

RISK AND PROTECTIVE FACTORS INFLUENCING CHILDREN AT RISK FOR
OVERWEIGHT AND OBESITY IN LOW-INCOME, SINGLE FEMALE, PRIMARY
CAREGIVER HOUSEHOLDS: AN EXPLORATORY QUALITATIVE STUDY

By

Sara N. Lappan

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ABSTRACT

RISK AND PROTECTIVE FACTORS INFLUENCING CHILDREN AT RISK FOR OVERWEIGHT AND OBESITY IN LOW-INCOME, SINGLE FEMALE, PRIMARY CAREGIVER HOUSEHOLDS: AN EXPLORATORY QUALITATIVE STUDY

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Obesity has risen to epidemic levels in the United States (US) and affects individuals from all socioeconomic levels and ethnicities. Children of low-income, single female, primary caregiver households are at higher risk for being overweight and obese, particularly if they are members of ethnic minority populations exposed to permanent contextual adversity. Therefore, the most deleterious impacts of the epidemic are experienced by low-income and under-served ethnic minority populations. Both adult and childhood overweight/obesity are associated with devastating and costly health problems, reduced life expectancy, stigma, and discrimination. Although efficacious obesity intervention programs exist, their impact continues to be limited among underserved populations. Couple and family therapists can offer a relevant contribution to alleviate this health problem due to the profession's systemic training and strengths-based orientation. This study consisted of an exploratory qualitative design with a thematic analysis approach. Data were gathered from 16 low-income, single, female, primary caregivers who were predominantly Black/African American (56.25%) of children between 3 and 8 years of age. In-depth interviews focused on exploring risk and protective factors associated with healthy eating and regular physical activity, two critical components for addressing the disease. Additional findings will facilitate obesity-focused interventions, and better inform practice and research.

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CHAPTER 1: INTRODUCTION

Purpose

The purpose of this qualitative study was twofold. First, to investigate the life experiences of low-income, single female, primary caregivers, particularly as they refer to risk and protective factors associated with childhood overweight and obesity. The guiding research questions were:

1. How do caregivers' socio-historical and ethno-cultural backgrounds influence family eating practices and physical activity?
2. How do caregivers' perceived family interactions influence family eating practices and physical activity?
3. To what extent, and how, do family financial resources influence family eating practices and physical activity?
4. What are additional risks and protective factors reported by participants that influence their family's eating practices and physical activity?

The second goal of this study was to obtain feedback from research participants to inform culturally relevant prevention and treatment programs, aimed at promoting healthy diets and enhancing regular physical activity with populations resembling the background of research participants. The guiding research questions were:

1. What sources of support, if any, do participants need to cope with their reported contextual challenges?
2. What sources of support, if any, do participants need to offer their children healthy diets and engagement in regular physical activity?
3. What sources of support, if any, do parents need regarding their own eating and exercise habits?

4. What types of health promotion programs do participants consider would be relevant to help them address the aforementioned needs?

Rationale

Childhood obesity constitutes one of the leading health problems in both the United States (US) and the world (CDC, 2012). Childhood obesity is associated with multiple risk factors including genetic, biological, environmental, behavioral, and socio-economic backgrounds (CDC, 2012; Levi et al., 2007, 2014; National Task Force on the Prevention and Treatment of Obesity, 2010). Poor quality diets and limited physical activity are two prominent risk factors associated with this health problem (Carlson et al., 2012; Ho et al., 2013; Liu et al., 2012; Prentice-Dunn & Prentice-Dunn, 2012). Obesity affects individuals from various socioeconomic backgrounds and ethnicities (Kriemler et al., 2010; WHO, 2011). According to epidemiological data, 1 in 10 infants and 1 in 4 toddlers and preschool-aged children in the US are overweight or obese (Ogden, Carroll & Flegal, 2008).

Obesity constitutes one of the largest healthcare costs to the US society. In 2014, the individual healthcare burden was increased by \$1,429 for overweight children, compared to their normal weight counterparts (Finkelstein, 2009). Hospitalizations of children and youth with an obesity diagnosis nearly doubled between 1999 and 2005, whereas total costs for children and youth with obesity-related hospitalizations increased from \$125.9 million in 2001 to \$237.6 million in 2005 (Trasande & Chatterjee, 2009). These obesity-related health care costs remain current and if maintained, could reach \$861 to \$957 billion by 2030, accounting for 16% to 18% of total US health care expenditures (Go et al., 2013).

Obesity disproportionately affects low-income ethnic minorities (Anderson & Whitaker, 2009; Morello-Frosch et al., 2011; Wang & Beydoun, 2007). According to the Pediatric

Nutrition Surveillance Survey (PedNSS), which provides health data on children between the ages of 2 and 5 from low-income families, 14.4 % of children in this age group was obese in 2011, compared to 12.1 % of all U.S. children of similar age (Ogden et al., 2014). A related study of more than 7,700 children found that a third of the children who were overweight in kindergarten became obese by eighth grade. Overweight 5-year-olds were four times as likely as normal-weight children to become obese (Cunningham et al., 2014).

Since 1980, obesity prevalence among children and adolescents has almost tripled in the US (Ogden & Carroll, 2010). It is expected that both, obesity incidence and prevalence, will continue to increase if current epidemiological trends are maintained (Hill et al., 2013). Obese and overweight youth are more likely to experience peer pressure (Falkner et al., 2001), social isolation (Strauss & Pollack, 2003), lower self-esteem (Biro et al., 2006), and lower academic performance than their normal-weight peers (Gable et al., 2012).

The public health burden of obesity is of great concern given its immediate and long-term health, psychological, and economic consequences (Daniels, 2006; Gundersen et al., 2011; Karnik & Kanekar, 2012; Reilly & Kelly, 2011; Wang & Lim, 2012). Obesity also contributes to lifespan risks for illness, disability, and decreased life expectancy (Olshansky et al., 2005; Stern et al., 2007). Further, specific risk factors associated with obesity such as an unhealthy diet and limited physical activity have been linked to numerous diseases, including cardiovascular disease (DeBoer, 2013), cancer (De Pergola & Silvestris, 2013; Vucenik & Stains, 2012), diabetes (Kodama et al., 2012; Tirosh et al., 2011), and respiratory disorders (Chen et al., 2013; Sánchez-de-la-Torre et al., 2012). When associated with obesity, and poorly managed, these conditions can lead to premature disability and death (Cecchini et al., 2010; WHO, 2015). In summary, the extent of the childhood obesity epidemic and its worldwide contribution to rates of disability and

reduced life expectancy warrant intense prevention and intervention efforts (Summerbell et al., 2005).

Theoretical Framework

This investigation was guided by two main theories. Ecological systems theory (Bronfenbrenner, 1986), which provides an overarching framework to understanding childhood obesity according to variables identified at multiple levels of the ecology of individuals (e.g., individual, family, and context). In addition, resilience theory constitutes a strength-based theoretical approach helpful for the identification of existing resources in individuals, families, and communities (Walsh, 2003).

Ecological systems theory. Ecological Systems Theory (EST) postulates that human behavior and development should be understood by carefully examining the multiple systems and contexts in which individuals live and develop (Bronfenbrenner, 1986). More specifically, four levels/systems are the focus of this type of investigation. These include the microsystem, mesosystem, exosystem, and macrosystem. Researchers can incorporate this theory into studies by carefully analyzing relevant variables associated with specific systems impacting individuals and families. With regard to childhood obesity, the *Microsystem* consists of individual-level factors (e.g., genetic background, child temperament), as well as additional factors having a direct impact on children (e.g., parent-child relationship, levels of family functioning, school climate, healthcare providers). The *Mesosystem* refers to interactions between microsystems. Such interactive effects can have an impact on how children adapt to overweight and obesity (e.g., quality of relationship between family and healthcare providers).

The *Exosystem* consists of indirect influences on children. For example, if the parents of overweight children are exposed to harsh working conditions and extended work shifts, the

children could be impacted by lack of attention from parents who are experiencing such contextual stressors. The *Macrosystem* refers to the larger social environment influencing children and families affected by childhood obesity. Examples of variables of interest include cultural values and social stereotypes associated with childhood obesity. Finally, the *Chronosystem* refers to the effect of time on individuals across time. For example, a child diagnosed with obesity at an early age could be exposed to stressors over time that may be similar or contrasting to those experienced by an adolescent with a later onset of the condition.

Family resilience theory. Interventionists informed by the family resilience approach engage distressed families with respect and compassion for their struggles, affirm their reparative potential, and seek to maximize their strengths (Luthar et al., 2000; Walsh, 2003). At the core of the family resilience approach is the recognition of the potential for personal growth. By fostering existing resources, families can emerge stronger and more resourceful through their shared efforts. Thus, family members may discover untapped resources and abilities that they had not previously recognized. The family resilience framework focuses on three domains of family functioning: (a) family belief systems, (b) organization patterns, and (c) communication processes (Walsh, 1998). According to these areas of focus, the processes targeted to promote family resilience are: (a) making meaning of adversity, (b) embracing a positive outlook in the midst of adversity, (c) having a sense of transcendence and spirituality, (d) adopting flexibility when facing conflict, (e) strengthening family connectedness, (f) expanding social and economic resources, (g) engaging in clear patterns of communication, (h) privileging open expression of emotions, and (i) engaging in collaborative problem solving (Walsh, 2003).

A family resilience approach is grounded in family systems theory (Walsh, 1996) as it combines attention to ecological and developmental factors, including consideration of the

interactions of families with broader sociocultural contexts and multi-generational family life cycles (Carter & McGoldrick, 1998; Falicov, 1995). The approach is also guided by a bio-psycho-social systems orientation, in which problems and their solutions are considered according to the reciprocal influences among individuals, families, and larger systems. Thus, problems are understood as influenced by multiple systems. For example, individual health problems are biologically-based but are influenced by key contextual variables such as permanent exposure to discrimination and/or poverty.

At its core, the family resilience framework is strengths-based, fully focused on the perspective that individuals and families are able to adapt to challenges, recover, and grow. Thus, interventions are targeted to foster family strengths as presenting problems that are addressed and resolved. As a result, families are empowered and supported so they can develop new competencies and strengths, which will allow them to cope with existing and future challenges more effectively.

Summary of Manuscripts

Manuscript one explores low-income, single female, primary caregivers' experiences related to risk and protective factors associated with childhood overweight and obesity. Manuscript two expands findings from manuscript one to suggest specific approaches to offer culturally relevant prevention and intervention programs focused on childhood overweight and obesity. Four areas of programming are explored in detail: (a) recruitment, (b) content, (c) delivery, and (d) context and implementation.

CHAPTER 2: STUDY ONE:

Challenges and Resilience Related to Childhood Obesity for Low-Income Families: An

Ecological Perspective

ABSTRACT

Obesity has risen to epidemic levels in the United States, affecting individuals from all socioeconomic levels and ethnicities. However, the most deleterious impacts of the childhood obesity epidemic are experienced by low-income and underserved ethnic minority populations. Parents help shape their young children's patterns of eating and exercise, both important relative to obesity. Nonetheless, parents from disadvantaged backgrounds are very likely to experience considerable limitations with regards to being able to offer their children alternatives aimed at promoting healthy eating and regular exercise. In this study, in-depth qualitative interviews were conducted with 16 low-income, single, female, primary caregivers from disadvantaged backgrounds and who are predominantly African American (56.25%). Following the tenets of the thematic analysis approach, interviews focused on identifying risk and protective factors influencing parental and child health behaviors. Results are organized into risk and protective factors according to the ecological systems framework. Findings from this investigation have public health relevance as they indicate barriers to health experienced by participating families, as well as opportunities to enhance existing resources aimed at increasing their overall well-being.

Introduction

Obesity accounts for a large proportion of healthcare costs in the US. Approximately \$254 billion on an annual basis are associated with health expenditures to treat adolescent overweight and obesity (Go et al., 2013; Levi et al., 2014). Childhood overweight and obesity are also associated with \$14.1 billion in annual prescription drug costs, emergency room expenses, and outpatient care (Marder & Chang, 2006).

In the face of the expanding childhood obesity epidemic in the US, applied researchers and interventionists face the challenge of finding alternatives to support multi-stressed families with regards to their health needs, while ensuring that such approaches are culturally relevant and informed according to the daily challenges experienced by target populations (Kumanyika & Morssink, 2006). Whereas childhood obesity is associated with family-level variables and dynamics (Garasky et al., 2009), studies have not fully examined the impact of focusing on parent-child interactions as a way to facilitate behaviors leading to healthy eating and exercise (Wrotniak et al., 2004; 2005). In fact, empirical evidence indicates that selecting the parent-child dyad as the unit of intervention constitutes a more effective approach than only focusing on the child (Kitzman-Ulrich et al., 2010; Snethen, Broome, & Cashin, 2006). In addition, parent-focused treatments appear to have similar treatment outcomes to interventions focused on parents and children (Boutelle, Cafri, & Crow, 2011; Janicke et al., 2008). Although a recent meta-analytic study indicated an association between parental involvement and reduction of indicators of childhood obesity (Kitzmann, Dalton, & Stanley, 2010), inconclusive empirical findings justify the need to further evaluate prevention and treatment approaches focused on childhood obesity (De Santis-Moniaci et al., 2007; Oude Luttikhuis et al., 2009).

Next, risk and protective factors associated with childhood overweight and obesity will be presented according to Bronfenbrenner's ecological framework (1986). Briefly, the

Ecological Systems Framework postulates that human behavior and development should be understood by carefully examining the multiple systems and contexts in which individuals live and develop. It is important to clarify that due to limitations in the existing literature, two levels of the ecological framework (e.g., exosystems, mesosystems) are not included in this review.

Macrosystems. Socio-historical factors. Interventions aimed at reducing childhood obesity in the US have been difficult to disseminate among underserved populations due to various socio-historical factors (Cote et al., 2004; Skelton & Beech, 2011). For example, because many efficacious interventions were originally developed with Euro-American and middle-income samples (Summerbell et al., 2005; Seo & Sa, 2010; West et al., 2010; Wilson, 2009), their relevance and impact remains to be tested with low-income and underserved ethnic minority populations (Wilson, 2009). Furthermore, existing interventions may be limited in scope if salient historical challenges and injustices affecting these groups are not thoroughly considered (Boardman et al., 2005; Brotman et al., 2012; Calzada & Anderson-Worts, 2009; Gordon-Larsen et al., 2004; Peña et al., 2011; Wang et al., 2011; Wickrama et al. 2006).

Stigma and bias. Despite empirical evidence indicating that body weight is determined by a complex interaction of biological and environmental factors, people who are obese are likely to be blamed for being overweight. Specifically, obesity-related stereotypes are fueled by attributions of controllability of weight, North American values of self-determination and individualism, and the belief that people get what they deserve and are responsible for their life situations (Crandall et al., 2001). The stigma associated with being overweight or obese can be overwhelming and damaging (Brewis et al., 2011; Durso & Latner, 2008; Farrell, 2011; Ogden & Clementi, 2010). Stigma has also been documented to negatively influence health and mental health care providers (Brown, 2006; Brown et al., 2006; Merrill & Grassley, 2008; Puhl &

Brownell, 2006; Puhl & Heuer, 2009). Specifically, some studies indicate that health care providers' views on obesity tend to be negative, with providers' helping skills considered to be inadequate by recipients of services (Mikhailovich & Morrison, 2007; Puhl & Heuer, 2009; Skelton et al., 2009; Thande et al., 2009). Training opportunities for health care professionals are often limited in scope and may overlook critical issues associated with the adversity experienced by underserved populations (Bleich et al., 2012; Kahn, 2006; Waring et al., 2009). For example, empirical studies have reported health care providers' frustration with treating overweight children due to factors that providers consider must be controlled by families (e.g., insufficient limits on food intake or lack of physical activity) (Spivack et al., 2010). Additional studies with pediatricians have documented deficit-based perspectives among these professionals, such as attributing childhood overweight and obesity to parents' lack of motivation and deficient motivation and involvement (Budd et al., 2011; Huizinga et al., 2009; Jay et al., 2009; Rhodes et al., 2007). Although these findings are restricted to the samples in these studies, results indicate the risk for health care providers to hold negative stereotypes about overweight and obese clients in general (AMA, 2003; Harris et al., 2004).

Ethno-cultural factors. Ethnic minority populations have been exposed to social injustice, segregation, and historical exploitation in the US. As a result, pervasive health disparities seriously impact underserved ethnic-minority populations in the nation. To illustrate, Table 2.1 depicts the disproportionate impact of childhood overweight and obesity experienced by diverse minority children in the US.

Table 2.1: Prevalence of childhood overweight and obesity among ethnic minority populations in the US (Ogden et al., 2014).

Overweight/Obesity Percentages	Adult Women		
Race/Ethnicity	African American	White	Hispanic/Latino
Overweight (%) >85 th %ile	79.9	60.2	78.2
Obese (%) >95 th %ile	53.9	32.5	44.8
	Adult Men		
Race/Ethnicity	African American	White	Hispanic/Latino
Overweight (%) >85 th %ile	68.7	73.1	81.3
Obese (%) >95 th %ile	37.9	33.8	36
	Children ages 2-5		
Race/Ethnicity	African American	White	Hispanic/Latino
Girls Overweight (%) >85 th %ile	27	21.3	32.1
Girls Obese (%) >95 th %ile	12.4	5.4	11.9
Boys Overweight (%) >85 th %ile	22.2	21.8	34.1
Boys Obese (%) >95 th %ile	9	6.3	14.1
	Adolescents ages 6-19		
Race/Ethnicity	African American	White	Hispanic/Latino
Girls Overweight (%) >85 th %ile	44.7	26.6	40.9
Girls Obese (%) >95 th %ile	19.1	8.3	14
Boys Overweight (%) >85 th %ile	38.8	31.1	41.5
Boys Obese (%) >95 th %ile	20.3	12.3	18.8

To understand the nature of health disparities, it is important to analyze how underserved ethnic minority populations continue to be impacted by significant barriers to health care services, as well as risk factors inherent to poverty and adversity. For example, Porter and colleagues (2010) conducted a study aimed at identifying risk factors among families of color with overweight and obese children. Salient risk factors consisted of long work schedules, transportation barriers, dangerous neighborhoods, and segregation. These risk factors were compounded by family-level challenges such as unhealthy cooking styles, busy schedules, insufficient time for meal preparation, and disliking the taste of healthy food. Researchers highlighted the need to understand the presence of these risk factors within contexts of adversity, particularly as it referred to the impact of chronic poverty, segregation, and perceived discrimination (Bleich et al., 2010; Braveman, 2009; Styles et al., 2007).

