HOW PARENTS EXPERIENCE THEIR CHILD’S EXCESS WEIGHT: IMPLICATIONS FOR WEIGHT MANAGEMENT PROGRAMS AND MENTAL HEALTH PRACTITIONERS

A thesis submitted to the Kent State University College and Graduate School of Education, Health, and Human Services in partial fulfillment of the requirements for the degree of Masters of Arts

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August, 2009
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Pediatric weight management programs have been criticized for not addressing the individual needs and barriers that families face during weight management. Given that the success of such programs depends largely on the parents’ capacity to support their child’s weight management, perhaps treatment effectiveness could be improved by learning how parents experience their child’s excess weight and by listening to what they believe could help them support their child’s weight management. Additionally, the lack of focus on the emotional aspects of pediatric weight management suggests that families may benefit from the addition of mental health services to weight management programs.

The purpose of this study was thus to learn how parents of overweight and obese children conceptualize and experience their child’s excess weight, and to explore whether these parents think mental health professionals could contribute to pediatric weight management programs. This was accomplished by conducting open-ended interviews with ten parents of families enrolled in a nutrition and exercise education program for overweight children in Kent, Ohio, USA. Interview responses were analyzed from a phenomenological research approach.
Overall, the results suggested that parents feel they need help to overcome the many challenges they face during their child’s weight management. The results also demonstrated that parents agree with the inclusion of mental health assistance in weight management programs to help families cope with excess weight and address an aspect of weight management that is evidently given less attention than it deserves. Perhaps, taking the parents’ experience into consideration would help pediatric weight management programs engage families in treatment, improve treatment effectiveness, and lower drop-out rates by addressing parents’ weight management concerns appropriately and increasing confidence in their weight-related parenting skills.
ACKNOWLEDGMENTS

The completion of this thesis project marks the end of the latest chapter in my academic life. However, I cannot move on to new challenges without acknowledging the many individuals who supported me throughout this process and without whom completing this project would not have been possible. Each of the following individuals contributed to this thesis in their own way, and it is the unique combination of our efforts which has made this project what it has become.

Dr. McGlothlin and Dr. Jencius gave me the opportunity to become the first student from the Counseling and Human Development department to do a thesis project in several years. This unconventional situation raised several logistical and bureaucratic issues that I could not have overcome without their unending flexibility, patience, and support. During my Master’s studies at Kent State University, I grew to appreciate them as mentors, teachers, and counselors, but what I will remember most from them is that are truly genuine individuals who accepted me and respected me for who I was. In this sense, they were much more than my thesis directors, and I consider myself lucky to have known them.

Dr. Bernert was the perfect professor to complete my thesis committee. Her rigour and constructive criticism brought this research project to the level that one would expect from a thesis. I leave Kent State feeling like I have much to learn from her, but I will certainly keep her teachings of the qualitative research process with me.

Dr. Caine-Bish was, to say the least, a savior to this thesis. By allowing me to recruit participants from her KIDS CAMP program, she made this project come to life. Most
importantly, Dr. Caine-Bish made me believe that this research could make a significant contribution to the field, and this meant the world to me. Her motivational guidance and her generous support kept this project alive during difficult times, and this project would be extremely different if it was not for her help.

My brother, my girlfriend, and my friends supported me in various stages of the project and motivated me to stay on task, especially toward the end. Occasionally, my research endeavors took time away from them, and I am truly grateful for their patience and loyalty. I hope I will be able to give back all the admiration, love, and encouragement they provided me with over the course of this thesis when they face similar challenges in their lives.

My parents are the main reason I have become the person I am today, and it is only appropriate that I dedicate this work to them. They showed true interest in my project from the beginning and always encouraged me to see this project through. It is no coincidence that my parents, who always fed me so well and loved me so much, should be recognized in a research project about parenting. I can only hope to become the caring, generous, understanding, and supportive parent they both have been to me.

Lastly, I would like to recognize the parents who took the time to share their lives with me and discuss a topic that is very sensitive for many. Their courageous and dedicated participation in Dr. Caine-Bish’s KIDS CAMP program says a lot about the importance of weight and health in our everyday lives. If this research project ever contributes to the prevention and treatment of childhood overweight and obesity, it will be because they
believed that the health practitioners and policy makers of this world would benefit from hearing their experience. My hope is that this thesis honors their experience to the fullest.
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CHAPTER I
INTRODUCTION AND LITERATURE REVIEW

Problem Statement

In the past three decades, childhood obesity and overweight prevalence has continued to increase dramatically in the United States and throughout the world (Hedley et al, 2006; Ogden et al, 2006; World Health Organization, 2000). Most recently, studies estimate the combined rates of childhood obesity and overweight to be around 10% worldwide and 30% in North America (Lobstein, Baur, & Uauy, 2004). Most alarming is that this increase has occurred in spite of growing awareness that childhood obesity poses a threat to the health of American youth (Jain, 2005; Lobstein, Baur, & Uauy, 2004; Reilly, 2003). Notably, childhood obesity has been linked to medical problems such as type 2 diabetes, hypertension, sleep apnea, and orthopedic and pulmonary function complications. It can also led to psychological problems such as low body satisfaction, low self-esteem, depression, and suicidal ideation resulting from social isolation, negative discrimination, and bullying.

In spite of the growing amount of research conducted to improve the health and wellbeing of children with excess weight, childhood obesity remains very difficult to treat in the long-term (Oude Luttikhuis et al, 2009). So far, the best results were obtained using behavioral lifestyle modification interventions where 30% of children reached non-obese weight status after 10 years (Epstein et al, 1994). Although some intensive forms of treatment such as aggressive dieting, pharmacotherapy, and bariatric surgery have been identified as promising additions to lifestyle interventions, they are not usually prescribed for children unless they are currently experiencing from health consequences directly related to extreme
obesity (Caprio, 2006). Ultimately, childhood obesity remains difficult to treat because, similarly to adult obesity, the long-term maintenance of healthy weight requires the implementation of major lifestyle changes over one’s lifetime (Yanovski & Yanovski, 2003).

In order to assist obese and overweight youth in making such lifestyle changes, treatment guidelines now recommend that parents be involved in the treatment process (Barlow & Dietz, 1998; Poskitt & Edmunds, 2008). This is due to the large influence that parents have over their children’s lifestyle behaviors and their ability to make their child’s environment healthier (Davison & Birch, 2001). Unfortunately, even though they are considered one of the best treatment options, family-based treatment programs demonstrate relatively low long-term success rates, low attendance, and difficulty recruiting parents into programs (Eneli et al, 2008; Golan, 2006).

Parents are often identified as one of several factors that may be contributing to the development of excess weight in youth (Barlow & Dietz, 1998). However, there is little research about how parents experience and conceptualize their child’s excess weight, and assumptions about parents may act as a potential barrier to successful family-based treatment. This is especially true when considering the lack of research on the emotions that parents experience as result of their child’s excess weight.

While some studies suggest that many parents are not concerned about their child’s excess weight (Jain et al, 2001), others suggest that many parents do worry about this problem, and that they carry a large emotional burden for it (Jackson, Wilkes, & McDonald, 2007). In a recent study investigating the parents’ experience of their child’s obesity, parents reported feeling judged and blamed for their child’s weight, feeling frustrated or uncertain about how to motivate their child to manage their weight, and feeling like poor role models
for healthy behaviors. They also worried about how obesity will affect their child’s social
development (Jackson, Wilkes, & McDonald, 2007). This raises several issues related to how
parents experience their child’s excess weight and how they view the role they play in their
child’s weight problems. It also suggests that family-based treatment programs may be
affected negatively by failing to address the parents’ overall confidence in their ability to
support their child’s weight management or to address the parent’s weight-related concerns
about their child. The fact that this study was performed in Australia with parents of children
from a wide age range however limits the generalization of the findings to the USA.

Experts have criticized pediatric obesity and overweight treatment providers because
they often do not know what type of help their target population needs and do not address
limitations for behavior change based on socioeconomic status, family dynamics, and the
parents’ ability to successfully engage their child in behavior change (Poskitt & Edmunds,
2008). Considering the positive results of a study investigating the impact of short-term
family therapy on pediatric weight management, experts have also criticized the lack of focus
on the role of psychology as a factor in family-based weight management (Nowicka,
Pietrobelli, & Flodmark, 2007; Oude Luttikhuis et al, 2009). In general, it appears that
treatment providers need to ask parents about their perspective on their child’s weight
problem and consult them about how their concerns about their child’s weight can be
addressed in a holistic manner, including from a psychological perspective.

Purpose of Research

The premise of this research is that (1) the success of pediatric obesity and
overweight treatment programs depends largely on the parents’ capacity to support their
child’s weight management (Barlow & Dietz, 1998), (2) many treatment programs cannot
address this issue in a holistic manner because they do not take the families’ personal needs and limitations into consideration or do not know how the families approach weight management (Poskitt & Edmunds, 2008), and that (3) treatment could perhaps be improved by addressing this gap in knowledge and learning how parents experience their child’s excess weight (Jackson, Wilkes, & McDonald, 2007; Lindelof, 2007). Additionally, little research in the USA has explored this topic. Therefore, the primary purpose of this study is to give parents an opportunity to express how they conceptualize and experience their child’s excess weight. The second objective of the study is to give parents a voice in their child’s treatment by asking them how they think mental health practitioners could contribute to pediatric weight management.

Research Questions

1. How do parents of overweight and obese children conceptualize and experience their child’s excess weight?

2. How do these parents think mental health professionals could contribute to pediatric weight management programs?

Literature Review

Introduction

This literature review is meant to provide the reader with a deep understanding of the current obesity epidemic and the context within which parents experience their child’s excess weight. The chapter begins with an exploration of obesity’s definition and the debate over how obesity should be measured as a basis for understanding obesity research. The reader is then presented with the two major arguments that support the importance childhood obesity research to our society: (1) that childhood obesity and overweight rates are higher than ever
and have continued to increase steadily worldwide, and (2) that excess weight during childhood has severe consequences for health that affect both these children’s wellbeing and our economic system negatively. The chapter then addresses the causes for the development of excess weight, which provides the background for evaluating the best treatment options available to children with excess weight. Given that pediatric weight management research suggests the importance of family support to increase treatment effectiveness, the chapter concludes with a review of studies that address how parents experience their child’s excess weight and make a case for the importance of researching this topic to improve pediatric weight management.

When reading this literature review, it is important to consider the fact that most of the research on obesity and overweight comes from the medical field. This has resulted from the fact that excess weight is a physical state used as an indicator of physical health, that doctors have led the fight on obesity, and that most individuals consider obesity to be a medical issue. The literature review therefore refers to a lot of medical research in the to address childhood obesity from the medical perspective in which society has rooted it. However, to limit the investigation of excess weight to the medical realm is minimalist in that this perspective omits the many causes, consequences, and treatment options that are not purely physical or biological in nature. Given the researcher’s background as a mental health professional who strives to promote human well-being in a holistic sense, an effort was made to expand this literature review beyond research that stems from the medical field to capture the essence of how parents experience their child’s excess weight as comprehensively as possible.
Definition of Overweight and Obesity

According to the World Health Organization (WHO), there are 4 major reasons to define obesity. These are: to compare weight status between individuals and groups, to identify groups and individuals at increased risk for health problems, to establish priorities for health intervention, and to provide a basis for evaluating these interventions. Here, the purpose of defining obesity is twofold. The first is to ensure clarity about the weight status of the population being investigated. Therefore, unless otherwise specified, obesity and overweight will be used in reference to the WHO’s definitions of these terms for adults and children, which, as discussed later on, is measured using the Body Mass Index (BMI). Excess weight is a term that is employed infrequently among researchers and has no official definition, but that will be used throughout this text to refer to the combination of both obese and overweight individuals in a general sense. The second reason to explore obesity’s definition is to put the research studies that will be presented later in this literature in perspective. This is because there is large debate about the most accurate and useful way of measure obesity and many argue that BMI is not the best indicator of obesity or weight-related health. Unfortunately, results from obesity studies depend largely on how the definition of obesity was operationalized, and thus the critical reader will want to keep this in mind when evaluating obesity research results.

Obesity is generally defined as a “condition of abnormal or excessive fat accumulation in adipose tissue, to the extent that health may be impaired” (WHO, 2000). Therefore, obesity is defined primarily as an excessive amount of body fat content, but also by the possibility for developing health problems caused by high fat content. The definition thus incorporates both etiology and symptomatology by implying the relationship between
high fat content and increased risk for health problems. Overall, this definition demonstrates the view that excess fat is generally “bad” and poses a threat to well-being without specifying how it does so.

The major problem of defining obesity lies in the measurement of fat content, which is difficult to do accurately. There are several different methods of measuring fat content directly or indirectly, and while the evaluation of these is beyond this scope of this paper, it is important to note that there is a large debate in the academic community concerning how to measure excess fat to define obesity most effectively.

The most employed measure of obesity is the Body Mass Index (BMI) because it is so convenient, but also because it has concurrent validity with more direct measures of body fatness. The BMI is a number calculated from an individual’s weight in kilograms divided by the square of their height in meters (kg/m$^2$), both of which are easily obtainable and are usually on record for most medical patients. In adults, three major classifications of body fat content exist based on BMI value. The National Institutes of Health ([NIH], 2000), the Center for Disease Control ([CDC], 2008) and the WHO (2000) all use the following classifications: a BMI between 25.00 to 29.99 indicates overweight, a BMI between 30.00 to 39.99 indicates obesity, and above 40.00 indicates extreme obesity (although studies usually clump obese and extremely obese individuals together). Essentially, the meaning of BMI as it relates to obesity is such that someone with a BMI equal to or above 30 is considered to have an elevated weight for their height, and that this excess weight, which is attributed to excess body fat, poses increased risk for health problems. Accordingly, someone with a BMI equal to or above 25 is deemed overweight, which means they have excess weight that also poses increased risk for health problems, but that this risk is not as high as that for individuals with
a BMI equal to or above 30.

Although this method of obesity identification is the most popular among medical professionals, there are obvious caveats to the use of BMI as a measure of obesity. Despite promoting the use of BMI as a measure of obesity, the WHO (1995) admits that the BMI classifications are somewhat arbitrary because they are not actually based on a relationship between BMI and increased risk for health problems, which is what they should be based on from a clinical standpoint. Rather, they are based on large longitudinal cohort studies suggesting that risk for mortality increases in adults at a BMI of 30 regardless of age and gender (Freedman et al, 2006; Troiano et al, 1996). While mortality is definitely a critical indicator of health, it certainly does not encompass the variety of threats that excess weight can pose to general well-being.

An additional flaw of BMI as a measure of obesity is that it does not differentiate between weight that results from fat content and weight that results from muscle mass. This is such that someone with high muscle mass could have a high BMI despite having little of the excess fat which is the essence of obesity by definition. The WHO (2000) acknowledges that “the relationship between BMI and body fat content varies according to body build and proportion” such that some populations, women for example, typically have more fat content than men for the same BMI. Moreover, excess weight in the abdominal area is correlated with more obesity-related health problems than excess weight that is spread evenly across the body, but BMI cannot differentiate between the two (WHO, 2000). This in turn affects the accuracy of BMI in determining the health risks associated with excess weight. Measurement of waist circumference provides a better estimate of abdominal fat, but similarly to BMI, correlations between waist circumference and risk factors for health appear to differ
depending on the population studied (WHO, 2000). Therefore, when interpreting adult
obesity data it is important to remember that the use of BMI for obesity identification only
assumes that there is a relationship between BMI, fat content, and health, but that a BMI of
30 is nonetheless significant indicator of increased risk for health problems.

Determining obesity in children and adolescence is rendered even more complex
than in adults by the fact that children are continuously growing in height and weight and that
their body composition changes frequently (WHO, 2000). Weight classifications for children
are generally based on a sex and age-specific comparison to a population of healthy children
instead of a raw number range like it is in adults because BMI varies considerably according
to both these variables. Therefore, a BMI between the 85th and 95th percentile of a population
of the same age and sex indicates overweight and a BMI above the 95th percentile indicates
obesity (CDC, 2007). The CDC therefore has growth charts for both boys and girls of various
ages that are based on the BMI of a healthy reference population.

The main problem with using growth charts is that they are based on one sample of
one population and thus become irrelevant if the reference population is not representative of
the child being measured (Lobstein, Baur, & Uauy, 2004). Of course, if the reference
population has a large proportion of children with excess fat, which it might if we consider
the trends in childhood obesity prevalence discussed in the next section, then percentile
ranges can be misleading. For example, the sample used by the WHO up until a few years
ago, developed by the US National Center for Health Statistics (NCHS), is known to include
such a high prevalence of obese children that they have developed a new growth reference
since (Lobstein, Baur, & Uauy, 2004; WHO, 2000). The implications of a classification
system based on percentiles is that if the sampled population is identical to the to the
reference population, then 10% of children should be overweight (between 85th and 95th percentiles) and 5% should be obese (above the 95th percentile), but prevalence rates in the following section clearly demonstrate that today’s American children surpass the rates of the reference population.

*Prevalence of Overweight and Obesity*

Childhood obesity and overweight must be addressed as a topic for two reasons: There is a growing amount of research indicating that obesity is increasingly prevalent in both children and adults across the world, especially in the United States of America (WHO, 2000). The most cited prevalence data of obesity in the USA is that of the National Health and Nutrition Examination Survey (NHANES). Based on height and weight measurements collected between 1999 and 2002 that included over 4000 individuals as part of NHANES’s nationally representative sample of USA’s adult population, Hedley et al (2004) found that 65% of American adults were considered to have excess weight that poses health risks. Specifically, about 35% of American adults were overweight (BMI from 25.00 to 29.99), 25% of American adults were obese (BMI from 30.00 to 39.99), and 5% were extremely obese (BMI above 40.00). The NHANES in 2003-2004 also included 3958 children and adolescents aged 2 to 19 years. Of them, 34% were considered to have excess weight such that 16.5% were overweight (between the 85th and 95th percentiles) and 17.1% were obese (above the 95th percentile) (Ogden et al, 2006). These are extremely high prevalence rates, especially if we consider that this represents triple the child obesity rates from 30 years ago (Hedley et al, 2006).

This obesity crisis, which is referred to as an epidemic by the WHO (2000), is occurring worldwide. This is reflected in high childhood obesity and overweight prevalence
rates worldwide in other Western countries. For example, in a study conducted in 24 inner-city elementary schools located in multiethnic, low income neighbourhoods of Montreal, Canada with 2108 students aged 9-12 years, 35.2% of boys and 33.0% of girls were overweight and 15.1% of boys and 13.3% of girls were obese (O’Loughlin, 1998). In the United Kingdom, the 2004 Health Survey found that 14% of 2 to 10 year-old children and 25% of 11 to 15 year-old adolescents were obese (Reilly, 2007). In Australia, Wake et al (2008), found that of the 4934 children studied during the Longitudinal Study of Australian Children in 2004, 15.3% were overweight and 5.2% were obese. According to cross-sectional data from 1456 children with a mean age of 10.4 years collected in 2000 in Victoria, Australia, 20.2% of children were overweight and 4.3% were obese (Williams et al, 2005).

While North America, Europe, and Australia demonstrate high levels of childhood obesity prevalence, obesity is increasingly common in many developing countries. Both the WHO (2000) and Lobstein, Baur, and Uauy (2004) reported that in developing countries, obesity is surprisingly prevalent among individuals of high socioeconomic status and in urban areas. This has been demonstrated in areas such as Brazil and China and attributed to quick changes in financial status and nutrition habits over short periods of time. While there is little data concerning obesity for school age children in Asia Pacific, Africa, and South and Central America, it is clear that there is an increasing trend of childhood obesity in most of the world even though the rates in these regions vary considerably by country and are generally lower than in more industrialized countries (Lobstein, Baur, & Uauy, 2004).

If the childhood obesity rates mentioned above appear high, some have suggested they could be even higher and that there could be even more obese and overweight children than these statistics show. This is based on a debate about the accuracy and usefulness of
BMI to classify children’s weight status. Reilly (2007) stated that although almost all children classified as overweight and obese are excessively fat and actually fit the definition of obese, BMI tends to underestimate the amount of children with obesity. This, he explained, occurs because several children have low BMIs despite having excess fat content.

More alarming is the fact that rates of obesity and overweight among children are increasing even though healthcare practitioners have known for many years that childhood obesity is a health condition that must be addressed. Using the NHANES results, Ogden et al (2006) observed an increase in the prevalence of overweight in female children and adolescents from 13.8% in 1999-2000 to 16.0% in 2003-2004 and an increase in the prevalence of overweight in male children and adolescents from 14.0% to 18.2%. Based on a regionally representative cross-sectional survey of 2184 children, 4 to 12 years of age conducted from 2003 to 2004, Sanigorski et al (2007) claimed that the prevalence of overweight and obesity is increasing in Australian children by about one percentage point per year, which represents about 40000 Australian children per year.

Overall, these numbers have led doctors and researchers to recognize childhood obesity and overweight as a primary public health concern. For example, some claim that childhood obesity has reached pandemic proportions in the USA, where pandemic refers to a disorder occurring over a wide geographic area and affecting an exceptionally high proportion of the population (Kimm & Obarzanek, 2002). Unfortunately, it appears that “obesity is now the most common disorder of childhood in the developed world, and its prevalence is still increasing” (Reilly, 2005).
Consequences of Childhood Excess Weight

The rise in prevalence of childhood obesity and overweight would not be much of a problem if it did not affect anyone. Unfortunately, excess weight lowers the wellbeing of children both during their childhood and perhaps later in adulthood, especially if they remain obese or overweight. Indeed, excess body fat increases risk for adverse physical and psychosocial health consequences and lowers general quality of life. This in turn takes a toll on the economy by increasing healthcare costs and lowering productivity of the workforce. The following explores the various ways in which the increasing prevalence and intensity of childhood excess weight hurts obese and overweight children.

Consequences of Childhood Excess Weight on Physical Health

It is easiest to separate the psychological health ramifications of childhood obesity and overweight into two categories: short-term and long-term physical health consequences. Short-term consequences refer to physical health complications that appear immediately during childhood, whereas long-term consequences refer to physical health problems that adults who were obese as children may face.

Short-Term Consequences of Childhood Excess Weight on Physical Health

The major short-term physical health consequences of childhood obesity consist of type 2 diabetes, increased cardiovascular risk factors, metabolic syndrome, orthopedic problems, asthma, non-alcoholic fatty liver disease (NAFLD), and menstrual abnormalities in girls (Poskitt, E. & Edmunds, L., 2008; Reilly, 2005).

Type 2 diabetes is a condition in which the body either makes too little insulin or cannot properly use the insulin it makes, leading to elevated blood glucose levels (Daniels, 2006). Until a few years ago, it was essentially unheard of in children, but it is now estimated
to affect about 1 to 15 in every 100,000 children, most of whom are obese (Daniels, 2006). Obesity is thus considered to be the strongest risk factor for type 2 diabetes in children. Type 2 diabetes, can lead to cardiovascular disease, kidney failure, visual impairment, and limb amputation, and the incidence of these complications increases if the onset of the disorder occurs during childhood (Lobstein, Baur, & Uauy, 2004).

The risk factors for cardiovascular disease associated with childhood obesity include hypertension, dyslipidemia (abnormal levels of lipids or lipoproteins in the blood, according to Mirriam-Webster’s medical dictionary), abnormalities in the left ventricle of the heart, and hyperinsulinemia or insulin resistance (Reilly, 2005). This means that obese children tend to display physical conditions that place them at more risk for cardiovascular disease in childhood than non-obese children. Although this is not fully understood, some researchers have attempted to explain how obesity can increase risk factors of cardiovascular disease. For example, obese school-age children are more likely to have elevated systolic or diastolic blood pressure than non-obese children and about 30% of obese children to experience hypertension (Lobstein, Baur, & Uauy, 2004; Must & Strauss, 1999). This is thought to occur due to heightened metabolic responses in obese children that lead to increased absorption of sodium from food (Must & Strauss, 1999).

