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PARENTAL PERCEPTIONS OF BODY MASS INDEX REFERRALS AND
OVERWEIGHT SCHOOL-AGE CHILDREN:
PLANTING THE SEEDS OF HEALTH

by

Misty M. Schwartz

A Dissertation

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Major: Educational Studies

(Educational Leadership and Higher Education)

Under the Supervision of Professor Marilyn L. Grady

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PARENTAL PERCEPTIONS OF BODY MASS INDEX REFERRALS
AND OVERWEIGHT SCHOOL-AGE CHILDREN:
PLANTING THE SEEDS OF HEALTH

Misty M. Schwartz, Ph.D.
University of Nebraska, 2009

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It is well documented that there is a worldwide epidemic of obesity in children. To address obesity in children, emphasis must be on factors within family, school, and community environments. Although most parents and school officials are aware of the problem of overweight children, there is little data available to guide decision making about the acceptability of school-based Body Mass Index (BMI) screening and referral programs. As states mandate BMI screening and referral, parental insight is essential to determine the efficiency and effectiveness of BMI notification.

The purpose of this multiple case study was to explore the perceptions of parents whose school-age children received a BMI referral letter stating their child is overweight. Purposeful convenience sampling was used to obtain 21 participants. A detailed description of each case and themes was developed, followed by cross-case thematic analysis. Eight themes and corresponding sub-themes emerged. The themes regarding parental perceptions were: feelings about receiving the letter, causes of obesity, capabilities, barriers, role modeling, primary care provider response, school's role and health screening process.

Parent's feelings were categorized into sub-themes of positive/neutral, negative, disbelief, or more than one emotion. Specific and general causes were identified. Capabilities included changes in diet and activity and support/communication. Barriers encountered were: financial, lack of time, lack of control, lack of knowledge, other children and age. Provider responses were categorized into supportive/neutral or negative. Role modeling of their own behaviors and the behaviors of others was identified as significant. Regarding the school's role, topics included education,

increasing activity, responsible snacking and parties, and school lunches. Finally, the process before, during and after the health screenings was discussed.

By receiving a BMI notification letter, parents felt a “seed of health” had been planted. The causes were “rooted” deep in the child’s life. The themes and sub themes took on the form of branches and leaves. From these findings “grew” the implications for parents, schools, health care providers and communities.

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CHAPTER 1

INTRODUCTION

“When health is absent
Wisdom cannot reveal itself,
Art cannot manifest itself, Strength cannot fight,
Wealth becomes useless, and intelligence cannot be applied.”
--Herophilus, Physician to Alexander the Great

Context of the Problem

The Institute of Medicine (IOM) (2005) defines an epidemic as “a condition that is occurring more frequently and extensively among individuals in a community or population than is expected.” According to this definition there is a worldwide epidemic of obesity in children. The problem is particularly alarming in the United States (U.S.). In 2001, the U.S. Surgeon General identified obesity as one of the greatest health problems facing the nation (U.S. Department of Health and Human Services, 2001). According to data gathered from the Centers for Disease Control (CDC) in the 1999 National Health and Nutrition Examination Survey (NHANES), about 19% of children and adolescents, or one in five, are considered overweight (CDC, 2007a). The trend appears to be increasing at a disturbing rate. Since the 1970s, the prevalence of obesity has quadrupled among children in the United States (Lobstein, Baur, & Uauy, 2004). In 2005, there were at least nine million children over the age of 6 who were considered obese (IOM). In Nebraska, according to the 2003 Nebraska Behavioral Risk Factor Survey, one in every six (16.2%) students in grades K-12 is overweight while one in every three (33%) is at risk for becoming overweight (Nebraska Physical Activity and Nutrition State Plan, 2005).

This public health crisis does not target any particular population. Although obesity is more often reported in certain populations, it is affecting every part of society. Obesity does not discriminate based on gender, age, socioeconomic group, race, religion, or ethnicity. Federal, state, and local agencies have taken notice and are implementing plans and policies to act on the issue. Private agencies, hospitals, insurance companies, businesses, healthcare providers, and schools also are expected to address the dilemma.

Undoubtedly the current pattern will lead to a rising burden on the nation's health services. According to a study of national costs, healthcare expenses attributed to obesity accounted for nine percent of total U.S. expenditures in 1998 and reached approximately \$92.6 billion dollars in 2002 (Finkelstein, Fiebelkorn, & Wang, 2003). It is estimated that obesity-associated annual hospital costs for children and youth have tripled during the last two decades, rising from \$35 million in 1979-1981 to \$127 million in 1997-1999. It is anticipated that if this trend continues, this figure could reach \$100 billion by 2025 (CDC, 2007b; Wolf & Colditz, 1998). If the number of children who are overweight continues to increase, the health system will not be able to cope with the increased demand for services (Witt, 2004).

Causes and Consequences of Childhood Obesity

Obesity is a complex, multi-faceted problem. It ultimately results from an imbalance of energy consumed (nutrition) relative to the energy expended (physical activity). There are a number of confounding causes such as physiological, nutritional, psychological, behavioral, cultural, environmental, genetic, and social factors (Dietz, 2002; Healthy People 2010; IOM, 2005; Stouffer & Dorman, 1999). Specific examples

of what contributes to the problem in children include insufficient breastfeeding, reduced physical activity, increased television viewing and computer use, increased fast food and soda consumption, increased overall fat intake, increases in sugary and fat-laden foods displayed at children's eye level in supermarkets and advertised on television, decreased fruit and vegetable intake, family eating patterns, and inadequate sleep (Council on Sports Medicine, 2006; Hardy, Harrell, & Bell, 2004; Lobstein, Baur, & Uauy, 2004; Paxson, Donahue, Orleans, & Grisso, 2006; Schwartz & Puhl, 2003). Children with overweight parents are more likely to become overweight themselves, and underlying diseases, such as hypothyroidism or Cushing's syndrome can also contribute (Broadwater, 2002). Environmental factors contributing to obesity are much more compelling in 2009 than they were 30 years ago. Some examples of environmental factors include urban and suburban designs that discourage physical activities, unsafe play areas, reduced access to nutritious foods, and time pressures on families (IOM). Although many of these causes are alterable, it is important to recognize the complex nature of how difficult this problem is to combat.

There are a number of consequences that accompany childhood obesity. Physical, psychological, and social issues that used to be considered adult diseases or illnesses are now seen more often in children. It is estimated that 60% of overweight children have already developed at least one cardiovascular risk factor (e.g. hypertension, hyperlipidemia, or impaired glucose tolerance), and 25% of overweight children have two or more risk factors (Dietz, 2002; Dietz & Gortmaker, 2001). Furthermore, children who are overweight are more likely to become overweight or obese adults (U.S. Department of Health and Human Services, 2001). Obesity in

children is such a threat that for the first time in U.S. history, children in this generation may be the first to have a shorter lifespan than their parents (Olshansky, Passaro, Hershow, Layden, Carnes, Brody, Hayflick, Butler, Allison, & Ludwig, 2005). Table 1 summarizes the complications documented in the literature on overweight children.

Table 1

Consequences of Obesity in Children

General category	Specific consequences
Physical	Cardiovascular Hypertension Dyslipidemia Hyperlipidemia Left ventricular hypertrophy
	Respiratory Asthma Sleep-disordered breathing (sleep apnea) Pickwickian syndrome
	Endocrine Type 2 diabetes Glucose intolerance Insulin resistance Polycystic ovary syndrome Hypercorticism Menstrual abnormalities Early menarche Metabolic syndrome

Table 1 (continued).

Consequences of Obesity in Children

General category	Specific consequences
Physical (continued)	Orthopedic Stress on weight bearing joints Increased risk of fractures Tibial torsion Slipped capital femoral epiphysis
	Skin Intertrigo Monilial dermatitis Acanthosis nigricans
Other	Delayed maturation Impaired balance Idopathic intracranial hypertension Systemic inflammation/raised C-reactive protein
Psychological	Lower self esteem Body image Body dissatisfaction Negative body image Depression Anxiety Perceived lower cognitive ability
Social	Stigma
	Peer Relationships Peer rejection Teasing and Bullying Reluctance to interact with others

Table 1 (continued).

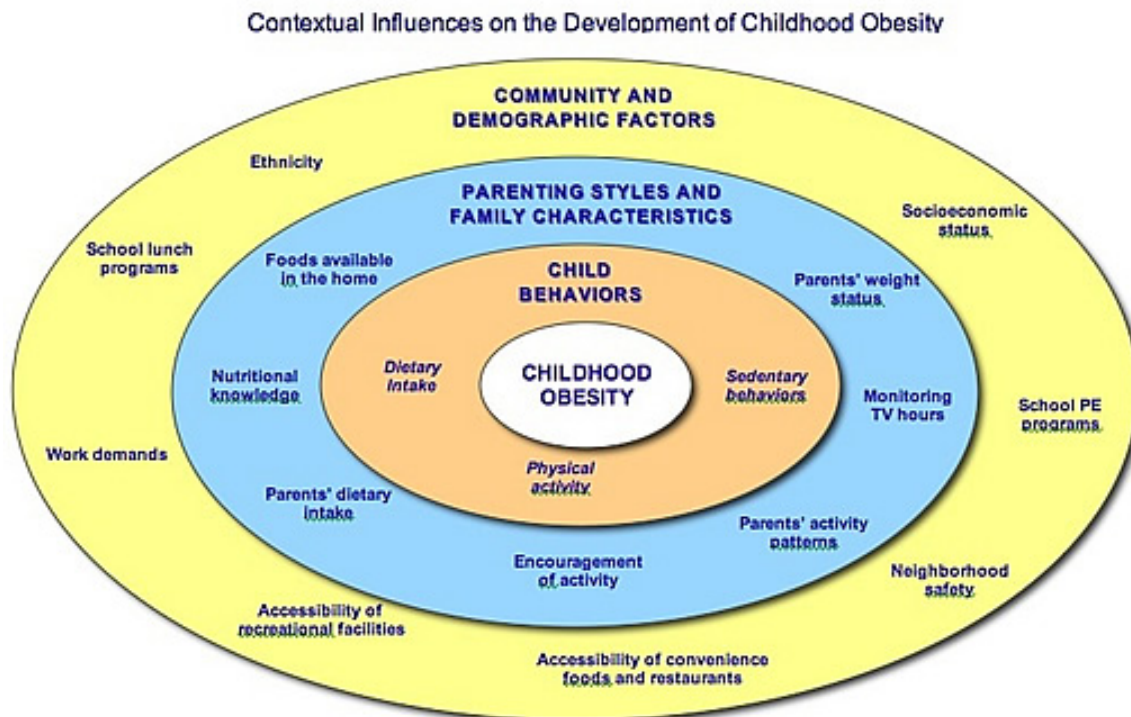
Consequences of Obesity in Children

General category	Specific consequences
Social (continued)	Negative Stereotyping Discrimination Social marginalization
Economic	Direct costs Increased hospitalization costs Increased health insurance costs
	Indirect costs Loss of productivity absenteeism
	Indirect costs (continued) Absenteeism Sick leave and disability pensions Additional costs to educational system

(Broadwater, 2002; IOM, 2005; Lobstein, Baur, & Uauy, 2004; Moran, 2003; Paxson, Donahue, Orleans, & Grisso, 2006; Schwartz & Puhl, 2003).

