purchase meats and produce and they stated that Kroger has a bigger selection, is more convenient, and is more expensive. Sav-A-Lot is where they shop when they run out of money, but they have a bad meat selection. Aldi is farther away, but they also go there when they are low on money. Wal-Mart was identified as "inexpensive." Solutions to grocery shopping barriers were discussed and suggestions included a grocery store tour and a class to learn how to comparison shop. Marketing and advertising were also discussed, as well as grocery shopping with children. Having children along is difficult because they want to purchase the unhealthy foods that have cartoon characters on them. The "Logo, No Label" picture sparked this discussion on marketing. In the picture, the logo is very visible and inviting, whereas the nutrition label on the back is hard to see from the shelves. Scooby snacks was also identified as a food that is unhealthy and geared towards children. The majority of the participants did not know how to properly read or understand a nutrition label and expressed interest in doing so. This was originally under the theme of labels/marketing, but was combined with the grocery shopping barriers and strategies theme.

Possible interventions were discussed with participants at the end of the third session. One idea was to put informational flyers in backpacks. However, the flyers would have to be on a single topic and the readers would need time to process and implement the information. The time of 5-7 pm on Tuesdays was chosen by participants as the best time to hold an in-person intervention. Incentives could include Kroger gift cards, kitchen tools, raffling off a larger prize, and providing snacks. Education and nutrition needs were also discussed. Topics included Supplemental Nutrition Assistance Program education, Women Infants and Children education,

iron deficiency, and doctors. Participants stated that they felt they needed more education in these areas.

The Photovoice process was discussed at the end of the final session, including its benefits, changes the participants would have made to the project. Benefits included more awareness, creative thinking, learning about nutrition, talking about/sharing problems, thinking metaphorically, having company, and learning more about nutrition labels. Participants suggested holding exhibits, specifically including students. Participants now say they have more discipline and avoid certain aisles in the grocery store because of attending the Photovoice sessions.

I originally had Family meals and cooking as a subtheme of the the grocery shopping barriers and strategies theme. However, I split them up because I felt that family meals and cooking were important enough to be their own theme. Family meals were atypical for participants in that they don't often sit at the table. They generally eat on the couch and watch TV. There are usually no set meal times, everyone eats when they are hungry. Most participants agreed that they are too busy to eat at the table. However, a couple of participants said they would use the table if they were given one. Barriers to cooking healthy meals for participants included a lack of cooking utensils/tools, not knowing how to plan meals, and not knowing proper food safety procedures.