Metabolic syndrome consists of a combination of risk factors including increased waist circumference, elevated blood pressure, increased triglyceride and decreased high-density lipoprotein (HDL) cholesterol concentrations, and raised plasma glucose (Daniels, 2006). It is estimated to occur in about 4% of overall children, but in 30% of obese children, thus suggesting a link between metabolic syndrome and childhood obesity (Daniels, 2006).
While obesity can create general physical discomfort in children, it can also create specific orthopedic and skeletal problems in children as a result of unfused growth plates and softer bones (Must & Strauss, 1999). For example, Blout’s disease, the bowing of children’s legs caused by a growth disturbance, and slipped capital-femoral epiphysis, a disorder of the hip’s growth plate, are uncommon in children, but will occur most frequently in combination with childhood obesity (Daniels, 2004). About 1 to 8 children per 100,000 experience slipped capital-femoral epiphysis, but it tends to occur at younger ages among obese children than non-obese children, and about 80% of children with Blout’s disease are obese (Daniels, 2004; Must & Strauss, 1999).

Asthma is another health problem that appears to be related to childhood obesity. Although the mechanism for this relationship is unclear, it is clear that obese children tend to experience asthma more than non-obese children (Lobstein, Baur, & Uauy, 2004; Reilly, 2005).

Non-alcoholic fatty liver disease (NAFLD) essentially consists of fatty infiltration in the liver that can either be benign or result in inflammation that leads to steatohepatitis, fibrosis, cirrhosis, or end-stage liver disease. According to a literature review by Lobstein, Baur, and Uauy (2004), NAFLD affects between 23% to 53% of children who are obese, and 70% of them have steatohepatitis and severe fibrosis or cirrhosis. The link between NAFLD and childhood obesity appears evident when considering that it occurs in about 3% to 8% of overall children.

Girls with excess weight can also experience menstrual abnormalities and early menarche. This association is demonstrated through data from the NHANES II study, where
33.0% of obese girls reached menarche before age 11, compared to 12.6% for non-obese girls (Lobstein, Baur, & Uauy, 2004).

Overall, it is clear that obese and overweight children can potentially experience a host of serious health problems. This suggests that childhood excess weight is a critical health issue that must be addressed early on to alleviate the burden on children’s well-being, but also to reduce the potential of obesity affecting children’s health during adulthood.

**Long-Term Consequences of Childhood Excess Weight on Physical Health**

In addition to affecting children during childhood and adolescence, childhood obesity appears to increase the potential of experiencing various health complications in adulthood. Reilly (2005) reported that there a few high quality studies investigating the health consequences of childhood obesity into adulthood due to the difficulty to conduct longitudinal studies, and that it is unclear whether these health complications resulted from childhood obesity or from another variable. However, he did find a few high quality studies that demonstrated a relationship between childhood obesity and the persistence of obesity in adulthood, premature mortality, and increased risk factors for cardiovascular disease. Based on this, it is clear that there are major long-term physical health consequences of childhood obesity.

The primary reason that childhood obesity is considered to be such an important health issue is that obese children have a greater chance of becoming obese as adults than non-obese children (Singh et al, 2008). This is problematic because obesity during adulthood is an independent risk factor for cardiovascular disease, type 2 diabetes, hyperlipidemia, gall bladder disease, osteoarthritis, and certain types of cancers, and early mortality regardless of childhood obesity (Burton et al, 1985; Daniels, 2006; Freedman et al, 2006; Li, Bowerman,
& Heber, 2005). In addition, some obese children may experience the continuation and progression of the short-term physical health complications mentioned earlier that began in their childhood.

Based on a rigorous systematic review of studies published since 1993 on this topic, Reilly et al (2003) claimed that childhood obesity tends to persist in adulthood. For example, they cite a study by Whitaker et al (1997) which reviewed the records of 854 subjects born at a health maintenance organization in Washington State between 1965 and 1971 to see how many overweight and obese children were above a BMI of 27.8 for men and 27.3 for women. They found that 69% of obese 6 to 9 year olds in their study were obese as adults and 83% of obese 10–14 year olds became obese adults. They concluded that “obesity is an increasingly important predictor of adult obesity, regardless of whether the parents are obese.”

Another often cited study suggested that childhood obesity can predict adult obesity, but that obesity before adolescence is less predictive of adult obesity than obesity during adolescence. Guo and Chumlea (1999) combined data from 4 longitudinal studies that included a total of 555 white children who were aged between 30 to 40 years old at the end of the study. Their data suggested that overweight in adulthood (defined as BMI > 28 for men and BMI >26 for women) could be predicted from BMI during childhood but that the accuracy of this prediction increases with age, such that it is “excellent at age 18, good at age 13, but only moderate at ages below 13 years old.” They found that for 18 year-olds with BMIs above the 60th percentile, the probability of overweight at age 35 ± 5 years was 34% for men and 37% for women. Moreover, the odds of being overweight in adulthood for those with childhood BMI values at the 95th percentile were between 1.3 and 6.1 times as great as for those with BMI values at the 75th percentile.
Only one study appears to conflict with the data presented above. A study by Wright et al (2001) followed 412 members of a 1947 birth cohort from Newcastle in England to track BMI and percentage of body fat at ages 9, 13, and 50. They found weak links between body mass index at age 9 and body fat percentage at age 50. Based on their results, they concluded that most overweight adults were not obese as children and that thin children and adolescents were not protected from obesity as adults.

However, in an analysis of Wright et al’s (2001) study, Must (2003) argued that their sample was small, unusually short and lean, and included very few obese and overweight children (6 to 10% of the participants). Must also criticized the study because the time between measurements was too great and their results were not generalizable because of the fact that children now live in an obesogenic environment and a sedentary lifestyle that was not present then. Additionally, it is important to note that the children classified as overweight (>90th percentile BMI by 1990 British standards) in Wright’s study were still five to nine times more likely to be obese at age 50 compared with children in the lowest quartile of BMI percentile scores.

Must’s (2003) comments are reflected in a literature review conducted by Serdula et al (1993) that concluded that “the wide range of estimates in this literature are, in part, due to differences in study designs, definitions of obesity, ages at which participants were measured, intervals between measurements, and population and cultural differences”. In light of these differences between studies in terms of how methodology affects results, it appears safe to agree with Must (2003) that “the likelihood that overweight persists from childhood to adulthood is moderate.”
This moderate association between childhood obesity and adult obesity is reflected in Serdula et al’s review of the epidemiologic literature published between 1970 and 1992. They stated that “the correlations between anthropometric measures of obesity in childhood and those in adulthood…were consistently positive. About a third (26 to 41%) of obese preschool children were obese as adults, and about half (42 to 63%) of obese school-age children were obese as adults. For all studies and across all ages, the risk of adult obesity was at least twice as high for obese children as for non-obese children. The risk of adult obesity was greater for children who were at higher levels of obesity and for children who were obese at older ages.” Since then, Singh et al (2008) have reviewed more recent studies and come to the same conclusion from studies they deemed to be of high-quality.

These results support the importance of addressing childhood obesity as a health issue. Furthermore, it appears reasonable to expect that today’s obese children are even more likely to become obese adults now that they live in a more obesogenic environment compared to children born in the late sixties. This affects risk factors for obesity persistence into adulthood because children tend to be obese at an earlier age, their obesity extends into adolescence, and their parents are heavier (Reilly, 2003; Reilly 2005).

Beyond the risk of becoming obese adults, obese and overweight children run the risk of experiencing health consequences in adulthood more than their non-overweight counterparts, regardless of their adult BMI. For example, it appears that childhood obesity increases the risk factors for cardiovascular disease into adulthood. The Muscatine and Bogalusa studies, two prospective studies conducted in America demonstrated that obese and overweight children are about 9 times more likely to have high blood pressure as adults than non-obese children, and also more likely to have high low density lipoprotein (LDL)
cholesterol levels and low high density lipoprotein cholesterol levels as adults than non-obese children (Must & Strauss, 1999).

The few studies that investigate the relationship between childhood obesity and mortality suggest that adults who were obese as children appear to die at younger ages than adults who were non-obese as children. One Dutch study mentioned in Reilly’s (2005) review of high-quality studies reported that higher BMI at age 18 was associated with premature mortality. Based on a review of five other studies, Must and Strauss (2004) concluded that “it appears that all-cause mortality and cardiovascular heart disease are significantly elevated in relation to overweight during childhood. Moreover, risk appears to be elevated independently of some factors thought to mediate weight/mortality relationships, such as adult weight status, smoking, and SES.”

Based on the review clinical studies in the field, it is clear that obese and overweight children face an increased risk of experiencing serious physical health complications that are associated with their excess weight, and this, throughout their lifespan. However, the next section demonstrates that the impact of obesity and overweight in childhood goes beyond physical health risks, as excess weight exposes children to various forms of discrimination that can have an impact on their emotional well-being, self-esteem, and social life.

**Consequences of Childhood Excess Weight on Psychosocial Health**

Although the psychosocial consequences of childhood obesity are often given little attention in major reviews, there is evidence suggesting that excess weight affects children psychological and socially even more than physically (Wills et al, 2006). Lobstein, Baur, and Uauy (2004) claimed that “obesity in children and adolescents may have its most immediate impact in the psychological and social realms.” This is not surprising because it is well
known that many individuals in Western society hold negative attitudes toward obese individuals and that excess weight makes obesity a visible health condition that cannot be hidden under clothing. The combination of these two factors causes obese children to be the target of teasing, bullying, and expectations of low achievement from the peers and adults with whom they interact simply as a result of their excess weight. Additionally, even though the prevalence of childhood obesity is growing, it is not yet the norm, so the majority of children are not obese. This means that the environment in which children live is not designed to accommodate the needs of children with excess weight. Overall, this results in a general message of disapproval toward obese children, as they are regularly reminded of their abnormal weight condition and the fact that they do not fit in with other children. This can in turn affect their psychological and social development, and even their educational and career achievements.

Similarly to the previous sections on the physical health ramifications of childhood obesity and overweight, it is easiest to separate the psychosocial ramifications of childhood excess weight into two categories: short-term and long-term psychosocial consequences. Short-term consequences refer to the psychological and social impact that excess weight has on children immediately during childhood, where as long-term consequences refer to social and economic problems that obese children may face as they become adults.

*Short-Term Social Consequences of Childhood Excess Weight*

Research suggests that obese children are exposed to various obesity-related stigma that their non-obese peers do not experience. This stigma is rooted in the attitudes Western society holds toward obese children. Lobstein, Baur, and Uauy (2004) cite studies in the USA and in Australia where school-age children view their obese peers as lazy, sloppy,
lying, naughty, mean, ugly, dirty, and stupid. The recent replication of a study on the stigma of obesity in children demonstrated that negative attitudes toward obese children have existed for some time, but that they have increased since 1961 (Latner & Stunkard, 2003).

Researchers asked 5th and 6th graders to rank drawings of six children according to how much they liked each child in the drawings. The drawings consisted of one healthy child, one obese child, and 4 other children with various disabilities (crutches, wheelchair, missing hand, and disfigurement). The presence of stigma toward obese children relative to healthy or disabled children was confirmed by the fact that the drawing of the obese child was disliked the most in both the 1961 and 2003 studies regardless of the ranking child’s sex, race, socioeconomic status, living environment, or own disability. However, in Latner and Stunkard’s (2003) replication study, the difference in liking between the healthy and the obese children drawings increased by 40.8% as participants liked the healthy child even more and the obese child even less than in the 1961 study. This may have implications for how today’s children are treated as adults by individuals who had such strong weight-related stigma as children.

Although the terms usually associated with stigma toward obese children suggest that they are being blamed for their excess weight (“lazy”), studies have suggested that having knowledge that a child has no responsibility in being obese does little to alleviate stigma, if anything. A study by Bell and Morgan (2000) demonstrated that children’s attitude toward a child whose obesity is caused by a medical condition was no less negative than an obese child with no justification for excess weight, and that they were even more negative about sharing activities with the child with the medical condition. Puhl and Latner (2007) reviewed other studies suggesting that knowing obese individuals have little responsibility for their
weight condition may reduce the degree of negative evaluation of them, but that this will not increase their likeability.

If the studies presented above demonstrate how children discriminate against children with excess weight, average-weight children are not the only ones with negative attitudes about obesity. Some studies have reported that overweight and obese children are as likely to display negative attitudes and stereotypes about obesity as average-weight children across a range of ages (Puhl & Latner, 2007). This may be a sign that obese children internalize the stigma they are exposed to and apply it to others, and perhaps, themselves.

Internalization of negative weight-related attitudes may also result from exposure to the attitudes of the adults they interact with, namely their parents and teachers. Research demonstrates that parents have negative stereotypes toward obese children, even their own (Puhl & Latner, 2007). Moreover, similarly to obese children who endorse negative stereotypes against other obese children, approximately 70% of overweight parents and 30% of obese parents endorse negative stereotypes against obese children (Davison & Birch, 2004). Even teachers sometimes perpetuate negative stereotypes about obese children. One study demonstrated that 20% of middle and high school teachers reported beliefs that obese persons are untidy, less likely to succeed than thinner persons, more emotional, and more likely to have family problems (Neumark-Sztainer et al., 1999). These results are supported by a study by Bauer et al (2004), who conducted focus groups and interviews with overweight middle school students and found that the participants occasionally received negative comments from teachers about their athletic abilities that led them to feel upset and avoid participating in physical education classes. Overall, the fact that parents and teachers may perpetuate negative weight-related messages that obese and overweight children are
exposed to by their peers is unacceptable given that they are expected to be supportive figures in the children’s development and facilitators of children’s health. More importantly, such studies also demonstrate the strength of weight-related stigma in Western society.

Unfortunately, attitudes influence behavior. Thus, the behaviors that result from negative attitudes toward obesity include teasing, bullying, and avoidance of friendships and romantic relationships. For example, a large cross-sectional survey of youth in Minnesota called Project EAT found that overweight adolescents reported higher levels of teasing than average weight adolescents, and that obese adolescents were most likely to be teased about their weight, as 63% of obese girls and 58% of obese boys reported being teased by their peers, while weight-teasing by family members was reported by 47% of these girls and 34% of these boys (Neumark-Sztainer et al, 2002). In their review of the literature concerning stigmatization of obesity in children, Puhl and Latner (2007) presented additional studies that suggested that weight-based teasing was “more severe, frequent, and upsetting” among overweight children compared with non-overweight children and that overweight and obese adolescents are generally more likely to be victims of bullying behaviors than are their average weight peers.

The negative attitude toward obese youth by their peers may also have an impact on their social life, as Puhl and Latner (2007) mentioned several studies that support this idea. For example, they cited the National Longitudinal Study of Adolescent Health, which found that overweight adolescents were more likely to be socially isolated from their peers and less likely to be identified as friends by their peers than were average-weight students (Strauss & Pollack, 2003). The social impact of childhood obesity was reinforced by another recent large study of adolescent social behavior which demonstrated that obese adolescents were
less likely to spend time with their friends, even after controlling for grade level, race, and socioeconomic status (Falkner et al, 2001).

Childhood obesity affects not only friendships, but also dating and romantic relationships. Puhl and Latner (2007) reported one study suggesting that obese adolescents are less likely to have ever dated and are more dissatisfied with their dating status compared with average-weight peers (Pearce et al., 2002). This was further supported by the statistic of another study that showed that only 12% of adolescents had dated someone who was overweight, which goes hand in hand with the discomfort that non-overweight adolescents reported concerning dating an overweight person (Sobal, Nicolopoulos, & Lee, 1995). Overall, the impact of obesity during childhood is huge if we consider the importance of harboring healthy peer relationships for childhood development.

**Short-Term Psychological Consequences of Childhood Excess Weight**

Obese children are not blind to the stigma that exists toward them, and their exposure to negative attitudes and behavior from their peers, family, and teachers can affect them psychologically in various ways. One factor that appears to be affected by stigma is obese children’s view of themselves. For example, a large cross-sectional study by Eisenberg, Neumark-Sztainer, and Story (2003) found that weight-related teasing was consistently associated with low body satisfaction and low self-esteem in adolescents, for both genders and all racial and ethnic groups.

Although studies have chosen clearly different operational definitions of self-esteem, two literature reviews on the topic concluded that there is a modest relationship between obesity and low self-esteem in children, but that obese children are often in the average self-esteem range such that they do not appear to be more vulnerable to low self-esteem than non-
obese children (French et al., 1995; Wardle & Cook, 2005). However, prospective studies show that excess weight in children does predict future low self-esteem (Brown et al., 1998; Davison & Birch, 2001, 2002; Hesketh, Wake, & Waters, 2004; Strauss, 2000; Tiggemann, 2005). This may be a sign that self-esteem lowers when peer relationships, which are negatively affected by excess weight, become an especially important measure for the adolescent’s self-evaluation.

Body dissatisfaction is another aspect of self-evaluation that appears to be affected by weight gain. In fact, body dissatisfaction appears to have a great impact on how obese adolescent feel about themselves, as one study found that low self-esteem in overweight adolescent females was not significant after body image was controlled for (Pesa et al., 2000). Two recent reviews of the literature concluded that body dissatisfaction is higher in overweight and obese children than in average-weight children, and that this is particularly true for overweight girls (Ricciardelli & McCabe, 2001; Wardle & Cooke, 2005). Such negative self-image can translate into unhealthy behaviors, as was demonstrated in a study where obese adolescents were not only more likely to report body dissatisfaction but also more likely to engage unhealthy eating behaviors such as chronic dieting and binge eating (Neumark-Sztainer et al, 1997).

The impact of childhood obesity is so great that obese children may present more psychopathology than their non-obese peers. Based on his systematic review of research in this field, Reilly (2005) stated that “pediatric obesity increases the risk of psychological ill health.” This may appear conflicting to literature reviews by Puhl and Latner (2007) and Wardle and Cooke (2005), who claimed that obese children demonstrate only a slight increase in vulnerability to depression compared to non-obese children and that, similarly to
self-esteem, non-clinical samples of obese children do not differ in depression levels compared with average weight children. This may be because the relationship between childhood obesity and depression is mediated by weight-related teasing and bullying. This appears logical when considering that many obese children are teased about their weight, but that non-obese children are too, thus diluting the direct relationship between childhood obesity and depression. Effectively, a large cross-sectional study by Eisenberg, Neumark-Sztainer, and Story (2003) demonstrated that weight-related teasing was consistently associated with high depressive symptoms, suicidal ideation, and suicide attempts for both genders and all racial and ethnic groups.

It is important to remember that causality is not implied in most of these studies. In fact, while some research relating childhood obesity to depression found that obese boys are more likely to become depressed over time, some studies found that childhood depression predicts childhood obesity such that depressed children would be more susceptible to gain weight (Goodman & Whitaker, 2002; Mustillo et al., 2003). Thus, more research in the area is warranted, but it does not change the fact that obese children may experience the emotional ramifications of having excess weight. Differences based on gender and age must also be investigated further, but it appears that obese girls are at a greater risk of experiencing psychopathology than obese boys, and that this risk increases with age (Lobstein, Baur, and Uauy, 2004; Reilly, 2005).

Overall, it appears the short-term psychological consequences of childhood obesity are mediated by the stereotypes that obese children are exposed to. After hearing negative comments repeatedly from their peers, family members, and teachers, they may internalize such stigma and apply society’s negative view of obese individuals to themselves and to their
obese and overweight peers. This is supported by the fact that most studies demonstrating the consequences of childhood obesity are conducted in predominantly Western populations such as the USA, Great Britain, or Australia who idealize thin body image (WHO, 1995). On the other hand, a study conducted with obese children in Mexico, for example, demonstrated that they do not experience psychological or social problems (Brewis, 2003). Perhaps, psychosocial consequences of childhood obesity also differ in developing countries where obesity is more prevalent among higher socioeconomic and urban populations. Overall, this suggests that it is the responsibility of parents, educators, and everyone in society to change false preconceived notions about obese individuals and teach children that weight is a superficial attribute on which to judge an individual.

*Long-Term Psychosocial Consequences of Childhood Excess Weight*

It appears reasonable to expect that the impact of excess weight on a child’s social and psychological development can continue later into the child’s life. While no studies appear to address the psychological aspect of this issue, some have researched the effect that childhood obesity has on later social, academic, and economic achievements. One of the most frequently cited studies in this area is a study conducted from 1981 to 1988 involving a nationally representative sample of 10,039 randomly selected young individuals who were 16 to 24 years old at the beginning of the study. They found that women who were obese at the beginning of the study had completed fewer years of school, were 20% less likely to be married, had $6,710 less per year in household income, and had 10% higher rates of household poverty than women who had not been obese, independent of their socioeconomic status and IQ scores in 1981 (Gortmaker et al, 1993). Men who were obese at the beginning of the study were 11% less likely to be married, but not significantly different on other
factors. An almost identical longitudinal study conducted with 12,537 children born in England, Scotland, and Wales found similar results (Sargent & Blanchflower, 1995). This suggests that obese adolescents and young adults, especially women, are more likely to find themselves in a disadvantaged position for marriage and income during early adulthood. Moreover, the researchers compared this data to non-obese individuals experiencing asthma, musculoskeletal abnormalities, and other chronic health conditions and found that none of them were affected by their condition to the extent that obesity did. This demonstrates the seriousness of childhood obesity’s psychosocial impact in relation to other childhood health problems.

A recent study went even further to demonstrate the impact that helping obese children lose weight can have on their psychosocial well-being during adulthood. Viner and Cole (2005) obtained data for a nationally representative cohort of 8490 babies born in 1970 in England who were assessed for various measures at 10 years old and 30 years old. Surprisingly, their results conflicted with those of the two studies discussed earlier. After adjustment for confounding variables, they concluded that childhood obesity or adult obesity alone were not related to adult social class, income, years of schooling, educational attainment, relationships, or psychological morbidity in either sex. However, they found that women who remained obese from childhood through adulthood had a higher risk of never having been gainfully employed and not having a current partner. This supports the importance of early weight management interventions, as obese children may not experience the social and economic consequences of obesity if they reduce their weight below the 95th percentile before adulthood.
Quality of Life and Overall Wellbeing of Overweight and Obese Children

Quality of life (QOL) measures have become increasingly popular measures of overall wellbeing in the health domain. According to Schwimmer et al (2003), QOL measures can capture one’s overall well-being more effectively than a self-esteem instrument can because it includes measures of physical, emotional, social, and academic functioning.

A few studies have investigated the health-related QOL of obese children. In Schwimmer et al’s study (2003), obese children and adolescents were more likely to have lower health-related QOL than healthy children and adolescents. In fact, this study demonstrated that obese children’s QOL were similar to children and adolescents diagnosed as having cancer. Based on parent report of their child’s QOL, BMI z-score was significantly inversely correlated with total QOL score, physical functioning, social functioning, and psychosocial functioning. Other studies with large samples, have found similar results suggesting the negative impact of excess on QOL based on both adolescent and parent reports (Friedlander, Larkin, Rosen, Palermo, & Redline, 2003; Kolotkin et al., 2006; Williams et al, 2005).

Moreover, some studies have demonstrated the impact that adult obesity has on health-related QOL. Kolotkin et al (1995) and Fontaine et al (1996) both demonstrated that obese adults have lower health-related QOL than nonobese adults. Although these studies did not differentiate between the QOL of adults who were obese as children and those who were not, this is still critical if we consider that a significant percentage of obese children go on to become obese adults.