Statement of the Problem

The Ecological Systems Theory suggests development or change in an individual can not be effectively explained without consideration of the context in which the individual is embedded (Davison & Birch, 2001). When considering a child who has developed obesity, one must include considerations from the family which is embedded within the larger social contexts including the school and community (see Figure 1).



Adapted from Davison & Birch (2001), Obesity Reviews, 2, 159-171

Figure 1

As demonstrated in the figure by Davison and Birch (2001), childhood obesity is affected by the child's behaviors such as dietary intake, physical activity, and sedentary behaviors. Parents influence their child's weight through diet, activity level, and general health activities. They buy and prepare food as well as model eating and activity habits. Parents also provide access to activities and either encourage or discourage sedentary activities such as television viewing or computer use.

Beyond the child's home, school is the most influential environment in the child's life. There is no doubt that schools face intense pressures, but the belief that a healthy body produces a healthy mind can not be ignored. The National Association of State Boards of Education (NASBE) wrote "Health and success in school are interrelated. Schools cannot achieve their primary mission of education if students and

staff are not as healthy and fit physically, mentally, and socially” (National Association of State Boards of Education, 2000). Schools are an important connection between the parents and children in the public health effort to combat the problem of overweight children.

School is a natural setting to influence the health and well being of students (National Association of School Nurses, 2001). There is an established pattern of communication within the school regarding health matters that provides an access to parents. Laws regarding medication administration and immunization requirements are in place and provide an avenue for additional and extensive health interactions. As states institute Body Mass Index (BMI) reporting laws, communication between the school and parents becomes even more imperative. Most parents and school officials are aware of the problem of overweight children in the United States, but there is little empirical data to guide decision making about the acceptability and safety of school-based BMI screening and parent notification programs (Young-Kubik, Fulkerson, Story, & Rieland, 2006). Nurses in the schools are a significant link in this chain. Nurses have established protocols for conducting screenings and their training includes thoughtful and respectful collection of health data (Ikeda, Crawford, & Woodward-Lopez, 2006). For a complex issue such as children who are overweight, parental insight is essential to determine the efficiency and effectiveness of BMI notification letters.

Purpose of the Study

The purpose of this multiple case study was to explore the perceptions of parents whose school-age children had received a BMI referral letter stating that their child is

overweight according to the CDC guidelines. The grand tour question guiding this study was how do parents feel about receiving a letter stating their child may be overweight?

The sub questions included:

1. What are the perceptions of parents regarding the causes and seriousness of children being overweight?
2. What are the perceived capabilities of parents in making changes for the treatment for childhood obesity?
3. What are the perceived barriers to parents making changes for the treatment of childhood obesity?
4. What are the parents perceptions of their roles and the roles of others involved in the treatment of childhood obesity? (Doctors, Nurses, Schools, Community, Government)

Definitions

BMI is a statistical correlation of the relationship between the height and weight of an individual. According to the IOM (2005), it is an indirect measure of body fat calculated as the ratio of a person's body weight to the person's height. When calculating using pounds and inches, a conversion factor of 703 must be multiplied to obtain the BMI (see Table 2).

Table 2

Calculation of BMI

$\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height (m)}^2} \quad \text{OR} \quad \text{BMI} = \frac{\text{Weight (lbs)} \times 703}{\text{Height (in)}^2}$
--

CDC, 2007c; IOM, 2005

For children and youth, BMI is plotted on a growth chart specific for age and gender and referred to as the BMI-for-age (see Appendices A and B). The original growth charts were developed in 1977 by the National Center for Health Statistics (NCHS), and in 2000 the CDC revised the charts using five nationally representative survey data sets from 1960 to 1984 (Flegal, Tabak, & Ogden, 2006). These charts are used to assess underweight, normal weight, risk for overweight, and overweight (see Table 3).

Table 3

BMI Classifications for Children Ages 2-20 Years of Age

Weight Status Category	Percentile Range
Underweight	Less than the 5 th percentile
Healthy weight	5 th percentile to less than the 85 th percentile
At risk of overweight	85 th to less than the 95 th percentile
Overweight	Equal to or greater than the 95 th percentile

(CDC, 2007c).

In 2008, the CDC re-classified the categories of at risk of overweight and overweight, renaming the 85th to less than 95th percentile as overweight and equal to or greater than the 95th percentile as obese. For the purposes of this study, the earlier definitions, as seen in Table 3, will be used since this is the chart the participating parents received with their notification letter.

The two main reasons for identifying overweight individuals are to be able to predict health risks and to provide comparisons between populations (Lobstein, Baur, & Uauy, 2004). “BMI in children provides a consistent measure of obesity across age

groups, correlating with measures of body fatness in children and adolescents” (Caprio, 2006, p. 211). According to the CDC and the NCHS and for the purposes of this study, overweight is defined as any child who has a BMI-for-age on or greater than the 95th percentile for that child’s age and gender (CDC, 2007d). The recommendations by multiple expert committees in the U.S. are that values at or above the 95th percentile should be used as a reference point for children to undergo an individualized in-depth assessment (IOM, 2005; Nihiser, Lee, Wechsler, McKenna, Odom, Reinold, Thompson, & Grummer-Strawn, 2007). For further clarity, much of the literature uses the term obesity as an equivalent to the CDC definition of overweight; therefore, in this study the terms overweight and obesity may be used interchangeably.

The referral letter in general has many purposes, but when used in schools it is a form of communication to parents indicating health screening results. The BMI referral letter provides parents with objective data in order to begin a discussion on weight and health (Vaughn & Waldrop, 2007). For the schools in this study, a BMI referral letter was sent to parents of children who were either at or above the 95th percentile or at or below the 5th percentile based on the CDC growth charts. The letter included some contributing factors, potential consequences, and encouraged parents to communicate the findings to their child’s primary care provider for further assessment and evaluation (see Appendix C).

Delimitations and Limitations

Creswell (1998) describes delimitations as how the scope of the study is narrowed. After receiving approval from University of Nebraska-Lincoln’s Institutional Review Board (IRB), principals from six parochial schools representing diverse

populations and locations in the city signed letters of cooperation agreeing to participate in the study. Each principal sent recruitment letters to all 3rd and 4th grade parents inviting their participation in the study (see Appendix D). The letter to the parents explained the purpose of the study and invited parents who had received a BMI notification letter in the last three years to contact me if they wanted to participate in the study. Each principal also agreed to post recruitment flyers in the school. Fourteen parents volunteered for the study and were interviewed. I filed an additional request to IRB in order to invite three more schools to participate in the study and to extend the distribution of letters sent to include parents of 2nd and 5th grade students. When the process was completed, I had interviewed 21 parents. I did not attempt to seek the perspectives of the children or any other individual associated with the referral process.

Limitations identify potential weaknesses of the study (Creswell, 1998). Due to the nature of qualitative research and specifically case study methodology, the results of this study are not generalizable beyond the sample itself. Although attempts were made to minimize bias, my perspective may impact the data analysis and interpretation. Because I have been working as the Creighton University School of Nursing (CUSON) School Health Coordinator, my responsibilities include the organization and referral process for health screenings; I came to this study with the following preconceived ideas:

1. I have the opinion that parents have an impact on children and their weight through the environment they provide as well as role-modeling. This influence can be positive or negative.

2. The overall health of children is one of the most important responsibilities of society. When a child experiences any form of physical, psychological, or social disruption, they are unable to achieve their full potential. As a nurse and educator it is important to do what I can to re-establish that balance.
3. CUSON has been screening for BMI and sending referral letters since 2002. We have seen a consistent rise in the number of referrals for overweight school-age children, especially around the age of 10.
4. Obesity and overweight is a very emotional issue. Communication involving this subject can be difficult for all those involved, particularly the child, parent, and nurse.

CHAPTER 2

REVIEW OF THE LITERATURE

Literature always anticipates life. It does not copy it, but molds it to its purpose.
Oscar Wilde (Sebastian Melmoth, *The Works of Oscar Wilde*)

The topic of overweight children is prevalent in the literature and media. In response to the alarming rise in overweight children and because it is widely recognized as a public health crisis, much has been written about the problem and ways to address it. However, specific research on the topic of parents' perspective is limited.

Overview of School Screenings

Screening is the practice of investigating children with the intention of detecting potential abnormalities, deviances, unrecognized disease, or identifying those children with exceptionally high risk of developing a disease (Destefano-Lewis & Bear, 2002; Lobstein, Baur, & Uauy, 2004). The advantages of school-based screenings include feasibility, cost-effectiveness, and reaching large numbers of children. Early identification of potential problems can have educational, behavioral, and quality of life benefits (Lobstein, Baur, and Uauy). For families with limited access to healthcare, annual school-based, state mandated screenings may be the children's only exposure to health care professionals and individualized health-related information. Education and health are not only compatible with one another but mutually reinforcing and essential to child development (Evans, Finkelstein, Kamerow, & Renaud, 2005; Young-Kubik, Fulkerson, Story, & Rieland, 2006; Story, Kaphingst, & French, 2006). Therefore, school health services can play a fundamental role in addressing obesity-related issues among students by providing screenings, health information, and referrals to students.

National recommendations for school health screening programs are issued by the Maternal and Child Health (MCH) branch of the U.S. Department of Health and Human Services but much of what is mandated is determined at the state level by legislative guidelines. Each state issues its own recommendations and requirements. Nebraska takes into consideration the recommended screening schedule based on experts in their respective specialties and professional organizations such as the National Association of School Nurses (NASN), American Academy of Pediatrics (AAP), Speech-Language-Hearing Association, and the American Dental Association (ADA) to determine what screenings should be done (Nebraska Health and Human Services, 2005). Nationally, children have traditionally been screened and rescreened for vision, hearing, height, weight, blood pressure, dental needs, and scoliosis. Since many pediatric experts are recommending annual childhood obesity screening, some states have passed legislation requiring schools to assess the BMI status of children and send this information home to parents in a health report card or referral letter. School health screenings are an ideal way to collect data on height, weight, and BMI information about children and then communicate that information to parents.