Economic factors. Economic factors constitute a significant burden in the lives of low SES families in the US, as well as underserved ethnic minority populations (Kumanyika, 2008; Osypuk & Acevedo-Garcia, 2010; Sanders-Phillips et al., 2009; Walker et al., 2010; Wilson, 2009). According to the US Census (2014), the percentage of non-Hispanic Whites living in poverty was 9.6% compared to Hispanics (23.5%) and Blacks (27.2%). Further, 10.7% of non-Hispanic White children lived below the poverty line compared to 38.3% of Black children, and 30.4% of Hispanic children. Research also indicates that key socio-economic variables such as insurance status and geographical location and neighborhood, are likely to be key predictors of physical activity and weight for children (Duke, Borowsky, & Pettingell, 2011; Franzini et al., 2010). Additional studies have provided evidence that increased rates of childhood overweight and obesity are associated with living in neighborhoods rated by parents as unsafe or poor (Singh et al., 2010).

Food deserts and access to resources. Low SES families, especially in inner city areas also live in areas with poor access to healthy, affordable, quality food. Low SES families are also most likely to experience intense economic challenges such as limited income, lack of or deficient health insurance, and levels of poverty that prevent them from buying healthy foods (Alm et al., 2008; Goh et al., 2009; Monge-Rojas et al., 2009). Low SES parents are also at increased risk for not seeking medical care for their overweight children due to inability to pay or insufficient health care coverage (Findholt, Davis, & Michael, 2013). Policy and economic issues are interrelated with these barriers as pediatricians have been historically reimbursed for the treatment of obesity only at a rate of 11% (Tershakovec et al., 1999).

Chronic poverty. Poverty can have pernicious effects on childhood obesity. As an example, children living in households led by low-income, single, female primary caregivers are at high

risk for experiencing this disease burden. Briefly, the number of low-income single-parent households in the United States is rising (Grall, 2011; Vespa, Lewis, & Kreider, 2013). According to the U.S. Bureau of Labor Statistics, as of 2013, women in general and women of color in particular, experienced steep salary gaps compared to men (Hegewisch, Ellis, & Hartmann, 2015; IWPR, 2015; U.S. Bureau of Labor Statistics, 2014).

Singh, Siahpush, and Kogan (2010) reported that obesity prevalence increased significantly among children from single, female, primary caregiver households from 18.9% in 2003 to 21.9% in 2007. Due to extended work schedules and significant economic strains, children of single parent households are less likely to share meals with their caregivers and may be allowed to engage for extended periods of time in passive activities such as watching television (Brown et al., 2010). Children of female-headed households impacted by low income, tend to consume more total fat and sweetened beverages than children from households with more financial stability (Huffman et al., 2010; Mandal & Powell, 2014; Miller, 2011). Due to the accumulated effects of long working hours and the need to save money, low-income, single female, primary caregivers are more likely to consume high-calorie, fast food than parents in two-parent households (Stewart & Menning, 2009). These children are also less likely to engage in physical activity, very often due to neighborhood safety concerns or lack of facilities (Bowman & Harris, 2003).

Microsystems. *Individual-level factors.* Individual-level risk factors range from genetics to emotional and cognitive variables. For example, obesity is associated with genetic background with obesity-predisposing genotypes being present in 10% of individuals (Herbert et al., 2006). Studies have shown that genetic differences between individuals account for significant within-population variations in Body Mass Index (BMI) in adulthood (Maes et al., 1997; Schousboe et

al., 2003; Sørensen et al., 2007). In addition, in a systematic review of twin and adopted siblings and the influence of environmental and genetic factors, Silventoinen and colleagues (2009) found that genetic factors have a strong effect on BMI from early childhood through adulthood.

Unexpressed feelings and emotional conflicts are also associated with childhood obesity and overweight (Satter, 2007b). Specifically, individuals may experience guilt or shame resulting from their body weight (Castonguay et al., 2012; Goldfield et al., 2010), which can lead to emotional stagnation, hopelessness, and a lack of desire to engage in behavioral change (Brown, 2007).

Family-level factors. Research has documented the contributing role of family-level variables in behaviors associated with childhood obesity (Institute of Medicine, 2005). For instance, unregulated emotional eating resulting from family conflict has been found to contribute to calorie-intake imbalances in nutrition (Mirch et al., 2006). Furthermore, Owen and colleagues (2009) found that families in which feelings of guilt resulting from overeating were not acknowledged, led to child distress and the inability of families to engage in problem-solving behaviors. Additionally, parents with low levels of self-confidence were more likely to drop out from childhood obesity programs (Gunnarsdottir et al., 2011).

Parenting and feeding styles. In the context of childhood overweight and obesity, feeding styles are conceptualized as specific subtypes of parenting styles related to eating behaviors (Blissett, 2011). Thus, authoritarian feeding styles usually involve restricted access to food and strict rules regarding food consumption. Authoritative feeding styles are usually informed by high expectations for children's healthy diets and eating behaviors, combined with parental modeling, communication, negotiation, and emotional warmth. Permissive feeding styles are usually described as lax, lacking rules or expectations about the quality or quantity of diet, with

only availability limiting consumption. The demands placed on low-income and underserved ethnic minority populations are likely to force these populations to engage in authoritarian or permissive styles due to the impact resulting from contextual stress, considerable economic pressures, and adversity (e.g., exhaustion due to long work demands or cultural influences).

Protective factors. The empirical literature focused on protective factors related to childhood overweight and obesity continues to be seriously underdeveloped (Wofford, 2008). Promising areas have been explored, but there continues to be a high need for studies aimed at identifying protective factors at multiple levels.

Existing studies indicate promising areas for prevention and treatment focused on protective factors. For example, regular physical activity (Brown & Summerbell, 2009; Harris et al., 2009; Herman et al., 2009; Story, Nannery, & Schwartz, 2009), high intake of dietary non-starch polysaccharides (Kumar et al., 2012; Swinburn et al., 2004), and ensuring regular sleeping patterns for children (Chen et al., 2008) have been found to be protective factors against childhood obesity. In addition, authoritative parenting styles have been found to be associated with healthy eating and promotion of child exercise (Silventoinen et al., 2010). Additional family-level protective factors consist of supportive family dynamics (Gruber & Haldeman, 2009), adequate parental sense of self-efficacy (West et al., 2010), support from extended family (Lindsay et al., 2009), and parental knowledge about healthy behaviors (Vereecken & Maes, 2010). Further, clear family rules, emotional support, and parental encouragement have been found to be important determinants of healthy family behavioral eating patterns (Gruber & Haldeman, 2009).

Parents are influential role models of healthy eating and regular exercise habits (Brotman et al., 2012; Golley et al., 2011; Pearson, Biddle, & Gorely, 2009). Additional parenting practices

serve a protective factors, such as not soothing children with food, having positive family interactions around food, allowing children to try new and healthy foods, and talking positively about body image (Joyce & Zimmer-Gembeck, 2009; O'Connor et al., 2010; Scaglioni et al., 2011; Schwartz et al., 2011; Vereecken et al., 2009). Parents' sense of self-efficacy with regards to perceived influence over children's food choices and physical activity has also been found to act as a buffer against childhood obesity (Campbell et al., 2010; Smith et al., 2010; West & Sanders, 2009), as well as parental knowledge of healthy lifestyle behaviors (Pocock et al., 2010; Skouteris et al., 2011; Towns & D'Auria, 2009).

Method

Participants. Sixteen low-income, single, female, primary caregivers residing in a mid-western city participated in this investigation. Caregivers were eligible to participate if they met the following eligibility criteria: (a) single status, (b) primary caregiver, (c) had at least one 3- to 8-year-old child with a BMI \geq 85th percentile, and (d) an annual household income that met the 2015 poverty guidelines. Caregivers ranged in age from 29 to 60 years of age, and children's BMI percentile ranged from 85 to 99. Approximately fifty-six percent of mothers were African American, followed by Hispanic (18.75%), non-Hispanic White (12.5%), and multi-ethnic (12.5%). Table 3.2 presents a summary of specific participant demographic information. More detailed descriptive information about each participant is available in Table 4.1.

Table 2.2: Descriptive Information of Study Participants

Demographic Factors	Summary Statistic
Caregiver age (mean, SD)	37 (9.7)
Child age (mean, SD)	5.8 (1.6)
Relation of respondent to child (%)	
Mother	81
Grandmother	19
Number of children in family (%)	
1	18.75
2	37.5
3	18.75
4	6.25
5	18.75
Child overweight/obese status	
Child overweight (%)	81
Child obese (%)	19
Caregiver race/ethnicity (%)	
White	12.5
Black/African American	56.25
Hispanic	18.75
Multi-ethnic	12.5
Caregiver education level (%)	
Less than 9 th grade	6
Less than 12 th grade	13
High school graduate	13
Some college	43
Associate's degree	6
Bachelor's degree	19
Caregiver employment status (%)	
Unemployed/Disabled	38
Part-time	25
Self-employed	6
Full-time, not working in professional area of interest	6
Full-time, working in professional area of interest	25
Allocation of monthly income	
% of monthly income spent on food (mean, SD)	32.6 (13.5)
% of monthly income spent on recreation (mean, SD)	4.4 (5.4)

Recruitment. All study protocol was deemed exempt by the Institutional Review Board of Michigan State University. Collaborations for recruitment were established with community-based agencies serving populations that met the inclusion criteria. Recruitment activities were implemented with the assistance of professionals from these agencies. If parents were interested in participating, they were given the principal investigator's (PI) contact information to be

screened for study eligibility. If parents met the inclusion criteria, an interview was scheduled at the participant's preferred location. Caregivers were compensated \$30 for their participation in the study.

Data Collection. Qualitative data were collected through face-to-face, in-depth individual interviews (Legard, Keegan, & Ward, 2003; Ritchie, 2003; Rossman & Rallis, 2003), which included the utilization of eco-maps (Hartman, 1995). Individual interviews were initiated with establishing rapport and completing consent procedures, followed by discussion of selected themes (Hill & Lambert, 2004; Legard et al., 2003). Individual interviews were chosen over other data collection approaches as they offer the opportunity to gather in-depth information from every research participant and facilitate the exploration of individual experiences (Legard et al., 2003; Lewis, 2003; Marshall & Rossman, 2006; Ritchie, 2003).

Data Analysis

Thematic Analysis. Thematic analysis is a qualitative approach useful for identifying, analyzing, and reporting patterns of data according to specific themes. This approach assists researchers to organize data according to relevant themes previously identified in the literature, as well as the identification of alternative emerging themes identified during the process of data collection (Boyatzis, 1998). For this study, thematic analysis followed a semantic and latent approach (Braun & Clarke, 2006). A semantic approach consists of identifying themes exclusively found in explicit meaning of data (Vaismoradi, Turunen, & Bondas, 2013). Thus, the semantic analytic process involves a progression from description to data interpretation. The semantic analysis was complemented by the latent analysis. At this level of analysis, data are examined to identify and examine the underlying ideas, assumptions, and unique conceptualizations (Braun & Clarke, 2006). Thus, latent thematic analysis refers to a level of

analysis characterized by detailed selection of themes matching the selected areas of exploration (Joffe, 2011). The development of new themes complements the descriptive analyses characteristic of semantic analysis (Braun & Clarke, 2006).

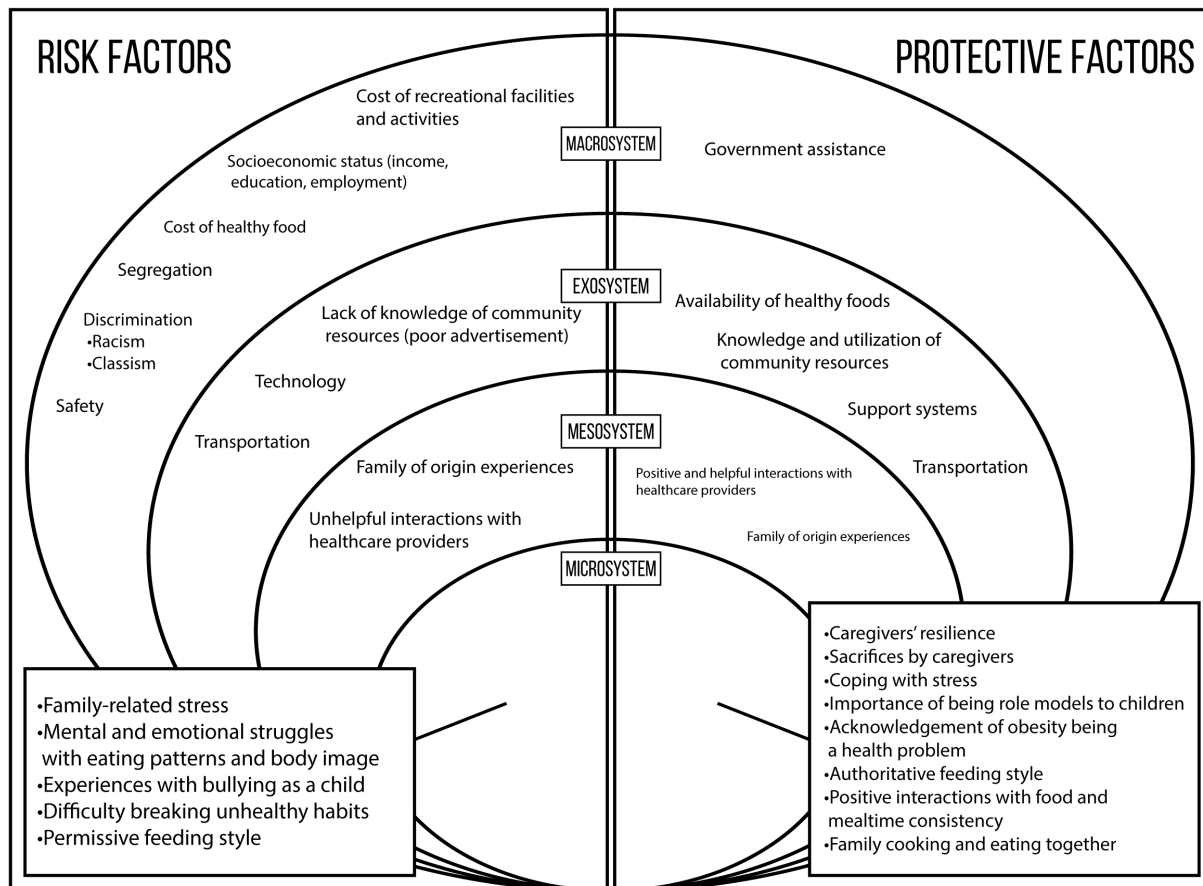
Trustworthiness. In order to ensure trustworthiness, I established credibility, transferability, dependability and confirmability. Credibility was established by prolonged engagement and site triangulation, which refers to including informants from several organizations in the research design, in an effort to reduce sampling bias associated with focusing only on one context or institution for data gathering activities (Lincoln & Guba, 1985; Dervin, 1983; Erlandson et al., 1993), and by maintaining a journal with “reflective commentary.” Transferability was achieved by keeping a detailed description of the situations in which data were gathered and how such contexts influenced my process of data gathering, analysis, and interpretation (Merriam, 1998). Dependability was achieved by my journal entries focused on: (a) the research design and its implementation, (b) the details of data gathering, and (c) reflections about the process of data analysis and reporting (Shenton, 2004). Finally, confirmability was achieved by maintaining an “audit trail,” which allows researchers to trace the course of the methodology step-by-step via the decisions that are made and the procedures utilized throughout data collection and analytical procedures (Miles & Huberman, 1994).

Results

Results are reported according to specific dimensions of Bronfenbrenner’s (1986) Ecological Systems Theory. Major findings are graphically represented in Figure 2.1. To increase precision of reported results, participants’ quotations will be supplemented by the caregiver’s age, ethnic self-identification, and number of children residing in the household. For example: “Jazmyne (48, American Indian/White, 5)” indicates that the participant named

“Jazmyne” is 48 years of age and resides with 5 children in her household. Current results confirm the salient role of contextual adversity on the etiology of childhood overweight and obesity, as well as the critical role of protective factors in the lives of families affected by these health problems.

FIGURE 2.1: RISK AND PROTECTIVE FACTORS IN HEALTH



Macrosystem. Risk factors. Discrimination. Sixty-nine percent of participants mentioned experiencing discrimination based on their appearance or backgrounds. For example, Honesty (43, White, 2) shared that she feels she is treated differently because of “being overweight, not necessarily color or anything, I think just being overweight... Then the kids have their friends that are like, ‘why is your mom like that,’ so I think that affects my kids.” Jazmyne (48, American Indian/White, 5) also shared that “since I’ve got my teeth broken in the car

accident, I had people say stuff to me that was rude.” Dee (36, Hispanic, 2) described how “failure to assimilate” oversimplifies critical life challenges experienced by immigrants. She stated:

We have this mentality that if you are in America then you should learn the language. But our parents they come here and they don’t have time to take classes because they have to work. They have to provide for their children, they don’t have time to go to school. They have to worry about putting a roof over their kids’ heads, they have to worry about putting food on the table. They don’t have time to learn the language. So it’s not that they don’t want to learn the language, I’m sure they would love to be able to communicate, but they can’t. So I think that’s key and that doesn’t allow you to take care of yourself because you can’t communicate.