Other measures of wellbeing, such as interviews, have not been used frequently to assess consequences of childhood overweight and obesity. A study by Wills et al (2006)
interviewed obese adolescents individually and found that they rarely reported health-related consequences of their excess weight even though they reported experiencing anxiety about their weight. Additionally, girls reported worrying about how weight affected the clothes they could wear, and boys reported worrying about being slowed down.

Direct and Indirect Economic Impact of Obesity for Individuals and Society

Another reason to address childhood obesity is that creates economic consequences for individuals and societies. The first and most obvious cost is that of healthcare, as obese individuals tend to require health care services more frequently than non-obese individuals to treat weight-related health conditions, which translates to higher health care costs (Lobstein, Baur, & Uauy, 2004). A study by Wolf and Colditz (1998) estimated the direct healthcare cost of obesity-related disease to US$51.64 billion in 1995 for the USA alone. This represented almost 6% National Health Expenditure in the United States for that year. Additionally, the health consequences of obesity can affect work productivity, lead to premature work disability, or in the worse case, cause premature death from obesity-related illness. Wolf and Colditz (1998) estimated this indirect cost of obesity to about US$3.9 billion for the USA in 1995. Overall, they calculated the total cost of obesity to be $99.2 billion dollars for the USA in 1995, which demonstrates another way in which obesity takes a toll on individuals and society. Although these figures are not specific to childhood obesity, they provide a basis to demonstrate the large economic impact that children who are currently obese could have if they become obese as adults.

Review of the Consequences of Childhood Excess Weight

Obesity can affect children and society negatively through several pathways. As discussed earlier, obese children are not only at risk for developing several serious obesity-
related health conditions during adulthood, but also during their childhood. They are exposed to stigma from peers, family members, and teachers, and this negative stereotyping can affect their psychological and social development to such an extent during their childhood that it has implications for marriage, length of education, and economic stability in their adulthood. Overall, the excess weight present in overweight and obese children has the potential to affect them negatively throughout their lifetime, and major health organizations across the world recognize its importance for children’s health as well as for the health of our economy.

*Causes for the Development of Excess Weight*

In order to alleviate the burden of obesity and overweight on children and their parents through prevention and treatment, it is critical to understand how children accumulate excess weight in the first place. Although the definition of obesity as the presence of excess body fat that increases risk for health complications appears straightforward, obesity’s etiology is much too complex to explain within this literature review. To put it in the simplest terms, obesity essentially results from a positive energy imbalance that occurs over an extended period of time, where the amount of energy taken in by the body as food and drink exceeds the energy expended by the body through physical activity, basic metabolism, and digestion (WHO, 2000). Therefore, either an increase in energy intake or a decrease in energy expenditure can create a positive energy imbalance. This positive energy imbalance results in energy storage, which takes the form of excess fat, and thus, excess weight. Overall, Campfield and Smith (1999) explain that “the development and maintenance of obesity can be considered to result from the integration, or the accumulation, of small daily errors in energy balance over several months and years.”

*Human Weight Regulation*
According to the WHO (2000), “physiological processes are primarily responsible for body weight regulation” and “multiple physiological mechanisms act within each individual to equate overall energy intake with overall energy expenditure and to keep body weight stable in the long term.” This means that technically, human bodies can self-regulate weight to a certain extent. The problem is that the human body appears to be better prepared to face undernutrition than overconsumption (WHO, 2000).

Although little is known about how energy imbalances lead to obesity, it appears that the accumulation of very small energy imbalances over long periods of time can create significant weight gain (WHO, 2000). Consider that the average American adult male between 20 to 40 years old processes approximately 1 million calories (cal) of energy from food over the course of one year, and that a 10,000 cal energy imbalance can result in weight gain (Campfield & Smith, 1999; CDC, 2004). This means that an energy imbalance that represents less than a 1% of a year’s energy intake can result in excess body fat. In other words, if the energy present in 4 days worth of food is not expended over one year, the transformation of this energy into excess body fat is sufficient to begin the development of obesity. This represents the energy of only one-half of an Oreo© cookie being ingested, but not expended, everyday for one year.

Before becoming obese, most individuals go through a phase of weight cycling. Weight cycling is when an individual’s weight fluctuates as a result of gaining weight followed by a conscious effort to lose weight. This may occur for several months or years before someone reaches the obese static phase. The static phase is a period when energy balance is regained, but at a higher weight than before the weight cycling period (WHO, 2000). What makes losing weight so difficult is that once an individual has gained weight
over a long period of time and re-established energy balance, the new weight is defended by the body through homeostasis. This has been demonstrated in studies where obese individuals were underfed to create a negative energy imbalance. To counteract the lower energy intake, their basic metabolic rate decreased naturally instead of breaking down and using up the energy available in their body in the form of excess weight. They were thus able to maintain energy balance and their weight remained unchanged even though they were eating less (Leibel, Rosenbaum, & Hirsch, 1995).

Factors Promoting Positive Energy Imbalance

Energy imbalance occurs through the interaction of several factors, and not only one factor in particular. This means that contrary to popular belief, behaviors such as frequent consumption of high calorie foods or lack of physical activity cannot cause obesity by themselves and must occur in combination with other obesity-promoting factors (WHO, 2000). According to Campfield and Smith (1999), multiple etiologies may result in similar degrees of obesity, which means that various combinations of obesity-promoting factors can lead to obesity.

According to the WHO (2000), four main factors are responsible for obesity and must be targeted to reduce its incidence; increased proportion of fat in nutrition, increased energy density of food, lower amount of physical activity, and higher amount of sedentary behavior. There are numerous problems with the increased proportion of fat in nutrition. Compared to other sources of dietary energy such as proteins and carbohydrates, fat is high in energy density, is not well regulated (other foods can either suppress their own intake through appetite control signals or stimulate their own oxidation upon intake), and is stored very efficiently in the body (at about a 96% rate) (WHO, 2000). These are the three main reasons
why our body is not well-prepared to protect itself against the overconsumption of fat and its increasing place our diet.

Physical activity and sedentary behavior affect the energy expenditure side of the total body energy equation. The WHO (2000) defines physical activity as “any bodily movement produced by skeletal muscle that results in a substantial increase over the resting energy expenditure.” (p. 113) Sedentary behaviors are the converse of this and thus defined as “a state when body movement is minimal and energy expenditure approximates resting metabolic rate.” (p.113) Thus, the amount of energy expended depends on the physical activity, but it can vary from about 4 times the basic metabolic rate for a one hour walk to 12 times the basic metabolic rate for activities such as football, hockey, and running (WHO, 2000). The intensity of the physical activity also affects energy metabolism such that low intensity activities tend to use more energy from oxidized fat, and high intensity activities mostly use energy from carbohydrates. However, the amount of fat oxidized always increases as intensity and duration of the physical activity increase.

Although studies demonstrate that obese individuals are less physically active than non-obese individuals, there is no causal evidence for this as low activity levels may be triggered by weight gain rather than low activity causing weight gain (WHO, 2000). There are however other correlations that are more convincing, such as the fact that obesity does not occur among elite athletes unless they reduce their activity levels, or from prospective studies showing that children who watch more television have a higher BMI later in life (Dietz & Gortmaker, 1985).

Additionally, studies have demonstrated the effect of regular physical activity on fat oxidation and storage. In one study, individuals who were previously sedentary and
considered “unfit” increased their body’s fat oxidation rate by 20% after completing a 12-week fitness training program (Hurley et al, 1986). Another study demonstrated that individuals who take part in physical activity regularly can eat a 40% fat diet without storing excess fat, but that these same individuals will develop positive energy balances with the same diet if they become sedentary (Stubbs et al, 1995). Interestingly, the same individuals maintained a neutral energy balance if they were sedentary and lowered the percentage of fat in their diet to 20%. This study thus suggests that there is an interaction between one’s physical activity level and the proportion of fat in one’s diet that affect the maintenance of energy balance, and consequently, the development of excess weight.

*Genetic and Biological Factors that Affect the Development of Excess Weight*

Obesity is a multifactorial health problem. While, from a biological perspective, it clearly results from a positive energy balance, some individuals are more susceptible to a positive energy balance than others. For some, this is because of genetics. Although some individuals become obese because of a genetic disorder caused by a single or a few deficient genes, it is thought that genetic susceptibility to obesity is usually created by a gene-environment interaction where weight-related genes increase the risk of obesity if they are activated in the presence of an obesogenic environment. Obesogenic environments are environments that are thought to promote obesity development and encourage positive energy balance. Examples of such environments will be discussed in the next section.

Evidence for the presence of gene-environment interactions are apparent in twin studies. These suggest that the heritability of BMI is between 25% to 40% and that some individuals are more likely to gain weight and increase their amount of body fat when exposed to energy overloads. (Bouchard, 1996) Additionally, there are several possible
mechanisms in which genes could affect obesity. The WHO (2000) identified the genes most likely to affect obesity development as those related to low resting metabolic rates, low lipid oxidation rates, low fat free mass, and poor appetite control. A low resting metabolic rate increases the risk for weight gain simply because it reduces overall energy expenditure and makes it more likely to have a positive energy balance. Low lipid oxidation is a risk factor for weight gain because fat is more likely to be stored, and carbohydrates are oxidated instead. Low fat free mass per given body mass is a risk factor for weight gain because it lowers the resting metabolic rate. Poor appetite control genes can also affect weight gain. Appetite control is thought to be regulated by leptin, a hormone secreted by adipose tissue in humans which acts as a satiety signal to tell the body to stop ingesting food. Leptin is thus critical to obesity if the energy intake required to activate it varies such that an individual who receives the satiety signal after ingesting large amounts of energy is more likely have a positive energy balance than someone who receives the signal earlier on.

There are also other biological factors that affect one’s risk of developing excess weight. One example is being a woman. Women demonstrate several physiological processes that appear to increase storage of fat and which are thought to exist to support reproduction (WHO, 2000). Some ethnic groups also appear more susceptible to obesity. This has been suggested by studies in which specific ethnic groups such as the Pima Indians of Arizona, Australian Aboriginals, and South Asians were exposed to more affluent, and thus, obesogenic lifestyles. This will be discussed further later in the literature review, but relationships between ethnicity and obesity should be interpreted with caution. This is because some ethnic groups are often discriminated against and are of lower socioeconomic
backgrounds such that in developed countries, socioeconomic status may mediate the relationship between ethnicity and obesity.

Critical weight gain periods also make individuals more vulnerable to developing excess weight. For children, the main critical period occurs between ages 5 to 7 when BMI increases rapidly as a result of adipose rebound. This period coincides with a period of autonomy and socialization in child development such that children of this age become vulnerable to peer pressure and are exposed to behaviors that lead to positive energy imbalances. Adolescents have a similar period where their autonomy increases, which affects their nutritional habits and sedentary behaviors negatively during a period when they are more likely to store fat, especially in women. (WHO, 2000)

There are also specific conditions that appear related to weight gain. These include smoking cessation, excess alcohol intake, the use of some pharmacological drugs, health problems such as Cushing’s disease, hypothyroidism, hypothalamic tumors, and disability or accidents that suddenly reduce mobility. (WHO, 2000)

Societal, Environmental, and Cultural Factors that Affect the Development of Excess Weight

On the individual level, it is clear that physical and biological factors have a large influence over energy balance. However, when explaining the rise of the pediatric obesity epidemic in the past 30 years, researchers agree that the problem lies in environmental and behavioral changes rather than genetic or biological changes (Anderson & Butcher, 2006; WHO, 2000). The reason for this is that 30 years is not sufficient time for genetic changes to occur for such a large portion of the population. Thus, while weight is mostly regulated by biological mechanisms, recent changes in society have made it easier to accumulate positive energy imbalances, and our body has not had the time to adjust to these changes.
Several changes have taken place over the years that have influenced the lifestyles of humans and their energy balance. Industrialization, global trade, and the general modernization of life have without doubt led to increased standards of living and improvements in access to services, but they have also had direct and indirect effects on nutritional behaviors and physical activity levels (WHO, 2000). For example, the industrialization of agriculture and food production has led to the increased availability of various foods which used to be seasonal, the increased availability of processed foods, and an increased amount of foods with a higher proportion of fat (WHO, 2000). There are also several examples of how modernization has increased the potential to have a positive energy balance by reducing physical activity in daily life. This includes the increased use of cars, elevators, escalators, and automatic doors when getting from one place to the next, or how the increased use of central heating has reduced the need for body thermoregulation. Also, the use of cooking equipment, ready-prepared foods, washing machines, and vacuums have reduced the amount of energy expended in the home when cooking or cleaning. At work, mechanics, robotics, and computerization have had similar effects, and now many people have jobs that require very little physical activity. Televisions and computers have become the main sources of leisure time, and urbanization has caused individuals living in cities to fear for their security and avoid being outside their homes. (WHO, 2000) A review of the potential causes for the obesity epidemic by Anderson and Butcher (2006) reveals that none of these environmental factors are the sole reason for the increased prevalence of childhood obesity, but rather that the combination of several changes which have occurred as side effects of modernization increased children's energy intake and decreased their energy expenditure.
Additional evidence for the relationship between modernization and the obesity epidemic lies in the difference between socioeconomic status (SES) and obesity rates in developing and developed countries. Socioeconomic status is an indicator of one’s status in society which generally combines variables such as income, education level, and occupation. In the developed world, SES is negatively correlated with obesity rates, especially amongst women, such that individuals from a lower SES background tend to be more obese than those from a higher SES background (Brown & Bentley-Condit, 1998; Sobal & Stunkard, 1989). However, in developing countries, the relationship between SES and obesity rates is reversed. This is thought to result from the combination of poor access to food and manual work that many individuals from low SES backgrounds face in developing countries (WHO, 2000). In such cultures, obesity thus becomes a sign of affluence because life conditions make it difficult to be obese if you are of low SES.

Interestingly, the positive correlation between SES and obesity prevalence in developing countries appears to slowly become negative as these countries become more affluent, an thus, modernized (Popkin et al, 1995). This may be because modernization increases society’s standards such that there is similar food availability for most individuals regardless of SES, and that most jobs in modernized countries require similarly low levels of physical activity. In developed countries, differences in SES affect nutrition in terms of quality rather than quantity. Therefore, low SES individuals in developed countries generally consume foods that contain more fat and less vegetables, fruits, and whole-grain products as a result of cost differences, but unlike their counterparts in developing countries, they still have sufficient access to food (Leather, 1996). Additionally, higher SES individuals may live in areas where it is safer to engage in physical activity or have the resources to access
establishments that offer opportunities to exercise regularly. Overall, this suggests that developed countries generally consist of obesogenic environments in which a negative relationship between SES and obesity prevalence exists because of SES-based differential access to healthier foods and environments that are conducive to physical activity during leisure time.

That being said, it is important to consider that the relationship between SES and obesity may result from cultural standards and the stigma against obesity individuals. Historically, weight and girth have been signs of health and prosperity such that larger weight was considered equivalent to more health. While this is still true in countries with non-obesogenic environments, developed countries have changed how they value body image at a time that coincides with the rise in obesity prevalence of the past 30 years (WHO, 2000). In such places where becoming obese is easier because of the obesogenic environment, culture idealizes thinness, especially in women. This is because thinness is now associated with competence, success, control, and sexual attractiveness while obesity represents laziness, self-indulgence, and lack of will-power (Hill, 1996) In other words, it is possible that obese individuals are victims of a change in the cultural appraisal of body image and are thus victimized and discriminated against to the extent that they are more likely to be of low SES, which in turn perpetuates the relationship because of the SES-related environmental factors described above.

Review of the Causes for the Development of Childhood Excess Weight

It appears very logical that obesity results from a positive energy imbalance where energy intake exceeds energy expenditure over long periods of time. Beyond this, the research presented above clearly indicates that someone is unlikely to become obese due to a
single factor unless it is from a rare genetic condition that causes abnormal weight gain. There are specific factors that cause positive energy imbalance as a result of the body’s biology, the environment, or more likely, an interaction of both. Campfield and Field (1999) summarized this nicely when they wrote “the pathogenesis of obesity can be considered as the sum of those biological factors which increase the predisposition towards as expansion of adipose tissue mass together with the consequences of adaptation to an environment that promotes, and possibly rewards, increased food intake and decreased physical activity.”

_Treatment of Childhood Excess Weight_

The goal of obesity treatment is to improve overall health and well-being. For obese children, this generally translates into keeping weight gain under control, minimizing the accumulation of body fat, and managing weight-related comorbidities. While health is the goal rather than change in weight, health can be improved if children’s weight growth is controlled. This usually means that children are asked to bring their weight below the 85% percentile for their age and sex. According to the Expert Committee Recommendations on the Assessment, Prevention and Treatment of Child and Adolescent Overweight and Obesity from the American Medical Association (AMA), Health Resources and Services Administration (HRSA), and CDC, weight change recommendations vary by age and weight status such that obese children older than 5 years old should never be losing more than 1 to 2 pounds per month. It is important to remember that while obese adults tend to aim for negative energy balance and weight loss, weight gain is normative in children due to their natural growth process and thus, only in the most severe cases will children be asked to lower their weight or maintain their weight while their height increases (WHO, 2000).
Some researchers have suggested that funding could be spent more efficiently if research focused more on large scale public health interventions that aim to change obesogenic aspects of our society and the environmental factors discussed earlier (Jain, 2005). While large-scale public health interventions and prevention programs can certainly have a greater impact on reducing pediatric obesity and overweight prevalence rates than individual treatment programs, they take several years to develop and put into practice. More importantly, prevention programs are meant to prevent the development of excess weight as much as possible, but they do not address the problems of obese and overweight children who need more support to improve their health. Pediatric treatment programs are therefore important because they empower the children who are currently obese or overweight to take charge of their health by reducing impact that excess weight can have on their physical, psychological, and social wellbeing now and later in life.

**Pediatric Weight Management Strategies**

The high prevalence of obese and overweight children has contributed to the creation of various weight management approaches for this pediatric health problem. That being said, children do not have as many options as adults. This is because surgery and pharmacotherapy are usually restricted to children whose health is immediately at risk to protect children from the physical side effects and complications of such procedures. Surgery is not recommended to children unless all other treatment options have failed, the child is of adult height, and is facing potentially life threatening complications as a result of obesity (Salvatoni, 2002). One uncontrolled study demonstrated that bypass surgery successfully contributed to large long-term weight loss in obese adolescents, but it created so many serious health complications that the surgery sometimes required reversal and the investigators decided to not recommend
additional use of this operation for adolescents (Silber et al, 1986). Although surgery
techniques have evolved since, most researchers remain fairly skeptical about recommending
such drastic measures for youth.

Although studies have shown that some forms of pharmacotherapy are relatively
effective in children, this type of treatment is approved only for older children and has not
been shown to be more effective than behavior therapy (Berkowitz et al, 2003). The main
problem with the pharmacological treatment of obesity is that some medications have
negative side effects and that most children regain the weight lost after they stop taking the
medication (Caprio, 2006). With limited approval for use in children, pharmacotherapy has
therefore failed to provide a viable treatment option for obese children to date.

As discussed in the previous section, several factors contribute to the development of
excess weight. Of all these factors, the WHO (2000) considers nutrition and physical activity
the most important ones for treatment because they are the most modifiable. This is logical
considering that other important risk factors for the development of excess weight such as
genetics, sex, and SES are all factors which cannot be changed readily.

Research has demonstrated that a multidisciplinary approach that supports modest but
sustainable life changes is more effective in the long-term than aggressive weight loss
methods, as the latter create large negative energy imbalances in the short-term that are
difficult to maintain in the long-term (Caprio, 2006; Edmunds et al, 2001). According to
Caprio (2006), the most effective weight management programs are those that combine
changes in nutritional habits, physical activity, behavioral modification, and parental
involvement. Such programs usually involve behavioral methods such as contracting, self-
monitoring, problem-solving, and social reinforcement that involve both child and parent in
combination with the improvement of nutritional habits and increased physical activity. The implications of targeting individual habits for change are twofold. The first is that success depends largely on the child and its family members’ adherence to the changes. The second is that only small changes in weight should be expected since the obesogenic environment, which is has a large impact on the child’s weight in the first place, remains the same. Interestingly, Epstein (1998) claims that each component of pediatric weight management is not effective by itself and must be used in combination with other components to have a significant effect.

One way to reduce children’s energy intake is to ask them to regulate eating habits using the Traffic Light Diet (Epstein et al, 1996). This provides the child with nutritional guidelines that categorize foods based on their nutritional qualities. Thus, “green” foods can be eaten anytime, “yellow” foods can be eaten in moderation, no more than a few times a week, and “red” foods should be avoided and eaten only once in while or for special occasions (Caprio, 2006). The WE CAN! Handbook developed for parents by the NIH (2005) provides examples for the types of foods in each category and identifies them as either “Go, Slow, and Whoa!”, where “Go” foods are full of nutrients and are lowest in fat and added sugar, where as “Whoa!” foods are highest in fat and added sugar, thus making them calorie dense.

Increasing physical activity is another crucial component of obesity treatment programs to increase energy expenditure and produce a negative energy balance. According to the US Department of Health and Human Services and the US Department of Agriculture’s Dietary Guidelines for Americans, children and teens should be physically active for at least 60 minutes on most, if not all, days. Physical activity can be increased
through regular exercise and sports, or through lifestyle exercise, which is an approach that aims to increase energy expenditure in regular daily activity as well as during periods of exercise. According to Epstein et al (1998), this flexible lifestyle approach to increasing physical activity appears to be more effective than to more structured and higher intensity exercise for the purpose of pediatric weight management. The WE CAN! Handbook developed for parents by the NIH (2005) provides examples on activities that contribute to energy expenditure and how to reduce screen time.

Low Effectiveness of Pediatric Weight Management Programs

It appears that most research on the effectiveness of weight management programs has been conducted with adults rather than children (Jain, 2005). This is unfortunate because the potential impact of childhood obesity is great, but also because the few studies that do evaluate the effectiveness of pediatric weight management programs are methodologically poor or inconsistent. For example, many have small samples that are unrepresentative of the general pediatric obese and overweight population, use varying definitions of obesity and overweight, or do not measure adherence to their interventions adequately such that it is difficult to know whether effectiveness is due to children following the program or not (Lobstein, Baur, & Uauy, 2004). In fact, a recent systematic review of studies assessing the effects of a range of lifestyle interventions designed to treat obesity in childhood found that “there is a limited amount of quality data on the components of programs to treat childhood obesity that favor one program over another” (Summerbell et al, 2003).

Generally, researchers agree that while some pediatric weight management programs appear to be more successful at improving the health of children with excess weight in some way, several programs are simply not effective (Lobstein, Baur, & Uauy, 2004; Poskitt &
Edmunds, 2008; Reilly, 2007). One sign that pediatric weight management interventions are not working is that childhood obesity rates are still increasing worldwide despite an increased interest and funding into obesity research (Jain, 2005). Currently, the most effective treatments are only able to help 30% of children reach non-obese status at 10 years follow-up (Epstein et al, 1998; Golan, 2006). Overall, this suggests that “it remains exceedingly difficult for overweight children and adolescents to lose weight, and even more difficult for them to sustain that weight loss long term” (Yanovski and Yanovski, 2003).