Obesity/overweight Measures

Routine assessment and recognition of excessive weight gain relative to growth is essential throughout childhood and should be addressed with parents and caregivers (AAP, 2003; NASN, 2001). There are many direct and indirect ways to assess and measure body composition and, as with most measurement tools, there can be advantages and disadvantages to each one. Underwater weighing, magnetic resonance imaging, computed axial tomography, dual-energy radiograph absorptiometry, and

bioelectrical impedance analysis are most specific and accurate measures, but they also require extensive equipment, are very costly, and are impractical for use outside tertiary care settings (Lobstein, Baur, & Uauy, 2004; Skybo & Ryan-Wenger, 2003). Indirect methods for estimating body composition require less training and are easier to perform. Examples include height and weight graphs, weight to hip circumference ratio, skin fold thickness, and BMI. There are no well-accepted standards for measuring overweight children, but of all the measures, including both direct and indirect, the BMI achieves the balance of being simple, convenient, accurate, noninvasive, and inexpensive (AAP; Flegal, Tabak, & Ogden, 2006; Lobstein, Baur, & Uauy; Nihiser et al., 2007).

Little research exists to substantiate indirect indexes used to assess and evaluate body composition, especially in children. A small validation study was completed by Pietrobelli, Faith, Allison, Gallagher, Chiumello, and Heymsfield (1998) to determine if BMI is a valid measure of obesity in the pediatric population. One hundred ninety-eight healthy children had their total body fat and percent of body weight estimated by dual energy x-ray absorptiometry. Multiple regression analysis was completed with these measures with BMI, age, and interaction terms used as independent variables. Results indicated a strong association between BMI and obesity in children with a wide range in age. The researchers were able to conclude that BMI is a valid measure of obesity for children.

In another study, Mei, Grummer-Strawn, Pietrobelli, Goulding, Goran, and Dietz (2002) attempted to validate the CDC's revised version of the age-and sex-specific BMI charts in screening for underweight and overweight in children ages 2-19. They compared three height- and weight- based indices to determine how they predicted

both overweight and underweight. Using data from the NHANES (n=11,096) and three other studies (n=920), they looked at the specificity and sensitivity of the 3 indices. They found BMI best at predicting both overweight and underweight for children and adolescents.

Despite the lack of research and no clear consensus on the best measurement device for overweight children, BMI has been most widely used and supported in the literature. Its routine use in forming an overall clinical impression for children is recommended by the AAP, the American Academy of Family Physicians (AAFP), the NASN, the CDC, and the IOM. Important points from the literature about the use of BMI are: (a) it is a screening tool, not diagnostic; (b) it is valuable to use additional criteria prior to evaluating and treating overweight children (not BMI alone); (c) results should be tracked over time, and single measurements as definitive results should not be used; and (d) other factors such as physical activity level, dietary intake, muscle mass and genetics should be taken into consideration (Flegal, Tabak, & Ogden, 2006; Ikeda, Crawford, & Woodward-Lopez, 2006; Mei et al, 2002; Pietrobelli et al, 1998).

Communication Preferences

Giving patients and families unwanted news is one of the greatest communication challenges facing healthcare professionals. Bad news can be defined as any information that produces a negative alteration to a person's expectation about their present or future state (Buckman, 1984). Based on this definition, parents receiving a letter indicating a child is overweight would be considered bad news.

A qualitative study to determine how parents preferred to receive difficult communication identified nine themes (Krahn, Hallum, & Kime, 1993). The themes

were communication of information, diagnostician, communication of affect, pacing of process, when told, where told, support persons present, contact with child, and separate process from content. Based on the themes, the following recommendations were made: (a) information should be given in a clear, straightforward way; (b) it is important for communication to be done by one individual who has known the child; (c) an empathetic approach should be used; (d) give information in a step-by-step approach allowing the family time to ask questions; (e) the environment should be private and free of distractions; (f) timing is significant with most wanting the information immediately; and (g) families should have the opportunity to have the child present as well as other support people. It is suggested that following these recommendations may help parents deal with unwanted news and may ultimately strengthen the relationships and outcomes for those involved.

In another communication study, parents with children having the non-life threatening deformity, cleft lip and palate, were asked to rate different features of their doctors' communication and preferences for different types of information (Strauss, Sharp, Lorch, & Kachalia, 1995). The researchers wanted to determine what behaviors are most important to parents who are receiving bad news. They found that parents valued providers who were confident, caring, and willing to try to make parents feel better. Parents also expressed the significance of a relationship between themselves and the healthcare provider prior to receiving the news.

The idea of relationship was also present in other aspects of the literature. McGrath (2005) describes communication strategies for delivering difficult news and facilitating decision making in the Neonatal Intensive Care Unit (NICU). The first and

most important strategy is the development of a therapeutic relationship with parents. Other recommendations are ensuring a supportive time and place, providing complete and unbiased information in a straight-forward yet empathetic way, providing parents with information to make decisions, being prepared for emotional responses, and engaging in self-reflection following the interaction.

One may assume that health problems such as obesity that are not immediately life threatening may be easier to pass along to individuals and their families, but there can be emotional, psychological and social issues that go along with this type of information. The way this information is transmitted can have direct and lasting effects on how it is received and dealt with (Fallowfield & Jenkins, 2004; Price, McNeilly, & Surgenor, 2006). Fallowfield and Jenkins summarize common difficulties encountered by healthcare professionals when it comes to disclosing difficult information. A lack of formal education, inadequate guidance once the professionals are practicing in the clinical areas, and difficulties dealing with their own emotions are the main concerns of professionals cited in the literature. Healthcare professionals indicated they need to understand what is important to patients and their families when upsetting news is given in order to refine the communication process.

Price, McNeilly, and Surgenor (2006) examined the literature surrounding the breaking of bad news and introduced a framework that describes the multifaceted role of the nurse within this complex process. Central to the framework is the child, their family, and their unique, individual values, circumstances, and ways of coping. The key roles highlighted are the manager/leader, facilitator/supporter, teacher/educator, and advocate/team leader. The framework focuses on each aspect of these roles and how

they should concentrate on the child and family before, during, and after the process. Some key nursing responsibilities are (a) preparing the information and the setting, (b) organizing the appropriate individuals to be present, (c) showing empathy, (d) allowing time, (e) providing information and answering questions using clear language, (f) giving any follow-up information requested in verbal and written form, and (g) communicating clearly with other members of the health care team.

The purpose of Kennedy-Sheldon, Barrett, and Ellington's (2006) study was to describe difficult communication in nurse-patient interactions from the nurses' perspective. Five themes were recognized and the term 'negative emotion' was a common thread in all five. Healthcare communication can be emotional, and when negative emotions are involved, the communication becomes even more difficult which can ultimately affect the patient outcome. They determined it is important for nurses to be aware of potentially emotional interactions and to prepare for them in order to effectively communicate with their patients.

A three-phase exploratory qualitative study was designed to develop meaningful and relevant messages to children and their families about the prevention of obesity (Borra, Kelly, Shirreffs, Neville, & Greiger, 2003). Four points emerged that can be applied to communications with children and parents regarding obesity. First, parents, children and healthcare providers need to work together. Second, effective communication and support are essential. Third, attainable goals must be set with ongoing encouragement by family members. Self-esteem issues must be addressed even if parents are ambivalent about dealing with the issue. Fourth, tools are needed for promoting fitness. Children and parents both expressed the need for support and

individualized information in either a face-to-face support group or online support through the use of a website.

Since most would assume that parents have the major responsibility when it comes to their child's health, Mikhailovich and Morrison (2007) set out to determine from the literature what is known and what might be helpful for health care providers when discussing a child's weight with the child and parents. Four key factors were identified. First, health care providers should expect a variety of responses from the parents. Second, these parents need information that is clear and supportive and should include information about resources available in their community. Third, parents are often afraid that their child may be stigmatized. Providing an environment that is caring and supportive is extremely detrimental. Finally, avoid the orientation of personal responsibility and acknowledge the social ecology and how it contributes to the problem of obesity in children. This includes communicating in ways that explore the needs of the parents, challenge individualistic responses, and recognize a broad range of determinants contributing to obesity.

The role of the referral letter as a tool for healthcare communication has received very little attention, and overall comparative data are lacking (Linne & Rossner, 2000). Much of the research surrounding communicating bad news focuses on terminal diseases, physical disabilities, or chronic illnesses. Based on the literature, things to consider when communicating to parents regarding a child's BMI are (a) all communication should be respectful and empathetic in its tone, (b) establish a relationship if possible, (c) provide parents with individualized facts and not opinions or judgments, (d) use more than one method of communication (verbal and written), (e)

provide the individual and family with resources, and (f) healthcare providers often feel they need more education and training in delivering difficult health care news, therefore, standardization may help with comfort and confidence. It is well documented that if bad news is communicated poorly it can create negative consequences, but if it is done well it can assist understanding, acceptance, and adjustment. In a potentially emotionally laden topic such as overweight children, every effort needs to be taken to communicate in a way that will not be harmful to any individual involved.

Community, Health Professionals and School Staff Perceptions of Childhood Obesity

There is a consistent consensus that childhood obesity is a community-wide problem, yet little research has examined the public's point of view. Two of the first studies examining public perceptions of childhood obesity were completed in the United States and Australia. In both studies the respondents from the community acknowledged obesity to be a major childhood health threat and that more should be done to combat it. Hardus, van Vuuren, Crawford, and Worsley (2003) claim to be the first to examine community perceptions of the causes of obesity among children and the views regarding prevention. A cross-sectional survey of 315 randomly selected individuals was completed in Australia. The cause of childhood obesity was recognized as multifactorial and seven major categories were identified. The categories were: over consumption of unhealthy food, parental responsibility, modern technology and mass media, children's lack of knowledge and motivation, government neglect, lack of healthy food, and lack of physical activity. The prevention measures were categorized into two groups: government action and children's health promotion. Suggestions for government action included taxation, banning advertising, the provision of safe

recreational facilities and community-wide prevention initiatives. Children's health promotion ideas included healthy eating on television, prevention activities focusing on all children, and schools serving healthy food and requiring daily physical activity.

A study by Evans, Finkelstein, Kamerow, and Renaud (2005) investigated interventions the public indicated were important to combat childhood overweight in the U.S. The results of a survey (n= 1047) found 91% of the respondents considered parents to have the most responsibility for reducing childhood overweight. As for specific interventions, most individuals favored school-based interventions such as limiting unhealthy foods in school vending machines and increasing the amount of time on physical activity and health education. Overall, the respondents opposed tax-based or regulatory strategies such as raising the price of unhealthy foods or standardizing restaurant portions, but there was strong support for restricting junk food/fast food advertising during children's television programming. A significant finding from the survey was 49.5% of the participants indicated it was important for the school to evaluate and record the children's weight in schools but 57% supported sending parents a health report card of their children's weight on a regular basis.

Sutherland, Gill, and Binns (2004) investigated the attitudes of parents, teachers and health professionals regarding the role of the school in preventing childhood obesity. A majority of parents surveyed with overweight children did not recognize their child as overweight or express concern about that weight. All three groups surveyed reported high levels of concern regarding obesity and that controlling food and eating environment was primarily a parental responsibility. Although parents and

teachers indicated schools should be involved, health professionals strongly advised that schools play a major role in obesity prevention.