Elena (41, Hispanic, 4) also shared a story about how discrimination negatively affects her health:

If we’re out grocery shopping, sometimes there are other nationalities there and you get looked at or even driving around the neighborhood, or going outside, sometimes the other neighbors that are other than Hispanic sort of like stare at us. It gets me upset. Sometimes I say swear words. I really don’t let it all the way out and let it get in our way but it does.

Jada (27, African American, 1) discussed how societal expectations take a toll on her:

Growing up, you are supposed to be married with a kid, you are not supposed to have a baby out of wedlock. It’s like everywhere you go you have different challenges. Okay, are you doing the best for your son? How do you make a safe environment? How do you just make the right decisions? Every day is work.

Racism. Sixty-three percent of caregivers expressed racism having a deleterious effect on their lives. Angela (33, African, 3) shared her experience with regards to discrimination associated with her geographic living location:

I tried to sign my youngest daughter up at a fitness center... they had a summer day camp. We were going through the registration thing over the phone and -- the reason why I want her to go there is because it’s a lot of exercise and swimming lessons and all those things they don’t offer at the Boys and Girls Club that they go to. When she got to the point where she asked for my address she’s like, "Oh we don’t have any financial assistance," and hung up on me.

She also shared:

We went to the farmers' market but it's one that's kind of farther out and considered a White neighborhood and we went there because we were out there shopping. As soon as we walked into the table with the fruit and stuff the lady was like, "We don't take food stamps at this farmers' market." I'm not using food stamps I got my debit card out, why would you just automatically assume that I'm using food stamps?

Dee (36, Hispanic, 2) also discussed the systemic effects of racism by sharing:

I guess statistically, African-American and Hispanics have like more high blood pressure and diabetes and stuff like that and I think it's because of the foods that we eat, but it's also because they don't have the resources to let go some of the stuff not good for us.

Classism. Seventy-five percent of participants disclosed that they believe the amount of money they earn influences the way they are perceived and the resources they are able to obtain.

Dee (36, Hispanic, 2) shared:

Resources are more available depending on what class you're rated. I mean, I consider myself to be a middle class person but I'm not. And the reason why I consider myself middle class is because I work, I don't sit at home waiting for someone to give me a handout. I go out there and look for it, it's just not enough.

Edna (52, African American, 2) added, "if you want to go to the recreational center but if you don't have the money to pay for it, that hinders you from going." In addition, Honesty (43, White, 2) expressed:

For me to get any help [financially], I feel that I'm like discriminated [against] a little bit, because when I really needed the help, I couldn't get the help because I made too much money or I didn't know the right people. I needed help moving, but they were like no, you don't make enough. Really? I think that they cater to wrong people. There are certain people that can go in there and get help every month and then the people that really need it don't get help, or people who don't really need help get their rent paid for a whole year. How did they do this? I just don't understand.

Lisa (29, African American/White, 1) discussed classism interfering with her ability to access high quality healthcare:

As far as medical care, I can't go to the good doctors or the good eye doctors and I have been missing a dentist. I can't afford it. So I feel like it's not reachable to me because there's not enough to go around like I can't go to the dentist just to get a cleanup not unless you have a good paying job and insurance. It's not that easy for a person to have Medicaid.

Towana (41, African American, 2) shared the same sentiment as Lisa by sharing:

People who have more money look at you differently. For instance, I have medical insurance, but I haven't always had medical insurance. I have Medicaid and the difference in the treatment of being seen by a doctor with Medicaid versus private insurance is totally different, it's totally different.

Segregation. Fifty-six percent of participants reported that segregation negatively impacts their health and access to resources. Angela (33, African, 3) stated, "segregation is still alive and kicking... There are no signs like the 60's but the boundaries are still invisible." Dee (36, Hispanic, 2) also shared her experience:

I've always heard that [a specific food pantry] is really good but it's not available to everyone and people can only visit that food pantry if you live in that area. I go to the pantry where I live and I am not sure what I'm going to get. So that's a big barrier to accessing resources, based on the community where you live.

Minty (29, African American, 1) expanded on this issue:

I think there's segregation because of access to resources, and not only access to resources, it affects education as well because in certain neighborhoods, the education isn't as good as it is in others. So, if someone doesn't have an adequate education, their ability to interpret a resource is different.

Safety. Sixty-three percent of caregivers expressed that safety was a concern in their neighborhoods and impeded their families' ability to be active outside. When asked if she thought that safety was a risk factor to health, Honesty (43, White, 2) responded, "My kids can't go out by themselves. I wouldn't trust anything around here, there's too much activity." When asked about her son being outside in her neighborhood, Lisa (29, African American/White, 1) revealed, "I don't live in a good area. I live across from a liquor store which is a really bad thing. So I see drunks, bums, drug dealers and everything else that I don't like to see every single day." She added that she's "scared every single day" and tries to use her situation to instill in her son what he should not be doing. Other caregivers shared that their children can only play outside where they can still be seen by their caregiver. Monica (60, Hispanic, 2) explained, "Well, I feel safe if I am looking after them myself." When prompted, she further elaborated, "I have to see

them. I got to be there because if I leave them out there I don't know where they could go... I got to be there all the time."

Cost of healthy food. Sixty-three percent of participants shared that healthy food is difficult to access due to their limited budgets. When asked if she thought that healthy food is affordable, Ellena (41, Hispanic, 4) responded, "Not really. I mean like fruits and vegetables, if I go grocery shopping and the price is high of what I really wanted, like cherries and bananas... I don't buy them as I don't want to pay 59 cents a pound for bananas." Minty (29, African American, 1) framed her situation in a different way by sharing:

I think that healthy food is affordable, but unhealthy food is cheap and I don't think we think about it in that way. But it's just the lifestyle that I may be condemned to at a time and may not allow me to afford it.

Amy (32, African American, 5) discussed her grocery shopping experience as one characterized by having to make compromises on the quality of food that she purchases. She shared:

We go to the grocery store and you buy a bag of oranges and they are \$3.99 and you want the big nice oranges but those are like \$6.99 a pound, we would love to get those ones but that's not an option for you because the bag of oranges comes with many more even though they are not as appealing and as good as those, but there is more in this bag and this is what I can afford and this will feed everyone.

Cost of recreational facilities and activities. Sixty-nine percent of caregivers mentioned that the cost of recreational facilities hinders their ability to regularly gain access to activities that promote physical activity. Honesty (43, White, 2) shared, "I would say that we would probably do more if I had more money to go to more places, see more things." Jazmyne (48, American Indian/White, 5) also expressed, "I can't afford to do a lot of stuff I'd like to do with my children. Like take them to Cedar Point or things like that." Quana (28, African American, 3) expanded on these issues:

You can say my children don't get to do a lot of things I would like them to do because a lot of things cost money and I don't have a lot of money, like camping or swimming lessons. It affects them a lot because I only have one income and that's only once a month.

Towana (41, African American, 2) added, "Either we go to the movies or we buy food, and I hate that." Dee (36, Hispanic, 2) also reflected:

Since I became a single parent, I haven't been able to have a gym membership. When we had two incomes in the home, we had a Y membership. So we would go swimming and I would go work out and they would go to a little kid zone and stuff like that, and we kind of miss that sometimes.

Socioeconomic status (income, education, employment). All participants expressed that their limited income negatively affects their health in various ways. For example, 75% of caregivers feel pressured to purchase unhealthy food for the sake of having something to eat rather than nothing. Amy (32, African American, 5) explained:

I definitely would buy the less healthy stuff because it is a little bit cheaper than buying the healthier stuff and I have a big family. Definitely one of those things where it is like if I am paying \$2.79 for something I would rather pay \$1.39 and stretch this meal out, I would rather pay \$1.39 even though I know that \$2.79 is much healthier and probably tastes a lot better but I have to go for what's going to be enough for everyone.

Chasidy (29, African American, 2) agreed:

I am always on the budget regardless of whether I am using my food stamps or whether I am using cash. As of right now, I don't have food stamps for the rest of the month, so I am using cash for us to buy food. I buy foods that I know can get us until I get more.

Ellena (41, Hispanic, 4) described her struggle with consistently being able to purchase what she wished she could afford:

Money affects the food we buy. On a good week, we can go grocery shopping and I have to think about how much we are going to spend, what specifically we are going to buy. It comes down to how much money we have and just the basics. If money is the issue, then it is just basics food.

Lisa (29, African American/White, 1) further elaborated on this issue:

You can't get the good stuff. You have to get the bad stuff or I have to go to a dollar store, they have little dollar meals where I can get two or three items for dinner instead of going

to Meijer where I would have to just get one. You budget and growing up on the poorer side, I know where to look for cheaper stuff. We haven't gone without a meal before.

An additional theme associated with low SES refers to how participants perceived overweight and obesity. Amy (32, African American, 5) explained:

I see obesity different than people with more money. They are able to go to the gym, they are able to buy those healthy foods, and they are able to hire doctors for different types of things going on because they are able to pay for it. But if you don't have that money, then it is not available to you. So, yeah, it is different.

Edna (52, African American, 2) shared she felt individuals who have more money might be overweight or obese for different reasons than individuals who are living in poverty. She explained:

If I had more money, I could eat whatever I wanted because I could afford it, but I'm going to eat a lot of maybe what's not so good for me and then someone in a lower income bracket would be like well chips are what I can afford or can't really afford something that's healthier, but more expensive.

Dee (36, Hispanic, 2) voiced her frustration with her compensation for working full time, "I work 40 hours a week and to think that I'm still on the poverty line. It's really annoying to me, it's like I don't believe that people that work should struggle as much as I do."

Protective factors. *Government assistance.* Eighty-eight percent of caregivers reported relying on government welfare programs and spoke of their ability to afford healthier foods because of the assistance they receive. Though caregivers stated that food assistance was helpful, only 22% said that their food stamps support was sufficient to meet their needs. For example, Monica (60, Hispanic, 2) shared, "Sometimes [the assistance] doesn't last the entire month and it leaves me like half of the month without nothing." Nikki (32, White, 5) added, "When I'm using assistance I get prices like it's not an issue, and the kids can get snacks or whatever they want, but when I'm using cash we get what we need and that's it."

Exosystem. Risk factors. Transportation. Fifty percent of caregivers emphasized the importance of having access to reliable transportation and the ways in which limited access to transportation can hinder one's sense of agency and the ability to complete tasks. Honesty (43, White, 2) stated:

I think transportation is a big deal. I have transportation, but at one point in time I didn't have transportation and I did not like to rely on other people and I caught the bus everywhere. I also spent more time on the bus than I did what I was supposed to be doing that's the only bad thing.

Minty (29, African American, 1) expressed feeling grateful for the public transportation system, but recognized its flaws, "Well, coming from DC's public transportation system and comparing the two, it is not very efficient here... I don't really like it."

Technology. Fifty-six percent of caregivers discussed their children's preferences for using tablets and watching TV, rather than being outside and active. They also discussed their difficulty in monitoring their children's use of technology. Jazmyne (48, White, 5) exemplified this by sharing, "When we were younger, we went outside. Kids watch too much TV today."

Towana (41, African American, 2) added to this sentiment by saying:

I look at it now how it was when I was growing up when we didn't have video games, we didn't have cable TV, we played outside. We didn't text and if you found yourself at a friend's house it's because everybody's bike is in front of the house so being outside was never an issue. Now, all kids know is video games, technology changed the world so it's way different than what how I grew up.

Nikki (32, White, 5) discussed her difficulty in limiting her children's use of technology by sharing, "My older son is on video games, I mean he'll stay up all 24 hours straight, and I try to take it from him but he cries and I feel bad so I give it him." Honesty (43, White, 2) has had similar struggles with her daughter, "Sometimes I do restrict the phone issues because of how she acts... and then sometimes she has an attitude where she can't have it and I'm like no, then we're just not going to play on the phone at all."

Lack of knowledge of community resources (poor advertisement). Forty percent of caregivers shared that they were unaware of any health promotion resources available in their community. Minty (29, African American, 1) shared a couple of resources she had utilized, but also commented on the low attendance of these events. She shared, “I went to yoga in the park yesterday and that was amazing, but I don’t think a lot of enough people know about that.” She continued, “I have gone to Zumba that’s offered at [a local church] which is great, but I don’t see a lot of people there.” Ellena (41, Hispanic, 4) agreed by stating, “I would say at times that there is [underutilization of community resources] because people are unaware of them.” When asked about resources in the community that help promote health, several participants simply responded, “No.”

Protective factors. Availability of healthy foods. All participants stated that they were able to access healthy foods from the supermarket to some extent (at least once per month). In general, participants wished this access to healthy food was more regular because of the stark differences in seasons and availability of produce. Lisa (29, African American/White, 1) shared, “There’s a church up the street from my house that I go to for fresh fruits and vegetables. There’s also a market I’ve been to in the summertime, but in the winter, produce is a little harder to come across.” Amy (32, African American, 5) added, “In winter when the fruit market isn’t available to me, we just go to the grocery store for fresh fruits and vegetables.”

Support systems. All participants created an ecological depiction of their social networks and support systems, specifically related to various dimensions of health (i.e., mental, physical, emotional, and spiritual). Participants’ eco-maps ranged from identifying one person or entity in their support system to thirteen people or entities or organizations or programs. Participants mostly identified family and friends, and also included governmental assistance programs,

church communities, specific individuals within health organizations and subsidy programs, and coworkers.

Transportation. Fifty percent of participants stated how regular access to transportation is a protective factor as it allows them to buy fresh and healthy food. However, access to transportation was dependent on the city in which they resided and their ability to afford it.

Ellena (41, Hispanic, 4) stated, “Transportation is good. Little by little I am getting my van fixed. So that’s not an issue.” Edna (52, African American, 2) shared, “I don’t have a car. It’s kind of an issue, but it’s not. I can get bus tickets and ride the bus.”

Knowledge and utilization of community resources. Sixty percent of caregivers shared both knowledge and utilization of various community resources aimed at promoting their health. Amy (32, African American, 5) enthusiastically shared her experience with an initiative called “Double your Stamps”:

So it is awesome, in our community that’s the best thing they ever could do for this community, because like so many kids are not getting enough fruits and vegetables that they need. The only thing I hate is it is only through the summer. But like I said you spend \$10 you get \$20 worth of fruits and vegetables. Awesome program.

Other women discussed additional resources regarding food subsidies. Tasha (32, African American, 3) shared:

Usually every couple of weeks the school has the fruit and vegetable people out. So, you can always come up there and get some fruits and vegetables, which are food stamped because a lot of people have to go all the way across town to go to get the fresh fruits and vegetables, so they come to us or we can just walk up the street and get it.

Similarly, Towana (41, African American, 2) shared, “[In my apartment complex], they have had things where you can sign up, it’d be a lot of things where they have or they offer that type of thing. Like every third Thursday of every month, they giving away free produce.”

Ellena (41, Hispanic, 4) discussed improvements in the quality of food available in food banks

by sharing, “I think more like our food banks. They are getting more and more fresh fruits and vegetables instead of the rotten ones that nobody wants to get.” Participants also reported about community resources aimed at helping people cultivate fruits and vegetables. For example, Minty (29, African American, 1) affirmed, “They have like gardens that they come and put in your backyard, it’s really nice, those are very, very good resources for people.” Angela (33, African, 3) added, “We have a community garden with fruits and vegetables that are grown there and anybody can come and get them at any time.”

Mesosystem. Risk factors. Unhelpful interactions with healthcare providers. Fifty percent of caregivers perceived that healthcare professionals did not take the time to figure out if the information they were providing to participants was relevant to them. Angela (33, African, 3) shared that the “information from the dietician wasn’t helpful... she was just telling me stuff that I was already doing. Watching portion sizes but a 5-month to 1-year-old baby, if she's being breastfed, you can't watch the portion sizes.” Dee (36, Hispanic, 2) discussed getting information she already knew, but didn’t have the resources to follow on the recommendations:

We talk about making healthier choices and then usually we’ll talk about okay then what resources can we use, is there a program out there that can help. Like whether there was visiting the nutritionist or, I always felt like seeing a nutritionist is a waste of time I think I’m very well informed, I just don’t have the means.

Lisa (29, African American, 1) discussed a lack of concrete information to help her make changes to her health by sharing, “[the information] would be beneficial for like a month and then I would get back, discussed it with them after trying that and it fails. Then I’ll be like, ‘Oh, okay. Let me try something else.’” She continued, “It’s always been there so I don’t know what changes to make. I just don’t know what to do” indicating that the information she received either does not make sense to her or is not applicable. Both Minty (29, African American, 1) and Edna (52, African American, 2) discussed how the healthcare provider’s lack of understanding of

their context created mistrust and would lead to rely on family for help and information. Edna stated that she “just disregarded” the feedback she was given by her doctor. Minty expanded on these issues:

I think if they would have asked more questions. I’m a single mom and her dad was not with me at any of the appointments maybe that’s where it could have made some more sense. They only take into consideration what’s in front of them. If her dad would have been there they could see that he’s really tall. [My daughter] was 10 pounds at birth. Instead of understanding the parents’ backgrounds, they just put the dot [on the growth chart].

An additional concern raised referred to the way in which healthcare providers informed the caregivers of their children’s weight status. Jazmyne (48, American Indian/White, 5) shared her frustration by saying, “they said she was obese and that kind of pissed... upset me.” She continued to explain how not only the label upset her, but that “they said it in front of my daughter” and her daughter reacted and “almost started crying.”