Based on the research reviewed earlier and the overwhelming agreement of health practitioners helping obese and overweight youth, it is clear that prevention and intervention programs need to be improved to be effective in clinical settings (Nowicka & Flodmark, 2006). Systematic reviews by Glenny et al (1997), Epstein et al (1998), Jain (2005), Oude Luttikhuis et al (2009) all support this argument. While several factors may reduce the effectiveness of pediatric weight management programs, Poskitt and Edmunds (2008) suggest several family-related reasons for their failure. These include that treatment providers often do not know what type of help their target population needs, do not involve the child’s family in the treatment, and do not address limitations for behavior change based on SES, family dynamics, and the parents’ ability to successfully engage their child in behavior change. For the purpose of this research, the rest of this literature review focuses on how parents and families contribute to childhood excess weight, and thus, how parents can become a major part of the solution.

**Incorporating Family Support in Pediatric Weight Management**

When asking children with excess weight to change their nutritional and physical activity habits, we must take into account how children develop eating and physical activity
behaviors and who can help them change these habits. Undoubtedly, the family home environment has a large influence on shaping children’s eating and physical activity behavior. This is evident when considering who provides food for children, where children eat, and children’s nutrition and physical activity role models. It is thus logical that this setting is also critical for pediatric weight management programs, as experts claim that successful long-term weight control is difficult to accomplish if no changes are made in the child’s home (Poskitt & Edmunds, 2008). The following sections demonstrate how family involvement can improve prevention and treatment programs targeting childhood excess weight.

**Ecological Systems Theory**

There has been growing support for the theory that a child’s energy balance is largely influenced by the environment in which they live. According to Bronfenbrenner’s (1986) Ecological Systems Theory, behavior cannot be fully understood without considering various aspects of the environment in which the behavior takes place, which he refers to as “environmental layers”. Davison and Birch (2001) have applied this theory to pediatric weight management and created the ecological model of childhood overweight to illustrate the various factors that affect a child’s weight status. This model separates the major factors affecting child weight into three categories: (1) child characteristics and risk factors, (2) parenting styles and family characteristics, and (3) community, demographic, and societal characteristics.

What stands out from this model is the number of ways in which parents and the family environment can influence the child’s weight. Examples of this include how parents feed their child, the food they buy and make available for children in the home, parents’
nutritional knowledge, nutritional habits, and food preferences, parents’ weight, how much they encourage the child’s physical activity, their own physical activity level, how they monitor the child’s time of television and computer use, their own amount of screen time, the activities they decide to do with their children, their SES, and where they have chosen to live.

Given the large amount of parental weight-related behaviors that could influence a child, classifying these behaviors into categories is helpful. A revision of Rhee’s (2008) classification of the impact that parents have on their child’s weight status results in four different categories. These are: (1) specific parenting behaviors targeting the child’s energy intake and energy expenditure related habits, (2) the parents’ own energy intake and energy expenditure related habits, which may in turn affect the child through modeling, (3) aspects of the home environment which are not necessarily targeted at the child but affect the child’s energy intake and energy expenditure, such as the type of food available in the home, and (4) the parents’ general parenting style and overall family functioning.

Therefore, the potential influence of parents on their child’s weight is quite large. As noted by Lindsay et al (2006), this influence may vary according to the child’s age, with the parent’s influence reducing gradually as the child grows older and begins to make more in independent choices regarding nutrition and physical activity. However, in most Western households children are limited by their parents until they become independent enough to change the lifestyle choices provided by their parents.

Evidence for the Increased Effectiveness of Family-Based Approaches

Most researchers agree that family involvement in pediatric weight management programs contributes to their effectiveness, even for adolescents (Barlow & Dietz, 1998; Epstein et al, 1998; Glenny et al, 1997; Golan, 2006; Kitzmann & Beech, 2006; McLean et
al, 2003; Novicka & Flodmark 2008; Young et al 2006). As was discussed in the previous section, this is because parents have a large influence over several variables related to childhood excess weight, including their environment. Kitzmann and Beech (2006) provide a clear description and rationale for family-based interventions: “Family-based interventions for pediatric obesity are programs that focus on changing the behavior of multiple family members, not only that of the overweight child (Epstein, Myers, Raynor, & Saelens, 1998). By family-based, we mean programs in which parents (or other caregivers) are included as an integral part of the intervention—that is, a parent is involved throughout treatment and is seen as a necessary component of the change process. These programs recognize that children’s weight problems develop and are maintained in a family context (Golan & Weizman, 2001), that parents play a role in shaping children’s health behaviors (Davison & Birch, 2001), and that parent functioning can influence the course of treatment (Epstein, Wisniewski, & Weng, 1994; Favaro & Santonastaso, 1995). These programs often combine child-focused treatment (including behavioral and cognitive-behavioral approaches to increasing health behaviors and coping) with family education and support, help with family coping and problem solving, or family therapy (Campbell, 2003). These interventions are informed by conceptual models that take into account the fact that pediatric illness is influenced by multiple contexts of development. These conceptual frameworks include Kazak’s social-ecological model (Kazak, 1989; Kazak, Rourke, & Crump, 2003) and Wood’s biobehavioral family model (Wood, 1993; Wood, Klebba, & Miller, 2000) of pediatric illness.” Overall, family-based weight management programs maximize the ability that parents have to influence their child positively and improve the child’s health.
Evidence for the increased effectiveness of pediatric weight management programs involving family members emerged in the late 1970s and early 1980s. Brownell et al (1983) performed one of the first studies investigating the impact of parental involvement on the health of obese children. The study consisted of a 16-month controlled trial with children aged between 12 to 16 years old and their mothers. Three groups were subjected to the same program, which included behavior modification, social support, nutrition, and exercise, but in a different way. In the first group, children and mothers attended separate sessions, in the second group, the children and mothers attended the same sessions together, and in the third group, the children attended the sessions and mothers did not attend any session. The children in the mother-child separately group lost more weight (8.4 kg) during treatment than did the other two groups (5.3 and 3.3 kg). Differences between the groups increased at 1-year follow-up, as the mother-child separately group lost 7.7 kg and the other two groups gained about 3kg. They concluded that the results suggest that a program of behavior modification with parent involvement can lead to significant weight losses in obese children, and that the nature of parent involvement may be important. In this case, they believe the mother-child separately group was more effective for adolescents because they require more independence than younger children, who may have fared better in a group providing more direct parental involvement, such as the mother-child together group.

Since then, more studies have supported the benefits of parental involvement in pediatric weight. In one study, researchers assigned families to one of three groups for behavior change; one targeting both the child and parent, one targeting the child only, and a third without a specific target. Although children in all groups demonstrated similar changes in the percent of overweight at post-treatment and 2-year follow-up, the parent-child group
had significantly better changes in weight status than did the nonspecific control at 10-year follow-up, with the child-only group in between (Epstein et al, 1994). This appears to suggest that direct parental involvement in children’s weight loss efforts improves the child’s maintenance of the weight loss, but also that children’s weight loss is somehow linked to parental weight loss.

However, a study by Israel and colleagues (1984) demonstrated that targeting parental weight loss per se is not what is important for the child to lose weight. Rather, they claim that programs should target parental behaviors that assist the child’s weight loss efforts, and that many of these may have an impact on the parents own weight. They came to this conclusion by comparing the weight loss of children whose parents were either involved in a weight-loss program of their own or in a program aiming to improve parental behaviors that facilitate the child’s weight loss. The results for either group were very similar, as children in either intervention groups reduced their percent overweight average by about 10% after treatment and by about 4% at 1-year follow-up, while children in the control group maintained the same percent overweight throughout. However, the investigators demonstrated that parental weight loss isn’t necessary, as child and parental weight loss appeared to be correlated during treatment, but not at 1-year follow-up. Such results are important when considering that some obese children’s parents are not obese and therefore would not be interested in a family-based program encouraging them to lose weight. Additionally, some parents might get discouraged and stop attending the program if they are expected to lose weight and do not, which technically would not matter as long as their child is losing weight.
Since then, Epstein and colleagues have been able to demonstrate more benefits of parental involvement in pediatric weight management. They recently published a study demonstrating the efficacy of family-based pediatric weight management programs in today’s more obesogenic environment (Epstein et al, 2007). In evaluating the efficacy of 10-year treatment outcomes for obese children in 4 randomized treatment studies, Epstein and his colleagues also demonstrated that over a third of the variance in weight loss was due to a combination of factors such as sex, baseline weight, self-monitoring of weight, meals eaten at home, and family and friends’ support for eating and exercise, thus supporting the importance of family-related variables in treatment effective (Epstein et al, 1994).

Additionally, systematic reviews conducted by Glenny et al (1997), Epstein et al (1998), McLean et al (2003), Kitzman and Beech (2006), Young et al (2006), and Nowicka and Flodmark (2008), Oude Luttikhuis et al (2009) support the hypothesis that familial treatment of pediatric excess weight is more effective than treatment programs that do not involve parents. Only one systematic review conducted by Haddock et al (1994) contradicted this, but it has been argued that this is because Haddock et al’s study failed to include only randomized trials and look at results in the long-term.

Glenny et al’s (1997) systematic review reported that family therapy was effective in the prevention of childhood obesity, as well as in weight management programs when parents and children were treated together. McLean et al (2003) reviewed 16 intervention studies concerning the effectiveness of family involvement in weight control. Based mostly on several of the studies led by Epstein, they concluded that targeting both parents and children for weight loss together appears to be beneficial to children. One study in particular demonstrated very positive results in the long-term, as participants in an 8-month treatment
targeting the nutritional and physical activity habits of 6 to 12 year-old children yielded an 11.7% drop in percent overweight after a 10-year follow-up (Epstein et al, 1990).

The effectiveness of family-based behavioral treatments over ones that do not include parents was further supported in two very recent systematic reviews. Both of these reviews focus specifically on children aged between 5 to 12 years old, which appears to be the main target age group for pediatric weight management programs. Young et al (2006) reviewed 16 studies that included a total of 44 participant groups organized into 3 categories: family-behavioral treatment, other treatment, and control. They demonstrated that family-behavioral treatments showed a large and significant mean effect size, whereas the average mean effect size for other treatment and control groups was not significant (Nowicka & Flodmark, 2008). Nowicka and Flodmark (2008) then reviewed studies published since Young et al’s study and found 8 studies, 4 of which were randomized control trials. Two of the randomized control trials showed a significant reduction in BMI in children in the intervention group compared to the control group, whereas the two other studies showed mixed results that partially supported family behavioral treatment. One study with a matched control group demonstrated a significantly greater reduction in BMI in the treatment group, and the three other studies that lacked control groups showed that the family-based intervention reduced the children’s BMI. Over the eight studies reviewed by Nowicka and Flodmark (2008), the children participating in family behavioral pediatric treatments either showed improvement in BMI, nutrition, or physical activity habits.

Overall, it appears family-based pediatric weight management is superior to other forms of treatment and is unlikely to be harmful or to be completely ineffective in terms of improving the child’s health. Many randomized control studies and systematic reviews,
including Oude Luttikhuis et al’s (2009) highly respected Cochrane review, conclude that “family-based, lifestyle interventions with a behavioral program aimed at changing diet and physical activity thinking patterns provide significant and clinically meaningful decrease in overweight in both children and adolescents compared to standard care or self-help in the short- and the long-term.” (p. 17) That being said, family-based treatment programs still demonstrate relatively low long-term success rates, low attendance, and difficulty recruiting parents into programs (Eneli et al, 2008; Golan, 2006). The following section thus explores how increasing focus on parenting skills and family functioning may improve the way that parents and families contribute to their child’s weight management.

*Parenting Skills & Family Functioning in Family-Based Pediatric Weight Management*

Although family-based pediatric weight management programs are more effective than treatment approaches that do not involve family members, there is certainly room for improvement (Eneli et al, 2008; Golan, 2006; Nowicka, Pietrobelli, & Flodmark, 2007; Oude Luttikhuis et al, 2009). In an attempt to improve effectiveness, some systematic review studies have tried to identify what is intervention strategy is best to involve family members in pediatric weight management, or to establish which parts of the treatment are effective. Interestingly, they have been unable to so conclusively (McLean et al, 2003; Nowicka & Flodmark, 2008). McLean et al (2003) suggested that “generally, the greater the number of behavior change techniques taught to both parents and children, the more successful the weight loss or weight control programs.” This was supported by a study conducted by Epstein et al (1994) where the intervention group that was taught additional behavior change techniques had a significant decrease of 9.8% in percentage overweight.
However, some researchers have suggested that family-based pediatric weight management programs should address more general parenting skills and family functioning rather than solely healthy eating and exercise (Israel, Stolmaker, & Andrian, 1985; Kitzman & Beech, 2006, Novicka and Flodmark, 2008; Poskitt & Edmunds, 2008). Kintzmann and Beech (2006) are perhaps the strongest proponents of such an approach. Their argument for this change is that family-based programs with a narrow family focus are effective as a result of a self-selecting bias in the research. According to them, this is because families who participate in research on family-based interventions for pediatric weight management are probably relatively high functioning, organized, and cohesive in order to initiate participation in an intervention program and participate in the program over long periods of time. Thus, they claim the narrow family focus treatments being investigated enroll families who are more likely take advantage of the program compared to families with high conflict and poor parenting skills, or families experiencing multiple stressors associated with socioeconomic disadvantage.

They suggest that these lower functioning families may need more basic support and preparation in order for treatment to be effective, and thus treatment programs targeting such families should place a greater emphasis on conflict resolution, basic parenting skills, and stress reduction so that parents be in a better position to influence their children’s eating and exercise. In other words, they suggest that programs with a broader family focus would suit a wider range of families and increase the effectiveness of family-based programs overall, which is similar to Poskitt & Edmunds (2008) suggestion that programs should address parents’ limitations to implement the knowledge they learn in pediatric weight management programs. Considering the close link between low socioeconomic status and childhood
excess weight mentioned earlier, this statement has large implications because of the several families with obese children who are under high levels of stress and whose weight management success is hurt because of this.

Generally, family stress has clear implications for the treatment of pediatric illness in that it can prevent families from enrolling in intervention programs or attending on a regular basis (Kintzmann & Beech, 2006). Unfortunately, most pediatric weight management programs tend to overlook the importance of the family environment in their interventions, which is odd considering that they are relying heavily on family support to improve treatment effectiveness. Family stress can have a larger impact on childhood obesity treatment, as highly stressed parents would be expected to show less consistent parenting (Deater-Deckard, 1998) and to model poorer health behaviors (Baum & Posluszny, 1999), thus limiting the effectiveness of a family-based intervention. Kitzmann and Beech (2006) thus suggest that “if family-based treatments for pediatric obesity are going to be maximally successful with a large number of families, specific strategies need to be developed to help families cope well enough with stress to be able to participate in and benefit from the intervention.”

Support for greater focus on family environment comes from Kirschenbaum et al., (1984), who assessed multiple dimensions of family environment as predictors of success in pediatric weight management. Higher family conflict was associated with a greater risk for dropping out of the program, whereas family higher support was associated with greater weight loss. This is especially important considering that high dropout rates are one of the greatest challenges that family-based pediatric weight management programs face.

Interestingly, one program with a narrow family-focus (Epstein, Paluch, Gordy, Saelens, & Ernst, 2000; Epstein, Paluch, Saelens, Ernst, & Wilfley, 2001) assessed parents’
self-reported psychological distress using a symptom checklist and found that parental
distress decreased as a result of their intervention. However, the authors did not state whether
these reductions in stress were associated with improvements in the children’s health status
or as a result of another variable.

Kitzmann and Beech (2006) take their argument further by suggesting that focusing
on general parenting and family functioning “is consistent with research on the associations
between family environments and children’s physical health” (Wood, 1993; Wood & Miller,
2002) in that “families characterized by relationships that are conflictual, cold, unsupportive,
and neglectful have children with poorer physical health in part because these family
characteristics interact with genetically based vulnerabilities to produce poor health
behaviors (Repetti, Taylor, & Seeman, 2002).” They conclude that “a more ecological
approach to treatment that focuses not just on the immediate context of parent–child
interactions but also on the larger social context of the family and community” could increase
the effectiveness of family-based pediatric obesity treatment or be effective for a wider range
of families. Therefore, they claim that many children with excess weight are likely to benefit
from family-based weight management programs with a broader family focus because many
of them may have developed excess weight partially as a result of poor family functioning in
the first place.

Evidence for the Effectiveness of Pediatric Weight Management Programs that
Address Family Functioning & Parenting Skills

Israel, Stolmaker, and Andrian (1985) appear to have been the first to conduct a
controlled study investigating the effect of general child management skills training on
pediatric weight management programs. Children aged between 8 to 12 years old and their
parents were assigned to one of three groups: Weight Reduction Only (8-week multicomponent weight reduction program), Parent Training (8-week multicomponent weight reduction program preceded by a short course for parents on general child management skills), and Control. Immediately after treatment, children and parents in both intervention groups lost weight (about 5 to 6 lbs) and improved their eating habits, whereas the control group did not. At 1-year follow-up, children in the Parent Training group maintained their weight status improvement (went from 50.60% overweight initially to 40.40% at 1-year follow-up) better than children in the Weight Reduction Only group (went from 46.82% overweight initially to 45.53% at 1-year follow-up). This result appeared to be somewhat related to the parents’ improved child management knowledge as a result of the training they received, as parents in the Parents Training group rated higher on an assessment of child management knowledge following the treatment and at 1-year follow-up. Although the study was small in that it included only 33 children-parent pairs and measured change in child management knowledge rather than behavior, the results suggest that addressing general parenting skills during pediatric weight management is useful, especially for maintaining the weight loss during treatment. The success of these results should be interpreted with caution because only about one-third of children were of non-obese status at one-year follow-up.

Epstein, McKenzie, Valoski, Klein, and Wing (1994) also investigated the effects of adding a parent training component to behavioral management. They found greater weight loss in the behavior management plus parent training condition compared to behavior management alone, but this effect disappeared after the first year follow-up. Oddly, parents in both conditions showed similar levels of improvement in parenting knowledge such that
their parenting knowledge increased whether or not they participated in the parenting training component of treatment. This may suggest that parental involvement in behavioral management programs provides parents with parenting knowledge.

A recent article written by Kitzmann and Beech (2006) reviewed programs based on whether they were family-based in a specific sense (i.e., programs that involve parents in attempts to change children’s health behaviors) or whether they also emphasizes broader family functioning (e.g., programs that target general parenting skills and general family functioning as contexts for change in addition to specific health behaviors). In support of previous literature reviews on the effectiveness of family-based pediatric obesity treatment programs, they found that family-based approaches focusing only on changing specific health-related behaviors were effective in producing child weight loss relative to control groups. However, they also found that programs with a broader family focus were effective, depending on the nature of this broader family focus, as they tended to differ greatly from one program to another.

In their review, two programs used Patterson and Gullion’s (1971) book *Living With Children* to teach parents general behavior management skills in addition to behavioral treatment programs that emphasized nutrition and exercise (Aragona, Cassidy, & Drabman, 1975; Israel et al., 1994). These programs found no differences between those who read the book and those who did not. In programs developed by Golan, Weizman, Apter, and Fainaru (1998), parents were employed as the “exclusive agents of change,” such that “approaching parents exclusively shifts the focus of the group from weight issues to parenting issues” (Golan & Crow, 2004a, p. 45). They found clear advantages to using such a method compared to treatment in which the child was the exclusive agent of change. Also, family
therapy was used by Flodmark, Ohlsson, Ryden, and Sveger (1993) to strengthen
hierarchies, reduce blurred boundaries and coalitions, and reinforce resources for coping in
families of children with excess weight. They found significant advantages associated with
family therapy compared to families who attended dietary counseling and pediatrician visits.

Research conducted by Golan (2006) is especially interesting. They claim that the
premise for targeting the parent alone is that it can avoid problems that may occur during the
course of treating the child and which could cause dropout or unsuccessful treatment. Such
problems include that the child be resistant to change, that the child feel stigmatized as the
result of being treated for obesity, or that the child become overly preoccupied with food and
dieting. Her parent-only pediatric weight management program therefore aims to change the
parents’ cognition and modeling of health-related behaviors as well parenting practices. As
can be seen in the figure below, the program accomplishes this by teaching the parents how
they can create an environment that promotes healthier behaviors and self-esteem growth for
their child through modeling a healthy lifestyle and taking on a more authoritative parenting
style that balances nurturing and limit-setting with relation to food. The sessions are
conducted by one or two facilitators who are either clinical dieticians, health promoters,
family therapists, or social workers supervised by a psychotherapist specializing in group
therapy and family counseling. The facilitators receive several hours of training and
supervision on childhood obesity, parenting, motivational interviewing, and counseling skills
and are taught to ask questions to parents to begin discussions on the session topics rather
than lecture. The parents attend 12 group sessions addressing topics such as nutrition,
physical activity, enhancing motivation, obesogenic environments, body image, parenting
skills, and parental modeling. Parents are also offered individuals sessions if they required
more support and requested it. In this study, following the 3-month program with 70 children aged a mean of 9.8 years old, results showed that children reduced their BMI by 0.5 kg/m$^2$ from baseline and that there were fewer children in high BMI percentile categories. This is a positive result considering the short amount of time over which this change occurred, and it is even more encouraging to consider that overweight parents also changed weight significantly. In her discussion of the research, Golan noted that it was especially difficult to recruit parents into this program, and hypothesized that it may have something to do with parents placing responsibility for change on the child. She called for more research on how to motivate parents of children with excess weight and how to introduce change in the family.

Interestingly, research published following Kintzmann and Beech’s (2006) literature review found that about 4 sessions of solution-focused and systemic family therapy alone was sufficient to reduce the obese child’s BMI z-score (0.12), increase the child’s self-esteem, and improve the parent’s report of family dynamics (Nowicka, Pietrobelli, & Flodmark, 2007). The study was conducted in Sweden with 54 obese children aged between 6 to 17 years who were referred to an outpatient obesity clinic. The family therapy sessions were conducted by a multidisciplinary treatment team consisting of a pediatrician, a dietician/sports trainer, a pediatric nurse, and a family therapist.

Although Nowicka, Pietrobelli, and Flodmark’s (2007) study did not have a control group, it still suggests that even very little attention to the family’s functioning in a clinical setting can be beneficial for the child’s health in a physical and psychological sense, as well as for family members. It also suggests that family therapy and psychological interventions that extend beyond simple behavioral improvements in nutrition and physical activity behaviors can be a powerful tool to initiate weight-related change. Nowicka, Pietrobelli, and
Flodmark’s (2007) also underlines the importance for this study’s second research question concerning how parents view the role of mental health practitioners in pediatric weight management. This is because family therapy may suit some families more than others.

Overall, there is considerable support for the potential benefits of incorporating either parenting skills training or family functioning therapy in family-based pediatric weight management programs. Given that these intervention methods are still relatively new and are supported with little research, it will be interesting to see whether positive results will be replicated and whether such methods will be incorporated into other pediatric weight management programs in the future. When considering this study’s research question about how families experience the challenge of pediatric weight management, it is important to note that many of these programs assume families do not have the necessary parenting skills or appropriate family functioning to succeed in family-based pediatric weight management. The potential limitations of such approaches are that families who feel like they already possess this knowledge will feel like their needs are not being addressed and may feel more inclined to drop out of such programs. The following section addresses additional research issues concerning pediatric weight management programs.

*Additional Issues in Family-Based Pediatric Weight Management Research*

As was noted earlier in this literature review, most researchers agree that there is too little data to evaluate the overall effectiveness of pediatric weight management interventions. This leaves many questions unanswered concerning how children’s health can be improved most effectively with the support of parents and family members. The following suggests that learning about how families experience childhood excess weight may be beneficial to inform what treatment approach is most effective, how should parents be involved, and what
parenting style is most beneficial to support pediatric weight management. This is followed by a discussion of how pediatric weight management programs are evaluated.