Schools should play a key role in the battle against obesity because of the amount of time children spend in school. In an integrative literature review, Budd and Volpe (2006) examined school-based randomized controlled trials (RCT) aimed at reducing body weight or preventing weight gain. Significant findings were as follows: (a) few research studies have studied BMI as an end point of school-based obesity prevention interventions, and those that have are more than five years old; (b) many of the interventions that were successful targeted older children; (c) the use of multicomponent, comprehensive, and detailed nutrition and physical activity curricula for the students in higher grades contributed to success; (d) longer intervention and follow up within programs (one year or more) produced greater success than those that were less than a year; and (e) girls often benefited more than boys in some of the specific intervention programs. Two conclusions from this literature review were for older students, classroom instruction and physical education can promote physical activity both in and out of school, especially for teenage girls; and younger children benefit most from programs that reduce sedentary behavior.

Since the literature concerning the responsibilities of health professionals is limited and schools are logical avenue for intervention, Moyers, Bugel, and Jackson (2005) examined school nurses' perceptions of childhood obesity. The researchers wanted to determine what school nurses felt about obesity as a health risk and how they perceived their role in the prevention, identification, and treatment of the problem. A survey of 106 school nurses showed nearly all recognized childhood obesity as

becoming more prevalent and is a major risk factor in many diseases. Most nurses reported schools are not doing enough to combat the issue and comprehensive health curricula in all schools may be part of the solution. Nearly 90% of the respondents indicated discomfort discussing obesity with parents and children. Three-fourths of the nurses stated parents played a major role in causing obesity and parents would not be receptive to help even if offered. The nurses questioned their own competence when it came to providing counseling; therefore, many stated they would provide help only when parents asked.

Based on the literature reviewed, parents play a critical role in helping their children achieve healthy lifestyles and are key players in the prevention and/or treatment of obesity. But schools must also be actively involved in helping parents recognize the problem as well as providing a healthy environment and appropriate long-term, school-based interventions. Healthcare providers working with overweight children are in a position to be a resource and should advocate for healthy environments for children both at home and in school. Finally, the community must play a significant role in implementing interventions to prevent and treat the epidemic.

Parental Perceptions of Childhood Obesity

One of the first steps in overcoming the problem of childhood obesity is to recognize there is a problem. In order for parents to become involved in prevention and treatment of obesity they must be aware that their child is at risk for or currently overweight. Studies are starting to point to the significance of this dilemma.

Myers and Vargas (2000) completed a study of parental perceptions and beliefs about their own child's obesity. Parents of preschool children between the age of 2 and

5 who had a BMI above the 95th percentile were studied. They found that 78% of parents expressed concern about the consequences of obesity but, as in the Sutherland, Gill, and Binns (2004) study, only 35.5% of parents of obese children identified their child was obese. Fifty-three percent of the parents stated they did not have a problem controlling what their child ate and most had not tried to do anything to manage their child's weight.

Baugcum, Chamberlin, Deeks, Powers, and Whitaker (2000) examined factors associated with mothers' failure to recognize when their children are overweight. They asked the mothers to classify the weight status of their child and themselves. Their sample included 662 mothers with varying socioeconomic status, educational levels, race, and geographic location. Seventy-nine percent of the mothers failed to perceive their overweight child as overweight but 95% of obese mothers identified themselves as overweight. Obesity in both the mothers and children was most prevalent in those families with less education (high school or less).

One study set out to examine parents' understanding of excess weight as a health risk, knowledge of healthy eating, and recognition of obesity in their children (Etelson, Brand, Patrick, & Shirali, 2003). An 18 item questionnaire of parents with children between the ages of 4 to 8 was conducted during well-child visits at a pediatric clinic. The findings demonstrated that out of the 83 parents surveyed, all parents had a similar level of concern about the health risks involved with obesity and their knowledge of healthy eating. The groups differed when it came to judgment about their child's weight. The parents of overweight children were the least accurate in describing

their child's weight, with only 10.5% correctly identifying their child as overweight compared to 59.4% of the other parents.

Another study assessed the supportiveness of elementary school-aged children's parents and their perceptions of the role schools have in reducing the prevalence of obesity in children (Murnan, Price, Telljohann, Dake, & Boardley, 2006). Three hundred and forty-four parents responded to a 59-item questionnaire that addressed the three components of the CDC's School Health Index: health education, physical education, and nutrition/food services. Nearly all the respondents indicated that health education (95.7%) and physical education (100%) should be provided weekly. Approximately half the parents (51%) stated children should be allowed access to vending machines if they contained healthy foods and drinks, while 42% said students should not be allowed access to vending machines regardless of the contents. Interestingly, these researchers found, despite the recommendations of many professional organizations such as AAP and AAFP, only about 30% of parents think schools should be measuring and informing parents of their child's BMI.

In 2009, 13 states had legislation requiring schools to monitor BMI and report this information to parents. Murphy and Polivka (2007) determined that there was no research available identifying how parents preferred to receive their child's BMI information. The researchers wanted to gain an understanding of parental insight about the school's role in addressing childhood obesity. A convenience sample of parents with children in an after-school program affiliated with a suburban school district was used. Of the eleven schools participating in the program, 117 parent surveys were collected. Their findings indicated that parents were neutral about whether the schools were doing

enough to alleviate childhood obesity, but 80% agreed that BMI is appropriate for schools to use and that they want to know their child's findings. They also preferred to receive this information about their child from the school via a letter from the school nurse. Sixty percent of the parents indicated that schools should recommend treatment for weight loss only when the children or parents ask for help.

A quasi-experimental post-test research design was conducted to report on parent responses to school-based BMI screening and parent notification programs (Young-Kubik, Fulkerson, Story, & Rieland, 2006). The sample consisted of four schools where all students had height and weight screenings completed. Parents from two schools were sent a letter reporting their child's height, weight, and BMI results along with health information and resources. A survey was then sent to a randomly selected sample of parents from all four schools with 790 parents participating. The closed-ended survey contained questions seeking opinions on school-based height and weight screening, response to the BMI notification letter, perceptions of their child's weight and any other concerns. Seventy-eight percent of the parents indicated it was important for schools to perform height/weight and BMI screenings and for parents to receive that information annually. About one half of the parent sample (n=391) reported receiving the BMI letter and most (80%) reported feeling only slightly or not at all uncomfortable. Parents with children who were reported as being overweight were more likely to report that they were somewhat or very uncomfortable with the information. Fifty-five percent of the parents chose not to discuss the letter with their child, and those that did stated the information was only slightly uncomfortable (15%) or not uncomfortable at all (68%) for the child. Among the parents who received a letter

expressing concern about overweight, only 8% planned on seeking medical services or making diet-related changes. Twenty-five percent of the parents planned to increase the amount of exercise or activities for the child.

To follow up, Young-Kubik, Story, and Reiland (2007) conducted a qualitative study to further explore the opinions and beliefs of parents of elementary school students concerning school-based BMI screening, notification methods, message content, and other health information needs. Seventy-one parents participated in 10 focus groups. The researchers found that most parents were in favor of the schools screening for BMI and that if it was being done, results should be reported to all parents. Most felt the information should be in letter form and mailed directly to the parents but some felt it was acceptable to send the letters home in a sealed envelope addressed to the parent. They preferred the content to be simple, easy-to-understand explanations, and how to interpret the results. Other information they would like to see included is recommendations regarding healthy eating and activities appropriate for all family members. When parents expressed concern for the screenings, their apprehensions involved the location, privacy, and children's behavior during the process. Overall, the findings suggest that parents are most likely to support a screening program that is private and respectful and the information is disseminated at an individual level as well as school community level.

The initial point regarding parent perceptions was that parental recognition and acceptance is essential for any interventions regarding treatment or prevention to be successful (Baughcum, Chamberlin, Deeks, Powers, & Whitaker 2000; Etelson, Brand, Patrick, & Shirali, 2003; Young-Kubik, Fulkerson, Story, & Rieland, 2006; Murphy &

Polivka, 2007). Next, most parents want schools to be involved and to provide a healthy environment. They feel health education and frequent opportunities for physical activity are essential. From the parents' view, school-based BMI screenings are appropriate when conducted respectfully and they expressed their desire to know their children's health information. A letter from a healthcare professional was acceptable to most parents in the studies.

Summary

Given the complex nature and number of influences on childhood obesity, it is unlikely that any program aimed at helping children achieve and maintain a healthy weight will be successful unless parents are actively involved. Furthermore, treatment of an overweight child will be most effective when it involves the entire family (Davison & Birch, 2001). Support from the schools and the community will also be vital to success. Knowledge needs to be developed in the area of how to effectively communicate to parents about obesity in children. When reviewing the literature, there are two considerations. The first concerns the perspective of prevention vs. treatment. Several studies and extensive literature are aimed at prevention, but little is available on how to effectively encourage treatment. There is a problem with obesity, and parents do not recognize it in their children. Between 10-30% of school-age children are overweight, and healthcare professionals have a responsibility to support and intervene for the health of those children and their families (Dietz & Gortmaker, 2001).

Second, although the research literature reports the increase in childhood obesity and the health threats that go along with it, there is little documentation on evidence-based, effective strategies to actively intervene with the parents and children who are

overweight (Caprio, 2006). The research in this area has been in the form of surveys and closed-ended questionnaires that do not allow for in-depth or specific understanding of parents' point of view. Since a family approach is imperative, this study sought to understand how parents experience the notification process.

CHAPTER 3

RESEARCH METHODS

Most learning is not the result of instruction. It is rather the result of unhampered participation in a meaningful setting.

Ivan Illich (Deschooling Society, 1970)

Rationale for Qualitative Design

Creswell (1998) defined qualitative research as a process of understanding based on a methodological tradition of inquiry that explores a social or human problem. To explore these problems a researcher must be able to form a multifaceted, holistic picture by analyzing the views of participants. Information should be reported in a detailed way that accurately explains multiple realities and subjective meanings and experiences. In order to understand the experiences of a parent, the focus of this study was on the participants' perception of how they felt about receiving a BMI notification letter that identified their child as overweight. I sought a complete picture of the participants' stories about their experiences of receiving this type of information in letter form. These points are strengths of qualitative research that cannot be accomplished with survey methods or quantitative data collection.

Characteristics of Qualitative Research

The general steps of the qualitative research process were followed in order to ensure reliability and validity. The first step was identifying a problem. With qualitative research the intention is to explore and understand a central phenomenon. Second, a review of the literature was completed. This plays a minor role in qualitative research. There needs to be some literature review in order to justify the problem but not so much that the researcher brings preconceived ideas or opinions about the central phenomena

to the study. Specifying a purpose was the third step and vital to clarity of the project. The purpose needs to be general and broad, yet focused on learning about the participants experience. Fourth, collecting data is an emerging process; data can be in the form of texts, images, or other documents. Typically, there is a small sample size in order to keep the data manageable. Analyzing and interpreting data is fifth and done by grouping text into descriptions and themes and trying to discover the larger meanings of findings. Finally, reporting and evaluating the findings are flexible and ongoing processes. It was important to provide a reflective, detailed narrative description of each individual followed by an analysis of the data in its entirety in order to appreciate multiple perspectives (Creswell, 1998; Creswell, 2003).