Family of origin experiences. Forty-four percent of caregivers disclosed they have adopted unhealthy behaviors from their families of origin, which in turn influenced their own parenting practices with their own children. For example, Chasidy (29, African American, 2) said, “I kind of spoil my kids a lot, so they kind of get their way... I am working on their eating habits because they are picky eaters, so it is just what it is.” Edna (52, African American, 2) adopted a feeding technique from her childhood that has been found to override children’s abilities to listen to hunger cues, “We had to eat everything that was on our plate. I try to do the same thing and make sure that they eat every portion that’s on their plate and that they are full once they finish.” Quana (28, African American, 3) shared that she continues habits with her own children that she didn’t enjoy as a child, which also turn children away from being willing to try novel foods. She said:

My mom made us drink milk for every meal, I didn’t like it. And after a certain time we couldn’t get anything to drink, nothing but water, and things like that my mom was really

strict. I try and do the same thing, everything she did to me, I try to do with my kids but it doesn't work really but I still try to stick to it and try to make them do it.

Protective factors. *Positive and helpful interactions with healthcare providers.* Fifty percent of participants reported that their interactions with healthcare providers were helpful. Ellena (41, Hispanic, 4) shared, "At times they are helpful with suggesting things that we can do. I have not so far run into anybody at the doctors that gave us anything negative. It is mostly positive." Quana (28, African American, 3) talked about the helpful information she received from her local WIC office:

They are the ones who really interact with me and I think it's good because they give you a lot of good ideas about cooking with the kids and stuff like that and what's healthy and what's not. I think it's kind of good that they did it.

Towana (41, African American, 2) drew parallels between her healthcare provider and her positive experience of being able to talk about her situation:

They are very helpful like this interview that we're doing right now I didn't think that it was this type of interview, I thought it was a couple of questions, whatever, this is excellent. This is very helpful like because these things that you don't get to talk about, you know so this is awesome too.

Family of origin experiences. All caregivers shared experiences in their families of origin (FOO) that have influenced the way they interact with their children regarding healthy eating and physical activity. Two main themes emerged. The first refers to wanting to continue activities with their own children that were helpful and healthy for them growing up. The second is related to experiences of their family of origin that they do not want to repeat with their own children.

With regards to eating practices caregivers choose to continue with their own children, participants reported fond memories of family gatherings around meals. Angela (33, African, 3) shared, "Everyone had to eat dinner together at the table, just eat as much as you can, you didn't

have to clean your plate. We eat the same way now.” Honesty (43, White, 2) shared a similar reflection:

We had a meal with vegetables, meat, and potato... We sat at the table and ate. I try to have my kids at the table, too, because a lot of people don’t eat at the table anymore or they usually get their plates and just sit wherever.

With regards to physical activity traditions that caregivers want to pass down to their children, Nikki (32, White, 5) said, “I was in sports. I played basketball and volleyball, but I wasn’t pushed to do it, I did it on my own... My daughter is in basketball and volleyball. My son wants to do soccer and football.” Similarly, Jada (27, African American, 1) reflected on her freedom as a child to be outside. She shared, “either you went outside or you didn’t.” In consequence, she provides her son with a similar freedom, “I let him go. He’s an outside person so I just let him enjoy the outside when the weather is nice.”

Participants also reflected about practices they want to correct, in contrast to their families of origin. For example, Jada (27, African American, 1) shared, “Everybody in my family was overweight. So I wish there were more boundaries with portions and certain types of foods to be healthy and stay fit.” Dee (36, Hispanic, 2) provided an additional example:

In my family, we had to finish what was on our plate in order to even get up from the table. And we didn’t get our drinks until we were done eating. I actually didn’t like that as a child, so I don’t make my kids finish everything and I do give them a drink before their meals.

With regards to food insecurity, Ellena (41, Hispanic, 4) reflected, “We did not have much to eat when we were little and growing up. So, I always make sure that my kids don’t suffer the way I did.” Similarly, Dee (36, Hispanic, 2) shared:

We went to bed without food for two days, twice in my life. So, I always strive to provide. I’m always looking for resources... Because I don’t want them to go through what I went through, I mean to go to bed without no food.

Discussing physical activity in terms of wanting to do things differently than when they were children, caregivers shared memories of not being encouraged to be active. As a result, they want to change this for their own children. For example, Lisa (29, African American/White, 1) said, “I didn’t play any sports at all as a kid. I was kind of lazy. So my son I do the opposite. He plays every sport you can think of.” Jazmyne (48, American Indian/White, 5) reported doing activities with her children that she wished her parents would have done with her, “I like to take the kids for walks in the woods and stuff... My parents never did that.”

Microsystem. Risk factors. Family-related stress. Eighty-eight percent of the participants expressed experiencing some type of family-related stress on a daily basis. Further, 81% of participants stated that stress negatively influences the interactions with their children. For example, some caregivers expressed how accumulated stress undermines their capacity to regulate emotions and be patient towards their children, as Minty (29, African American, 1) said, “I move quickly when I’m stressed, so, my kid has to be quicker too.” Reflecting on similar struggles, Ellena (41, Hispanic, 4) shared, “At times, if I find my children arguing, my stress level goes up and I yell at them... I don’t like that.” Jada (27, African American, 1) agreed, “Sometimes you get loud or take it out on the kids, but it’s not their fault.” Lisa (29, African American/White, 1) added, “I was yelling at my son, which I try not to because he doesn’t really deserve that, but I say the yelling becomes the factor a lot more.”

Mental and emotional struggles with eating patterns and body image. All participants revealed that they have some level of dissatisfaction with either their eating patterns, their physical activity habits, or their body image. Only one caregiver reported having a healthy relationship with food. Amy (32, African American, 5) reflected on these struggles:

I have such a love/hate relationship with food. It is definitely one of the hardest things to do in my life because I have been gaining weight since I was in fourth grade and I love food but then I hate it, so definitely a love/hate relationship.

Additionally, 81% of caregivers disclosed their discomfort with their own weight and 50% identified themselves as “emotional eaters” or “stress snackers.” Honesty (43, White, 2) explained:

I would say that when I get nervous, I eat. I have a child that’s the same way and I think that has a lot to do with some of the obesity in some of the other kids too... They don’t know how to deal with it and that’s their comfort zone.

Experiences with bullying as a child. 81% of participants disclosed experiences of being bullied as children due to their overweight or SES. Amy (32, African American, 5) shared her experience:

I never knew I was obese growing up and when I hit about fourth grade and I started being called the “fat girl,” being bullied about my weight, that’s when I noticed that I am a big person. I didn’t notice it because mostly everybody in our family was big at that time. So it definitely wasn’t until school it was like I am the fat kid. So definitely it was hard.

Jada (27, African American, 1) shared her desire to protect her son from experiencing bullying, “Being overweight, that kind of hurt me. Now I hope my son doesn’t have to go through what I went through. I’m trying to change a lot of things but it’s a challenge, a big challenge.”

Towana (41, African American, 2) shared her experience of being bullied not only because of her SES, but also her race:

I grew up in the 70’s in a middle class neighborhood, my grandmother probably was one of the first African Americans to own a home in that neighborhood, but we didn’t have the material things. We had each other, so that’s all we needed, but, we was teased for being poor, being bums. Did I resent it? Yeah. Did I act out? Definitely.

In addition, all participants shared having conversations about bullying with their own children. The caregivers shared that they encourage their children to accept others no matter their

appearance, as Lisa (29, African American/White, 1) expressed, “I do instill in my son that everyone is equal and you shouldn’t judge people. But kids being kids they notice the bigger kids are not as active.” Ellena (41, Hispanic, 4) expanded on this issue, “I make sure that my children understand that bullying counts and you can hurt somebody really bad by doing that. Just if somebody is bullying somebody don’t join in with them.” Reflecting on her own experiences as a victim of bullying, Edna (52, African American, 2) reflected, “I just tell my children that if you see somebody that’s smarter than you, bigger than you, whatever it might be, don’t tease people. You can hurt their feelings and that sinks into a person and it carries on throughout their life.”

Difficulty breaking unhealthy habits. Seventy-five percent of caregivers shared their struggles trying to change unhealthy habits, while also sharing uncertainty about how to accomplish this goals. Jada’s (27, African American, 1) reflections illustrate the struggle shared by participants:

Consistency is what I’m really working on. If I can just plan our meals ahead of time and our snacks to be healthy and just don’t do fast food, probably once every month or something like that. And just be like, this is your reward instead of, “We’ve got to go there because I don’t feel like cooking today.” I need to stop being lazy and just do it.

Permissive feeding style. Sixty-three percent of caregivers revealed experiencing difficulty with controlling their children’s eating habits. Towana (41, African American, 2) reflected on this issue:

I struggle with being so easy when it comes to sweets. Giving in, I need to stay firmer on the snacks. I can be on my way home from somewhere and my daughter could call me and be like, “can you stop and get me a Slurpee?” “No, I’m not going to do it, but I’ll pick you up and let you go and get one.” ...I should stop doing that.

Nikki (32, White, 5) shared her struggles, “If the kids want something, they’ll just throw it in the cart and I just don’t even fight with them, I just get it.” Quana (28, African American, 3)

added, “My daughter just keeps begging, my son just starts crying and yelling, ‘Mom!’ and I just really give into him because I don’t want to hear that today.” Tasha (32, African American, 3) also shared feeling powerless when she was told by her physician that her child is overweight, “I couldn’t feel anything because I let them eat like that.”

Other caregivers shared their ambivalence about feeling responsible for their children’s overweight, as Ellena (41, Hispanic, 4) said, “I don’t feel so much responsible because I know sometimes we go to McDonald’s or whatever, but I don’t think I am 100% responsible.” Monica (60, Hispanic, 2) agreed, “I don’t feel responsible. I don’t want my kid to go hungry. I don’t let them eat just all-day every day... I don’t tell them ‘no, you can’t eat.’ I would never tell them that.”

Protective factors. Caregivers’ resilience. Ninety-four percent of caregivers shared how their mindset and use of their support system helps them persevere and overcome life challenges. For example, when asked what helps her take care of herself and her children, Angela (33, African, 3) said, “My will and drive to make sure that my kids are being well taken care of.” Chasidy (29, African American, 2) concurred, “Staying positive, thinking positive, being positive, I don’t like to be around negativity. I don’t like to be around drama. I stay away from drama.” Honesty (43, White, 2) discussed the benefit of utilizing her support system, “I think by talking to people and telling people some of my problems that helps a lot. It relieves a lot of stress even though it’s not helping the problems, but at least you’re not keeping it bottled up inside.”

The vast majority of participants (94%) also discussed the need of being resourceful in order to access healthy foods and remain physically active. Minty (29, African American, 1) commented on this issue, “I just volunteered at a food drive. I got a ton of food from that.”

Others discussed utilizing free activities throughout their community, as Jada (27, African American, 1) affirmed:

I try to find free things to do. There's a lot of free things, I take advantage of that. I'll go to the museum where it's free for students. So I try to do the cheapest thing possible, go to the water park where it's free water. Just go to a library and read books, and I just try not to think about the money problems at all.

Amy (32, African American, 5) shared how physical activity can be as simple as going outside, "The thing is just go outside and that is free." Other participants agreed with this idea, provided that they ensure the safety of their children.

Sacrifices by caregivers. Approximately 50% of participants explicitly discussed sacrificing their own food intake and leisure activities to ensure the wellbeing of their children. Towana (41, African American, 2) shared her experience, "It's not that we don't eat. It's just that the portion and size, I might not eat as much because I'm going to make sure my kids eat." Minty (29, African American, 1) added, "I think every mom puts their child first, so, sometimes moms don't get to eat what they want to eat." Ellena (41, Hispanic, 4) shared how her "kids come first" in terms of the family food consumption and that she'll "figure it out somehow" the amount and type of food she will eat. Nikki (32, White, 5) discussed the importance of making sure that her children don't feel different because of her income:

I feel like I'm in the lower class, poor, so we don't have a lot of things. I don't do my hair, nails nothing like that because my kids insist on having designer clothes and shoes. So I get it for them and I go without. I don't care what people think about me, as long as my kids are good.

Coping with stress. Ninety-four percent of women were able to identify healthy coping strategies to manage stress. Common strategies included going outside for a walk, meditating, praying, reading, listening to music, talking to friends and family, and exercising. Amy (32, African American, 5) described her coping strategy:

Either I go outside and take a walk or I go sit in my car and listen to a couple of songs. I do have cool down methods. It is important for moms. Sometimes I leave and I will get my nails done or do whatever just to get that “me time.” To get that break in so I won’t get to that level and get to that point.

Importance of being role models to children. All participants reflected on the importance of being role models for their children, even if they are striving to reach this goal. The vast majority of participants (94%) shared their desire to pursue similar goals with regards to physical activity.

For example, Nikki (32, White, 5) shared that she “would like to go to the gym and get in shape and show to my kids that it’s fun.” Amy (32, African American, 5) further elaborated on this idea, “I am changing what I am doing and I am bettering my own health... Since April I have lost 48 pounds.” Ellena (41, Hispanic, 4) shared her strategy of inviting her children to be active with her, “I just let them see that if I am going for a walk come and ask them to come and join me.”

Caregivers reflected on alternative areas for self-improvement, as Towana (41, African American, 2) affirmed, “Your kids usually eat what you eat and if I don’t want to eat my green vegetables, why would they?” However, caregivers also reflected on the challenges associated with trying to make healthy decisions. Dee (36, Hispanic, 2) described her struggle, “I even hide when I don’t make good decisions. I can’t eat my snack until they are in bed so they can’t see me stressed out eating my snack because I’m supposed to lead by example.” Other participants shared a similar challenge, as Honesty (43, White, 2) said, “I eat unhealthy snacks when my kids are at school.”

Acknowledgment of obesity being a health problem. Ninety-four percent of participants said they believed childhood obesity is a problem in their community. In addition, 69% of

caregivers disclosed their discomfort with their children's weight. Chasidy (29, African American, 2) shared:

My concern really was his eating habits, but that has slowed down. He knows that he can't eat certain things or a lot of whatever it is. We went to the doctor's office and she told him that Ramen Noodles are not good and that the seasoning package is salty so it can cause high blood pressure and diabetes. And bread, it's got sugar in it – the white bread so we switched over to wheat bread, we are on one percent milk now and I just watch how he eats.

Dee (36, Hispanic, 2) had undergone bariatric surgery “due to [her] weight and I don't want my kids to go through that and to get to that point to feel like surgery is the only way out.”

Honesty (43, White, 2) also discussed her daughter's preference for sugar and how it's caused her to have soft teeth. She said, “Because high blood pressure and diabetes runs in the family and her being a sugar bug, yeah, I worry about stuff like that.”

Authoritative feeding style. Eighty-one percent of women expressed their desire to embrace authoritative feeding styles. For example, Amy (32, African American, 5) shared that her children have “zero” influence over what she buys at the grocery store because if she let them, “they would pick waffles, pop tarts, chips, and donuts.” Dee (36, Hispanic, 2) shared her strategy for dealing with begging children in the grocery store, “they'll beg first, then if I keep saying no they'll start stomping and I sometimes just ignore them and keep going through the grocery isle.” Tasha (32, African American, 3) also shared, “they're only allowed to get one or two snacks from the store.”

Positive interactions with food and mealtime consistency. Indicators of the participants' desire to fully embrace authoritative feeding styles referred to consistency in mealtimes reported by half of the caregivers. Specifically, participants reported exposing their children to novel healthy foods and allowing them to simply try them. Minty (29, African American, 1) shared an

example, “The average child may not be eating a plate of brussel sprouts, but I promise you, you will really like this, you should try this.”

Eighty-eight percent of caregivers stated eating at least one meal a day as a family and all participants reported eating together at least four days per week. Caregivers also framed mealtimes as an opportunity to bond with their children and hear about how their daily experiences, as Edna (52, African American, 2) said regarding mealtimes, “We just talk about how their day went by.” Jada (27, African American, 1) shared, “When he’s in school I ask him how his day was, what he liked about his day... Just to keep him talking because he’s a talker. I ask about his favorite color, what do you like, different things.” On a similar example, Minty (29, African American, 1) added, “She talks to me during dinner. I don’t ask questions because my daughter talks a lot! I have to stop her sometimes and be like, ‘can you eat your rice?’”

Family cooking and eating together. All participants reported the benefits associated with preparing meals together, the therapeutic impact of cooking with family members, as well as positive interactions when families prepare meals together. For example, Amy (32, African American, 5) shared how meal preparation constitutes an opportunity to teach her children skills, help them gain self-confidence, and a sense of pride over what they have achieved as a family:

I try to switch it up so that they can learn everything, because that’s how my mom did with both me and my sister. So if you were in charge of lettuce for salad last time. Then I want you to come over to flour the chicken with me this time. Or if you seasoned the food last time, you come over here and we are going to set the table and we are going to get the tomatoes out and we are going to cut them up. I try to get them all doing different things. So they can move around and know.

Discussion

The current study constitutes a relevant contribution to health and mental health practitioners committed to reducing the childhood obesity epidemic impacting the US population. The most important finding from this study refers to the need to conceptualize this

epidemic as structural in nature, rather than being perceived as attributable to “faulty” individuals, families, or specific ethnic groups. That is, the fact that the vast majority of risk factors were identified at the macro-system level, highlights how the health problems under study are closely associated with persistent health disparities (Devís-Devís et al., 2015; Robinson, 2008; Wilson et al., 2012).