First off, we do not know what family-based treatment approach is most effective. Kintzmann and Beech (2006) drew attention to the fact that most of studies they reviewed rely almost exclusively on a behavioral approach to treatment, with a few studies incorporating a cognitive component such as cognitive restructuring, and another program using family therapy methods. They note that these approaches have not been compared with each other except for a study by Duffy and Spence (1993), who compared behavioral treatment with and without a cognitive therapy component and found similar levels of improvement in both groups. While Nowicka and Flodmark (2007) have demonstrated the benefits of family therapy, Epstein and colleagues have demonstrated the potential long-term success of using a behavioral approach in some of their studies. Until research investigates this issue more profoundly, it appears erroneous to assume that one approach is more effective than the other. Perhaps, pediatric weight management approaches resemble treatment approaches in mental health counseling or psychology in that treatment effectiveness depends largely on the fit between the therapist’s approach and the client’s personality and needs. In this sense, more flexibility and individualization may be necessary during treatment planning to achieve optimal treatment effectiveness.

Although we know that family involvement is beneficial to improving the effectiveness of pediatric obesity treatment, we do not know what degree of family involvement is best. In this case, the extent of family involvement usually refers to the extent of parental attendance and participation at treatment sessions. In Kintzmann and Beech’s (2006) review, they state that among programs with a narrow family focus, “studies were
almost evenly divided between those that found better results, worse results, and mixed results associated with greater or more intense parent involvement in treatment.” As discussed earlier, some have proposed that younger children require more parental involvement, such as attendance to treatment sessions together, and that adolescents require less parental involvement, such as separate attendance to treatment sessions (Brownell et al, 1983). However, the low amount of research in this area suggests that differences based on cultural background and socioeconomic status could affect the optimal amount of parental involvement in treatment. In support for this possibility, Kintzmann and Beech (2006) discussed the differences between Brownell et al’s (1983) study of White, lower middle-class, 12- to 16-year-olds who demonstrated better treatment outcomes when their mothers attended separate groups than when their mothers met together for treatment sessions, and Wadden et al’ s (1990) study of Black, lower middle-class sample of 14-year-old girls who attended a similar program of similar length and demonstrated no differences based on the same conditions. This points to the importance that child development and cultural variables have when designing family-based pediatric weight management programs and that taking such factors.

Similarly, parenting style may affect the degree to which families are able to implement what they learn in treatment sessions. Although little research exists on this topic, there is data suggesting that parenting style may have an impact on pediatric excess weight development, and thus it is likely that parenting style also affects pediatric weight management. In fact, community health programs targeting both obese and non-obese children found that children of authoritative parents demonstrate healthier patterns of fruit consumption (Niklas et al., 2001) and physical activity (Schmitz et al., 2002). In support of
broader family-based treatment approaches, both Kintzmann and Beech (2006) and Golan and Crow (2004a) claim that the effectiveness of pediatric weight management with a narrow family-based focus is likely to vary based on parenting style. This suggests that while some parents may require support to alter their parenting style, others may not, and thus the relative effectiveness of addressing this issue in treatment may depend on the parents’ current parenting style. However, as is the case with parental involvement, it is possible that a different parenting style be more effective for children of different age, gender, socioeconomic status, or cultural background.

To conclude, it is important to remember that obesity is defined as the relationship between excess fat and increased risk for health complications. Unfortunately, much research evaluating the effectiveness of pediatric weight management programs primarily base their evaluations on weight change measurements. Certainly, measuring BMI change alone is insufficient to evaluate programs accurately because some programs may be improving children’s health and health behaviors without significantly affecting weight. To avoid brushing aside potentially beneficial programs based on little weight change, programs should therefore record indicators of success that include physical and psychosocial health as well as BMI change.

Review of Pediatric Weight Management Approaches

The research presented above clearly demonstrates the importance of involving parents in pediatric weight management programs (Barlow & Dietz, 1998; Davison & Birch, 2001; Poskitt & Edmunds, 2008). Even though they are considered to be one of the best treatment options, it remains that family-based treatment programs demonstrate relatively low long-term success rates, low attendance, and difficulty recruiting parents into programs
(Eneli et al, 2008; Golan, 2006). This may be because several family-based programs actually fail to address Poskitt and Edmunds (2008) recommendations to take each family’s limitations to implement certain changes into consideration when trying to help them. Although programs targeting parenting skills and family functioning are promising, it remains unclear whether they can address such problems. The following section addresses how asking families how they experience pediatric weight management may be one way to answer questions about how to improve program effectiveness.

**How Parents Experience their Child’s Excess Weight & The Need for Psychological Help**

While family-based pediatric weight management programs are promising, they appear to offer a potential for treatment that has not been fully explored. Experts criticize pediatric weight management providers because they often do not know what type of help their target population needs and do not address limitations for behavior change based on socioeconomic status, family dynamics, and the parents’ ability to successfully engage their child in behavior change (Poskitt & Edmunds, 2008). However, there is no evidence that these programs are asking families what they need before helping them? The following section addresses the value of doing this.

Studies focusing on parents of children with excess weight have used various research methods, but most of studies investigating parental perceptions of their child’s weight have taken a quantitative approach to answer their research questions. Such studies thus employ questionnaires where parents are asked to guess their child’s weight or classify their child’s weight into one of several weight categories (Akerman, Williams, & Meunier, 2007; He & Evans, 2007; Maynard et al, 2003). Occasionally, some of these studies attempt to relate parental perception of their child’s weight with other quantified variables such as parental
concern for their child’s weight, parents’ weight, education, or socioeconomic status, and weight-related behaviors (Baughcum et al, 2000; Crawford et al, 2006; Crouch, O’Dea & Battisti, 2007). Most of these studies found that parents of obese or overweight children often underestimate their child’s BMI or weight category, even though they are able to accurately classify the weight status of other children (Huang et al, 2007). Thus, many of these studies’ authors concluded that parents needed to be educated on how to recognize overweight and obesity in their child, or that some psychological mechanisms skews parental perceptions of their child’s obesity (Akerman, Williams, & Meunier, 2007; Crouch, O’Dea & Battisti, 2007; He & Evans, 2007).

While such research provides useful information about how parents perceive their child’s excess weight can act as a barrier to pediatric weight management, this type of data represents only one aspect of how parents perceive and experience their child’s excess weight. Interestingly, studies investigating similar concepts using parent interviews and focus groups instead of questionnaires came to slightly different conclusions than studies using a quantitative design.

One way to understand what families need and how families experience excess weight is by asking them what they expect from treatment and what going through treatment was like. A study by Stewart et al (2008) did this using in-depth interviews focusing on the parents’ expectations from treatment and their evaluation of pediatric weight management programs. They made the following conclusions:

Parents were consistently motivated to enter treatment due to perceived benefits to their child's self-esteem or quality of life, and weight outcomes appeared typically less important. During treatment parents felt there was a lack of support for lifestyle changes outside the clinic, and noted that members of the extended family often undermined or failed to support lifestyle changes. Parents generally felt that treatment should have
continued beyond 6 months and that it had provided benefits to their child's well-being, self-esteem and quality of life, and this is what motivated many to remain engaged with treatment.

Following interviews with several parents of obese children, Boutelle et al (2004) concluded “that the majority of parents do not need to be told that their children are overweight; instead, messages to parents of overweight teens should focus on how to provide support for healthy weight management.” Following focus groups with low-income mothers, Jain et al (2001) concluded that although health professionals and low-income mothers have different definitions of overweight and obesity, “both agree that children should be physically active and have healthy diets. Health professionals may be more effective in preventing childhood obesity by focusing on these goals that they share with mothers, rather than on labeling children as overweight.” In a similar study conducting focus groups with Australian parents, Pagnini et al (2007) concluded that “the emotional intensity of the mothers' perceptions about their children's eating and weight status suggests that interventions, including communications, need to go beyond information and engage with parents' emotions. Some food concerns were actually related to broader parenting issues and indicate the potential value for interventions to focus on behavioural parenting techniques.”

Thus, it appears that after allowing parents to express themselves concerning their child’s excess weight, researchers using interviews or focus groups developed a slightly different understanding of how parents perceive their child’s excess weight.

The best example of the value of interviews to the field is a recent study performed in Australia that investigated mother’s experiences of their child’s excess weight from a feminist perspective (Jackson, Wilkes, & McDonald, 2007). According to them, participants reported feeling judged and blamed for their child’s excess weight, feeling frustrated or
uncertain about how to motivate their child, feeling like poor role models for healthy behaviors, and worrying about how excess weight will affect their child’s social development. Specifically, mothers reported feeling judged and blamed by family members, friends, teachers, and health professionals’ comments and advice. This made them feel as though their child’s weight was public property and childhood obesity resulted from a choice parents had made. The blame they felt translated to experiencing guilt despite their current efforts to support their child’s weight management efforts. Guilt appeared to result from the combination of the perception of stigma associated with excess weight and worries about the social consequences of excess weight. Additionally, mothers felt that their child’s emotional vulnerability made it difficult to discuss weight-related concerns with their child and to say that they noticed their weight gain without being critical of them. They reported experiencing additional uncertainty about how to help their child manage their weight and frustration when their child was reluctant to participate in weight management.

While this study involved only 11 mothers and their child’s weight was assessed using photographs and clothing size information, these mothers clearly expressed significant personal distress as a result of being a parent concerned with their child’s weight. This suggests the potential need for additional support for parents, perhaps in the form of mental health services. This statement is supported by the most recent Cochrane Review of pediatric weight management programs, which clearly criticized the lack of focus on the role of psychology as a factor in family-based treatment (Oude Luttikhuis et al, 2009).

Overall, the information collected from the qualitative research studies presented above is so valuable to the improvement of family-based pediatric weight management programs that it appears as though such interviews should be a regular component of
programs. Surprisingly, few studies have addressed what parents and children think would be helpful to include in treatment programs. It appears basic to require that the evaluation of pediatric weight management programs go beyond the measurement of weight loss and health improvement and ask the families in the program how they experienced the program. This is especially true if we consider that so many pediatric weight management programs are probably not as effective as they could be. Many of the qualitative research studies presented above studies also point to the importance of increasing focus on psychological treatment that extends beyond behavioral techniques to change nutrition and physical activity.

*Lack of Research & Implications for the Field*

Unfortunately, the studies reviewed represent the majority of published research focusing on parent’s experience and perspective of their child’s excess weight. The fact that so little research exists on how parents are affected by their child’s excess weight while a much greater amount of research has been conducted on family barriers to weight management says a lot about how we view parental involvement with the treatment of childhood excess weight. First, it suggests the most researchers do not value the parents’ opinions and do not perceive parents as experts on this topic, which may actually be a problem for effective treatment. This is evident because researchers are essentially assuming they know what the problem is and give parents questionnaires and correlate factors instead of asking parents what they think, feel, and experience. This appears illogical given the large amount of information that parents can provide on this issue as first-hand observers of their child’s weight problem. Granted, they might be too involved in the problem to see what the problem is. However, if the goal is to help families make lifestyle changes, it appears crucial
that treatment providers learn about the families’ goals, needs, and challenges as well as their previous and current experience as parents of children with excess weight.

Second, the low amount of research on how parents are affected by their child’s excess weight reflects the treatment providers’ assumption that parents want to and are able to be supportive for their child, no matter how this condition affects them. Certainly, the fact that some parents in the Australian study cited earlier said they did not know how to help their child is telling about their self-perceived ability to contribute to weight management. While nutritional and physical activity education may address this, low parenting self-efficacy may have less to do with health knowledge than it does with the application of this knowledge. The application of knowledge may be hindered by barriers at the community level, such as the lack of resources to obtain healthy food or lack of opportunities to be physically active in a safe environment. At home, it could also be difficult to apply health knowledge if there is high family conflict or if parents’ general parenting practices are ineffective across the board. This means that the parent’s ability to support their child’s weight management may be obstructed by their difficulty to pass on this knowledge to their children or to motivate them in making the choices necessary for successful weight management. This hypothesis is supported by Kirschenbaum et al’s (1984) findings that higher family conflict was associated with a greater risk for dropping out of the program. It is also consistent with Poskitt and Edmunds’ (2008) claim that the possible reasons for the failure of pediatric weight management programs are that treatment providers often do not know what type of help their target population needs and do no address the limitations for behavior change based on SES, family dynamics, and the parents’ ability to successfully engage their child in behavior change. If the success of family-based pediatric weight
management programs depends largely the parents’ ability to help their children, then it appears important to learn about how childhood excess weight affects parents and how they cope with it.

Overall, the effectiveness of childhood weight management programs may have been hurt by a tendency to assume that all children and families can lose weight by eating more nutritious foods and engaging in more physical activity, and that simply telling them to do this is enough. This is clearly erroneous, as demonstrated by research that indicates that parents of obese children are often dissatisfied with their pediatrician’s help concerning their child’s weight (Edmunds, 2005). This constituted the basis for this study’s two research goals: (1) to learn how parents experience their child’s excess weight, and (2) to assess parents’ openness to receive help from mental health practitioners. It was thought that fulfilling these research goals would provide valuable information about the challenges families face during their child’s weight management as well as how parents believe family-based pediatric weight management programs can be improved.

**Summary of Literature Review & Rationale for Research**

Family-based pediatric weight management programs have their place because several children have excess weight and experience its consequences, parents have a large influence over their child’s weight, and these programs appear to work more effectively than do programs that do not involve parents. However, as suggested earlier, there is much room for improvement. This suggests that families with obese or overweight children may need more support than they are currently receiving in such programs.

Generally, pediatric weight management programs are educational in nature and address nutrition and physical exercise from a behavioral perspective. Although nutrition and
physical activity are the factors that directly affect energy balance and weight management, perhaps there are other issues that must be addressed before changes in health behaviors can be made. Probably the best way to know if there are other issues that are present is asking families how they experience their child’s excess weight. Unfortunately, as discussed earlier, very few studies have addressed the failure of pediatric weight management programs from this approach.

Therefore, this research project was created to offer parents an opportunity to share how they perceive their child’s weight, how their child’s weight has affected them as a parent, what challenges have they encountered when supporting their child’s weight management, and what would help them support their child in this capacity. The research goals were to collect data that could answer questions such as whether they perceive their child’s weight as a problem, what motivates them to help their child lose weight, what they believe has caused their child’s excess weight, whether they believe they can help their child, how do they approach weight management, to what degree do they see themselves as responsible for their child’s weight, and what challenges or barriers have they encountered that should be addressed to improve the child’s weight management.

Additionally, this research project was also conducted to explore the parent’s openness to including psychological support in pediatric weight management programs as a way of improving treatment effectiveness. The distress evident in the mothers participating in Jackson, Wilkes, and McDonald’s (2007) study combined with the positive results in Nowicka, Pietrobelli, and Flodmark’s (2007) family therapy study suggests that mental health support may be beneficial to some families. Specifically, mental health support may be especially helpful for parents who have a tendency to give up on their child’s weight
management in the face of the many challenges they face, or for children who experience
great distress as a result of their weight. Thus, asking parents whether they believe mental
health professionals could help them or their child, and if so, how, would provide clues as to
how mental health practitioners could improve pediatric weight management programs.

Therefore, this study attempted to answer the following questions:

1. How do parents conceptualize and experience their child’s excess weight?
2. How do parents think mental health professionals could contribute to pediatric
   weight management programs?
CHAPTER II

RESEARCH METHODS

Selection of research methods depends on several factors, but the purpose of the research and the type of questions guiding the inquiry are probably the most important factors to consider. In this case, the purpose of this research was to contribute knowledge about how parents experience their child’s excess weight for the sake of improving family-based pediatric weight management, and to learn how these parents believe mental health professionals could assist them. More specifically, the goal was to give parents a voice in the treatment of their child’s excess weight to ensure that their needs are addressed, to help individualize pediatric weight management based on the needs and resources of family, and to reduce assumptions about the extent of parents’ motivation or ability to support to their child’s weight management. Thus, the research methods should provide the means to answer the two research questions, which were:

1. How do parents conceptualize and experience their child’s excess weight?
2. How do parents think mental health professionals could contribute to pediatric weight management programs?

Accordingly, this chapter addresses the details of what was done to conduct the research and explains why the research methods selected by the researcher provided a valid means of answering the research questions. The chapter begins with a description of qualitative research methods, phenomenology, and their application in this study. This section is then followed by a detailed report of how the research was conducted step by step and an explanation of the researcher’s rationale for participant selection, recruitment, and...
data collection procedures. The chapter ends with a description of how data was analyzed to obtain results that answer the research questions as accurately as possible.

Qualitative Research Methods

As demonstrated in the literature review, studies with similar research questions to this study that used qualitative research methods appeared to provide more in depth information than studies using quantitative research methods. Moreover, qualitative studies appeared to address Poskitt and Edmunds’ (2008) criticism that treatment providers know too little about the families they are helping. This section thus describes how qualitative research philosophy and in-depth data suits the research goals and research questions of this study.

Essentially, qualitative research is a method of understanding a natural situation through an inductive process. This means that qualitative research begins with experience and ends with interpretation, rather than the opposite (Pollio, Graves, & Arfken, 2006). Therefore, qualitative inquiry is meant to be conducted with little or no preconceived notion or theory to keep as many possibilities for interpretation of the experience open (Wiersma & Jurs, 2005). In order to be able to do this properly, the researcher must fulfill two criteria. The first is that the researcher be flexible to adapt the research methods to pursue new paths of discovery, which may be necessary if unexpected information is discovered or if the researcher develops a deepened understanding of the research topic (Patton, 2002). The second is that the data collected by the researcher must be detailed, in depth, and if possible, collected from various sources. This requires personal engagement on the part of the researcher, who must be willing to get close to the people, situation, or phenomenon being studied (Patton, 2002).
When studying the behaviors, thoughts, and feelings of human beings, qualitative data collection is meant to capture the participant’s in-depth experience as much as possible. Interviews are one research tool employed by qualitative researchers to learn about the experience of human beings. While such methods can also be used to conduct quantitative research, qualitative interviews distinguish themselves in that qualitative inquirers view research participants as “meaning makers, not passive conduits for retrieving information from an existing vessel of answers.” (Warren, 2001, p83 in Gubrium & Goldstein, 2001)

The value of using interviewing from a qualitative research approach to answer this study’s research questions is demonstrated by an example from Patton (2002) as he compared the advantages and disadvantages of quantitative and qualitative research:

Some questions lend themselves to numerical answers; some don’t. If you want to know how much people weigh, use a scale. If you want to know if they’re obese, measure body fat in relation to height and weight and compare the results to population norms. If you want to know what their weight means to them, how it affects them, how they think about it, and what they do about it, you need to ask them questions, find out about their experiences, and hear their stories. A comprehensive and multifaceted understanding of weight in people’s lives requires both their numbers and their stories. (Patton, 2002, p13)

While this research project will incorporate some quantitative data collection to describe some demographic characteristics of the study’s sample, it will mostly consist of qualitative data collection. This is because the data necessary to answer the study’s research questions requires depth that only a qualitative research approach can provide without assuming what participants are experiencing before asking them. This is supported by aforementioned findings from research studies who have taken a qualitative research approach when investigating parental perceptions and experiences of their child’s excess weight. It is also consistent with the request of several researchers for more qualitative
research concerning childhood overweight and obesity (McLean et al, 2003; Nowicka & Flodmark, 2008; Poskitt & Edmunds, 2008).

Phenomenology as a Qualitative Research Approach

Phenomenology is one of many qualitative research approaches. According to Patton (2002), the foundational question of the phenomenological approach is “What is the meaning, structure, and essence of the lived experience of this phenomenon for this person or group of people” (p104). Hence, phenomenological research describes the meaning of several individuals’ lived experience in terms of what they experience and how they experience it (Creswell, 2007). Applied to this research, the goal is thus to describe what parents experience as parents of children with excess weight, how they experience this, and what they think about mental health practitioners contributing to pediatric weight management.

Underlying Assumptions of Phenomenological Research

While there are various philosophical schools within the phenomenological research approach, they all agree with the following: (1) phenomenology is the study of the lived experiences of persons, (2) these experiences are conscious ones, and (3) the goal is to describe the essence of these experiences (Creswell, 2007). According to Polkinghorne (1989) a fundamental task of phenomenology is to describe experiences rather than to describe objects. He suggested that objects of the external world do not exist in isolation, and that people can have certitude concerning how an external phenomenon is subjectively experienced. According to Husserl (1962), the founder of phenomenological research, the external realm consists of whatever resides in the subjective consciousness of the individual, and it is thus by exploring the individual’s Libenswelt (lived-world) that one gets to the truth
of matters. Husserl defined phenomenological research as the scientific study of the subjective experience of a phenomenon as it is perceived in human consciousness. Phenomenological research therefore places much importance on the individual’s experience, which suits this study’s goals.

Philosophically, the most important underlying assumption of phenomenology is intentionality, which refers to the internal experience of being conscious about something (Patton, 2002). In other words, intentionality assumes that the reality of a phenomenon, such as parenting a child with excess weight, is only perceived within the meaning of this experience for an individual (Creswell, 2007). Patton (2002) expanded on this concept by explaining the nomea and noesis. Nomea is the phenomenon in consciousness, as opposed to the real object that exists in the external world. The nomea varies based on previous experiences and the context during which the phenomenon occurs for the individual perceiving the phenomenon. Noesis, on the hand, is the “perfect self-evidence,” or the intentional process of experiencing itself. For every nomea, there is a noesis, and vice versa. Therefore, the phenomenology recognizes that the object of study, the real object, is inextricably linked to the conscious and intentional process of experiencing a phenomenon. Exploring the meaning of this experience is thus a critical method to understand the phenomenon itself.

**Phenomenological Research Steps**

Despite the various approaches to phenomenological theory, Moustaka (1994) has described a basic and commonly used approach to conduct phenomenological research. Creswell (2002) explained this process in clear steps. First, the researcher must verify that the phenomenon being studied is best suited by a phenomenological approach. Here, the
phenomenological approach is the best match for this research because it provides a means to understand several individuals’ common experience and to develop a deeper understanding of the phenomenon that is parenting a child with excess weight by minimizing researcher presumptions and bias. More importantly, phenomenological research focuses on the individual’s experience, which is what is lacking in family-based pediatric weight management research.

Second, the researcher must understand the broad assumptions of phenomenology and be able to bracket his or her own experience in order to reach epoche. Epoche is a term founded by Husserl, the founder of phenomenology. It means to suspend all judgments about what is real based on our ordinary way of perceiving things in order to be able to identify data in its pure form. To do this, the researcher must become aware of his or her personal bias and learn about his or her own preconceptions. This is called bracketing because it brackets out the researcher’s preconceptions to allow for a fresh perspective on the phenomenon being studied. In this study, the discussion of phenomenology’s assumptions and its application to the current research project demonstrates understanding on the part of the researcher, and bracketing was conducted in two ways. The first was to explore the researcher’s own assumptions in relation to the research topic by writing about them. This text can be seen in Appendix G. Second, the interview was structured to include only very broad questions to address research questions in what was essentially a conversation about the participant’s experience. The purpose of this was to limit the influence of the researcher’s bias in the conversation by allowing the participants to express themselves freely about the topics they felt were meaningful to their experience.
Third, phenomenological data must be collected from 5 to 25 individuals who have experienced the phenomenon until data saturation is achieved. This means that data must be collected until it becomes evident that collecting data from more individuals is unlikely to provide more information. Data is usually collected by conducting interviews that attempt to answer “what have you experienced in relation to this phenomenon and what context or situation has influenced or affected your experience?” In this study, the researcher collected data using open-ended individual face-to-face interviews. An open-ended format was chosen according to the principles of qualitative and phenomenological research to enable the collection of data that has the level of depth necessary to answer the study’s research questions. As demonstrated in the comparison of qualitative and quantitative research approaches discussed earlier, open-ended interviews provide rich information that cannot be collected using a forced response format. Face-to-face interviews also provides the opportunity for clarification of statements and flexibility that is beneficial when exploring a phenomenon as complex as parenting a child with excess weight. Overall, this method of data collection gave the participants in this study the opportunity to express themselves as much as they felt comfortable to do so and avoided limiting their responses as much as possible.