Lincoln and Guba (1985) outlined key characteristics of qualitative research in their book *Naturalistic Inquiry*. It is important for the researcher to carry out the investigation in the natural setting. Observation was important when trying to comprehend the whole picture and there is no better way than to go to the participant and be actively involved in the experience. Next, is the use of the researcher as the human instrument. Considering the fact that there are multiple realities of qualitative research, it is unrealistic to think that any other data collection tool could measure the concepts being studied. Purposeful sampling was used in order to obtain the best data possible and an inductive data analysis process allowed the findings to emerge. The final characteristic, narrative reporting, allows the reader to better understand the complexity of multiple realities and lets the voices of participants speak for themselves (Creswell, 2003).

Characteristics of Case Study

The case study method was used for this study. The aim of this approach was to explore and understand complex social phenomena (Yin, 2003). Yin describes five applications for case studies. They are to explain, describe, illustrate, explore, and study an evaluation study or a meta-evaluation. Ideally, a case study design is employed when one wants to gain an in-depth understanding of the situation and meaning for those involved (Merriam, 1998). Research questions that ask “how” or “why” are more explanatory and lead to the use of case studies (Yin). Case study was an ideal methodology since I was attempting to explore ‘how’ parents felt about receiving a BMI referral letter.

Data analysis occurs during data collection, while formulating categories and identifying themes. The process involves counting, noting patterns and topics, seeing plausibility and clustering. There is no standard format for reporting case study research. Case studies are often presented with detailed descriptions and direct quotes in order to bring meaning and insight to the words of the participants (Merriam, 1998).

Specifically, a collective case study approach was developed since more than one case was studied. A detailed description of each case and themes called a within-case analysis was completed followed by cross-case thematic analysis (Creswell, 1998). This method allowed the researcher to investigate holistic and meaningful characteristics of real-life events (Yin, 2003). Evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as being more robust (Herriott & Firestone, 1983).

The final characteristic of this study is particularistic since it focuses on a particular situation, event, program or phenomenon (Merriman, 1998). The cases themselves are important for what they revealed about parents' experiences about receiving a BMI notification letter. The processes of interviewing, observing, recording, analyzing, reflecting, dialoguing, and rethinking were all essential parts to the research process for this study.

Data Collection Procedures

Study approval was obtained from the University of Nebraska's Institutional Review Board (IRB) in April, 2008 (see Appendix E).

Sampling

Purposeful convenience sampling was the method of obtaining participants for the study. Lincoln and Guba (1985) state that this type of sampling "increases the scope or range of data exposed (random or representative sampling is likely to suppress more deviant cases) as well as the likelihood that the full array of multiple realities will be uncovered" (p. 40).

Initially, six parochial schools were chosen that had the state mandated height, weight and BMI screening performed annually by Creighton University School of Nursing. Letters of cooperation were obtained from each school's principal. Letters were sent to all parents of 3rd and 4th graders asking them if they had received a BMI notification letter in the last three years indicating their child may be overweight. If they had and were interested in participating in this study, they were asked to contact me. A copy of UNL's conditional approval letter was given to each institution when I requested permission to interview the parents. Participants were informed of the

purpose of the study, the interview procedures, the risks and benefits of the study and their right to refuse to participate at any time (see Appendix F). After completing the process with the six participating schools, 14 parents had been interviewed. Because I wanted to obtain a minimum sample size of 20 participants, a request was made to the IRB to include three additional schools and to send letters to all 2nd, 3rd, 4th, and 5th grade parents. That approval was granted in December, 2008 (see Appendix G). After the principals signed letters of cooperation and sent letters at the three additional schools, seven more parents agreed to be interviewed.

Participant Characteristics

The following provides some general information about the 21 parents who participated in the study. Twenty of the participants interviewed were mothers, and one was a father. One parent described herself as a “stay-at-home mom,” and the other 20 were employed outside the home either part or full time. The average number of children of the participants was 3, with the most having seven children and the least having two. Four participants identified themselves as “single parents.” Fourteen participants had boys who received the BMI notification letter and seven had girls. Since two parents received a BMI notification letter for more than one child, a total of fifteen boys and eight girls received letters. Seven parents received the letter for a child more than one year, with the most being four consecutive years. For a summary of the participant characteristics see Table 4.

Table 4

Participant Characteristics

Pseudonym	Work Status	Number of Children	Gender of child	Number of years letters received
Anna	Part time	2	Boy	1
Barb	Full time	5	Boy	2
Courtney	Full time	3	Girl	2
Danielle	Full time	3	Girl	3
Emily	Full time	5	Girl	1
Felicia	Full time	2	Boy	2
Gabrielle	Full time	2	Boy	1
Hailey	Full time	2	Girl/Girl	1
Irene	Part time	7	Boy/Boy	2
John	Full time	4	Boy	1
Karen	Works 2 jobs; Full and Part time	4	Boy	1
Lori	Works 2 jobs; Full and Part time	2	Girl	1
Mandy	Full time	5	Boy	1

Table 4 (continued).

Participant Characteristics

Pseudonym	Work Status	Number of Children	Gender of child	Number of years letters received
Natalie	Stay-at-home mom	2	Boy	1
Olivia	Full time	2	Boy	1
Paige	Full time	2	Girl	1
Robin	Full time	3	Boy	3
Stacey	Full time	2	Boy	1
Tammy	Full time	2	Boy	4
Valerie	Full time	2	Girl	1
Wanda	Full time	2	Boy	1
		Average: 3	15 boys/8 girls	Average: 1.5

Self-as-Instrument

The researcher is the primary instrument for data collection and therefore has considerable influence on obtaining information. Merriam (2003) outlines key qualities that the researcher must possess to be successful in maximizing opportunities for collecting and producing meaningful information in case study research. The qualities are tolerance for ambiguity, sensitivity, and good communication skills.

It is also necessary for any qualitative researcher to be able to examine data objectively and systematically; the researcher must be aware of personal values, assumptions, and biases (Strauss & Corbin, 1998). My professional background as a Registered Nurse for 15 years has provided me with a foundation of knowledge on the contributing factors, consequences, and risks associated with childhood obesity. I am also a parent and understand that often we make decisions based on experience and what we think is best for the child at the time. I kept both of these roles and potential biases in mind as I worked with the subjects in my study. It was important for me to continuously examine my attitudes, and acknowledge and address any biases in a reflective journal that I kept throughout the interviewing process.

Data Collection

The semi-structured interview was the primary form of data collection. Face-to-face interviews were arranged at mutually agreed upon times and places. Most interviews were conducted in public places such as restaurants or coffee shops, but three interviews were completed in the participant's offices and three others were conducted at their homes. Participants were asked to avoid stating their name, the name of their child or the school their child attends during the interview.

Open-ended questions were used initially and probes and follow-up questions were utilized as needed. The interview questions and probes for this study can be found on the Interview Protocol Form in Appendix H. At the beginning of each interview, an introductory statement was made such as, "I am interested in knowing more about your experience of receiving the BMI referral letter indicating that your child may be

overweight. While you are answering the questions, think back about your feelings at the time you received this letter.”

Following each interview, a summary sheet was completed. On this, I recorded my thoughts and described specific details of that particular case. I also reflected on the interview in the context of all the previous interviews and recorded common themes that were evolving.

Each parent was assigned a pseudonym, and all materials were marked with this pseudonym. The interviews were audio recorded and transcribed by a professional transcriptionist. The transcriptionist signed a confidentiality agreement (see Appendix I).

Data Analysis Procedures

“The right way to analyze data in a qualitative study is to do it simultaneously with data collection” (Merriam, 1998, p. 162). The following steps were used to analyze the data immediately once it was collected. The texts of the interviews provided the data for analysis. Initially, the raw text was transcribed and assembled in its entirety. All transcripts were reviewed with the audio tapes. Any transcription errors were corrected and then the files were imported into an Atlas.ti software program (Student version 5.2) on a computer in my home office. Participant transcripts were labeled with their pseudonym, and all files were de-identified. If parents used any identifying information during the interview, that information was removed from the final transcript at this time.

Each case was read thoroughly in order to see the whole picture. With the subsequent readings, significant statements and text segments were identified. These statements were coded using open and in vivo coding. An ongoing master code list was

developed. Strauss and Corbin (1998) suggest grouping all related codes together based on properties and dimensions. Properties have particular qualities that define them and dimensions represent the variety within the category. As coding progressed, all coded text segments were printed and grouped into themes and sub themes using the 'folder method.' Initially there were 45 codes during open coding; these codes were then grouped together and assigned a label. These labels were refined and revised as the data were continuously analyzed to form the eight themes of the study. Concurrently with the sorting and labeling process, each individual's summary sheet was considered separately and all findings of completed cases were compared to one another. Once data collection was completed, the themes were integrated into a narrative description.

When analyzing case study research, particular emphasis was placed on other areas of analysis as well. Description, direct interpretation, and naturalistic generalizations were important in this study (Creswell, 1998; Stake, 2000). Descriptions are detailed views of various aspects of the cases including the settings; this was completed with each summary sheet and allowed for more complete with-in case analysis. Direct interpretation is the process of pulling apart the data and putting it back together in meaningful ways. This was accomplished throughout data analysis with the completion of each summary sheet, coding and labeling as well as comparing each case to all the cases as a whole for the cross-case analysis component. Finally, naturalistic generalizations allow people to learn from the cases either for themselves or for applying it to a population of individuals. A discussion of the findings will serve as the naturalistic generalizations and can be found in chapter 4.

Methods of Verification, Validity, and Reliability

In order to check for accuracy of findings for this qualitative study and to achieve authenticity, credibility, and truthfulness, the methods of member checking, peer debriefing, maintaining a chain of evidence, self-reflective journal, and post-analysis literature review were used (Creswell, 2003; Lincoln & Guba, 1985; Yin, 2003).

Taking data back to the people from whom they were derived is a form of member checking. I used this method by inviting the participants to review their transcripts for accuracy, and they were given the opportunity to change or add to it. Each participant signed a document indicating receipt of the transcript, review of the transcript and agreement with the final version.

The peer debriefing technique was completed by an Advance Practice Registered Nurse in order to examine the data and findings. This nurse, who specializes in childhood eating disorders and was not involved in the study, reviewed the themes and descriptions for accuracy and completeness (see Appendix J).

Another principle to establish reliability of information in a case study is to maintain a chain of evidence (Yin, 2003). This was accomplished through accurate transcripts, detailed use of consistent interviewing techniques, a research log of all activities, a data collection chronology, and clearly recording data analysis procedures.