Thus, although data provided important information describing risk factors at individual and family levels, current findings provide relevant resulting evidence of the role of historical oppression, segregation, and discrimination on the permanency of health inequity (Evans-Campbell, 2008; Freeman, 2013; Herndon, 2005). Therefore, the most critical conclusion from this study refers to the need to conceptualize health and mental health services as embedded within the socio-historical contexts in which affected families live. For example, efforts to promote healthy eating among low-income and underserved ethnic minorities without being fully aware of the long-term impact of discrimination and segregation in the US, are likely to have limited impact (Cote et al., 2004; Skelton & Beech, 2011; Zeller et al., 2004). This is likely to be related to the fact that systemic, societal, and institutional inequities negatively influence an individual’s and family’s health. Current findings describe how attention to these factors is critical as health is largely determined by factors beyond the individual and family systems. Thus, lack of acknowledgment to macrosystem influences can overlook key determinants associated with burden of disease among underserved population.

Implications for Practice. *Context-focused interventions.* The ability to identify strengths in the face of adversity has been shown to be helpful in the process of empowering families and communities to improve health outcomes (Trickett et al., 2011). Based on the widespread contextual challenges identified by participants, initiatives to help families should

ideally be supported by key community leaders and stakeholders. For example, nearly half of the participants in this study could not identify resources available in the community to improve their children's health. Thus, even if such resources exist in communities and are advertised, community-level leadership is necessary to ensure that these resources reach members of society in highest need (Chandler, 2008).

Fifty percent of caregivers reported poor interactions with healthcare providers. This finding is of critical importance as pediatricians, pediatric nurse practitioners (PNPs), and registered dietitians (RDs) are at the front line of service for overweight and obese children, including those from low SES and ethnically diverse backgrounds (Story et al., 2012). However, studies continue to confirm a high risk for healthcare providers to embrace ideologies that blame individuals for their overweight and obesity (Ruelz et al., 2007). Thus, public health efforts to address these problems must not focus solely on the health problems themselves, but on addressing how these problems are intertwined with structures of health inequity (Fiese, 2012; Story et al., 2012).

Current data also indicate that several risk factors associated with historical socioeconomic inequalities must be considered by health and mental health providers, such as serious time constraints, chronic poverty, inefficient welfare systems for the poor, and lack of culturally sensitive health care providers (Pagnini et al., 2009; Roy et al., 2004). Participants in this study also expressed significant struggles with time devoted to preparing healthy foods and promoting exercise with their children. Thus, health professionals must refrain themselves from "encouraging" underserved families to "protect time." Rather, health and mental health professionals must embrace interdisciplinary advocacy approaches that will assist families obtain the resources they need in the face of their everyday challenges.

Individual and family-level interventions. In addition to identifying strategies for assisting affected families by thoroughly considering the impact of contextual factors, health and mental health professionals should also be cognizant of key alternatives for intervention at individual and family-levels. For example, current findings corroborate Resnicow and colleagues' (2006) recommendations indicating the need for interventions aimed at exploring, validating, and de-constructing parental feelings of guilt and shame associated with their children's overweight and obesity. Whereas increasing empirical evidence highlights the need to integrate individual- and family-level interventions to reduce childhood overweight and obesity, interventions focused on addressing relevant family dynamics need to be fully examined in empirical studies (Adriaanse et al., 2011; Evers et al., 2010; Fraser et al., 2010; Satter, 2007a).

Limitations and Strengths of the Study. Important limitations must be noted. Whereas all the participants' children met the eligibility criteria, 25% of caregivers did not express concerns about their children's overweight and obesity. This issue raises important methodological considerations. For example, it may be possible that these participants struggled with accepting the health conditions of their children as it has been documented in the grief literature associated with chronic illnesses. In addition, it is likely that the current methods were biased by the Euro-American background of the primary investigator, who also acted as data collector. That is, it is possible that participants' feedback was limited in scope due to the natural mistrust resulting from previous experiences of discrimination. In addition, the qualitative nature of this study prevents the generalizability of findings as data referred to the life experiences of participants.

Notwithstanding existing limitations, the current study has relevant strengths. First, this investigation constitutes one of the few qualitative studies in this area of scholarship. In spite of

the racial/ethnic mismatch between the PI and participants, the majority of caregivers were willing to provide detailed descriptions of their struggles, including the deleterious impact of perceived racial discrimination. Thus, the strategies utilized by the PI to diminish mistrust due to racial/ethnic mismatch demonstrates that health disparities research can be accomplished by non-minority scholars if they implement methodologies fully informed by social justice principles. Further, current data indicate how key individual- and family-dimensions associated with overweight and obesity, are fully interrelated with contextual factors such as chronic poverty and historical discrimination and inequality. Thus, the current study highlights the need to perceive childhood overweight and obesity as a multi-dimensional phenomenon (Guh et al., 2009).

Conclusion

The current investigation provides relevant empirical evidence indicating the multi-dimensional nature of health and mental health disparities impacting low income and underserved ethnic minority populations in the US. Results clearly illustrate how childhood overweight and obesity are closely related to chronic poverty and legacies of oppression and discrimination among disregarded populations in the US. Current findings also indicate relevant areas of opportunity to impact individual- and family-level variables. In summary, research findings corroborate the need for health and mental health providers to embrace social justice perspectives when designing interventions aimed at alleviating the epidemic childhood obesity in the US, which continues to disproportionately impact the most vulnerable populations in the nation.

CHAPTER 3: STUDY TWO:

Promoting Healthy Eating and Regular Physical Activity in Low-Income Families through Family-Centered Programs: Implications for Practice

ABSTRACT

Research in childhood overweight and obesity has historically focused on providing services to affected individuals, with limited attention to families affected by this health problem. Further, childhood obesity prevention and clinical programs continue to be impacted by contextual factors that increase the likelihood of attrition when targeting underserved diverse populations. This paper provides data with relevance for interventions aimed at promoting healthy eating and regular exercise with diverse and low-income families. Specifically, participants in a childhood obesity exploratory study provided recommendations for improving programs by reflecting on specific family and contextual issues related to childhood overweight and obesity. Following a thematic analysis approach, semi-structured interviews were conducted with 16 low-income, single, and female primary caregivers. All participants had at the time of the interview at least one overweight or obese child aged 3-to-8. Research findings have relevant implications for improving services for low-income and underserved diverse populations affected by childhood overweight and obesity. Thus, the primary audience for this paper are mental and public health professionals with an explicit interest in the direct provision of services according systemic perspectives.

Introduction

The childhood obesity epidemic in the US continues to be on the rise. Most recently, public health scholars have advocated for ecological approaches aimed at addressing health problems among underserved and diverse populations (Dooris, 2009; Golden & Earp, 2012; Poland, Krupa, & McCall, 2009; Richard, Gauvin, & Raine, 2011), including childhood overweight and obesity (Greener, Douglas, & van Teijlingen, 2010; Sacks, Swinburn, & Lawrence, 2009). According to these scholars, a systemic approach is necessary to thoroughly conceptualize childhood overweight and obesity, particularly when targeting populations affected by historical oppression and discrimination.

The fact that many interventions focused on reducing childhood obesity have produced only small changes in targeted behaviors and small to non-significant changes in specific outcomes such as the Body Mass Index (BMI) percentiles, indicates that interventions may be limited in their approach and overlook contextual issues affecting target populations (Kamath et al., 2008). Addressing this area of research is highly relevant, particularly if the long-term goal is to impact eating and physical activity behaviors among ethnically diverse children and their families (Wilson, 2009). Attention to this issue is critical, particularly because only a minority of randomized controlled trials focused on childhood obesity have targeted underserved ethnic minority populations (Doak et al., 2006; Flynn et al., 2006; Stice, Shaw, & Marti, 2006; Whitlock et al., 2005).

Attrition in Prevention and Treatment Programs. Although family-focused interventions appear to be promising for reducing childhood overweight and obesity (Golan & Crow, 2004; Wrotniak et al., 2004, 2005; Boutelle et al., 2011), health promotion programs targeting low-income, multi-stressed, and diverse populations continue to be impacted by high

rates of attrition. For example, attrition rates in pediatric weight management programs have been reported to range between 27% and 91%, with the majority of studies reporting attrition rates higher than 50% (Skelton & Beech, 2011).

Determining predictors for dropout and precursors of retention are essential in health promotion research (Carroll et al., 2011; Dhingra, Brennan, & Walkley, 2011; Grimes-Robison & Evans, 2008; Kalarchian et al., 2009; Sallinen-Gaffka et al., 2013). Studies indicate that salient reasons for dropout include limited medical insurance coverage, excessive length of health programs, lack of adequate transportation, and failure of programs to meet participants' needs (Goldberg & Kiernan, 2005; Honas et al., 2003). With regards to family-level risk factors, specific family dynamics may contribute to failure to engage and retain families in health-focused prevention and intervention programs. For example, research with overweight adolescents indicates that key predictors for attrition refer to levels of adolescent unhappiness/depression, family-related stress, and parent–adolescent conflict (Brennan et al., 2012).

Participants in health promotion research have identified key factors that are likely to determine their participation in overweight and obesity reduction programs. Among the most relevant are having access to affordable and comprehensive insurance plans, personal and culturally-sensitive engagement strategies, and flexibility of service delivery locations and times (Hampl et al., 2013). Parents also expressed the need for low-cost programs designed to meet family expectations and characterized by appropriate engagement strategies for children (Kitscha et al., 2009; Skelton & Beech, 2011). Further, studies indicate the need to adequately address the potential mismatch between parents' expectations and the extensive time required for children to lose weight (Alm et al., 2008; Murtagh et al., 2006). If this key variable is not considered,

parents are at risk for losing motivation to engage in prevention and treatment programs (Grimes-Robison & Evans, 2008; Hampl et al., 2011).

Challenges to Define the Format and Content of Childhood Obesity Programs. A current debate in the field is focused on whether to incorporate nutrition and physical activity components into existing programs that address general family functioning, or to focus exclusively on disseminating programs that target caregiver feeding patterns and decreasing sedentary behaviors among children and caregiver (e.g., Sleddens et al., 2011). This debate is informed by research indicating the close relationship between family and parenting dynamics, lifestyle habits, and feeding patterns associated with child overweight and obesity (Blissett & Haycraft, 2008; De Bourdeaudhuij et al., 2009; Vereecken et al., 2009; Vereecken et al., 2010). In fact, recent studies indicate that a focus on both parenting styles and health practices constitutes the most effective way to impact childhood weight-related outcomes (Gerards et al., 2011; Rodenburg et al., 2014). As Brotman and colleagues (2012) have affirmed, “obesity interventions that are narrowly focused on eating and activity without changing fundamental aspects of the early family environment are likely to be insufficient, especially for children at high risk” (p. 626). However, and despite the call for integrative programs, efficacious programs characterized by an integration of parenting and health promotion components remain limited (Carroll et al., 2011; Janicke et al., 2009; Yancey, Ory, & Davis, 2006).

The need for family-focused interventions. Parents and caregivers are the individuals with the highest level of influence in the lives of children and youth (Ball et al., 2012; Wen et al., 2011). Although advances have been made, childhood obesity prevention and treatment programs continue to demonstrate limited success, particularly as it refers to long-term outcomes with underserved populations (Han, Lawlor, & Kimm, 2010; Wake et al., 2009; Whitlock et al.,

2010). Further, the majority of existing interventions are characterized by a strong emphasis on education components related to physical activity and nutrition, as well as strengthening the collaboration between healthcare providers and affected families and children (Kirschenbaum & Gierut, 2012). However, research indicates that three critical components continue to be minimally addressed in current prevention and treatment efforts. First, the most affected families are frequently impacted by multiple factors associated with health disparities (i.e., limited resources, limited access to resources, discriminatory ideologies), which constitute considerable barriers to change. Second, a lack of focus on the family as the unit of intervention is likely to result in failure to promote family-level changes that could lead to permanent changes in family dynamics that are closely related to healthy diets and adequate physical activity for children. Finally, the deleterious impact of stigma must be addressed at all levels of the helping process (Schafer & Ferraro, 2011; Sikorski et al., 2011).

The need for ecological prevention and treatment programs. Scholars have increasingly called for the need for prevention and treatment programs aimed at addressing multiple outcomes in the lives of children and families impacted by health problems (Flynn et al., 2006; Summerbell et al., 2005). Thus, health promotion programs could impact relevant family-level variables that are often overlooked in programs focused exclusively on the individual child (Berge, 2009; Berge & Everts, 2011; Kitzman-Ulrich et al., 2010). In addition, there is a need to embrace ecological perspectives to effectively address variables that are beyond the individual child and family (Greaves et al., 2011; Robinson, 2008; Waters et al., 2011). For example, scholars have increasingly highlighted the potential impact of programs characterized by community building, advocacy, and social change (Huang et al., 2009; WHO, 2011). Most recently, health-oriented research and policy organizations, such as the Robert Wood Johnson

Foundation (RWJF), have launched comprehensive health initiatives that emphasize the need to address health inequity and promote community building as key strategies for addressing the obesity epidemic in the US (RWJF, 2016). A growing body of community-based participatory research (CBPR) studies also suggest that community involvement in intervention development and testing is essential for program effectiveness and sustainability, particularly as it refers to health promotion research with underserved ethnic minority populations (Bauer et al., 2006; Lytle & Perry, 2001; Koplan et al., 2005; Nollen et al., 2007; Norris et al., 2007; Reynolds & Spuijt-Metz, 2006; Summerbell et al., 2005). These approaches are particularly relevant when promoting health-oriented interventions with populations historically affected by discrimination and oppression (Kimbrow et al., 2007; Kumanyika & Kresbs-Smith, 2001).

This paper reports a sub-set of findings from a larger study focused on investigating risk and protective factors with low-income, single female, primary caregivers whose children are affected by overweight and obesity (Author, 2016). Specifically, the data reported in this manuscript refer to questions focused on exploring the participants' perceptions about issues to be considered for the development and dissemination of childhood overweight/obesity prevention and intervention programs. Following an ecological framework (Bronfenbrenner, 1986), data are reported according to four main areas of interest: (a) engagement and recruitment, (b) intervention delivery, (c) content of interventions, and (d) context and implementation.

Method

Below, a brief description of the most relevant characteristics of the core study is presented, as well as methodological details of relevance for this report. The reader is referred to the original source for additional information regarding the primary investigation (Author, 2016).

Participants. Sixteen low-income, single, female, primary caregivers residing in a mid-western city participated in this investigation. Caregivers were eligible to participate if they met the following eligibility criteria: (a) single status, (b) primary caregiver, (c) had at least one 3- to 8-year-old child with a BMI \geq 85th percentile, and (d) an annual household income that met the 2015 poverty guidelines. Caregivers ranged in age from 29 to 60 years of age, and children's BMI percentile ranged from 85 to 99. Approximately fifty-six percent of mothers were African American, followed by Hispanic (18.75%), non-Hispanic White (12.5%), and multi-ethnic (12.5%). Table 3.2 presents a summary of specific participant demographic information.

Table 3.1: Descriptive Information of Study Participants

Demographic Factors	Summary Statistic
Caregiver age (mean, SD)	37 (9.7)
Child age (mean, SD)	5.8 (1.6)
Relation of respondent to child (%)	
Mother	81
Grandmother	19
Number of children in family (%)	
1	18.75
2	37.5
3	18.75
4	6.25
5	18.75
Child overweight/obese status	
Child overweight (%)	81
Child obese (%)	19
Caregiver race/ethnicity (%)	
White	12.5
Black/African American	56.25
Hispanic	18.75
Multi-ethnic	12.5
Caregiver education level (%)	
Less than 9 th grade	6
Less than 12 th grade	13
High school graduate	13
Some college	43
Associate's degree	6
Bachelor's degree	19
Caregiver employment status (%)	
Unemployed/Disabled	38
Part-time	25
Self-employed	6
Full-time, not working in professional area of interest	6
Full-time, working in professional area of interest	25
Allocation of monthly income	
% of monthly income spent on food (mean, SD)	32.6 (13.5)
% of monthly income spent on recreation (mean, SD)	4.4 (5.4)

Recruitment. All study protocol was deemed exempt by the Institutional Review Board of Michigan State University. Collaborations for recruitment were established with community-based agencies serving populations that met the inclusion criteria. Recruitment activities were implemented with the assistance of professionals from these agencies. If parents were interested in participating, they were given the principal investigator's (PI) contact information to be

screened for study eligibility. If parents met the inclusion criteria, an interview was scheduled at the participant's preferred location. Caregivers were compensated \$30 for their participation in the study.

Data Collection. Qualitative data were collected through face-to-face and in-depth individual interviews (Legard, Keegan, & Ward, 2003; Ritchie, 2003; Rossman & Rallis, 2003), which included the utilization of eco-maps (Hartman, 1995). Individual interviews were initiated by establishing rapport and consent procedures, followed by discussion of selected themes (Hill & Lambert, 2004; Legard et al., 2003). Individual interviews were chosen over other data collection approaches as they offer the opportunity to gather in-depth information from every research participant (Marshall & Rossman, 2006) and facilitate the exploration of individual experiences (Legard et al., 2003; Lewis, 2003; Ritchie, 2003). The data reported in this manuscript refers to questions specifically focused on the participants' perceptions about key issues to be considered for the development and dissemination of childhood overweight/obesity prevention and intervention programs.