Fourth, the researcher must begin to analyze the participant’s report of their experience according to a process called horizonalization. This process is meant to select responses that contribute to understanding the phenomenon while giving each response equal weight. This step results in the creation of themes that arise from organizing responses relevant to the phenomenon into categories. These categories are based on the apparent importance and predominance of topics that arise in each participants’ responses. How
horizonalization was performed in this study is explained in the data analysis section of this chapter.

Fifth, the researcher develops a textural description and a structural description of the participant’s experience. The textural description addresses what the individuals experienced. The structural description addresses how the phenomenon was experienced in terms of the conditions, situations, or context that affected the participant’s experience of the phenomenon.

Last, the textural and structural descriptions are combined to convey the essence of the experience. This is usually called the essential structure because it focuses on the common experience and underlying structure of all individuals who participated in the research.

Overall, this study attempted to follow these guidelines for phenomenological research as closely as possible.

Research Procedures

This section addresses the details concerning how the research project was conducted, from the Institutional Review Board approval to data collection and data analysis. Figure 1 provides an overview of the structure for the research procedures.

Participants

According to phenomenological research guidelines, participants were selected to ensure that they had considerable experience with the phenomenon under study, and that this experience was conscious and intentional. Therefore, participants needed to be parents of children with excess weight who recognized that they were parenting a child with excess
IRB Application: Approval from Kent State University to conduct research.

Recruitment: Participants were recruited from the KIDS CAMP program. Parents were presented with the research project one-on-one at the beginning of the first KIDS CAMP session. If they agreed to participate, a meeting was set for the interview.

Face-to-Face Interview & Consent: Participants met with the researcher to sign the consent form, complete the demographic questionnaire, and participate in a face-to-face interview. This took place in the setting of their choice where a room was available to speak privately (home, workplace, or library). Interviews took place within one week of recruitment (before the next KIDS CAMP session) and usually lasted about 1 hour. The interview was audio-recorded for transcription.

Transcription: Audio recordings of the face-to-face interviews were transcribed into digital word processing documents.

Analysis: Transcripts were analyzed following phenomenological approach. This includes:

  Horizonalization. The researcher highlighted the participants’ literal responses that appeared relevant to their experience and labeled them as units of meaning.

  Reduction and Elimination. The researcher created invariant horizons from the units of meaning obtained in the previous step by eliminating statements that were not necessary to understand the participant’s experience or were redundant.

  Categorizing. The researcher organized the invariant horizons into categories of topics addressed during the interview.

  Textual Descriptions. The researcher composed textual descriptions of categories that address the “what” of all participant’s experience of their child’s excess weight.

  Structural Descriptions. The researcher composed structural descriptions of categories that addressed the “how” and “why” of all participant’s experience of their child’s excess weight.

  Thematizing. The researcher reviewed the textual and structural descriptions as well as the transcripts and intuitively created core themes that were meant to reflect the lived experience of all participants in the study.

  Verification of Meaningful Statements and Themes. The presence of meaningful statements, categories, and themes identified in previous steps were verified in the participants' complete transcripts. The themes were also compared to that of a peer reviewer based on his review of transcripts.

Phone Follow-up Interview (Member Check): Participants were called to review the initial interview based on analysis of transcripts and add anything else they thought was relevant. These interviews took place 4 to 6 weeks following the initial interview, were performed by the researcher, and usually lasted about 30 minutes. Changes and additions to the current transcript and analysis were recorded in a digital word processing document during the phone conversation.

Textual-Structural Syntheses. Textual and structural descriptions were synthesized and integrated into composite summary descriptions of the previously identified core themes for the group of participants as a whole. The general synthesis reflected the common themes and essences from all interview transcripts.
To fulfill this, participants were recruited from the KIDS CAMP program, a free 10-session nutrition and exercise education program for overweight or obese children and their parents based at Kent State University in Kent, Ohio, USA. The study was designed on the assumption that recruiting 10 participants would probably be sufficient to reach data saturation, but that more participants could be interviewed if data saturation was not reached since about 20 families were registered in the KIDS CAMP program during Spring 2009.

**KIDS CAMP Program Description**

The KIDS CAMP program aimed to promote healthy nutrition and physically active lifestyle and to provide families with the support they need to initiate weight-related behavior change. Nutrition education focused on teaching healthy eating behaviors through age-appropriate hands-on activities which include the provision of a healthy snack every session, nutrition games, and nutrition contests. Physical activity education focused on teaching active lifestyle habits through age-appropriate hands-on activities such as handweights, Theraball® and Theraband® exercises, and circuit training. Enrollment to KIDS CAMP was limited to about 20 families per 10-week session to ensure that every child can be assigned a personal mentor that will follow-up on the child’s progress weekly. The 7-year-old program was created and directed by Dr. Natalie Caine-Bish, an Assistant Professor in the Department of Nutrition and Dietetics at Kent State University’s School of Family and Consumer Studies.

**KIDS CAMP’s Selection Criteria**

Any of the 20 families with a child enrolled in the KIDS CAMP program during Spring 2009 were eligible to participate in the study. Given that all participants in this study were selected from the KIDS CAMP program, some characteristics of this study’s sample
were set by the KIDS CAMP program’s main selection parameters. The first limitation was that children needed have physician approval to participate in the program and meet the WHO (2000) criteria for overweight or obesity. This ensured that the participants were in need of the program and met criteria as clinically overweight or obese children. The only other restriction to participate in KIDS CAMP was that children had to be between 5 to 17 years old, although most children tended to be between 8 to 12 years old.

The rationale for limiting recruitment to parents with a child enrolled in KIDS CAMP was that all parents being interviewed would have at least one obese or overweight child, which was the topic of the study. It also ensured that all participating parents were at least somewhat concerned and involved in their child’s weight management because they had to make the effort to enroll their child in the KIDS CAMP program and participate in it. Additionally, the fact that most children enrolled in the program were in late childhood and early adolescence meant that most participants were parenting children in the same age range as those targeted by most pediatric weight management programs (Nowicka & Flodmark, 2008). Overall, this increased the probability that the information collected in the study would be applicable to family weight management programs.

Recruitment

The researcher recruited parents attending the KIDS CAMP program to participate in this research project during KIDS CAMP’s preliminary session, which consisted of an assessment battery. At this time, the researcher approached parents one-by-one and provided information on the nature of the study and requirements for participation in the study using a Recruiting Script Form (see Appendix A). During this time, parents were informed that participating in the study implied doing a one hour face-to-face interview and a half hour
phone follow-up interview. Parents were also told that participation in the research project is separate from participation in the KIDS CAMP program. As an incentive to participate, parents were told that participation in the study would contribute to the development of family-based programs such as KIDS CAMP and perhaps even provide parents with useful insights about how they perceive and experience their child’s weight. Additionally, parents were informed that they would receive $30 to compensate them for the time needed to complete the interview and the follow-up phone interview. If parents asked whether their partner could participate, they were told that either parent or both of them could participate, depending on their availability. This was done to increase the potential amount of data collected.

Data Collection

This study attempted to answer the two research questions by conducting interviews with parents enrolled in a family-based nutrition and exercise education program. The interviews took place in the setting of the participants’ choice, such as their home, workplace, or library, as long as it allowed them to speak privately. Interviews took place within one week of recruitment, before the next KIDS CAMP session. The interviews lasted about 1 hour and started with consent form reading and signature, followed by completion of a short demographic questionnaire and administration of the interview protocol. The interviews were audio recorded with the parents’ permission and then transcribed. Once all the interviews and process notes were analyzed by the researcher, each parent or parent pair was called back within 4 to 6 weeks of the initial interview to ensure that the researcher understood the parents’ comments as they meant them and to ask any other significant
questions that may have been addressed during interviews with other parents. Follow-up phone interviews lasted about 30 minutes.

**Rationale for Data Collection Method**

Individual interviews were chosen as the method of data collection for a few reasons. First, it is because qualitative data collection in general is meant to capture the participant’s holistic experience in as much depth as possible, and individual interviews are an effective method to gather such data on human experiences and perceptions (Patton, 2002). Since the research questions address human perceptions and experiences, interviews appear to be the most appropriate data collection method for this research.

Second, the few studies that employed interviews or focus groups to learn about parental experiences related to their child’s weight came to conclusions that were very different than the studies using questionnaires to collect data. For example, many studies with quantitative designs either concluded that parents need to be educated on how to recognize overweight and obesity in their child, or that some psychological mechanisms affect parental perceptions of their child’s obesity such that they are not concerned about their child’s excess weight (Akerman, Williams, & Meunier, 2007; Crouch, O’Dea & Battisti, 2007; He & Evans, 2007). However, the few studies using qualitative studies on found information that was much more in depth and came to conclusions such as Pagnini et al.’s (2007) that “the emotional intensity of the mothers' perceptions about their children's eating and weight status suggests that interventions, including communications, need to go beyond information and engage with parents' emotions.” This demonstrates how the depth of the data collected with individual interviews can bring to light another aspect of the
participants’ perceptions and experiences. Research methods thus have great implications if conclusions from the research are made to improve treatment programs.

Third, research suggesting that parents prefer to discuss issues about their child’s weight in an individual rather than group setting informed the decision to conduct individual interviews rather a focus group to allow parents to be more comfortable sharing their true feelings about their child’s weight (Eneli et al, 2007).

Consent

Before beginning the interview, parents were asked to read the consent forms in Appendices B & C and sign them if they agreed to participate. The first consent form explained the basic purpose of the study, what time commitment was implied from participating in the study, incentives for participation, confidentiality and data storage, potential risk from participation, and the right to stop the study at any time without penalty and without impact on KIDS CAMP participation. The second consent form addressed audio recording and use of audio recording.

Additional Data Collection & Measurements

From a phenomenological research approach, demographic information can provide context for the parents’ experience. Therefore, demographic data considered to be important for pediatric weight management was collected using the questionnaire in Appendix D (Poskitt & Edmunds, 2008). The questionnaire included questions concerning the caregiver’s relationship to their child (mother, father, etc), their ethnicity, their family’s average household income, the number of children in the family, and the overweight or obese child’s age, gender, and ethnicity. A paper version of this demographic questionnaire was
administered at the beginning of the interview. Parents were told they could take as much
time necessary to complete the questionnaire.

Interviewing Approach & Interview Guide

The primary method of data collection employed in this study was individual
interviewing. The goal of the interview was to allow parents to express their experience of
their child’s excess weight. The interview was therefore structured to allow the parents to
express what they believed to be important about their child’s weight and their relationship to
their child’s weight without assuming that any one part of their experience was more or less
important. The interview was guided by an initial question to initiate conversation and
follow-up questions with participants. The questions followed an open-question format.
Open-questions are useful to engage the participant in an informal conversation about a topic
(Patton, 2002). Given the researcher’s training as a Rogerian and client-centered mental
health counselor, reflection was often used as a technique to help the participants clarify their
experience, elaborate on it, and ensure the researcher had properly understood it.
Additionally, the content of the questions in the interview protocol demonstrated the
researcher’s affinity Cognitive Behavioral Therapy theory as questions focused on thoughts,
feelings, and behavior separately, with an assumption that these may be somewhat related.

In order to provide some direction and structure to the interview, the
researcher used the interview guide in Appendix E. At the beginning of the interview, the
researcher discussed the purpose of the research. The research then began the interview and
presented the participant with the introductory question: “Please tell me about your child’s
weight history.” Depending on the participant’s responses, the researcher then used
unstructured follow-up questions to gather more information, or moved on to another general
question on the protocol such as “How has your child’s weight affected you as a parent?”
This continued until parents addressed multiple aspects of their experience, including emotions, thoughts, and behaviors related to their child’s weight management. It is important to note that after completing a few interviews, the questions in Appendix F were added to the interview protocol. These questions emerged as a natural part of the interview and were helpful to collect data that appeared important to the parent’s experience, so they were added to the interview protocol to ensure that all participants had a chance to answer them.
Following questions about the parent’s challenges and what would help them support their child’s weight management, participants were asked whether they thought a mental health professional could be helpful to them in any way, and if so, how. Occasionally, the interviewer had to give examples of the settings in which mental health professionals could be involved, such as a nutrition and exercise education program like KIDS CAMP, because participants said they had no idea. Overall, the researcher used the interview guide as a basis to explore various aspects of the parents’ conceptualization and experience of their child’s excess weight. The researcher remained open to discuss new issues that arose and asked questions informally throughout the interview to further engage parents in the conversation as necessary.

This interview format was appropriate for this study as a way of reducing researcher bias about what aspect of childhood excess weight should be discussed or is most important to the parents. While a review of the transcripts suggested the interview often tended to ask questions about the parent’s feelings of responsibility and how parents discussed weight with their child, this may not necessarily suggest bias. Instead, these questions may have been asked as a result of emphasis on these topics by previous participants, or from evidence that
the current participants cared about this topic without saying it explicitly. Therefore, the flexibility of this format did allow for researcher bias, but it was limited by the fact that respondents were first asked broad general questions that provided them the freedom to focus on what they perceived as important to their experience before the researcher inquired further about topics relevant to the parents’ responses. This format also allowed for respondents to develop and clarify their answers because the researcher often reflected their responses back to them to ensure they were understood properly.

**Data Analysis**

After all interviews were completed and transcribed, each transcript was read thoroughly over the course of a few weeks. During this process, the researcher wrote reactions to the participants’ text and ideas about their meaning and implications in the transcripts’ margins. The participant’s text in the interview was reviewed and referred to several times throughout the analysis process to ensure that the researcher had the opportunity to understand the details of the experience of each participant, to enter the participants’ lived experience, and identify what themes were recurrent in the individual’s experience.

The researcher followed Moustaka’s (1994) steps to conduct phenomenological research. To begin, the researcher read and highlighted responses that provided understanding of the parents’ experience of the phenomenon and gave each response equal weight. Clusters of meaning were then created through a meticulous process by which quotes with overlapping meanings were eliminated, textual responses labeled with the aspect of the experience they referred to, and by allowing categories to emerge intuitively based on the topics addressed by participants during their interviews. Based on these categories, the
researcher developed a textural description and a structural description of all the individuals’ experiences. The textural and structural descriptions were then combined into core themes that transcend the experience of all participants and convey the essence of their experience as parents of children with excess weight.

**Horizontalization**

In phenomenological research, data analysis begins with horizontalization, a process that is meant to select responses that contribute to understanding the phenomenon while giving each response equal weight. In this study, this was done by reading through each participant’s transcript and highlighting the participants’ literal responses that appeared relevant to their experience as a parent of a child with excess weight. These relevant statements were labeled as units of meaning. These statements related directly to a particular question on the interview protocol or to a question asked to the participant during the interview. Participant responses were treated with equal value. Each response was given equal weight by invoking the bracketing experience and keeping all relevant responses together in the same file. Thus, the participants’ literal responses that appeared relevant to their experience were highlighted and labeled as units of meaning. They were preliminarily grouped by the question they answered to be used in the next step.

**Reduction and Elimination**

The relevant statements obtained in the previous step were examined to determine invariant horizons. Invariant horizons are aspects of an experience that stand out as unique aspects of a phenomenon. To be considered a horizon of the experience, each meaning unit obtained during horizontalization was subjected to two qualifying requirements based on the approach advanced by Moustakas (1994): (a) does the statement needed relate directly to the
experience and is necessary for understanding it, and, (b) can the statement be extracted from the text and labeled? Statements which did not fit this criteria were ignored thereafter.

**Categorizing**

In this step the researcher organized the invariant horizons from the previous step to begin the identification of core themes and categories expressed in phenomenological terms. Categories were meant to describe the participants’ viewpoints in relation to topics addressed during the interview, such as the parents’ feelings about their child’s weight, the effect that the child’s weight has on the parent, or what the parent has done about the child’s weight. The search categories required that the researcher go back and forth between the participants’ transcript and invariant horizons to create a list of categories that was faithful to the participants’ texts.

This was first accomplished by reviewing invariant horizons and re-reading participant transcripts to identify categories that emerged from participants’ responses to interview questions. Every time a meaningful statement was identified as part of a category, it was copied under that category’s heading. These categories sometimes represented meaningful statement that spanned across several areas of the participant’s experience. Other categories included meaningful statements that were specific to one or a few participants, but that appeared essential to their experience. The words to describe the category emerged by asking what was the overarching significance of each category was.

**Textural Description**

Following on the categorization of meaningful statements, a textual description combining all participants’ experience of their child’s excess weight was composed by the researcher. This was done to provide a textual account of “what” the participants
experienced. Therefore, this step addressed the *noematic* component of the participants’ experience as parents of a child with excess weight. To accomplish this, the researcher reviewed each participant’s transcripts, units of meaning, and described previously identified categories that answer the question, “What was the participants’ experience as parents of a child with excess weight based on each domain of inquiry from the individual interview?” Categories emerging from textural analysis are described in the Results chapter.

*Structural Description*

While the textural description addresses what the individuals experienced, the structural description addresses how the phenomenon was experienced in terms of conditions, situations, or context. Structural descriptions relate to the noetic, or the “how” and “why” of the “what” that is experienced about the phenomenon (Moustakas, 1994). To identify categories for structural analysis, the researcher described previously identified categories that reflected the overarching assumptions of the participants’ experience and the context for the participants’ experiences. Categories emerging from structural analysis are described in the Results chapter.

*Thematizing*

Following the textual and structural descriptions, the researcher identified core themes that expressed the general perspective of the entire group of participants and which were representative of the parents lived experience of their child’s excess weight. These themes were based on the apparent importance and predominance of topics that arose in each participants’ report of their experience as a parent of a child with excess weight. The themes were created intuitively based on the review of transcripts, as well as the categories and their textural and structural descriptions.
Verification and Validation of Meaningful Statements, Categories, and Themes

Verification procedures are used in qualitative research to enhance the quality and trustworthiness of the research (Creswell, 2007). By including these procedures, the researcher attempts to increase the validity of the conclusions that are drawn from the data. In this study, themes and categories were created as a result of the researcher’s intuition about the importance of all clusters of meaning and their relation to each other. Therefore, verification was essential to ensure the accuracy of the themes in representing the parents’ lived experience. This was done through transcript review, peer review, and member checking.

Transcript Review

First, the presence of meaningful statements, categories, and themes identified in previous steps were verified in the participants’ complete transcripts. Three guidelines were used to accomplish this process: (a) The categories and themes needed to be explicitly stated in the form of meaningful statements from the participant’s transcript; (b) if the categories and themes were not explicitly stated, the participant’s meaningful statements needed to be compatible with the categories and the themes; and (c) if not explicitly stated or compatible or relevant with the participant’s experience, the categories and themes were eliminated. If categories and themes were only present in a few interview transcripts and did not appear essential to the parent’s lived experience, they were either incorporated with another category or theme or eliminated altogether.

Peer Review

The categories and themes were also compared to that of a peer reviewer based on his review of transcripts. This was done to ensure that data analysis was accurate and to bring to
awareness how the researcher’s interpretation of the data affected its analysis. The peer reviewer was a doctoral candidate in Kent State University’s Counselor Education program. This individual had a lot of experience and interest in qualitative research and phenomenological research in particular. He was provided with two interview transcripts and then met with the researcher to discuss his perspective on the interviews and the categories and themes that emerged from these. The categories and themes he identified were compared to the researchers’, and if any of his categories or themes were not accounted for in the researcher’s analysis, they were incorporated into the researcher’s category theme list. This however did not occur because the peer reviewer did not identify any categories or themes that had not been previously identified by the researcher, or that were not part of a category or theme the researcher had previously identified. Overall, the peer review process confirmed that the categories and themes identified by the researcher captured the participants’ experience accurately.

**Member Checking**

To accomplish a validity check with the participants, each participant was called to perform a phone follow-up interview which took place 4 to 6 weeks following the initial interview. These were performed by the researcher, and usually lasted about 30 minutes. During these, participants were first asked whether anything had changed since their interview or if they had anything to add to their interview. They were then asked to summarize how they experienced being a parent of an overweight child in a few sentences and to describe how their child’s weight affected them as parents. This was done to help parents think about the first interview and start thinking about their experience parenting a child with excess weight. These questions were also asked to ensure the researcher had
understood the most important part of the participants’ experience and to verify that their current summary of their experience truly did not differ significantly from their description of their experience in the first interview.

The interviewer then read the list of core themes he had composed based on his data analysis. Each participant was asked to confirm whether or not each theme captured the essence of their experience as parents of children with excess weight accurately. Participants were told they could change themes or add to them as they felt necessary, and the researcher incorporated the participant’s feedback into the description of the themes. Changes and additions were recorded in a digital word processing document during the phone conversation. Some participants clarified the meaning of some themes to their experience or emphasized the importance of one theme over another to their experience. However, all of the participants agreed with any of the themes presented by the researcher, thus confirming that the themes represented the participants’ experience faithfully. Overall, this step gave the participants an opportunity to comment on the accuracy of the researcher’s perspective and enhance the credibility of the results (Creswell, 2007).

**Textual-Structural Syntheses**

The final step was to combine the textural and structural descriptions into a synthesis that conveys the essence of the experience and that reflected the participants’ review of the core themes. This synthesis is usually called the essential structure because it focuses on the common experience and underlying structure of all individuals who participated in the research. Textual and structural descriptions were thus synthesized and integrated to create composite summary descriptions of the core themes representing group of participants as a whole. This synthesis thus reflected the common themes from all interview transcripts.
The synthesis was done by integrating thematic elements of the textual and structural descriptions. According to Moustakas (1994), the investigator’s task is to “intuitively-reflectively integrate the composite textual and composite structural descriptions to develop a synthesis of the meaning and essences of the phenomenon or experience” (p. 181). The researcher did this by reading through the textural and structural descriptions and integrating the core themes with the participants’ review of the themes during the phone follow-up. The textual-structural syntheses and resulting description of core themes are presented in the Results chapter.
This chapter presents the research results. It begins by addressing the demographics of the study’s sample as well as additional contextual information related to each family’s experience of childhood excess weight. The results of the interviews are then presented in the form of unique themes that emerged from both the textual and structural analyses of the interviews. The chapter ends with a description of the essence of the sample’s experience as parents of children with excess weight.

Description of Families in the Research Sample

As discussed earlier, it is common practice in phenomenological research to analyze data on the basis of what the participants experienced the phenomenon under study (textural description) and how the participants experienced the phenomenon in terms of the conditions, situations, or contexts in which the experience occurred (structural description). Table 1 thus provides basic information about the contexts in which the participants of this study experienced being parents of children with excess weight. The assumption is that these contexts provided a framework for the phenomenon and may have affected the experience in some way. Without implying that the relationship between the contexts in which parents live and the experience of parenting children with excess weight is necessarily causal, taking these contexts into consideration is important to understand the parents’ experience because a different sample of parents living in different contexts could experience parenting children with excess weight completely differently. This is because various issues related to childhood weight management, such as nutrition, physical activity, body image, and parenting, vary across cultures. However, it is important to remember that the collection of demographic data
does not provide additional information about the experience itself, but rather provides a description of the sample and the degree of the sample’s diversity.