Lincoln and Guba (1985) and Creswell (2003) describe the self-reflective journal as a way in which the researcher records a variety of information about themselves, their potential biases, and the method. I kept a journal throughout the entire research process to help clarify any bias I brought to this study as well as using my field

notes for this purpose. Finally, I returned to the literature as needed to broaden my knowledge of information that had emerged since the onset of the study.

Ethical Considerations

It was important to keep in mind the obligation to respect and protect the rights, values, and desires of the participants since sensitive information was revealed. All participants signed an informed consent form stating they understood the purpose of the study and the intended use of the data. Pseudonyms were used for each participant and any identifying information was removed from the transcripts. All tapes, consent forms, and transcripts were stored in a locked cabinet my home office and a password was placed on the Atlas.ti software program. After the completion of the final oral defense, the audio tapes will be erased and any materials with identifying information will be shredded.

CHAPTER 4

PARTICIPANT VIGNIETTES

If there is anything that we wish to change in our children, we should first examine it and see whether it is not something that could better be changed in ourselves.

Carl G. Jung (The Development of Personality)

Anna

Anna was the first parent I interviewed and our conversation started well before the audio taping even began. When I contacted her to set up the time for the interview she was so excited about talking to me, she began sharing the story of her son. When we met, she quickly stated that she was not surprised by receiving the BMI notification letter and she felt it was a verification of what she already knew. She was positive about receiving the letter, “glad” because they had made some changes as a family because of it. Role modeling healthy behaviors became a very big deal to her. They joined a gym and began working out as a family. While looking for the gym, she researched places where personal training was included in the membership and so her son was able to work with a trainer on multiple occasions.

She described the child that received the letter, her son, as an inactive child. He has never liked sports, although he had tried his share of them. She said he is very smart and loves to read books.

Some of the barriers she encountered while making changes include frustration with her son’s physician, initial resistance from family members, and lack of knowledge. She had been concerned about her son’s increasing weight over the past couple of years and felt dismissed by his doctor when she had brought it up at appointments. When the letter arrived, she felt she had a “third-party” telling her what

she already suspected. The doctor ordered lab work “to appease her” and they discovered he had high cholesterol. The physician then talked to them about a “low fat diet” but Anna was so discouraged at that point she ended up making a health care provider change and taking him to another doctor. Initially, she struggled with resistance to change from her husband. He also has high cholesterol and diabetes and once he found out their son had elevated levels, she said “he came on board with the changes she was trying to make.” Her most pressing concern was her lack of knowledge. She said from the very beginning, she did not know where to go or what to do. She started making small changes with the knowledge that she had but said multiple times during the interview, “I just didn’t know what to do!”

She was most proud of her persistence and determination. She felt that increasing his activity was important and she worked very hard and tried multiple things until she found activities that he enjoyed and would stick with. She said it was not easy at times but she knew she had to do it for the health of her son and entire family.

Barb

Barb is a working mom with five boys. She was upset about receiving the letter but thinks it is important information parents should know. She was fearful that receiving the letter would “label” her child and she wanted to protect him from that. She describes her family as very active; except for the son that received the letter. They do belong to a gym but says he does not like to go. He is an avid book reader and LOVES food. He wants to be a cook some day.

She has encountered many challenges when trying to make changes with her son. With four other boys that do not have weight issues, she finds it very difficult to

apply rules to one and not the others: “When the other kids can sit around the table and eat all the cookies they want, how can we limit him to just one? It’s hard, very hard.” Finances, lack of time and lack of control are also obstacles for her. “Everything costs” and “it’s expensive to eat healthy” were comments she made regarding trying to make healthy changes. She also pointed out that with multiple kids in various activities; they did not have time to eat the way she knows they should be. Lack of control was also an issue for her because she knew of occasions where her child was sneaking food, she was not sure why but feels there is only so much a parent can do.

Courtney

Courtney expressed a lot of frustration. Prior to the letter, she felt she was doing many things to provide a healthy environment for her family so when she received the letter multiple years, she became angry. She feels it is a private issue that as a family they are trying to deal with and the school getting involved only adds to her frustration. She tries to keep all her children in both organized and spontaneous activities and she feels both she and her husband role model healthy eating and exercise.

Time is a major barrier for Courtney and her family. She and her husband both work full-time and with three children in multiple activities, they find themselves unable to cook and therefore eating out quite a bit. She talked about a cycle; she feels many parents put kids in activities to increase their physical activity and they get very busy, that busyness leads to poor options and choices when it comes to eating.

Another concern she had was her own lack of knowledge: “You know, if you’re gonna tell me that my child’s overweight, well then help me.” She took her daughter to the pediatrician after receiving the letter and felt the information she was given was

excellent. She commented that generally, the medical community needs to educate parents more on what they can do to change things. She and her daughter now talk often about making healthy choices.

Danielle

“I didn’t like it” and “it went promptly in our trash” were the statements made by Danielle about how she felt about receiving the letter. She does not believe that her child is overweight. After visiting the pediatrician, she felt reassured and was concerned about the process of BMI screening in schools. She was most bothered that her daughter knew what the letter was and was very upset and hurt.

She is a working mom with three children and the child that received the letter is the only one on the “heavier side.” She likes sports and participates on many teams year round. Although Danielle was very upset about receiving the letter and initially said she did not make any changes after receiving the letter, toward the end of the interview she did state, “You know, from the letter coming home in the first place, maybe that did prompt some of these things.” She has used the opportunity to talk to her daughter about healthy choices regarding serving sizes, drinks such as power aid and pop, and fast food options.

Emily

Emily could not remember the specifics of receiving the letter but she did know she agreed with it: “It doesn’t bother me because it is reality.” Emily works in the health care field so she said she really knows most of the things she should be doing; it is just a matter of applying them “gently.” One of her biggest struggles is talking to her child

about it. There is “a fine line with communication” because she does not want her daughter to have the opposite reaction and become anorexic or bulimic.

She discussed the importance of role modeling and the influence she feels it can have on children. She and her husband try to watch what they eat and exercise regularly but she also talked about the significance of negative role modeling such as health care providers and teachers who are overweight and trying to tell the kids how to live healthy lifestyles.

In Emily’s family, she described her 5 children by saying, three have a heavy body type and two have a thin body type, which creates another challenge. The daughter that received the letter was described as very shy and sedentary. She has tried to encourage more activity but “just hasn’t found her thing yet.”

Felicia

Felicia approached receiving the letter in a very optimistic way. She did not feel it was news to them and saw it as a confirmation of what they already thought. She and her husband discussed the letter and their first reaction was: “Well what are we going to do about it?” They decided that since they had two children with very different builds, anything they were going to do, they would do as a family. Role modeling became even more important for them and they took the opportunity to make some healthy changes. They took their two boys to the doctor and also talked to them more about how to be “healthier.” They were already members of a gym so they started going regularly with the kids and encouraging them to be more active at home as well.

She mentioned that they were a pretty healthy family to start with but their busy schedules did contribute to some poor habits. She said that although she felt supported

by the doctor, she would have liked more information from him because there is so much information out there; it would be nice to know what is most important for their family from someone who knows them.

Gabrielle

Gabrielle is a single mom who works full-time. She lives with her parents and has two children, a boy and a girl. When she received the letter, she said she was “taken aback” and “kind of in denial.” She went through various emotions as she started to make changes and realized that “it was all probably for the good.” She made a number of “small and easy changes” that the kids were very receptive to. She also mentioned role modeling and how important it was for her to show her children that she was “walking the walk.”

The lack of communication during the process was a struggle for her. As she started making changes she expressed that she “really didn’t know what to do next.” She thought information about healthy eating habits from the school would have been helpful; especially since finances were a barrier for her. She did not feel she could spend a lot of money even though she knew it was for the health of her family. Communication with the parents prior to sending the letters home may have helped her and her son to not feel so singled out. Handling it in the way they handle the puberty talk was her suggestion: “Send a letter home to all parents telling them when it is going to be, what is being done and what they might expect after it is completed.” Finally, she summed up the interview by saying, “You know, I would say it really just got me thinking – kind of planted the idea that maybe I do just need to think a little bit more about what we are doing.”

Hailey

Interestingly, Hailey also compared receiving the letter to planting a seed: “It’s a seed that has already been planted...by mentioning the letter we can have more actions versus just saying a bunch of things about change.” As a full-time working single mom, she was uneasy about receiving the letter because she was concerned for the health of her children. But as she thought about it, she was “glad” she got the information so she could be proactive and change some things. She has two daughters and had received a BMI notification letter for her older daughter a few years ago. She felt it was an important reminder for her to “look at the big picture” and that “this is occurring in my family.” She stated, “I think I can benefit from it by identifying some things that our family could potentially work on.”

She grappled with how to balance the amount of talking she should do with her daughter. She did not want to restrict her eating or push her to the point of becoming obsessive about trying to lose weight. She wanted to educate her in a way that she could make better choices and eat healthier. Overall she felt they are a fairly healthy family, with portion sizes being a major contributor to her daughter’s weight: “She doesn’t necessarily eat a lot of unhealthy foods; she just eats a lot of any food she eats.” She made some changes in the types of food she bought and prepared and she feels one of the most difficult things for her is being consistent with the healthy changes they have made. A busy schedule contributes to them occasionally reverting back to eating in an unhealthy way.

Irene

Irene received a letter two different years, regarding different children. Both were boys and in both cases she “wasn’t surprised.” She has seven children and just started working part-time. She knows that her own lack of knowledge and role modeling has contributed to their issues. When I grew up my dad did all the shopping and he did not like fruit either so it was the same things over and over, meat and potatoes. So I have started trying to eat more fruit and getting different kinds of vegetables. It makes a difference in what you offer them from the beginning.

Irene also talked about the amount of food her boys eat. She has started paying more attention to serving sizes and limiting the amount of food she gives them: “at dinner a lot they want thirds, I limit them now to seconds.” She is concerned about this because even before she and husband started making changes she discovered that both boys were sneaking food.

Lack of activity is an issue for her children: “You just don’t see as many kids playing outside as you used to, there’s more safety concerns, at least in this part of town.” Finances are also a consideration in the choices she makes in terms of diet and activity. Her children do not have the option of being in organized activities and when it comes to grocery shopping, she “has to make choices” because “there is not enough money in the budget right now for food all the time.” She suggested sending information to parents about available resources that are free and healthy and include creative meal and snack ideas.

John

John was the only father that I interviewed and he felt the information being sent home was “reasonable.” Both he and his wife work full-time and they have four children. He described the child that received the letter as an introvert who “is more of an indoor kid than an outdoor kid” and when it comes to eating “he doesn’t always make the best decisions.” He stated that he and his wife felt the letter was a good prompt for them to continue to work on things. He mentioned the two barriers for their family in making changes are economic and time factors.

They did not talk to the child about the letter because they had been addressing the issue at home already regarding his eating choices and encouraging activity. He did not want it to become a situation where he is harping on him all the time. Overall, he feels that as a parent, “it’s good to have it [BMI] pointed out to you, the information is good, and it’s what the parents do with it that is even more important.”