Data Analysis

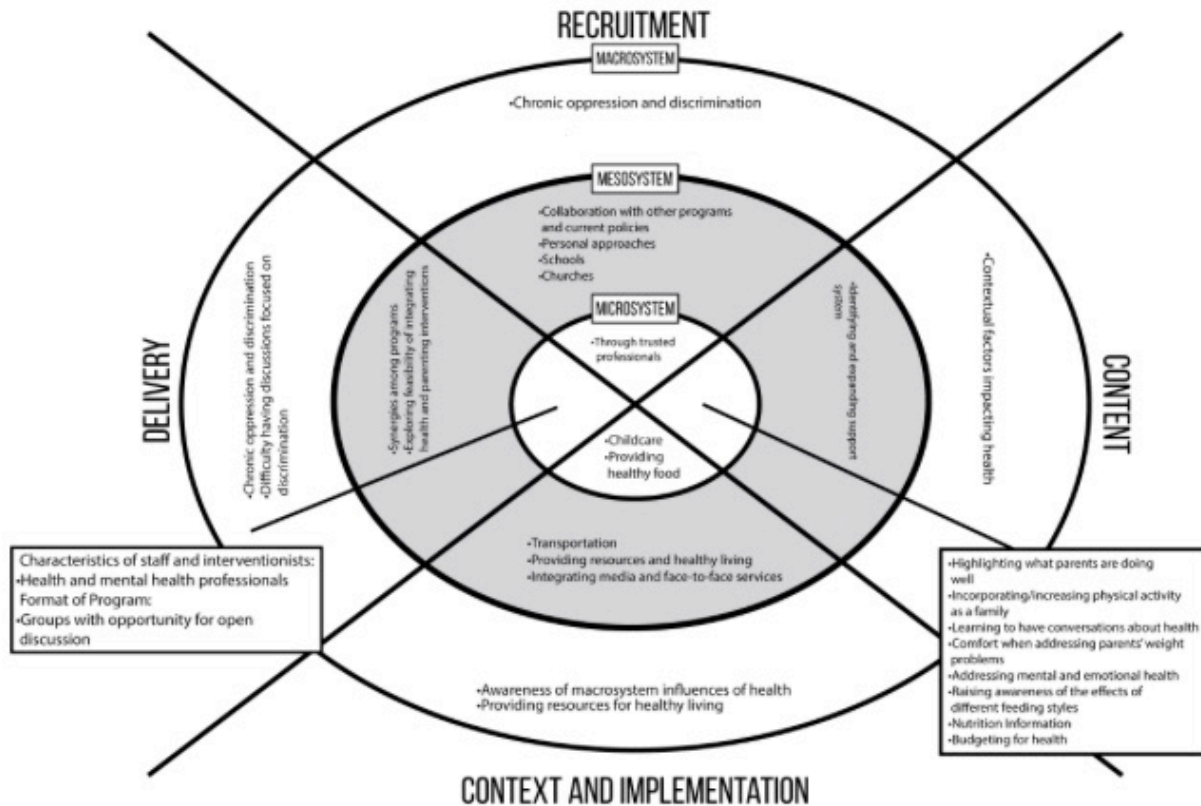
Thematic Analysis. Thematic analysis is a qualitative approach useful for identifying, analyzing, and reporting patterns of data according to specific themes. This approach assists researchers in the organization of data according to relevant themes previously identified in the literature, as well as the identification of alternative and emerging themes identified during the process of data collection (Boyatzis, 1998). For this study, thematic analysis followed a semantic and latent approach (Braun & Clarke, 2006). A semantic approach consists of identifying themes exclusively found in explicit meaning of data (Vaismoradi, Turunen, & Bondas, 2013). The semantic analytic process involves a progression from description to data interpretation. The

semantic analysis was complemented by the latent analysis. At this level of analysis, data are examined to identify and examine the underlying ideas, assumptions, and unique conceptualizations (Braun & Clarke, 2006). Thus, latent thematic analysis refers to a level of analysis characterized by detailed selection of themes matching the selected areas of exploration (Joffe, 2011). The development of new themes complements the descriptive analyses characteristic of semantic analysis (Braun & Clarke, 2006). Finally, in collaboration with the research team, a trustworthiness plan (Lincoln & Guba, 1985) was established to address credibility, transferability, dependability and confirmability (see Author, 2016).

Results

As previously stated, this manuscript provides participants' data aimed at informing the design and implementation of health promotion programs focused on childhood overweight and obesity. Figure 3.1 provides a graphic description of major findings according to specific programmatic areas and levels outlined in Bronfenbrenner's (1986) ecological framework. It is important to clarify that participants did not elaborate on all areas of inquiry according to Bronfenbrenner's model. For example, no data were identified in the exosystem level according to the ecological model. Quotes will be provided for themes that were addressed in depth by participants. To increase precision of reported results, participants' quotations will be supplemented by the caregiver's age, ethnic self-identification, and number of children residing in the household. For example: "Jazmyne (48, American Indian/White, 5)" indicates that the participant named "Jazmyne" is 48 years of age and resides with 5 children in her household.

FIGURE 3.1: PROGRAMMING COMPONENTS



Macrosystem. Participants expressed the need for health and mental health providers to consider key contextual issues that have an impact on childhood overweight and obesity, as well as the caregivers' decision to participate in health promotion programs.

Recruitment. *Chronic oppression and discrimination.* Participants reported a high need for health and mental health professionals to consider the role of adversity and discrimination when considering efforts to recruit participants into health promotion interventions. Specifically, sixty-nine percent of the women reported past experiences with racial or class discrimination in various settings and contexts. For example, Minty (29, African American, 1) explained discrimination associated with low SES, which was an experience commonly reported by other caregivers, "If you come from a different social class and you are trying to get money, there can

be clashes that affect your income. It's just always like that. I feel like you always have to make adjustments.”

Participants also referred to the issue of mistrust when considering participation in health promotion interventions. For example, participants reflected on the sense of safety associated with being surrounded by people they trust. Overall, participants reported past experiences of discrimination by Euro-Americans (identified by participants as “Whites”), which led them to have a general sense of mistrust in health professionals. One participant (33, African, 3) captured a concern expressed by other caregivers, “I'm not scared of my own people. I'm more scared of people that look like you [White].”

Delivery. Chronic oppression and discrimination. Participants reflected about the ways in which mistrust will influence the decision of diverse populations to participate in health promotion interventions. Angela's (33, African, 3) feedback reflected on this issue: “I think other women being interviewed just won't open up to you because they're afraid of offending you...But I don't care, because I get offended every single day.”

Difficulty of having discussions focused on discrimination. A majority of participants reflected on how intervention delivery is likely to be affected by the difficulties associated with having honest conversations about discrimination. Angela's (33, African, 3) reflection illustrates a reaction commonly expressed by other participants when asked about the impact of discrimination in their lives. She affirmed, “Is that a real question?... You wouldn't want me to talk about that because you see me as a Black woman and every other White person just sees me as a Black woman.”

Content. Contextual factors impacting health. Approximately 88% of participants expressed that attention to contextual issues such as the impact of stereotypes, should inform

selecting the content to be addressed in health promotion programs. Reflecting on these issues, Amy (32, African American, 5) expressed, “You have to create an atmosphere where people feel like they’re understood” Dee (36, Hispanic, 2) further elaborated on this idea:

There’s this taboo where people think that fat people eat just because or they are slob because they are fat. Sometimes people don’t have the resources, sometimes people have mental health problems that go along with it, so even if you help one side, you can keep a person as active as you want, if they stay active all day and then binge eat at night because they are not feeling good then they are never going to get healthy.

Honesty (43, White, 2) added, “Discrimination has to do a lot with people’s health. It’s how they’re treated... Their race, their color, everything. I believe discrimination is a good topic to discuss in group.”

Context and Implementation. *Awareness of macrosystemic influences of health.*

Seventy-five percent of participants referred to the impact that various contextual factors (i.e., cultural norms, values, belief systems, ideologies, and socio-economic structures) are likely to have on implementation efforts. For example, Minty (29, African American, 1) reflected on a topic commonly shared in groups, which referred to economic inequalities. According to participants, this type of inequality must be considered when planning the dissemination of health promotion interventions. Minty affirmed:

I look at it [inequality] like Monopoly.... There are a few major players who have power, who own and control the resources. And there is a part of those resources that have been designated to a particular group and they are the guardians of the resources, the gatekeepers of these resources and they determine who will and who will not have access and it depends a great deal of how they feel about you. So, if you express certain issues and draw attention to yourself but they feel negatively about you, they will restrict access to you.

Mesosystem. Participants reflected about the ways in which health promotion programs should not be conceived nor implemented in isolation, but interrelated with complementary programs.

Recruitment. *Collaboration with other programs and current policies.* Sixty percent of participants acknowledged utilizing health promotion programs in their communities. However, participants also highlighted that they do not rely exclusively on one type of program as 88% of caregivers also reported utilizing various types of government assistance.

Personal approaches. In addition to utilizing existing programs in the community, 63% of caregivers stated that they would prefer to receive information about various types of programs through face-to-face contact, rather than impersonal approaches (e.g., flyers). For example, Ellena (41, Hispanic, 4) said, “Talking to the resource leaders. For example, at the school they have the KSSN leaders who collaborate with other people, so they will tell me and I will pass on the information to the nurses and other people that live in the area.” In addition to highlighting the need for personal contact in open recruitment, participants identified two ideal sources of recruitment: schools and churches.

Schools. Fifty percent of participants suggested that health programs should establish collaborations with schools to let families know about health interventions. However, participants also cautioned that recruitment through schools should be carefully planned. Chasidy (29, African American, 2) explained:

The neighborhood school, when school starts back they have people that look like you [White], but you don't look like nobody in my neighborhood. They'll [White people] come to me and in a condescending way will say, “Well you need to stop feeding your kids this and you need to do this and you need to do that” ...but these people do not show us ways to effectively do this, especially with little to no money or with food stamps. They get I don't know 200 to 300 dollars a month for food. No family can live off of that and eat healthy so don't say, "Well it's your fault that your child is this." With the bigger picture, yes you could point fingers and say, well “you could have a better job or you could do this or you could've done that.” Don't make them feel bad for the situation that they're in because that is not helping. You're not giving no options, no resources, no nothing.

Churches. Fifty percent of participants mentioned their faith being an important part of their health as well as identifying their church community as an integral part of their support

system. Thus, health promotion programs should be conceptualized by establishing collaborations with faith-based organizations. Amy (32, African American, 5) expressed the importance of considering churches as a resource for recruitment:

I have a wonderful faith community that is very important to me and my well-being. I think if you were to have the pastor make an announcement at the end of service telling the congregation about the program that would be good because people trust religious leaders and they would believe that if the pastor was endorsing this program then it must be a benefit to the community.

Delivery. Participants addressed multiple ways to create synergies among programs to enhance the impact of delivery of health promotion interventions. Overall, participants expressed high interest in programs that can take holistic approaches rather than having a sole focus on overweight or obesity issues.

Synergies among programs. Fifty-six percent of caregivers shared a desire to engage in programs aimed at helping families increase physical activity. However, these participants also expressed high interest in complementing these interventions with other programs such as cooking classes. Two participants provided quotes on these issues that reflected participants' reactions. Dee (36, Hispanic, 2) expressed, "I would like for people to get information of programs, other than that the programs offered by the organization they are getting services." Tasha (32, African American, 3) discussed an experience she had with WIC that she appreciated as service providers highlighted synergy of programs available to her, "I liked that they just gave me options of different programs related to theirs. They didn't tell me, 'oh, you should do this, you need to do that'... That worked for me."

Exploring feasibility of integrating health and parenting interventions. Participants were split regarding the possibility of integrating health promotion and parenting interventions. Fifty percent of participants stated they believe including general parenting components to health

promotion programming would be well-received and beneficial, as Lisa (29, African American/White, 1) affirmed:

I think they could be done together. Because you're the reason why you and your family are obese. You have all the means to make you guys obese. So I think yes. It should be brought up with the parenting and how to discipline them because I have a friend that son steals out of the refrigerator. He's very obese. And she's put a lock on the refrigerator. She has done this and numerous stuff and she can't get through to him that you can't eat all through the night while the rest of us are asleep. You try to prevent more because she stopped putting food in the house and you don't want to deprive them really with food but that's what it has become.

In contrast, 50% of the participants stated that they would not consider beneficial to integrate both types of programs. According to these parents, such an integration would not work based on poor past experiences they had with parenting interventions, characterized by intervention delivery approaches that were insensitive, condescending, and even offensive. One participant (32, African American, 5) reflected on a perception shared by half of the caregivers:

I don't think you should incorporate parenting into the groups. I will feel like who are you to tell me how to discipline my child, everyone is different, I do things differently than you are going to do, I would not like that conversation, personally I just wouldn't.

Content. Identifying and expanding support system. All participants reported the relevance of interventions to address the ways in which the interactions among multiple systems had the potential to promote their physical, mental, spiritual, and emotional health. Specifically, 81% percent of caregivers identified interactions among systems for groups of reference that extended their support network. Monica (60, Hispanic, 2) reflected on these issues, resembling the reports of other participants:

I feel supported by my sisters and my friends and I feel supported by my doctors, but I don't feel supported all the time. I wish that I had more consistent support from people or organizations that have more influence over resources that help people be and stay healthy.

Context and Implementation. Transportation. When asked about the types of support caregivers needed to enroll in health-oriented programs, 63% of participants expressed the need for welfare agencies to collaborate with city or private transportation services as they could not be able to participate in health programs without adequate transportation support. Towana (41, African American, 2) described the need for this type support, resembling the participants' feedback, "Transportation is a must, that's one of the biggest things like childcare and transportation is one of the major issues in African Americans definitely."

Providing resources for healthy living. Eighty-one percent of participants suggested that welfare agencies should enhance implementation activities by establishing linkages among various programs aimed at promoting healthy living (i.e., recipes, insurance policy counseling, physical activity programs, family financial planning). Participants expressed that these synergies would significantly increase their interest to remain engaged in the interventions. Interestingly, no participants with Medicaid insurance were aware that they were entitled to have two yearly visits with a dietician. When asked if they would use this resource, all participants reported that they would. Ellena (41, Hispanic, 4) highlighted the importance for program developers to create this synergy of implementation:

I would say that by getting a hold of community resources, there are specific coalitions out there and they can help you deliver the message... You can join one of the coalitions and you can stand up and say, "I am from the health department and this is what I do, if you would like to sign up, I will leave my card and you can call me when you want."

Integrating media and face-to-face services. Eighty-six percent of participants shared the importance of complementing face-to-face intervention delivery with media. Minty (29, African American, 1) offered an explanation shared by these participants:

Setup an Instagram or Facebook or something like that because it just seems more convenient. It is not like you're interrupting a person because they're already doing this

they are scrolling by only that is right click, play the message has gotten across. I just think that media would make it much more effective.

Microsystem. Caregivers provided important insights for program development and delivery associated with direct interactions with potential participants.

Recruitment. *Through trusted professionals.* Seventy-five percent of the sample considered that potential participants in health promotion programs are likely to be recruited if recruitment activities are carried out by professionals who can be trusted, or by professionals with existing trusting relationships with participants. Jazmyne (48, American Indian/White, 5) elaborated on this issue, reflecting the sentiment of these participants, “I think it would be helpful to hear about the programming from my daughter’s doctor or her counselor. That would motivate me to try anything to try to help her, so she doesn’t feel like she feels about being overweight.”

Delivery. *Characteristics of staff and interventionists.* Hearing from regular people. Eighty-eight percent of caregivers stated that they would like to receive health information and interventions by “regular people.” To these participants, the matching of life experiences would be particularly important. Amy (32, African American, 5) shared illustrated this issue:

This is how I feel about education: I feel like anybody can read books... I would rather talk to somebody who has walked in my shoes, just a little bit... You don’t have to be obese growing up, but if you have gone through it, you were right there. You saw it or you also have a child that went through it... That would make it easier for me to accept your criticism or to accept your opinion because you walked through it... But if you are just telling me, I don’t know, I just read up on it. You just don’t know. So if I have someone that has been through it before or knows someone who has been through it and has been close to them, then it is easier for me to accept what they are saying to me.

Health and mental health professionals. Seventy-five percent of participants also expressed their openness to receive help from health and mental health professionals, as long as they perceive these professionals to be invested in their well-being. For example, Amy (32,

African American, 5) stated, “If a doctor was there and they were giving us information, I would love to hear and I would love for the doctor to open it up with questions.” Monica (60, Hispanic, 2) offered a reflection shared by these participants:

A therapist or a social worker. I said therapist because somebody that help with the mental health issue and I said social worker in case someone is in there and they are facing eviction notices or their lights are being cut off or they don’t know where the food pantry is. A social worker has that information, so I think that that would be positive if a social worker was on hand to help all of these parents. A lot of parents don’t want to come and ask for help, but let them be known that after class she will still be here or pass out a card, maybe a private conversation...I really feel like a social worker being on hand will be helpful.

Format of program. Groups with opportunity for open discussion. Ninety-four percent of participants stated that a group format would be ideal for a health promotion program.

Participants shared that they would like a group format to include both time for open discussion, as well as having a didactic component with relevant information for their mental, physical, emotional, and spiritual health. Quana (28, African American, 3) expressed an expectation shared by other parents, “I’m really big on not just sitting down and people telling me what to do. I’m really big on open conversation where we all can have an agreement and figure out how to work this out.” Amy (32, African American, 5) elaborated on this suggestion:

I would open up the conversation with something light and then change the subject in the middle...You have talked about that for an hour, now I want to talk to you guys about finances. Then, about faith...That’s what I would do.

***Content.** Highlighting what parents are doing well.* Ninety-four percent of participants were able to identify areas of health where they believe they are being good roles models to their children, as well as encouraging them to engage in healthy behaviors. These parents considered essential to focus on this issue for program content. For example, Dee (36, Hispanic, 2) shared, “I am always looking for resources and just trying to stay active. Changing things to break the

cycle.” Honesty (43, White, 2) also elaborated on this issue, which was commonly reported by parents:

Trying to help them learn how to eat healthy and they both like salads too and I can’t eat salad, but anything that I can’t eat or I don’t like, I never discourage them not to try and they love salads, I just can’t eat it, because I can’t digest it.