Table 1

Participant Demographic Information

<table>
<thead>
<tr>
<th>Parent</th>
<th>Relation to Child</th>
<th>Ethnicity</th>
<th>Household Income</th>
<th>Child's Gender</th>
<th>Child's Age</th>
<th>Child's Ethnicity</th>
<th>Sibling Age</th>
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<tr>
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<td>G</td>
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<td>65000</td>
<td>G</td>
<td>6</td>
<td>White</td>
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<td>Undisclosed</td>
<td>B</td>
<td>12</td>
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<td>9</td>
</tr>
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<td>B</td>
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<td>18</td>
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<td>30000</td>
<td>G</td>
<td>7</td>
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</tr>
<tr>
<td>Harry</td>
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<tr>
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<td>B</td>
<td>9</td>
<td>White</td>
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<tr>
<td>Janeb</td>
<td>Mother</td>
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<td>50000</td>
<td>G</td>
<td>8</td>
<td>White</td>
<td>None</td>
</tr>
<tr>
<td>Summary</td>
<td>9 Mothers</td>
<td>All</td>
<td>Average = 53333</td>
<td>6 girls</td>
<td>Average = 9.1yo</td>
<td>All white</td>
<td>2 - 0 sib</td>
</tr>
</tbody>
</table>

a Child is home schooled. b Child had been through KIDS CAMP once already.

Basic Family Demographic Information

The demographic questionnaire provided the following demographic information about the families participating in the study. The 10 parents interviewed consisted of 9 mothers and 1 father. All were of white race, as were their children. The average household income was $53,333, ranging between $27,000 to $75,000. 5 families had household incomes in the $25,000-$50,000 category and 4 families in the $50,001-$75,000 category. 4 of the overweight children discussed by parents were boys and 6 were girls. The average age of the children discussed was 9.1 years old, ranging from 6 to 12 years old. 5 children were
in the 6 to 9 year old early childhood range, and another 5 were in the 10 to 12 year old late childhood or pre-adolescent range. Of the 10 families with overweight children, 2 had no other children, 4 had one other child, 3 had 2 other children, 1 had 3 other children.

Occasionally, the influence of the demographic information on the parents’ experience was evident. For example, mothers talked about the fact that they felt much of the parental responsibilities related to weight management, such as cooking, fell back on them. This in turn may have affected the degree to which mothers felt blamed or guilty for their child’s excess weight. Some families also discussed the difficulty to find affordable options for physical exercise or nutritious food, which reflected their low to middle-class income level. At times, parents discussed the unrealistic portrayals of ideal women body shapes in the media during the description of their experience. This was never the case for parents of boys with excess weight. Most notably, several parents discussed siblings and their involvement in the family weight management project. Some parents said the siblings complained about the changes being made in the house as a result of weight management or bullied the child with excess weight. Some parents however rationalized that having children who do not have excess weight demonstrates that weight is partially due to genetics. Thus, the parents who had other children were able to come to this realization more easily, and were thus more likely to feel slightly less responsible removed some responsibility from the parents who had siblings, and is thus not only caused by parenting. However, ethnicity was never explicitly stated in the parents’ description of their experience. Perhaps this was because of the low importance of ethnicity in an area with such low ethnic diversity as the one in which the sample resided.
Additional Family Contextual Information

While the demographic questionnaire provided basic information that contextualizes the participants’ perspective and experience as parents of children with excess weight, additional information collected during the interview provided information about the research sample.

Most importantly, for all families except one, the upcoming KIDS CAMP was the first official weight-related program in which they registered their child. The one family from whom this wasn’t the case participated in KIDS CAMP in Fall 2008 and re-registered upon the child’s request to do so. Although the parent from the one family who had gone through the program during the previous year reported past experiences similar to that of other parents, this parent appeared to encounter less challenges and more successes than other parents did. This parent attributed this to both the positive changes that came from doing the program once, but also to the child’s enthusiastic approach toward weight management.

Apart from one family who had recently experienced a divorce, all other families consisted of heterosexual couples. The main impact of the parent’s marital status on weight management as reported by the divorced parent was the difficulty to apply nutritional guidelines in the home consistently. Allegedly, this was because the other parent did not take weight management as seriously as did the parent participating in the study.

During the interview, many of the parents discussed their weight and their family’s weight. Although not all parents discussed this topic, most parents referred to themselves as overweight currently or having been overweight as a child. For many, this affected their experience because it gave them the opportunity to understand what their child was going through and have something in common with them. Most parents reported that their own
weight was motivation to involve themselves in weight management and do what is necessary to avoid their child the bullying they themselves experienced as a result of their weight. One parent however found this common ground to be an opportunity to bond with her child. Most parents also mentioned that they had family history of overweight or weight-related health problems such as diabetes and heart complications. This in turn appeared in the parents’ report of their experience when discussing the reason that engaging in weight management was important for their child.

Finally, apart from the one parent whose children were home schooled, all other children attended either public or private school institutions. This emerged as an issue only in terms of fearing the response of other kids to the child’s weight once the child eventually attended public school.

Description of Core Themes Emerging from Textual-Structural Synthesis

This section is meant to describe the essence of the parent’s experience. Each of the six themes presented below thus transcend how parents experience their child’s excess weight. These themes were confirmed as core themes by all participants during the phone follow-up interview.

Effective Pediatric Weight Management is Difficult and Requires Additional Help

All parents who wanted to implement effective weight management for their child encountered barriers in their attempt to do so. These barriers emerged from parental lack of knowledge concerning what to do to help their child, how to implement the knowledge they had most effectively, difficulty changing their family’s weight-related habits, low support of weight-related behavior changes in community and school environments, and little or ineffective support from their pediatrician. All these barriers contributed to the low success
of their previous attempts to manage their child’s weight and the decision that they needed additional help for their child’s weight management. This was evident in their gratitude for receiving help from KIDS CAMP.

*Pediatric Weight Management Challenges Parenting Skills*

The presence of a child with excess weight in their family challenged parents to support their child’s weight management. Pediatric weight management requires parents to know the difference between healthy and unhealthy weight-related behaviors, but also to help their child engage in such behaviors. To do so, parents must establish clear boundaries for what weight-related behaviors are acceptable and use appropriate incentive to help the child engage in healthy nutrition and exercise behaviors. In this sense, the parenting skills required to support their child’s weight management do not appear significantly different from parenting skills necessary to change other aspects of their child’s behavior, such as supporting their child’s academic progress, implementing a chore schedule, or teaching good manners. However, many parents said they felt like they did not have some of the tools or the knowledge necessary to implement successful weight management practices for their child without external help.

The fact that parents had previously failed to engage their child in successful weight management suggests that this experience did actually challenge the parent’s ability to implement effective parenting skills. Additional evidence for this came from the large number of parents who mentioned how helpful it would be for the child to be accountable to someone other than themselves during KIDS CAMP, as though they had lost control over their child’s weight management or wanted to lower their responsibility in their child’s weight management. The importance of this issue was confirmed in follow-up interviews
during which parents shared their fear of the KIDS CAMP program ending because their child would lose the mentor, which they believed was the child’s main source of motivation.

**Parental Responsibility & Guilt**

Parents felt responsible for their child’s excess weight in the sense that they recognized the impact that role-modeling healthy behavior and making healthy food available to their child is their responsibility, and that this in turn affects their child’s weight. While some parents recognized the impact of metabolism on their child’s weight through the fact that they had other children who were not overweight, many parents still felt responsible to support their child’s weight management. While most parents simply acknowledged the impact they could have on their child’s weight management and accepted that they needed help to do so, some parents experienced feelings of guilt or failure for allowing their child to reach their current weight and about needing external help to support their child’s weight management. The difference between parents feeling responsible and parents feeling guilty appeared to be their perception of their child’s current weight. The parents who felt guilty tended to view their child’s weight as a current problem requiring immediate attention, potentially because of the child’s very high weight or because the family has been trying to manage the child’s weight for a long time without success. The parents who felt only responsible viewed weight management as a proactive manner of preventing future weight-related problems, as though their child’s current weight was not necessarily affecting the child yet but could in the future.

**Fear of Making Child Feel “Fat”**

Many parents appeared to fear making their child feel like they (the parents) thought they were “fat”. The word “fat” is used here specifically because parents used it when
describing their fears, because of how much parents avoided using this term when describing their child, and because it usually carries a negative connotation in Western society. For some parents, this fear appeared to exist because they thought their perception of the child’s weight reflected how much the child was loved by the parents. In a way, these feelings may have reflected the parents own bias against overweight body size, but most likely resulted from a fear that the child would not understand that their parents are criticizing their weight and asking them to change something which appears to be an integral part of themselves. The implications of this fear were that parents did not discuss weight, or if they did, they were unsure about how to encourage the child to participate in healthy weight-related behaviors without relating the child’s weight to the necessity of engaging in such behaviors. One option that many parents chose to avoid singling out the overweight child was to change behaviors as a family. As discussed later on, this strategy was however challenging for families with other children or parents who perceived no personal benefits to changing their weight-related behaviors.

Weight Management as a Family Project

The main strategy employed by parents was to change weight-related behaviors as a family unit. However, several challenges stood in the way of its implementation. Parents with multiple children were often faced with the challenge of non-overweight weight siblings making fun of the overweight child’s weight or complaining about the changes caused by family-wide weight management. This made it more difficult for parents to make the home a supportive environment for the child with excess weight and a space free of the stigma that overweight children are usually exposed to outside the home.
Aside from avoiding stigmatizing the overweight child, the decision to change weight-related behaviors as a family also appeared to be based on the parent’s view of their own weight and weight-related behaviors. Indeed, one implication of enrolling their child in a nutrition and exercise education program was that it brought attention to the parents’ own weight and weight-related behaviors. This was suggested by the many parents who discussed their own weight during the interview and expressed feeling like they were poor role-models for their child because they were overweight themselves. It was as though they felt it would be hypocritical to ask their child to engage in healthy weight-related behaviors without doing it themselves. The result of this was that some parents viewed the program as having the potential to affect their entire family positively, although some said it was difficult for them or their partner to change their weight-related behaviors or to exercise with their child. The difficulty to be a role-model thus emerged as an additional barrier to the family weight management approach.

*Parents Support the Need for Mental Health Professionals*

As was addressed earlier, most parents responded positively to the possibility of having mental health professionals help them and their child with weight management. Many parents recognized how excess weight could either have an impact on themselves, as a result feeling overwhelmed by the challenge of supporting their child’s weight management. They also recognized that excess weight affected their child, usually as a result of bullying and being discriminated by society’s standards. Many parents identified ways in which mental health professionals could provide psychoeducation or therapy that would address their family’s mental health needs. In some cases, parents denied that excess weight was having an impact on their child’s mental health, but felt that it could be helpful to other families
nonetheless. This appeared related to the parents’ general view of mental health practitioners and their family’s previous mental health treatment experiences, or lack thereof.

Description of Categories

While core themes describe issues that permeate the parents’ experience and transcend it, categories describe issues that relate directly to topics addressed during the face-to-face interview. The following is a description of the categories that emerged from both the textual and structural analyses of the interviews, and direct quotes from participants are used to support each category. These categories support the presence of core themes and answer the two research questions specifically for this research sample. This includes what the interviewees experienced as parents of children with excess weight and how they conceptualize their child’s weight in the past, present, and future. It describes their attempts to support their child’s weight management and how they are affected by their child’s weight. Finally, it reveals the parents’ perspective on how they think mental health practitioners could help.

Categories Emerging from Textual Analysis

This section focuses on the content of the participants’ experience as parents of overweight children by answering the “what” of each parents’ experience. The categories that emerged from this analysis address the emotions, actions, and perceptions that parents associated with their child’s excess weight and which follow directly from how parents answered questions during their interview.
Parents Avoid Setting Weight Goals for Their Child & Fear Discussing Weight with Their Child

Early in the interview, it became evident most parents did not set weight goals. Some clearly felt uneasy about doing this, usually because they thought this would be counter-productive or disappointing. As evidenced in the following quote, Anne described how her child’s father has given the child a weight goal, but that she fears this could lead her child to stress the child, which in turn could lead her to eat more and thus gain more weight. This also exemplifies the disagreements that can occur between parents on how to approach their child’s weight.

Her dad has told her if she loses 10 pounds we’ll reward her with something that she wants. But I don’t particularly like to go that route. I’m very, you know, “whatever you lose, we’ll just keep going.” I don’t want to put pressure on her because I don’t want her to get stressed out and then start eating because she’s so stressed. (Anne)

Erin expressed a similar feeling about asking her child to lose weight, but added that part of the reason was that she did not want her child to feel labeled as overweight.

I don’t think that’s good [setting a weight goal]. It’s hard enough as it is, and then to say “now you have to lose 10 pounds.” It would scare me to tell him now you have to lose weight. I don’t want to label him. (Erin)

While most parents did not have specific weight goals, this did not mean that they did not have goals altogether. Similarly to Erin, Irene expressed a fear to that her child would think that she thought he was overweight. She overcame this by setting goals in terms of lifestyle change and appearance instead of weight.

My goal is not really weight oriented. I’d like him to trim down appearance wise, but if he doesn’t it is okay with me. I would just like him to exercise more. (Irene)

However, weight outcome appeared to be important to most parents. Many of them expressed a desire to see their child to lose weight, although they would be satisfied if their
child should maintain their weight or if they met goals conceptualized in terms of lifestyle changes and appearance.

I don’t want her to have to measure everything and count calories, it’s too complicated. I just want her to be able to make better choices. And who doesn’t want to look great? What little girl doesn’t want the boys to think she’s cute? (Beth)

A few parents went further and suggested that they would be disappointed if their child gained weight.

I wouldn’t be upset if she stayed the same [weight]. If she went up, then we’d probably be upset. (Harry)

*Parents Worry about How Weight Affects Their Child’s Social, Health, and Self-Esteem Development*

Despite all that parents did to help their child lose weight, weight loss or weight maintenance did not appear to be the end goal itself. What mattered is what weight loss or weight maintenance would imply for their child’s quality of life. In some cases, parents emphasized that excess weight currently affected their child, and thus that something should be done now. Additionally, parents mentioned that doing something about the child’s weight now could help the child in the future. For some parents, having a healthier weight was important because their child would have a better body image and would improve their self-esteem.

Hopefully making healthier choices will result in weight loss and looking better, and feeling better about herself. (Beth)

They see their friends at school, when they’re younger they don’t understand genetics. So they start getting like “why do I have a bigger belly than her?” Or “why are my legs bigger than hers?” and it wasn’t an issue, but it would be brought up. And I think having poor body image in 2nd grade is ridiculous. (Jane)
For others, having a healthier weight is important because they will be able to shop
for clothes more easily.

I would be thrilled that we could just go into the store looking for pants and I wouldn’t
have to think “Well if we get this size that’s way bigger and I cut the bottom off of the
pants and then we tuck some of this in here...” It would just be like “You want those
pants? That’s fine. Get them.” That would be probably the most exciting part. (Carol)

For others, having a healthier weight is important because their child could avoid
health problems in the future that their family has had to deal with.

I’m diabetic, and I know that if you can lose weight you can control the diabetes a little bit
more. And I know that I became diabetic very early, not during childhood or anything like
that, but while I was pregnant. And I don’t want my kids to have to deal with that, so if I
can head it off right now and give them a lifetime of eating correctly, maybe they won’t
become diabetic until late, late in life. (Anne)

In the long run if you don’t control your weight I know she could get into the part where it
becomes more of a health issue. So you have to control it for that too. (Gina)

But for many, managing their child’s weight was important to help their child avoid
weight-related negative comments and bullying, or to make it easier to have friends and date
later on. This demonstrated the social stigma that overweight children are exposed to, even at
such a young age.

I’m sure there are physical complications to her weight now, but I think mostly most of
her problems at this point are more social rather than physical. I think it’s much more
stigmatizing for women, because my son doesn’t get teased even though he’s a bit
overweight too. (Gina)

No one wants to be the one that kids don’t pick to be on a team or the boys don’t look at
when she gets older. (Jane)

For parents who were overweight, the concern is that their child will have to worry
about her weight in the future, like the parents did for themselves currently.

But when I have her go through all this stuff that I am going through now, you know
health wise and how I’ve had to lose a lot of weight, I tell myself “why have here go
Parents Experience Feelings of Responsibility and Sometimes Guilt About Causing Child’s Excess Weight and Helping Child

Many parents communicated the blame and guilt they experience as parents of children with excess weight. These emotions were often very strong, probably as a result of measuring parenting success by looking at the child as a person, and in this case, their weight. Many parents were able to recognize their child’s limited power in terms of nutrition because they do not buy the food in the house, parents do. In fact, many parents brought this up at the beginning when telling their child’s weight history as an attempt to remove the blame from their child.

We’ve discussed healthier eating habits over the last couple years, but it never really stuck. I don’t think it’s not her fault really. It’s the food that’s provided to her. (Beth)

Jane recalled an incident during the first time she did KIDS CAMP and was faced with how she managed her child’s nutrition before she learned about portion control:

I remember that during the first class, you have you have to fill out a 24-hour recall of all the food you ate in a day. At the end of the program, when they brought those back out, I was ashamed. I was like “Oh my god, I let my kid eat all that food?” After learning portions and what they should be, I was ashamed that I let my kid eat that. (Jane)

This feeling of responsibility that parents experienced in relation to their child’s weight was not always about having caused the weight, but also about needing to help the child. It is as though assuming responsibility to help their child is part of the role of a parent, and that if they fail to do so, then they experience great distress. This was the case for Anne, who felt bad about not knowing what to do to help her daughter:

I know she’s overweight, and I know she needs some help to get it off. I’m trying to figure out ways to help her, but I don’t know exactly how to help her. (Anne)
Parental Perception of Whether Mental Health Professionals Could Help Pediatric Weight Management, And If So, How

Parents varied greatly concerning their previous experience with mental health professionals. While parents were not asked about their previous experience, many who had experience disclosed it and appeared more open to mental health professionals being incorporated in childhood overweight treatment. These parents tended to cite general benefits of seeing a mental health professional, such as confidentiality and having the perspective of a person who is unbiased and uninvolved in the issue.

I think that counselors can be extremely beneficial to everybody. And I think it might be good to have a counselor that was there that could talk to my daughter, whether is was at KIDS CAMP or wherever, because sometimes people feel more comfortable talking to an unbiased, neutral party than they would to their family member. Maybe my daughter is really conscious of her weight, but she’s not saying it to me and therefore I have no idea. So I think it would be good. (Carol)

Many parents who shared their worries about their child facing negative comments or bullying at school brought this up when asked about how mental health professionals could help. They usually said it would be good to help their child cope with such situations.

It might be helpful in terms of having my daughter deal with the people that tease her. I know they talk about bullying at school, but I don’t think it’s really brought up in terms of people teasing you about your weight and what you should do about it. (Gina)

Some parents went beyond the potential that mental health professionals could help their child and extended it to them. They said it would be good for parents to learn how to cope with some issues as parents, such as how to help their child face negative comments from others, or how to deal with the guilt parents experience for their child’s weight.

It would be for parents to know how to handle the comments others make to their children as well and how to handle feeling guilty about their child, you know, the “what have I
done to my child?” feeling. I think that would be good to help be comfortable with yourself. (Harry)

Although most parents made suggestions, some parents were more skeptical about the necessity to have each child in a program meet with a mental health professional because not all of them needed it or they simply did not view weight as related to mental health.

I just don’t think it’s an emotional problem. I don’t think I eat because I’m emotional. I think we just like food a lot and I think she’s just learning from what’s being supplied to her. (Beth)

Others mentioned how they would like just to meet as a group with other parents. One parent in particular expressed significant distress and embarrassment about her child’s weight and at a loss about what to do. This made her open to anything that could help, including mental health professionals and group discussions.

I could spill my guts to them [mental health professionals] every week and cry and go home and feel better. I mean, that would help. But, they’re supposed to have group discussions I believe. I was really looking forward to that. It’s just I want to hear what everybody else is saying before I before I start thinking that there’s nothing else I can’t really think of that could help? I’m at a like a stop here, and I don’t know where to turn now. (Fiona)

**Categories Emerging from Structural Analysis**

This section focuses on the structure of the participants’ experience as parents of overweight children by answering the “how” and the “why” of the content of each parent’s experience. The categories that emerged from this analysis address how parents perceived their child’s current weight, why they believed their child gained weight, what contributed to their child’s weight gain, and how they expect their child’s weight to be in the future.

**Categorization of Child’s Weight: Parents Describe Their Child as “Overweight”**

All parents recognized that their child has excess weight, and most referred to their child as “overweight” without any prompting. No parents called their child obese or fat, but
the words “heavy”, “chubby”, “flabby”, and “big” were commonly used to describe the child’s weight or appearance.

*Weight History: Parents Recall Their Child’s Weight Gain and Associate It with School, Illness, and Genetics*

There were considerable differences in the way parents described their child’s weight history and the pathway for their child’s weight gain. Many parents claimed that their child was of normal weight or only slightly overweight until they started attending school. At this point their child either put on weight either very quickly during an early childhood growing spurt, or more gradually over the first few grades of elementary school. While some parents explained this weight gain in terms of their child’s change in lifestyle due to the demands of school, others made no mention of this.

He was always a solid baby, a solid toddler. He wasn’t fat, but he was heavy. But he wasn’t like flabby like he is now, you know overly heavy. And he stayed pretty steady. Then, once school started and he was in kindergarten all day, they have recess for a half hour a day and then the rest of the time he’s sitting. And that’s where it started. (Fiona)

It seemed like after she started into school she didn’t get quite as much exercise, and so it’s been steadily going up and up and up. (Anne)

She started off actually being very, very tiny. She was little. I’d say that she probably started to grow at age 4. I mean, she went through maybe three clothing sizes within six months. Not just weight gain, but height also. She just grew. And then from then on gradually just started putting weight on. When I would consider her overweight would have been probably second to third grade. (Beth)

A considerable amount of parents found correlations between their child’s medical problems and high weight gain. While none of these parents were convinced that there was a causal relationship between either the medical problem or the medication prescribed for the problem and the initial weight, they all considered this weight gain to be somewhat out of the ordinary and made efforts to inquire with their doctors about the potential relationship.
Her weight was fine until she was 3.5 years old and she started having trouble with asthma and sinus trouble. She had her tonsils out, and after that we noticed her weight crept up and we don’t know if it was from the steroids in the inhalers making her hungry, or lack of exercise because she was having the trouble with asthma problems, but gradually it kept getting worse and worse and worse. You could look at pictures in our photo albums and see “before tonsils” and “after tonsils,” and there’s a huge difference. There’s some kind of correlation there. So we just thought maybe she would grow out of it and start to plain off. That didn’t happen, so we thought that a nutrition program would be something beneficial to her. (Jane)

When she started taking that medicine [for tremors], she got really big really fast. And I asked our doctor about that, and she said “we don’t know that that’s a side effect. (Carol)

He was diagnosed with asthma when he was two years old and he has been on a lot of medication like steroids for that. But its been about two years now and he’s really not had anything asthmatic problems. He takes a preventative medication but I’m sure that has affected him also. I’ve taken him off it for a little bit and have him a few months without taking medicine, and I’m sure that has helped his weight also. (Erin)

At the same time, some children just grew steadily and did not appear to be gaining weight disproportionately to their height. Erin’s child was always above average in both height and weight, and he just kept on growing steadily.

From when he was a baby, he was always in the high percentage of height, weight, everything. So he followed the same curve that he’s been on, but now that he is 10 years old, the doctor told us that he weighs too much. It’s not like he just started gaining weight when he entered a certain grade or age. This is something that we’ve kind of known pretty much since he’s been born. (Erin)

Knowledge of Energy Imbalance: Parents Recognize the Impact of Nutrition, Physical Activity, and Metabolism on their Child’s Weight

Regardless of the story for their child’s initial weight gain, all parents mentioned nutrition and physical activity as either a cause for their child’s excess weight or as solutions to manage their child’s weight. This was to be expected because all parents had registered their child in a nutrition and physical activity education program, but it was also evident throughout the interviews as all parents readily discussed nutrition and physical activity in
relation to their child’s weight. In many cases, parents discussed the balance between
nutrition and exercise and how their child needed to change one or both sides of the equation.