Karen

Karen stated that she struggled with the letter because she did not understand what a BMI was or what the letter was saying. She is a single mother with four children and she works two jobs. She talked to co-workers about the content of the letter and after visiting with them, concluded that it was good information to have. She thinks the letter should be written clearly so everyone can understand it. She said she has some guilt with the fact that her son is overweight but knows she has a lot of barriers to make changes. She spoke about receiving money from the government supplemental nutrition program for Women, Infants, and Children (WIC) and how that limits what she can purchase and the amount she spends in a month on food: “Like the foods that are good

for you are expensive, you know I'm not even gonna lie about that. There's sometimes when we have to compromise." She also stated that she knows she and the children eat out more than they should and if she would stop or cut back she might be able to spend that money on fresh produce. She said with working two jobs, her older children do a lot of cooking. She buys things that are already prepared or boxed for easy preparation for them. She mentioned what a challenge it is for her to model good behavior: "The children often say, mom let's go. And I'll be like, 'heck no, I'm tired.' I ain't gonna lie but I know that it starts with me too...but I gotta work."

Since receiving the letter, her family has been trying not to eat out as often and she has been watching all the kids' serving sizes. She has also been talking to more people about healthy ideas for cooking and snacks. She feels she has a lack of knowledge about what to do and does not have a computer at home, limiting her access to resources. When discussing the school, she said her children eat two of their three meals at school and she does not think those meals are very healthy. She realizes the schools are probably under many of the same restrictions that she is with government funding but she would like to see some improvement in the quality of the meals.

Lori

Lori and I met for the first time when I was dropping off the letters at one of the schools. She works two jobs to help support her family and was very pleasant in both encounters. Her daughter received the letter when she was in 4th grade but she could pinpoint the time when she realized her daughter was gaining weight. When her mother was dying in the hospital, it was a very stressful time for her family and looking back now she realizes that many of the choices they made were not healthy.

Lori describes her daughter as a “shy and a private person.” She feels this contributes to her weight issues because she has always been inactive. She also feels that because she has worked two jobs for many years, time is an issue for their family. They eat out often and she was very adamant about how portion sizes have gotten out of hand. Generally, she feels obesity is a problem in our society with children. She is very aware of it because she sees the problem at school. She added that most parents are busy like she is and it is so hard to do it all.

One of the biggest stressors for Lori is communicating to her daughter about the issue of weight. She is an “emotional” child and she was very upset when she found out that the letter had come home. Lori tries to talk to her but feels when she goes “too far, she just shuts down.” All of this makes Lori feel guilty: “I’m wondering what I have done wrong with her...and is it my fault?”

She felt she did a lot to make changes, but one of the biggest challenges for her is “sticking to it” especially because she “hasn’t always been the healthiest herself.” The suggestions she gave were making sure the process was as private as possible in everyway and specifically mailing the letters home to parents. Lori ended the interview with the statement: “the bottom line is it’s trying to please everyone, and in the process it seems like I can’t please anyone.”

Mandy

Emotional is the word to describe my first encounter with Mandy. She called on the phone and was very angry about receiving the letter. She felt her son had been singled out and she did not appreciate it. Once we met, I was able to get more of her story. Mandy has five children and her son who received the letter is the youngest. He

has had a problem with his weight for a couple years, and recently moved to a new school because of what she described as “bullying related to his size.”

She described her family as extremely active with two of her older children in college pursuing degrees in health-related fields. She has recently experienced some stresses in her family life with her husband losing his job and extended family moving in with them. The biggest barrier she is facing are the financial aspects of eating healthy and participating in activities. They had belonged to a community center but decided to cancel that membership. She also talked about the cost of feeding a large family and how that directly affects choices she makes.

She feels her strengths are her role modeling behaviors and the support system she has around her. She and her children exercise almost everyday and she says this is something she has done all her life. She has encouraged all her children to find activities they enjoy and stick with them for the “health of it all.” At the end of this interview, Mandy was extremely appreciative of the opportunity to talk. She stated, “I was mad, but after I calmed down I realized it kind of jump started us again. So this has been a good thing.”

Natalie

Natalie’s interview went very quickly. She is a stay at home mom of two boys. She agreed to participate and was willing to help although she made it very clear that she did not believe that her son was or ever had been overweight. When asked about how she felt about the letter, she came right out and said, “I thought it was crazy.”

After receiving the letter, she called a friend, who happened to be the nurse at her son’s pediatrician’s office. The nurse told her not to worry about it and she said,

“that was pretty much the extent of what I did.” She described both her children as “extremely active” and she felt she was already pretty efficient in educating herself about healthy eating and activities. When she had questions she went to the internet or magazines for information and she had been to a local grocery store to consult a dietician about healthy meal options for her boys. She did have a lot to say about the “lack of nutrition” of school lunches. She was indifferent about the schools doing the screenings and commented that she would have rather received that information from her doctor.

Olivia

Olivia’s son had a fascinating story. He is the oldest of her three children and was diagnosed by a pediatrician as “obese” when he was four years old. He received the letters three years in a row and she was “fine” with getting the information but would have liked it for her other children. The causes she identified specifically for her son included, their busy lifestyle, not sitting down to eat meals as a family, and portion sizes. She and her husband both work full time and with three young children involved in activities, she often found time was an issue. She emphasized they try to make healthy nutritional choices and they recently joined a gym to increase their activity level as a family.

Her major struggle is a lack of knowledge about “what to do to help him.” She feels like she has tried all the things she knows and his weight has not changed. It is extremely frustrating to her that her other children do not have weight problems but the “heavier” child often makes healthier choices than they do. She stated she was desperate for information. Recently, her focus has been on portion control.

The final topic of our discussion was about the communication of the screening process. She said she would like to have some information up front; she was not even aware health screenings were being done until she received the letter. She added that providing parents with information afterward would have helped her.

Paige

“I guess maybe sometimes I wonder if I should be more alarmed than I am” was the response that Paige gave about her child’s weight issue. She has three children. She described two of them as “very skinny” and the other one as “heavy.” She was not surprised about receiving the BMI notification letter and they were almost “expecting it.” Her daughter had been diagnosed a few years ago with high cholesterol, so they have been “somewhat” monitoring her diet since then. Her challenges include her daughter’s “sweet tooth” and interest in food in general. Paige states her daughter loves to be in the kitchen, often helps her prepare and cook the meals and hopes to go to culinary school someday.

Paige identified the main cause of her daughter’s obesity as inactivity. She commented, “she is a couch potato. We are constantly running her away from the TV.” They encourage her to be active by keeping her involved in things such as swimming and dance class. The barriers she mentioned include finances, schedules and access. One statement she made about finances was: “I think one of the biggest things is cost. You know fresh produce and that kind of stuff cost more...or it seems to anyway. It would be interesting for somebody to do some sort of comparison.” Their family schedule was packed full. She walked through what they do each night and between school activities, work and church, every evening they had something going on. As for

access, she was unaware of any community resources for her daughter and she said there are no community centers or workout facilities close to their home.

Paige had insight about the screening process and how she felt the principal at her daughter's school made the process more positive by communicating clearly and frequently. Another thing that she felt was encouraging was the open communication she had with the "lunch lady" at her daughter's school. After she was diagnosed with high cholesterol, she spoke to her about the diet and what her daughter could eat. Then after receiving the letter she went again. Paige felt she was very receptive about doing what she could to help and one of the specific things they discussed was serving sizes. Paige was very impressed that while they were talking the "lunch lady" recommended that her daughter be there as well so that she was aware of the expectations. The idea of open communication resonated with Paige. She said she and her daughter talk much more openly now about diet and activity and she feels that it has helped them both.

Robin

Robin and I conducted our interview at her home. It was good for me to be able to be in the participant's environment. Robin works full time and has three "very active" boys, although her youngest who received the letter is the "least active." Robin was very light-hearted throughout the interview and even joked that she and her son call the BMI notification letter, "the chubby letter." She has tried to make a number of changes in her family. She feels she has great support from her older sons, but she has never told her husband about the letter because she was sure he would "wig out." When I asked her what she meant, she said he was already very uptight about her son's weight and he probably would have "freaked them all out trying to make ridiculous changes."

The main causes of obesity that Robin identified for her son were “over eating” or portion sizes, eating out, and poor choices for snacks. Robin says she struggles a lot with guilt over her son’s weight because she feels, being the youngest, they were always on the go and that led to the development of some of the bad habits he has today. She also recognized her role in modeling healthy habits and how she has not been the best about it with the busy schedules they keep. Some of the changes she made are limiting his portion sizes, buying healthier snacks, and limiting the amount of times a week he eats school lunch.

Stacey

Stacey had good insight as a mother and a health care provider. She was fine with receiving the BMI notification letter even though she takes her boys to the doctor annually. She had been told at one of the visits that her son was overweight so she was not surprised by the letter. She said when she received the letter it allowed her “the opportunity to discuss different health strategies with her sons.” The two things she implemented were exposing them to a variety of foods and teaching them moderation.

The challenges most difficult for her are consistency, lack of time, finances, and school lunches. She talked about how hard it has been for her over the years with her own weight, so “sticking with healthy habits” is always difficult for her. With her health care background, she has a lot of knowledge but the troublesome part is finding the time to do the things she knows she should be doing. Finances are a barrier as well. She and her husband were working “very hard” to put their kids through private school and the cost of healthy foods was an added concern. The final issue she mentioned was school

lunches: “I hate to belabor it, but the lunch program at our school could *really* be improved.”

Stacey made some good suggestions regarding the process. She talked a lot about the importance of educating parents. Providing information and resources within the letters, nurses or dieticians coming into the schools and working with the children and the staff, presenting information to parents at parent meetings, and support groups were all ideas she had about ways the process could be improved.

Tammy

“I do think we have an obesity problem at our school. Year after year we see those children getting bigger and bigger and I think that what you’re doing [sending BMI referrals] could add value if we [parents] add some additional information to your piece.” Tammy’s quote was enlightening, as was her entire interview. She is a working mom of two children and is very active in the school community. Much of our interview was about the process and how she felt it could be better.

The causes that Tammy identified were mostly general causes. It was not that she denied her son was overweight; it was that she felt she was already doing many things to educate both her children about healthy lifestyles. Things such as “packing the calendar,” portion sizes, poor messages, and lack of choices at school were the factors she thought contributed the most to the problem. Tammy was one of the two parents who said she made NO changes after receiving the letter. Her explanation was that she felt she was already doing many of them. She also spoke a lot about role modeling. She and her husband “try to be very healthy at home.” They offer their children many choices, she openly communicates with them about their diet and activity, and she

involves the children in some of the decisions she makes when shopping, planning and preparing the meals.