Incorporating/increasing physical activity as a family. Fifty percent of participants shared the desire to be more active with their children and stated a desire for guidance to develop strategies to incorporate more physical activity into their daily routines. This issue was illustrated by Lisa (29, African American/White, 1), who stated:

I would say a good topic would be how to coordinate exercises with a working person, as well as age appropriate exercises. There’s a gym I know about that the kids can go to and I feel like what’s really appropriate for a six, seven-year-old to be doing in the gym.

Learning to have conversations about health. Fifty percent of participants expressed a desire to learn how to have sensitive, helpful conversations with their children about health and weight. To participants, this would be a key theme to be addressed in health promotion interventions. Amy’s (32, African American, 5) reflection illustrates this expectation shared by parents, “I need information to help me help my child in a positive way. Teach me how to have this conversation with my child.” In addition, 31% of participants described unsatisfactory experiences they had with healthcare providers who used insensitive language to discuss their children’s weight status and spoke in a condescending tone, implicitly stating that parents were to blame for their children’s health problems. Angela (33, African, 3) shared, “She was just telling me stuff that I was already doing. Watching portion sizes but as 5-month to 1-year-old, if she's being breastfed, you can't watch the portion sizes with that. They just eat until they're full. Jazmyne (48, American Indian/White, 5) also reflected on this issue, “They said she was obese

and that kind of pissed... upset me. They said it in front of my daughter and she almost started crying.”

Comfort when addressing parents’ weight problems. Eighty-eight percent of caregivers reported that conversations with helping professionals facilitated their own comfort with their weight problems. Thus, they consider that these conversations, along with conversations focused on healthy eating and physical activity, would be helpful topics in programming. Dee (36, Hispanic, 2) stated the benefits of addressing these issues in interventions, “You realize you are not the only one going through that. I think group sessions would help a lot.” Edna (52, African American, 2) also shared that discussing discomfort with personal weight in a group setting would be helpful, “Because you can help and encourage each other or we have a meeting and then you can support each other.” Honesty (43, White, 2) elaborated on these issues, which were reported by these participants:

It would be helpful to discuss in group discomfort with weight...Because what we do reflects on our kids. If we are not comfortable, if we are not happy, then our kids are not going to be happy. It all starts at home. Whatever starts at home, finishes at home. We should be talking about this because the parents need help, we need help to guide ourselves to be better parents and better people.

Addressing mental and emotional health. Ninety-four percent of participants mentioned a desire to discuss issues related to mental and emotional health. When asked about health practices, 50% of participants reported engaging in behaviors focused on spirituality and mental health. With regards to needs, Dee (36, Hispanic, 2) discussed the importance of addressing depression, “Because of bullying and stuff, kids get stressed out and have depression. Kids are committing more and more suicide nowadays because they don’t like themselves.”

All participants agreed on the importance of processing parental feelings of guilt resulting from their children’s weight status. Caregivers considered that a group experience could

facilitate mutual learning about these struggles, while becoming a source of support, as Jazmyne (48, American Indian/White, 5) expressed, “You’re able to share experiences and hearing other people struggling with the same thing and how maybe they deal with it.”

Nutrition information. All participants expressed a desire to receive specific information to help them improve their families’ eating behaviors. As Amy (32, African American, 5) suggested, “A topic that would be helpful would be the ‘do’s and don’ts.’ Do give your child milk, give your child water, don’t always offer soda, a lot of the parents don’t know the do’s and don’ts.” Angela (33, African, 3) added, “How to cook healthy meal...Not with a lot of salt and things like that can cause high blood pressure... That’s a big issue in the Black community. Yes, how to cook healthy and how to buy healthy food.” Participants also talked about receiving coaching to help them prepare healthy recipes, as Ellena (41, Hispanic, 4) said, “I know you can make other things that are healthier too, not just a salad. Those kinds of things we really don’t know about.... The healthier, unless I see something and get a recipe.”

Caregivers also shared the desire to learn more about obesity in general. For example, Honesty (43, White, 2) shared, “I would like to know what caused your child to become overweight. Like was it because they ate too much, was it a stress issue? There are different things to cover, not just one specific topic.” Participants also addressed the need to talk about the ‘likelihoods’ as Minty (29, African American, 1) clarified, “Talk about the likelihoods. So, talk with parents about the likelihood for a child to become obese at this age and so forth...Talking about those types of projections would help parents a lot.”

Budgeting for health. Ninety-four percent of participants shared a desire to learn how to better manage their time and their money to help themselves and their families lead healthier lives. Lisa (29, African American/White, 1) eloquently stated, “Time is never on a single

parent's side" and this sentiment was shared by 75% of participants. Thus, caregivers mentioned they would like to learn how to fit meal preparation and physical activity into busy schedules. Jada (27, African American, 1) emphatically shared an issue reported by these parents, "Planning, just planning ahead and being positive a lot."

In addition, seventy-five percent of participants expressed a desire to prepare more adequate budgets to maximize expenses aimed at improving their families' health. To illustrate, Dee (36, Hispanic, 2) affirmed, "How to budget...Knowing the amount of money you are allotted each month for food and seeing how you can healthfully make your money stretch. I mean because I can make it stretch but it's not always the healthier choice." Chasidy (29, African American, 2) confirmed a need expressed by parents, "Budgeting, definitely. A lot of people need to learn how to do that."

Context and Implementation. Childcare. Eighty-one percent of participants stated that providing childcare during family programming would be crucial for retention. Some examples of responses to this suggestion were, "That's a must, that's one of the biggest things like childcare and transportation is one of the major issues in African Americans definitely" (Towana, 41, African American, 2). Similarly, Quana (28, African American, 3) affirmed, "Childcare is number one." Honesty (43, White, 2) concurred, "Yes, if it was something that was once a month or once a week or whatever, I think that childcare should be something offered during that time." And Dee (36, Hispanic, 2) confirmed, "Oh yeah that's important I don't go to a lot of places because they don't have childcare."

Providing healthy food. Eighty-one percent of caregivers expressed the desire to have healthy food options provided to them during interventions, especially if the program is held during a usual mealtime. Minty (29, African American, 1) said:

If this program provided healthy food, that would be great for everyone. Even if that was the incentive, if it was always fresh food like a bag of fresh groceries, because I think that these things are more expensive and people don't try them because of that.

Jazmyne (48, American Indian/White, 5) added in response to the question about having healthy food options available, "that would help get people to go I'm sure."

Discussion

Current findings highlight the need to inform health programming and intervention delivery efforts according to systemic paradigms, which will increase the likelihood for interventions to address risk and protective factors at multiple levels (Casagrande et al., 2009). Data indicate the need for applied researchers and mental health professionals to integrate interdisciplinary perspectives to effectively address determinants of childhood overweight and obesity (Ben-Shlomo & Kuh, 2002). Current findings also confirm the risk for childhood obesity programs to target narrow and isolated outcomes, an issue that continues to be addressed in the field (Pollack et al., 2014). A tendency for narrow perspectives in health promotion can limit the conceptualization of much needed policies, aimed at eliminating the current childhood obesity epidemic in the US.

Present findings indicate the critical role of context in the etiology and maintenance of childhood obesity. For example, issues of chronic poverty and discrimination not only put children in these families at a disadvantage since birth, but also prevent them from accessing the health services they need as they grow and develop. Fortunately, the data in this study provided clear evidence of parents' strong desire to address their children's health problems, as well as their keen understanding of the multifaceted nature of these problems. Of particular relevance were the parents' specific suggestions to improve program development and intervention delivery at multiple levels (Moens et al., 2007). For example, caregivers acknowledged the

critical role that family has against childhood obesity. Therefore, they identified their important role in the promotion of parenting practices aimed at enhancing healthy diets, physical exercise, and adequate family health practices (Cason, 2006; Golan & Crow, 2004). Parents also expressed the relevance of integrating psychoeducational components into programming, as long as they are culturally relevant and sensitive (Rhee, 2008).

Policy and Practice Implications. Current findings indicate that integrating policy and practice implications is particularly important to effectively address the childhood obesity epidemic in the US. For example, parents' suggestions to improve programming by considering multiple levels of intervention, highlight the need for policies at various levels of impact such as levying taxes, subsidizing healthy choices, and regulating marketing of healthy foods to underserved families (Kumanyika et al., 2008; Ludwig et al., 2012; Sharma et al., 2010). Data also indicate that more comprehensive interventions studies at the family-level are needed to further corroborate the ways in which macrosystemic factors impact families and children (Sallis et al., 2008).

Current data also highlighted the need for interventions to be culturally relevant and sensitive (Skelton et al., 2012). According to participants' feedback, lack of attention to contextual factors (e.g., experiences of discrimination), cultural factors, and family of origin influences, are likely to result in unsuccessful interventions. Without being mindful of these interrelated influences, health and mental health professionals run the risk of developing interventions that will be partially or minimally effective.

A promising alternative to explore in service delivery refers to advocacy models applied to health outcomes. Specifically, although advocacy models have proven to be highly successful in fields such as domestic violence (Sullivan & Bybee, 1999), their impact remains to be

determined when targeting health outcomes (Sabo et al., 2013). Briefly, advocacy approaches are collaborative work with individuals and families to help them determine their immediate needs and develop individualized plans to address them. Thus, rather than focusing exclusively on processing with families the experience of having an obese child, an advocacy approach would develop a plan aimed at addressing interrelated goals at multiple levels such as acquiring adequate health care, supportive services for parents, health promotion programs for children, job training for parents, etc. The potential for these types of advocacy programs rely on the fact that they would target outcomes beyond healthy eating and physical activity behaviors (Israel et al., 2010).

Strengths and Limitations of the Study. Important limitations of this study must be acknowledged. First, due to the small sample size and qualitative nature of this study, current findings are not generalizable, as they primarily describe the participants' perspectives. In addition, because African Americans represented 56% of the sample, current findings cannot be extrapolated to various ethnic minority groups. In addition, whereas a feasible screening protocol was implemented, high homogeneity of the sample with regards to target children was not achieved as the screening protocol did not include refined biological participant data such as markers of genetically predisposed children to obesity. In addition, due to the sensitive nature of the study and the complexity associated with being a caregiver of an overweight/obese child, it is expected that self-report biases informed the narratives provided by participants. Finally, the Euro-American ethnic self-identification of the principal investigator also introduced bias into the study, and it was possible for participants to refrain themselves from addressing specific topics in more detail (e.g., racism) due to the interviewer-caregiver ethnic mismatch.

Notwithstanding these limitations, the current study offers a relevant contribution to the literature on childhood obesity and overweight. First, qualitative data were provided by caregivers interested in participating in health promotion programs. Thus, participants were invested in providing information that they considered relevant to inform this type of interventions. In addition, guiding questions not only targeted issues related to content of interventions, but also addressed issues related to engagement and retention, intervention delivery, and implementation. Therefore, relevant targeted areas of programming (i.e., recruitment, content, delivery, and context and implementation) can be informed by the first-person narratives reported in this study. Current data also illustrate the relevance of establishing solid collaborations among systems and organizations that have a direct impact in the lives of families impacted by childhood overweight and obesity. Finally, the study provided relevant and detailed data describing the widespread and long-term impact of context and oppression in the lives of underserved and diverse populations. Such data ranged from the identification of the impact of racism and discrimination, to detailed suggestions about the characteristics of health and mental health professionals who are most likely to be effective in the delivery of health promotion interventions.

Conclusion

Participants in this study provided detailed feedback with regards to relevant issues to be considered for the development and dissemination of childhood overweight/obesity interventions. In concordance with a previous research report aimed at exploring risk and protective factors associated with childhood overweight and obesity (Author, 2016), current findings highlight the prominent role of contextual factors in the development and maintenance of these health problems. Although individual-level variables remain documented risk factors of

child obesity (e.g., genetic predisposition), current findings highlight the urgent need to consider not only micro-level variables but critically important, context-related variables (i.e., poor advertisement of community resources, the digital divide, and negative interactions with healthcare providers) when considering the design and implementation of health promotion programs. Such a holistic and multi-systemic framework is necessary to achieve realistic progress in the fight against childhood obesity in the US.

CHAPTER 4: CONCLUSION

Findings described in papers 1 and 2 share a common overarching finding: context matters and influences the health of individuals in very significant ways. The fact that the risk factors for childhood overweight and obesity were primarily represented at the macro-system level, highlights the fact that underserved, low-income and/or diverse families are exposed to significant health disparities which considerably exacerbate individual- and family-level risk factors. According to qualitative data, there is a high need to conceptualize childhood overweight and obesity as a multi-systemic problem. Fortunately, leading health-focused organizations and policy and research institutes are taking bold steps to disseminate this message. For example, the Robert Wood Johnson Foundation is strongly promoting an action framework focused on creating a culture of health by addressing shared values of health and social justice, cross-sector collaborations, integrated systems, and a focus on community development (RWJF, 2016).

With regards to relevant areas of intervention aimed at promoting healthy diets and physical activity in families, current findings corroborate the relevance of targeting key family-level variables such as overall family functioning, communication, and emotional connectedness (Mellin et al., 2002). Findings from this investigation also confirmed the key role of parents as health role models based on the important influence on their children's exposure to food, food selection, and other health-promoting behaviors (Caprio, 2006; Reinehr et al., 2002; Wilfley et al., 2007; Wrotniak et al., 2005). Current findings also confirmed the usefulness of ecological perspectives for the identification of risk and protective health-related behaviors associated with children and families (Felner & DeVries, 2013; Lawman & Wilson, 2012), particularly as it refers to understanding children's health and eating behaviors (Dunton et al., 2009; Huang et al., 2009; Lytle, 2009).

Based on research results, target outcomes should also include the identification of specific social, cultural, physical, and economic determinants of health and obesity (Kumanyika & Morssink, 2006). This broad perspective for the identification of risk and protective factors at multiple levels is in concordance with participants' suggestions to improve health promotion interventions. For example, caregivers addressed the need to focus on family level issues, but also highlighted the need to thoroughly consider the role of broader systems for effective intervention development and intervention.

Participants' feedback goes in line with recent calls to address child overweight and obesity as a health equity issue in the nation, particularly as it refers to the most underserved populations (Diez Roux, 2011). As the RWJF's plan for promoting a culture of health states, health equity can only be achieved by promoting health in multiple interrelated systems (RWJF, 2016).

Overarching Implications for Practice and Research

Papers 1 and 2 included specific implications for practice based on findings associated with each manuscript. In this section, I will briefly address overarching implications that cut across both papers with a particular emphasis on family therapy practice and research.

Health and Family Therapy Practice. First, it is important to highlight that health promotion programs, specifically those focused on weight reduction, have historically taken a behavioral approach and have primarily focused on attempting to address individual-level changes as a way to promote healthy eating and increased physical activity. This study indicates the clear need for adopting broader systemic perspectives for preventing and treating childhood obesity. For example, Friedman et al. (2005) suggest that a systematic approach to health promotion should include open discussions about the impact of stigma and, weight-related cultural beliefs. For instance, utilizing cognitive restructuring can be useful to deconstruct the

damaging effects of weight-related stigmatization. Family therapists are particularly equipped for achieving this level of adaptation of interventions based the systemic training of the profession.

Furthermore, couple and family therapists should embrace learned skills on cultural competence to maximize the impact of these intervention approaches. For example, by considering self-of-the therapist issues, family therapists should recognize the ways in which their biases influence their clinical work with families affected by childhood overweight and obesity. Thus, some therapists may find it difficult to frame health problems beyond individual and family systems, as well as overtly stating the role that macro-systemic variables have in the etiology and maintenance of these problems. Further, current data indicate that this process may be challenging if therapists represent to clients membership of groups who have discriminated against them in the past (e.g., middle- to high-SES Euro-Americans). Thus, therapists must be fully aware that mistrust should be expected, recognized, and validated

Findings also indicate the widespread presence of stigma among health professionals, which raises the need for family therapists to act as agents of change in health care systems. Attention to the issue of stigma should be a permanent area of evaluation and awareness for therapists and other health professionals due to the deleterious impact of stigma on overweight and obese individuals (Crocker, 1999). For example, Latner and Stunkard (2003) replicated a study conducted by Richardson and colleagues (1961) in which children ranked six pictures of children with varying physical characteristics and disabilities. Raters were asked to identify who they would like most as a friend. In both studies, children ranked obese children last. Researchers in the 2003 study found this bias to be more pronounced than the original investigation. Similar work with children has confirmed that obese children can be depicted by children as mean, stupid, ugly, unhappy, lazy, and unfriendly (Brylinsky & Moore, 1994). In contrast, Kraig and

Keel (2001) documented biases and stigma among children ages 7 to 9, and found that ratings were most favorable for illustrations of thin children and least favorable for overweight children.

A particularly relevant finding refers to the need for family therapists to fully consider the impact of advocacy-informed interventions (Sullivan & Bybee, 1999). That is, it is not sufficient to address individual- and family-level processes if families are not supported by facilitating access to the resources they need to address the multiplicity of contextual challenges that they face. According to the data, participants expressed their challenges as a set of interrelated problems involving struggles with the emotional aspects of eating, barriers to physical activity, parenting challenges, and the negative impact of larger systems. This issue has been addressed in empirical research by Vos et al. (2012) when they compared two multidisciplinary family-based treatment regimens for obese children. Improved outcomes were only observed in the intervention that addressed health problems at multiple levels, including context.

A focus on strengths. Current findings clearly indicate that if provided with opportunities and resources, caregivers are fully committed to addressing the health problems of their children. Thus, couple and family therapists must focus on enhancing protective factors against obesity such as positive family functioning (Cason, 2006). For example, consistent family mealtimes constitute an important protective factor leading to healthy diets if parents have the time for adequate food preparation and acquisition of nutritious food. Further, family interactions at mealtimes can be an important precursor for family intimacy and family healthy habits. Thus, family therapists should collaboratively work with families to help them prioritize meal-related activities with the promotion of family cohesion and intimacy. For example, research indicates that inclusion of children in meal preparation constitutes an important precursor of positive family interactions and family cohesiveness (Cason, 2006).