I’m assuming she is like this because she doesn’t have a lot of exercise. Of course, she
does overeat too. (Anne)

The end result basically is that it has something to do with our exercise and what we’re
eating, and we need to deal with it now. (Carol)

We told him that he needs more exercise or that he needs to eat less, especially now that
he doesn’t want to participate in athletics too much. (Irene)

Some parents also demonstrated their understanding that metabolism is another factor
that can mediate energy balance and weight. This is was especially evident when
rationalizing the difference in weight between their multiple children.

And my other child, my son, he’s not overweight at all. And the same food is there for the
both of them, but he has a higher metabolism. He’s really active too and it doesn’t seem to
bother him what he eats, which is so aggravating for her that he can eat anything he wants
and never gain weight, because she’s careful but it doesn’t seem to work that way for her.
(Beth)

Others understood weight as a result of genetics, but nonetheless recognized that
improving physical activity or nutrition habits could help.

I think some people are just destined to be bigger than other people and that a lot of it is
genetics. My whole family is big. Her father’s whole family is big. The likelihood that our
children would be thin is pretty slim I think. But she definitely could lose weight. I know
what she should be eating and I do feed her nutritional food. It’s just she eats two or three
helpings of it rather than one. (Gina)

*Weight in the Future: Parents Are Hopeful that Their Child Can Maintain Their Weight with
a Bit of External Help*

Most parents shared their hope that their child maintain their weight or lose weight. In
Erin’s case, this hope appeared to be a combination of what she wants for her child and what
she has seen happen to other children.
I tell him not to be discouraged. I point to people I know or I’ve known as a young 10 or 11 or 12 year old who were the same way he is. They were a pudgy kid and now they’re a tall thin slender, muscular kid. I think once he grows, he’s going to even out. I really do believe that, he eats actually pretty good. I just hope, I hope, I hope. (Erin)

In some cases, this hope was contingent on receiving external help, such as enrolling in a nutrition and exercise program like KIDS CAMP that provides support and accountability to someone outside the family. For example, Gina talked about how doing weight management as a family would help, but that it might not last beyond KIDS CAMP.

It will last as long as KIDS CAMP lasts. The problem will be after KIDS CAMP. Maybe we can just come up with our family goals for the week if we get in the habit of doing “this is the goal for the week,” then we can continue without it. But the problem would be that not having that outside influence. (Gina)

Other parents were not as hopeful.

I had to answer a question on a survey that was like “how sure do you feel of your child that he has the ability to lose weight?” and I had marked mine like, completely unsure/middle of the road. (Irene)
CHAPTER IV

DISCUSSION OF RESEARCH FINDINGS

Benefits of Knowing How Families Experience Childhood Excess Weight

Although this research was conducted on a small scale with a rather homogeneous sample in cultural terms, its findings have implications for caregivers of children with excess weight, their children, and all individuals involved in prevention and treatment of childhood overweight and obesity. Several studies reviewed in the literature have found parents to be essential participants in a child’s weight management. Certainly, the findings from this study demonstrate the importance of understanding their conceptualization and experience as parents of children with excess weight. Parents concerned for their child’s weight and willing to learn how to help their child deserve to be supported, but also heard. After all, they are the ones that have been trying to manage their child’s weight for several years. While they feel like they were unsuccessful in this task and look to health professionals for guidance, we should view them as partners who know much about their children’s weight management. The findings confirmed that parents may have tried more strategies than can be imagined or struggle with problems that cannot be imagined.

Thus, when considering the application of the findings from this study to treatment programs, the most important conclusion from this study is that conducting interviews such as the ones performed in this study would be beneficial to inform, individualize, and improve the efficiency of treatment programs. The information collected during the interviews was so rich that it would be negligent to not take the time to have such discussions with parents either privately or in groups. That being said, it would take a confident clinician or group
leader to conduct such sessions, as parents sometimes revealed emotions that were surprisingly deep and touching.

KIDS CAMP, the nutrition and exercise program in which families were about to participate in, required families to undergo an initial assessment focused on nutritional and physical health information that touched only very slightly on weight management motivation and goals in the form of a quantitative questionnaire. While this is better than not performing any assessment, it fails to address the parents’ concerns, expectations, and barriers, which this research demonstrated may vary from parent to parent. Some parents were more affected than others by their child’s excess weight, which may have been because of their experience of weight-related stigma, their heightened sense of responsibility toward their child’s weight, or simply because of their lower ability to cope with parenting challenges.

These differences matter because they are components that would be helpful to know when attempting to create a positive clinical relationship with a family seeking external support for their child’s excess weight. The creation of this positive clinical relationship is the essence of this research project, because a good clinical relationship can increase the motivation of the participants and improve communication between the treatment providers and its clients. It appears as though the overall effect of this would not only be higher retention rates, but also greater efforts on both parties to collaborate and reach joint goals. In other words, the argument put forth here is that the importance of knowing the parents’ experience and creating a good clinical relationship with them would probably increase the engagement of families in the treatment process. Trying to help families without knowing the
parents’ concerns, expectations, and barriers they face thus implies that treatment providers have to guess how to engage families.

Although this research shares the essence of some individuals’ experience as parents of children with excess weight, we should not assume that this experience applies to all parents. Rather, the study demonstrates the importance of taking the time to ask parents about their experience before engaging them in treatment. While the researcher did not ask parents to share their experience of the interview itself, all parents appeared to appreciate the experience and enjoy discussing their role as a parent dealing with an overweight child, as they often said so at the of the interview. This might be because taking the time to ask parents about their experience suggests that their experience is valued and important to the treatment of their child’s excess weight in some way. If nothing else, this is a good first step on which to establish a positive clinical relationship with the family.

One of the underlying assumptions of this research project was the suggestion that perhaps childhood obesity and overweight treatment programs are not as effective as they should be because they do not know the families they are trying to help very well. This assumption was put forth by Poskitt and Edmunds (2008), two experts in the field of childhood obesity, and it appears as though it was confirmed by the results for two reasons. The first is that some parents in this study revealed specific challenges to weight management which are not addressed by most treatment programs. An example of this is a parent who revealed she had not taken her child to the doctor in 5 years for fear of what the doctor would think about the parent letting their child’s weight get so out of hand. This represents a serious barrier to any health-based weight management, let alone hospital-based programs run by doctors. In this parent’s case, the KIDS CAMP program may have been an
excellent fit in the sense that it was advertised through schools, and its description was presented in terms of education rather than assessment and made no mention of medical staff involvement. The point is that if no one asked, this barrier to improving the child’s health would probably never be considered.

The second reason that Poskitt and Edmunds’ assumption was confirmed by the study is that parents revealed taking different approaches to their child’s weight management than one might expect. This was reflected in the way in which they presented KIDS CAMP to their child and convinced them to participate. Many parents presented the program as a fun opportunity to exercise and to learn about nutrition for the whole family rather than identifying the child as the target client in attendance. This reflected the parents’ fear of making the child think they are overweight and mirrored their attempts to change nutrition and exercise habits without relating these actions to the child’s weight. The implications of this are that programs targeting overweight children who approach lifestyle changes with weight goals in mind would inevitably conflict with these parents’ approach. This may not necessarily have a negative impact on the family because discussing the child’s weight openly may be beneficial, but it may also cause the parents to feel like the program was a poor fit if this was never discussed previously with the parent.

The Challenges of Family-Based Pediatric Weight Management

The findings from this research also demonstrate the large impact that a child with excess weight can have on the parenting experience and the family’s lifestyle as a whole. In a way, it may seem obvious that a child’s change in nutritional and physical activity habits would affect his or her parents, and perhaps siblings or other family members living under the same roof. This is because most families in modern culture do not expect children to be
responsible for feeding themselves and being physically active, and because nutrition and physical activity are essential components of human life that occur continuously. Therefore, parents are responsible for the provision of food and opportunities for physical activity, which in turn affect their child’s energy balance. Parents have this responsibility for all other children in the household as well, thus requiring parents to balance the nutrition and physical activity needs of the overweight child with that of other overweight children in the house, let alone their own. This reinforces the importance of addressing pediatric weight management from a family perspective rather than a child-only perspective.

Perhaps, parenting an overweight child challenges parenting skills because it requires the consistent implementation of boundaries as well as the courage to change one’s own behavior. Certainly, focusing more closely on both the parents’ ability to implement boundaries on their child’s behavior and their ability to change their own behavior may provide pediatric weight management providers with beneficial information to predict the family’s success in treatment and perhaps address weaknesses in both these areas. However, results from this study suggest that parents certainly do not feel confident that they can do what they need to do to help their child, and perhaps this is what pediatric weight management programs are not addressing.

In terms of parenting, the fact the parents perceive a problem with either their child’s nutrition or physical activity habits requires additional effort in monitoring such behavior and additional challenges in the parent’s quest to succeed as a caregiver. This was evident when parents spoke of the difference between their child with excess weight and their children with normal weight, because the overweight child required specific attention to nutrition and physical activity that may be unnecessary for children of normal weight. While some parents
welcomed these additional responsibilities and viewed them as simple motivators to become a healthy family, other parents did not cope well with this challenge and experienced significant worries about their child’s well-being, let alone their own. This was evident in one case where this burden became so heavy for the parent that the parent cried during the session when describing her difficulty supporting her child’s weight management. In this case, she recognized that individual consultation with a mental health professional would be helpful, which would certainly affect treatment delivery. The following section addresses the implications of this research for mental health professionals working with obese and overweight children.

Participation of Mental Health Professionals in Pediatric Weight Management Programs

Some pediatric weight management programs presented in the literature review attempted to address family functioning as a whole. Providing families of obese and overweight children with family therapy and psychoeducation on parenting skills and family functioning is one way to focus on the child’s family environment. This provides the child with support at the family level to put into practice the lifestyle changes their doctor has recommended for them. The rationale for providing such services to families with obese and overweight children is based on the premise that “facilitating family functioning whether impaired or not, improves chances of maintaining a socially and medically acceptable weight, regardless of individual genetic susceptibility.” (Novicka, Pietrobelli, & Flodmark, 2007) This may be explained by the following pathway: as family functioning improves, the obese child’s most critical source of support becomes more stable, reliable, and effective. In other words, family therapy and family functioning education help family members be more supportive for their child.
Some have suggested that family therapy is more helpful for obese children than individual counseling is (Ganley, 1986). This conflicts with the opinion of parents who thought that providing children with the opportunity to talk privately with a mental health professional and away from a family member would be beneficial to let the child express the worries and concerns they experience but are not comfortable sharing with their parents. Additionally, Ganley’s (1996) research does not imply that family therapy is more beneficial than individual counseling for parents of children with excess weight. This present research project demonstrated that some parents have significant difficulty coping with their child’s excess weight, suggesting that family therapy and family functioning education may not be sufficient because it does not necessarily help the parents cope with the guilt they experience. Family therapy also does not appear helpful to the many parents who avoided discussing weight with their child for fear of making the child feel inadequate. This is supported by the findings of Jackson et al (2005), who discussed the “need to avoid turning the home into a negative site of focus on weight for their child.” Therefore, perhaps family therapy is more appropriate for families who take a particularly open approach to weight conversations.

Moreover, there was at least one parent who suggested individual counseling would be helpful for her. This suggests that making individual mental health services available would be beneficial. Others suggested that talking to other parents in a setting similar to group counseling or a support group would be helpful for parents to exchange strategies and to see how other parents coped with this experience altogether. Such groups would probably best be conducted by a combination of health and mental health professionals, as is the case in Israel et al’s weight management programs targeted entirely toward parents.
Research Limitations & Considerations for Future Research

Research limitations include the sample, which was small and not especially diverse. These are limitations because the essence of the experiences of parents of children with excess weight described in this study are those of parents from a specific demographic group. This demographic group’s experience is rooted in the structure of their lives in cultural variables, including SES, race, age of children, and number of siblings. Thus, even though the themes from this research may inform pediatric weight management for families from various backgrounds, they should not be assumed to apply to parents from other demographic groups because the conclusions are not descriptions of these other groups’ experiences. Expanding the number of participants in the study could have increased the study sample’s diversity and given the themes more credibility.

Another limitation was not knowing each child’s exact weight or weight category. This is because some children appeared to be heavier than others, and this appeared to be related to the distress parents experienced about their child’s weight. Essentially, the heavier the child, the more concerned the parent. This appeared to be because the child’s weight status appeared to be more out of control and less manageable, thus reducing hopes of normal weight in the future and more urgency about engaging the child in successful weight management now.

Perhaps, future research should distinguish between children’s ages more, as parents of younger children appeared to be able to motivate their child and engage them in weight-related behavior change more easily. This is because the younger children’s lack of knowledge made it easier to convince them that the program was for the family than for their weight. Thus, parents could engage the child in family changes and support them without
addressing the true reason for changes, which as discussed earlier, is not a topic parents are inclined to discuss with their child unless they must do so.

Conclusion

Primarily, this study demonstrates the value of learning about the parent’s experience of their child’s excess weight to engage families in pediatric weight management. The findings reveal how health practitioners can improve parental support of their child’s weight management by addressing the issues parents care about and helping parents overcome the barriers they experience. Although some of the parents’ needs appear to be addressed by current family-based pediatric weight management programs, many others do not. For example, many programs address how parents feel like they lack knowledge about age-appropriate portion sizes, calorie requirements, and internal hunger signals. However, few programs address the parents’ report that they lack the behavioral management and motivational skills to engage their child in healthy weight-related behaviors. Additionally, many programs should consider collecting information that was crucial in understanding the parents’ experience in this study. This includes how parents perceive their child’s weight, what motivates them to support their child’s weight management, how well they feel they are fulfilling their role as a parent in this issue, and what they feel they need help with. The results also suggest how mental health practitioners can be incorporated into such treatment programs to help families cope with excess weight childhood and address a component of treatment programs that is evidently given less attention than it deserves.
APPENDICES
APPENDIX A

RECRUITING SCRIPT FORM
How Parents Conceptualize and Experience their Children’s Weight Problems: Implications for Mental Health Practitioners

My name is Antoine Beauchemin and I am a Graduate Student at Kent State University. I want to do research on how parents view and experience their children’s weight.

All parents whose children are participating in KIDS CAMP are eligible to take part in the research. The study involves one face-to-face interview and one follow-up phone interview. The face-to-face interview will last about 1 hour and the phone interview will last about 30 minutes. You will be provided $30 to thank you for your help.

If you are interested in participating, please complete this form and return it to me before you leave today, or contact me at (330) 524-6766 if you would consider participating later on.

Phone Number: __________________________________________________________

Days & Times available for interview: ________________________________________

To be filled by Researcher:

Parent #: _____

Adult, Counseling, Health, and Vocational Education
P.O. Box 5190 • Kent, Ohio 44242-0001
330-672-7977 • Fax: 330-672-3063 • http://www.ehhs.kent.edu/achve
APPENDIX B

CONSENT FORM
CONSENT FORM

How Parents Conceptualize and Experience their Children’s Weight Problems: Implications for Mental Health Practitioners

I want to do research on how parents view and experience their children’s weight problems. I want to do this as a thesis project to contribute to research on effective services for families of children with weight problems. I would like you to take part in this project. If you agree to do this, you will be asked to maintain an active involvement in the research for the duration of the data collection process, which is anticipated to be approximately 1.5 hours over the course of 1 week. This includes one face-to-face interview and one interview over the phone. The face-to-face interview that will last about 1 hour and the phone interview will last about 30 minutes. Involvement will also include review of research data, including interview transcripts.

This research involves interviewing you about your views and experiences. Some people find that talking with another person about their personal life can lead to new insights and understandings about themselves. While this may be positive, it could also cause distress. If you experience distress while engaging in this study, I will assist you with identifying and contacting local resources for mental health services.

This research also involves revealing personal information about yourself. Your participation in this study will be confidential and the recording, questionnaire, and
transcription from our interviews will be stored in a secure location. Tapes will be erased upon completion of the research project. You will be assigned a coded name in the study and will be identified only by your relationship to your child (i.e. mother, father), your child’s age, your child’s gender, your ethnicity, and your income level. While I will not divulge your participation, others whom you make aware of your participation may be able to identify you by these identifying characteristics. If I believe that you pose a danger to yourself or others or if you disclose ongoing child or elder abuse, I will break confidentiality and notify the local authorities. Notes and transcriptions of our interviews will be stored in a secure location and tapes will be erased upon completion of the research project.

If you take part in the project and maintain your involvement throughout the entire process of data collection, you will have provided a great service to my research efforts and may gain increased personal awareness of how you view and experience your child’s obesity. You will be provided $20 as thanks for participating in the face-to-face interview and an additional $10 for participating in the phone follow-up.

Participation in this project has no impact on your participation in the KIDS CAMP program. Taking part in this project is entirely up to you, and no one will hold it against you if you decide not to do it. If you do take part, you may stop at any time. You are free to refuse to answer any questions which make you uncomfortable.

If you want to know more about this research project, please call me (330-524-6766) or my advisors, Dr. Jencius (330-672-0699) or Dr. McGlothlin (330-672-0716). The project has been approved by Kent State University. If you have questions about Kent State University’s rules for research, please call Dr. John West, Vice President of Research,
Division of Research and Graduate Studies (330-672-2704). You will receive a copy of this consent form.

Sincerely,

Antoine Beauchemin, B.Sc.
Master’s Candidate, Kent State University

I agree to take part in this project. I know what I will have to do and that I can stop at any time.

_________________________________      ___________________________________
First Name      Last Name

________________________________
Signature       Date

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APPENDIX C

AUDIOTAPE CONSENT FORM
AUDIOTAPE CONSENT FORM

How Parents Conceptualize and Experience their Children’s Weight Problems: Implications for Mental Health Practitioners

I __________________________ agree to audio taping
at _______________________________________
on _____________________________________________.

_________________________________________ Date

Signature

I have been told that I have the right to hear the audiotapes before they are used. I have decided that I:

_____want to hear the tapes   _____do not want to hear the tapes

Sign now below if you do not want to hear the tapes. If you want to hear the tapes, you will be asked to sign after hearing them.

Antoine Beauchemin and other researchers approved by Kent State University may / may not use the tapes made of me. The original tapes or copies may be used for:

_____ this research project   _____ presentation at professional meetings

_________________________________________ Date

Signature

Address:

Adult, Counseling, Health, and Vocational Education
P.O. Box 5190 • Kent, Ohio 44242-0001
330-672-7977 • Fax: 330-672-3063 • http://www.eihhs.kent.edu/achve
APPENDIX D

DEMOGRAPHIC QUESTIONNAIRE
DEMOGRAPHIC QUESTIONNAIRE

Please complete the following regarding the child registered in KIDS CAMP:

1. Your relationship to your child (i.e. mother, father, etc): _______________________

2. Your ethnicity: ________________________________

3. Your approximate household income level: ________________________________

4. Your child’s gender: __________________

5. Your child’s age: _______

6. Your child’s ethnicity: ________________________________

7. Do you have other children living in your household?  Yes  No
   a. If yes, how many and how old are they?

________________________________________________________

Date:

Parent #:
APPENDIX E

FACE-TO-FACE INTERVIEW GUIDE
1. Please tell me about your child’s weight history.

2. How do you feel about your child’s weight?

3. How does your child’s weight affect you?

4. What do you do about your child’s weight, if anything?

5. How do you think mental health professionals could help you or your child in the process of improving your child’s health?

6. Is there anything you would like to add?
APPENDIX F

FACE-TO-FACE INTERVIEW GUIDE ADDENDUM
Note. The following questions were included into the original interview protocol after completing a few interviews. They were asked in this order between questions #4 and #5 of the original interview protocol.

1. How responsible do you feel for your child’s weight?
2. Do you feel guilty about your child’s weight?
3. What challenges have you encountered when trying to help your child’s weight management?
4. What would help you support your child’s weight management?
APPENDIX G

BRACKETING EXPERIENCE
BRACKETING EXPERIENCE

This text introduces the researcher’s bracketing experience through a description of the development of the research project as well as the researcher’s perspective on the research topic.

Researcher’s Perspective and Experience on the Research Topic

In an attempt to bracket out any pre-existing views on the research topic as much as possible, the researcher provided the following description of how the ideas for the research project came about and how he experienced the research as an interviewer.

“My research project concerning parental perceptions of their child’s obesity has stemmed from a combination interests in health psychology and community counseling. I feel strongly about the fact that holistic healthcare begins with the integration of health care resources, and I believe that the collaboration of health practitioners is a first step toward such integration. This would ensure that the wellbeing of patients is addressed from various perspectives and that their most immediate needs are addressed by experts in their field. As a Community Counseling student, I am interested in how health problems affect the mental health of patients and their families and therefore how mental health practitioners can help families cope with health issues. During my undergraduate studies I had had the opportunity to conduct research investigating the motivational profile of morbidly obese adults awaiting gastric bypass surgery. Childhood obesity thus presented itself as an especially fascinating topic for research because it was a combination of my clinical interests and my previous research experience.

As I began reading about childhood obesity and overweight, I learned that the treatment of childhood excess weight involves all family members because of the impact that
the home environment has on the child’s weight and lifestyle. I chose to focus on parents of children with excess weight because I was shocked by the few studies discussing the emotional burden that some parents carry as a result of their child’s obesity. This made me wonder whether parents were able to support their child’s obesity treatment without receiving support themselves. Unfortunately, I found no programs that specifically addressed this issue with parents, and few programs that provided any mental health support to either parents or children. At the same time, I read about how many childhood obesity treatment programs knew very little about the population they were working with. This motivated me to learn more about how parents perceived their child’s excess weight and whether they saw the potential contribution of mental health support as beneficial to either themselves or their child before assuming that parents wanted mental health treatment.

While I am conducting this research to fulfill requirements for my master’s thesis, my hope for this project was not only to learn how to do academic research, but also to learn about childhood overweight and obesity, and more specifically, how parents experience having a child with excess weight. My goal was to give the parents a voice in the treatment they make such a great contribution to. To do so most effectively, I hoped to influence their voice as little as possible even though I acknowledged that my presence and question wording would inevitably affect the content of the parent’s account of their experience.

Previous to this research, I had little experience interacting with individuals with excess weight or their parents. I am a white 24 year-old male with some history of obesity in my extended family, but I am in the “normal” BMI range and I do not have children. This therefore makes me an outsider regarding this topic in the sense that I have no personal
experience with excess weight or parenting children with excess weight. In fact, my weight appearance was commented on by a few parents and may have influenced the parent’s responses, though parents were not asked about how my weight affected their interaction with me.

That being said, I am an experienced interviewer and I engage people in conversation rather easily. In addition to being a trained mental health counselor, I have participated in several research projects as an interviewer and have conducted numerous diagnostic interviews. I therefore expected parents to begin discussing weight-related issues, even emotional ones, without much of the awkwardness or resistance that might be expected from such a situation.

Overall, my expectations about what parents would say were thus entirely based on readings of previous research on the topic described in the literature review above. I attempted to keep a fresh perspective on the topic, although it was difficult not to take a mental health professional’s perspective to the parent’s experience. I do not know how this affected the interview process because it is difficult to guess how other interviewers may have done this differently, but I feel my perspective has mostly influenced the fact that I focused on the perception and experience of parents in the first place.”
REFERENCES
REFERENCES


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