Future Research

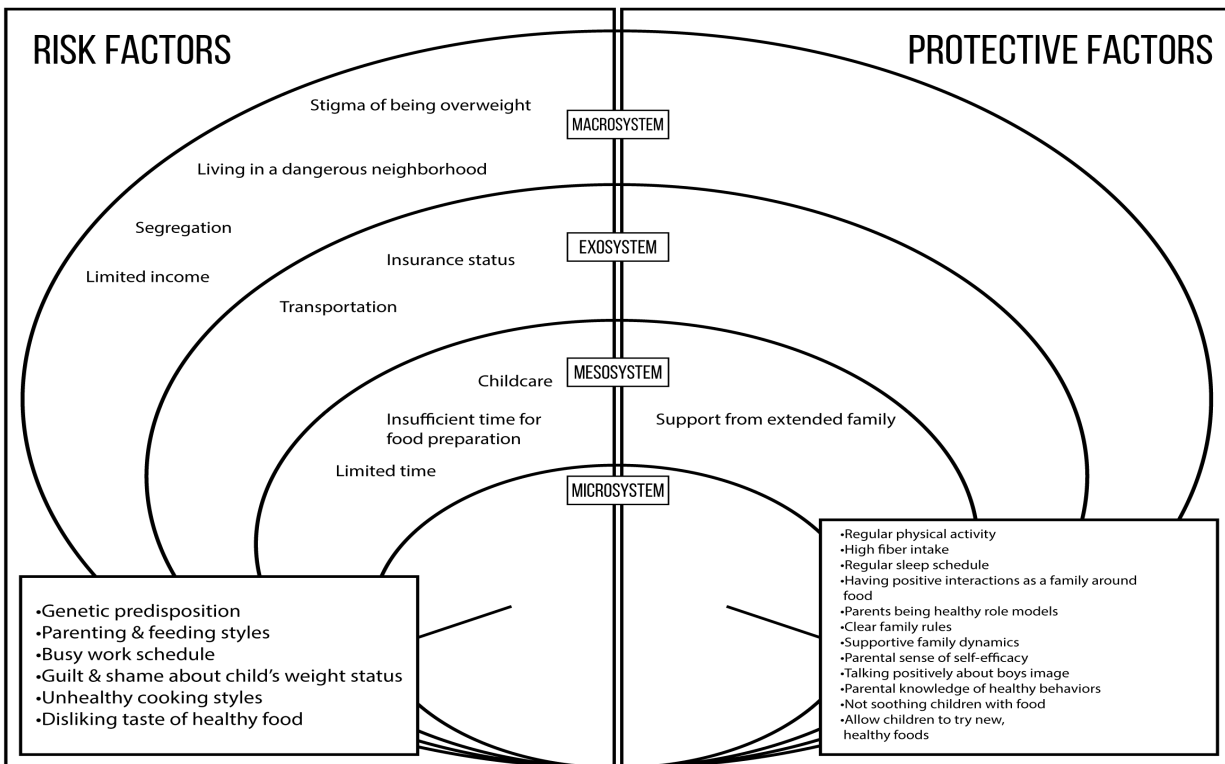
This study corroborates the need for a focus on specific lines of future research inquiry. First, there is a need to implement cultural adaptation studies of existing health promotion interventions to identify the best alternatives to culturally tailor existing efficacious interventions. However, researchers must be cautious of conducting surface-level adaptations that may fail to address core cultural issues that are relevant for the promotion of healthy eating and adequate physical activity (Wilson, 2009).

A focus on advocacy approaches that target relevant contextual factors must also be empirically tested in research with comparative studies aimed at examining these interventions against approaches that solely focus on individuals and families. Empirical data is needed in this area in order to more effectively advocate for the relevance of multi-systemic interventions (Glasgow et al., 2004; Koh et al., 2010). Closely related to the potential impact of advocacy-focused interventions is the importance of embracing community-based participatory research (CBPR) approaches in health promotion research (Israel et al., 2005). This approach to research would ensure the co-leadership with community representatives in the adaptation, design, and delivery of relevant health interventions. Further, embracing CBPR approaches should also translate in the utilization of mixed methods approaches in research. Specifically, whereas rigorous quantitative designs are essential to claim the efficacy of interventions, this investigation demonstrated the high relevance and usefulness of qualitative approaches aimed at capturing in detail highly relevant experiences of families that would be overlooked by sole reliance on quantitative methods.

Finally, research must inform policy efforts and vice versa. As indicated in Figure 4.1, the risk factors identified in this investigation are significantly concentrated at the macro-level,

whereas protective factors can be identified at the micro-level. This graphic display of risk versus protective factors, confirms the nature of health disparities as a phenomenon that has at its core structural inequalities and limited opportunities for members of society that have been historically overlooked and disregarded. Implementing future lines of research focused on health disparities related to childhood obesity is highly relevant for the generation of precise data aimed at informing relevant health promotion policies. In summary, as stated by RWJF research priorities (2016), health represents a human right that will only be achieved by promoting societies and communities capable of offering equal health opportunities to everyone.

FIGURE 4.1 RISK AND PROTECTIVE FACTORS IN LITERATURE



APPENDICES

Appendix A: Study Consent Form

Exploring Familial Risk and Protective Factors Influencing Childhood Obesity in Low-Income, Single Female Primary Caregivers Households: An Exploratory Qualitative Study

Michigan State University Department of Human Development and Family Studies Consent Form – Interview Participants

I am conducting a preliminary study, Exploring Familial Risk and Protective Factors Influencing Childhood Obesity in Low-Income, Single Female Primary Caregivers Households: An Exploratory Qualitative Study, to learn more about the experiences of families who have a child between the ages of 3 and 8 who has a BMI \geq the 85th percentile. The first step in the study is to conduct interviews with family units to understand your experiences with health promotion, eating, and parenting, and then conduct a needs assessment in regard to programs that would aid in promoting and supporting a healthier lifestyle and aspects of those programs that would be helpful and relevant to your family.

This interview will take place in person and I expect the conversations to be approximately 60-90 minutes in length.

Participation in this project is completely voluntary. Participants may discontinue the study at any time and/or refuse to answer any questions they do not want to answer. Refusal to participate in the study will not affect you in any way. The potential benefits in taking part in this study are the opportunity to discuss your experiences with your and your family's health as well as give input to influence content in future health promotion programs for families like yours. Participants will receive one \$30 gift card after completion of the interview. I know your time is valuable, however, I feel that this will be a useful discussion for you.

The potential risks of participating in this study may include any distress and/or discomfort regarding discussions of your previous health experiences. Any study participant experiencing distress or discomfort is invited to contact Arbor Circle. The phone number is: (616) 456-6571.

If you choose to participate, a fourth-year Graduate Student, from Michigan State University, will conduct the interview protocol. Each interview will be audiotaped, unless this is not an acceptable option to you. If you agree to be audiotaped, please consent by saying "yes".

Any responses you offer during the interviews will be combined with others, making your responses confidential, and your privacy will be protected to the full extent allowable by the law. Identifying information will not be attached to any of your individual responses when reporting results from the interviews. All materials will be kept in a locked file cabinet and only the principal investigator, her advisors, the Human Research Protection Program, and any participating organizations in the collection of data will have access to the data.

If you have concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury, please contact:

- Dr. José Rubén Parra-Cardona, Michigan State University, 3D Human Ecology, East Lansing, MI 48823, 517-432-2269, parracar@msu.edu
- Dr. Marsha Carolan, Michigan State University, 13B Human Ecology, East Lansing, MI 48823, 517-432-3327, carolan@msu.edu
- Sara Lappan, Doctoral Candidate, Michigan State University, 5 C Berkey Hall, East Lansing, MI 48823, lappansa@msu.edu.

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 202 Olds Hall, MSU, East Lansing, MI 48824.

Your saying “yes” indicates your willingness to participate in this study. Thank you for your time. I look forward to talking with you about your experiences.

**Michigan State University
Department of Human Development and Family Studies
Participant- Consent to Use a Direct Quote**

The form gives your consent to use direct quotes, from this interview, for the purposes of publishing this study. Your identity will be kept confidential and a false name will be used to protect you. Only the researchers will know the name assigned to you. By signing this form, you allow for the use of direct quotes in publications of this study and understand that your privacy will be protected to the maximum extent of the law.

Your saying “yes” indicates your willingness to voluntarily consent to the use of direct quotes in the publication of this study. Thank you for your time.

Appendix B: IRB Exempt Status

MICHIGAN STATE UNIVERSITY

June 12, 2015

To: Jose Parra
3D Human Ecology

Re: **IRB# x15-318e** Category: Exempt 2
Approval Date: June 9, 2015

Title: Exploring Risk and Protective Familial Factors Influencing Children at Risk for Overweight and Obesity in Low-Income, Single Female Primary Caregiver Households: An Exploratory Qualitative Study

The Institutional Review Board has completed their review of your project. I am pleased to advise you that **your project has been deemed as exempt** in accordance with federal regulations.

The IRB has found that your research project meets the criteria for exempt status and the criteria for the protection of human subjects in exempt research. **Under our exempt policy the Principal Investigator assumes the responsibilities for the protection of human subjects** in this project as outlined in the assurance letter and exempt educational material. The IRB office has received your signed assurance for exempt research. A copy of this signed agreement is appended for your information and records.

Renewals: Exempt protocols do not need to be renewed. If the project is completed, please submit an *Application for Permanent Closure*.

Revisions: Exempt protocols do not require revisions. However, if changes are made to a protocol that may no longer meet the exempt criteria, a new initial application will be required.

Problems: If issues should arise during the conduct of the research, such as unanticipated problems, adverse events, or any problem that may increase the risk to the human subjects and change the category of review, notify the IRB office promptly. Any complaints from participants regarding the risk and benefits of the project must be reported to the IRB.

Follow-up: If your exempt project is not completed and closed after three years, the IRB office will contact you regarding the status of the project and to verify that no changes have occurred that may affect exempt status.

Please use the IRB number listed above on any forms submitted which relate to this project, or on any correspondence with the IRB office.

Good luck in your research. If we can be of further assistance, please contact us at 517-355-2180 or via email at IRB@msu.edu. Thank you for your cooperation.

Sincerely,



Harry McGee, MPH
SIRB Chair

c: Sara Lappan, Marsha Carolan



Office of Regulatory Affairs
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Institutional Review Board
(BIRB)

Community Research
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Olds Hall
408 West Circle Drive, #207
East Lansing, MI 48824
(517) 355-2180
Fax: (517) 432-4503
Email: irb@msu.edu
www.humanresearch.msu.edu

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**Initial IRB
Application
Determination
*Exempt***

Table 4.1: Detailed Descriptive Information of Study Participants

ID	Age	Race/ Ethnicity	Education Level	Employment Status	Child BMI %ile	Child Age	%age of income spent on food	%age of income spent on recreation	# of children
Monica	60	Hispanic	Less than 12 th grade	Unemployed	90	7	~50	0	2
Jazmyne	48	American Indian/ White	Some college	Disabled	99	8	~50	~5	5
Tasha	32	African American	Less than 9 th grade	Unemployed	90	5	~50	0	3
Jada	27	African American	Bachelor's degree	Self- employed caregiver	89	3	~40	~5	1
Minty	29	African American	Bachelor's degree	Unemployed	89	3	~30	~20	1
Chasidy	29	African American	Less than 12 th grade	Unemployed	97	8	~22	0	2
Ellena	41	Hispanic	Some college	Full time in area of interest	88	6	~15	~5	4
Quana	28	African American	High School graduate	Part-time	96	7	~25	~10	3
Angela	33	African	Bachelor's degree	Full time in area of interest	85	6	~35	~10	3
Edna	52	African American	High School graduate	Unemployed	87	6	~20	~5	2
Amy	32	African American	Some college	Part-time	86	7	~40	0	5

Table 4.1 (cont'd)

Dee	36	Hispanic	Some college	Full-time in area of interest	86	5	~10	~5	2
Honesty	43	White	Some college – professional license	Part-time	94	4	~20	0	2
Towana	41	African American	Some college	Full-time not in area of interest	88	7	~25	0	2
Lisa	29	African American/White	Associate's degree	Full-time in area of interest	85	7	40	5	1
Nikki	32	White	Some college	Part-time	92	4	5	0	5

Table 4.2: Frequency of Themes for Paper One

Themes	Subthemes	Total % Reporting Theme	Ethnicity (%)			
			African American	Non-Hispanic White	Hispanic	Multi-Ethnic
Macrosystem Risk Factors						
Discrimination		69	54.5	9.1	18.2	18.2
	Racism	63	60	0	20	20
	Classism	75	50	16.7	16.7	16.7
Segregation		56	60	0	40	0
Safety		63	40	20	30	10
Cost of healthy food		63	40	20	20	20
Cost of recreational facilities and activities		69	45	27	18	9
Socioeconomic status		100	56.25	12.5	18.75	12.5
Macrosystem Protective Factors						
Government assistance		88	50	14.3	21.4	14.3
Exosystem Risk Factors						
Transportation		50	62.5	12.5	12.5	12.5
Technology		56	66.7	11.1	11.1	11.1
Lack of knowledge of community resources		40	50	16.7	16.7	16.7
Exosystem Protective Factors						
Availability of healthy foods		100	56.25	12.5	18.75	12.5
Support systems		100	56.25	12.5	18.75	12.5
Transportation		50	50	12.5	25	12.5
Knowledge and utilization of community resources		60	46.7	6.7	6.7	0
Mesosystem Risk Factors						
Unhelpful interactions with healthcare providers		50	50	12.5	12.5	25

Table 4.2 (cont'd)

Family of origin experiences		44	57.1	14.3	14.3	14.3
Mesosystem Protective Factors						
Positive and helpful interactions with healthcare providers		50	62.5	12.5	25	0
Family of origin experiences		100	56.25	12.5	18.75	12.5
Microsystem Risk Factors						
Family-related stress		88	50	14.3	21	14.3
Mental and emotional struggles with eating patterns and body image		100	56.25	12.5	18.75	12.5
Experiences with bullying as a child		81	53.8	15.4	15.4	15.4
Difficulty breaking unhealthy habits		75	58.3	16.7	16.7	8.3
Permissive feeding style		63	70	10	10	10
Microsystem Protective Factors						
Caregivers' resilience		94	53.3	13.3	20	13.3
	Sacrifices by caregivers	50	62.5	12.5	25	0
Coping with stress		94	60	13.3	20	6.7
Importance of being role models to children		100	56.25	12.5	18.75	12.5
Acknowledgement of obesity being a health problem		94	53.3	13.3	20	13.3
Authoritative feeding style		81	46.2	15.4	23	15.4
Positive interactions with food and mealtime consistency		100	56.25	12.5	18.75	12.5
Family cooking and eating together		100	56.25	12.5	18.75	12.5

Table 4.3: Frequency of Themes for Paper Two

Themes	Subthemes	% Reporting Theme	Ethnicity (%)			
			African American	Non-Hispanic White	Hispanic	Multi-Ethnic
Macrosystem: Recruitment						
Chronic oppression and discrimination		69	54.5	9.1	18.2	18.2
Macrosystem: Delivery						
Chronic oppression and discrimination		69	54.5	9.1	18.2	18.2
Difficulty of having discussions focused on discrimination		69	54.5	9.1	18.2	18.2
Macrosystem: Content						
Contextual factors impacting health		88	57.1	7.1	21.4	14.3
Macrosystem: Context and Implementation						
Awareness of macrosystemic influences of health		75	53.8	7.7	23.1	15.4
Mesosystem: Recruitment						
Collaboration with other programs and current policies		60	44.4	22.2	22.2	11.1
Personal approaches		63	60	0	20	20
Schools		50	60	20	20	0
Churches		50	100	0	0	0
Mesosystem: Delivery						
Synergies among programs		56	44.4	22.2	11.1	22.2
Exploring feasibility of integrating health and parenting interventions						
	For the integration of parenting and health	50	60	0	20	20

Table 4.3 (cont'd)

	Against the integration of parenting and health	50	40	20	20	20
Mesosystem: Content						
Identifying and expanding support system		100	56.25	12.5	18.75	12.5
Mesosystem: Context and Implementation						
Transportation		63	50	10	20	20
Providing resources for healthy living		81	61.5	7.7	15.4	15.4
Integrating media and face-to-face services		86	50	0	16.7	33.3
Microsystem: Recruitment						
Through trusted professionals		75	50	16.7	25	8.3
Microsystem: Delivery						
Characteristics of staff and interventionists						
	Regular people	88	64.3	14.3	14.3	7.1
	Health and mental health professionals	75	58.3	8.3	16.7	16.7
Format of program						
	Groups with opportunity for open discussion	94	53.3	13.3	20	13.3
Microsystem: Content						
Highlighting with parents are doing well		94	60	13.3	13.3	13.3
Incorporating/increasing physical activity as a family		50	50	0	25	25
Learning to have conversations about health		50	75	0	12.5	12.5
Comfort when addressing parents' weight problems		88	50	14.3	21.4	14.3

Table 4.3 (cont'd)

Addressing mental and emotional health		94	53.3	13.3	20	13.2
Nutrition information		100	56.25	12.5	18.75	12.5
Budgeting for health		94	60	13.3	13.3	13.3
Microsystem: Context and Implementation						
Childcare		81	46.2	15.4	23.1	15.4
Providing healthy food		81	61.5	7.7	15.4	15.4

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