The suggestions she made were solid. She wanted more information all around. She thought the communication process should be better prior to the screenings and definitely after they were completed. She received the letter four consecutive years, and this was a real concern for her since it was basically the same letter with the current year's weight, height and BMI. She suggested making that component more individualized: "I should not receive the exact same letter each year. There should be an adjustment to the letter that makes me notice...and then give me recommendations and help!"

Tammy had a lot to say about the school's role. She feels the lunches are "terrible," the nutritional quality is poor, the presentation is awful, the children often complain of them being cold, when they are supposed to be hot and they do not have time to sit and enjoy them. The lack of activity during the day is one reason she and her husband got involved in leadership positions at the school. They want to make a difference on many levels and felt like this was one way to do it. One of her final statements was profound: "As adults, children are not going to care about their health unless we are showing them that it's important."

Valerie

Valerie and I interviewed at the school where she works. When asked if she thought there was an obesity problem, she said she thinks there is and then commented, "but normal is getting bigger." She went on to talk about the parents' perceptions about what is acceptable and many feel if they look about the same as the other children, they

are fine. This is a real concern for her since she works with kids, sees them getting bigger and watches some of their poor health behaviors.

Valerie has two children and a “very supportive” husband, who happens to do most of the shopping and meal preparation. Her husband used to stay at home with the children but had recently started a new job. She commented on the difficulty of balancing it all and how “it was easier when one parent was home with the kids.” She was not surprised about getting the letter but her initial reaction was, “What did I do to cause this?” She struggled with that feeling for a while, since she had also been told by the doctor that they needed to start making some changes. She said receiving an “official letter helped her to feel like it was important to keep doing the things they were doing and make some additional changes.” She did talk to her daughter about receiving the letter, but was very cautious since she is “sensitive about her weight.”

One of things she feels brought on her daughter’s obesity is that she is a soda drinker. Valerie said she was having at least two or three regular sodas a day. As a family, they were also eating out a lot, not eating breakfast, eating very few vegetables, and when they did sit down for meals, it was in front of the TV. Changes she made were on the individual and family level. They quit buying pop and her daughter started drinking more flavored water and milk, she increased the amount of activity she gets in a day by getting her involved in more things at school, and generally she and her husband “became more conscious.” It was not always easy for them but she felt successful because she was making small changes and is “staying committed to it.”

Her suggestions also revolved around wanting more information. She would like to have ideas for healthy meals and snacks for children, particularly for those who do

not like fruits and vegetables, and information available at the schools for parents to “grab” when they need to. She is very aware of the dilemma parents are in when both are working and trying to get kids to activities, and she feels the more information we can get to them, the better off everyone will be.

Wanda

Wanda was the last parent I interviewed; she had an encouraging and positive attitude. She is the mom of two boys with “very different body types” but both “very active.” Her son has received the letter year every year for the last three years. She said she has been “fine” with receiving the letters and “once we started getting those letters, they just made me think. They made me a little bit more aware of what we’re doing and what I’m buying.”

She feels as a family they are very motivated and committed to making positive changes and she has been working with both her children to teach them about healthy eating: “We try to encourage and teach him to make good choices without always being on his case.” Recently they have been talking about sugar and fiber content in foods and what are good choices when it comes to those things. She has spoken to the doctor and he is very supportive. “He knows his history and he is aware of his activity level. Those are the things he was concerned about and he says he will watch it.” The causes she identified are drinking soda and portion sizes. She notices that he seems to have a bigger appetite than his brother who is older and often eats more than he does.

One of the recommendations she made was specific to receiving the letter year-after-year. She said that maybe after the second letter, it might be good to have the parents return something to school letting them know that they are aware and what

actions they are taking. She thinks this would let the nurses know what the parents were doing and as a parent it would be helpful to her too.

CHAPTER 5

DISCUSSION OF THE FINDINGS

A seed hidden in the heart of an apple is an orchard invisible.
--Welsh Proverb

Introduction

Early in the interviewing process, a picture began to emerge. As parents were describing their experiences, some compared receiving the BMI notification letter to a “seed that was planted.” As they thought about their child’s diet and activity levels, they explained how various parts of their lives grew or changed, branched out in a sense. The visual of a tree started taking shape. The causes seemed to be rooted deep in many areas of a child’s life. As the themes and sub themes developed, they took on the form of branches and leaves.

On more than one occasion during interviews, the term “planting a seed” or a “seed had been planted” was expressed by participants. Descriptions included phrases such as “I mean the letter is kind of a seed that has been planted. By me even mentioning what the letter said to her....so that’s a seed. I think it’s more important to have actions versus just saying a bunch of things.” Another participant who initially saw the letter as very negative also said, “After the letter, I think I planted the seed. He’s gonna go with it, and it’s gonna be ok. So, it’s been a positive thing.” Another parent saw her behavior as planting the seeds of various activities in her son’s life:

Now I’m trying to plant the seeds, like Tae Kwon Do. I am looking at activities that will help him down the road. You know, Tae Kwon Do teaches you so many more things and um, then we are also going to try swimming, they love

when we go to the pool in the summer so that is a good thing to do as well, that will help.

The data collected was coded. Eight themes with corresponding sub themes emerged from the analysis. The themes were: 1) Feelings about Receiving the Letter; 2) Causes of Obesity; 3) Capabilities; 4) Barriers; 5) Role Modeling; 6) Primary Care Provider Response; 7) School's Role; and 8) Health Screening Process. The following table (see Table 5) illustrates the division of themes with the sub themes. Supporting statements and participant responses were used to develop each theme and to best demonstrate the evolution of each participant.

Table 5

Themes and Sub Themes

Theme	Sub Theme
Feelings About Receiving the Letter	<ul style="list-style-type: none"> • Positive/Neutral • Negative • Disbelief • More than One Emotion
Causes of Obesity	<ul style="list-style-type: none"> • Specific • General
Capabilities	<ul style="list-style-type: none"> • Changes in Diet • Changes in Activity • Support/Communication
Barriers	<ul style="list-style-type: none"> • Financial • Lack of Time • Lack of Control • Lack of Knowledge • Other Children • Age
Role Modeling	<ul style="list-style-type: none"> • Parents • Others
Primary Care Provider Response	<ul style="list-style-type: none"> • Supportive/Neutral • Negative
School's Role	<ul style="list-style-type: none"> • Education • Increased Activity • Responsible Snacking and Parties • School Lunches
Health Screening Process	<ul style="list-style-type: none"> • Before • During • After

As the interviews continued, the themes began to take on different parts of the tree of the participant's life. The causes of their child's obesity were grounded or rooted in a number of both specific and general causes. Although the roots are often the least glamorous part of the tree, they are often the most crucial. Buried deep and virtually unnoticeable, they often impact the health of the tree. Receiving the letter started to grow a trunk of awareness or consciousness which branched out to various aspects of the individual's life. From the branches come the leaves, or sub themes. Just as the leaves on the trees perform various functions to sustain growth, the sub themes identified by the parents have contributed to their lives and the lives of their children (see Figure 2).

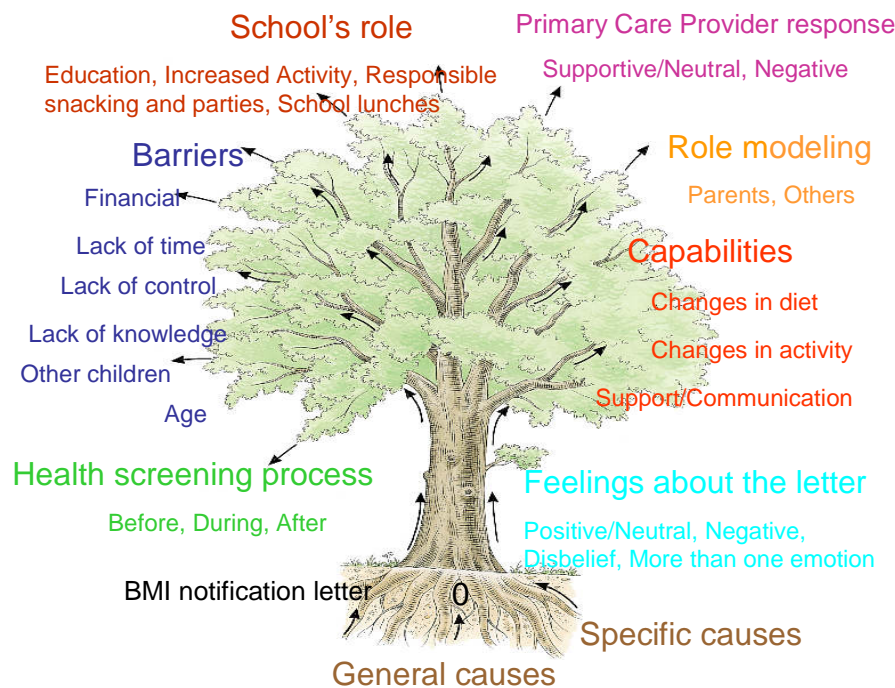


Figure 2. Tree with Themes and Sub themes

Characteristics of the Children

As each variety of trees has unique and distinguishing features, many trees have commonalities that link them together. The same was found true of the children being described by the parents. Each child had his/her own unique traits and characteristics, but as the interviews progressed, it became apparent that there were some qualities the children shared.

Ten of the children had health conditions. These children were seeing personal physicians or primary care providers. All but one of the conditions were recognized as conditions that could be directly or indirectly related to the child's weight, diet, or activity level. Diagnoses reported by parents were high cholesterol (n=2), high blood pressure (n=2), pre-kidney disease (n=2), irritable bowel disease (n=1), stomach ulcer

(n=1), and pancreatitis (n=1). One parent reported her child was being followed for leukemia which was included as a health consideration but was probably not related to the child's obesity.

Six children were described by parents as being "introverted" or having "shy personalities." And although the children were described as "quiet," all six parents felt this had nothing to do with their weight. According to eleven parents, the children were comfortable with their body type. Twenty of the parents felt their children were accepted by their classmates, and only one parent specifically mentioned her child had been teased because of his weight. Five parents described their children as having a real "passion" for food. One mom described her daughters by saying, "she loves food, both healthy and unhealthy." Another parent described her son by saying, "It is all he thinks about, he's just so excited by the time he hits breakfast. He loves food, it is his passion." Felicia, a working mom of two boys talked about her son and how he also thinks about food often: "He will say to me, 'It's dinner time, I'm hungry.' Where my other son will play and will be fine if he forgets. But this son does not. He never forgets about dinner." At least two of these parents mentioned that their children wanted to go to culinary school. Robin talked about how her son identifies everything with food: "He'll say, 'Oh yeah, that is the place with that...whatever food,' or 'That is the school with the good concession stand.' He loves his food, and he knows his food."

As far as activity level, six parents described their children as very active and 10 parents described their children as moderately active. Five parents described their children as sedentary. When asked about their child's general interests, 15 parents stated that their children enjoyed physical activities such as organized sports or bike riding.

Only six parents stated that their children really *preferred* activities that were more sedentary such as reading, playing computer or video games, or watching television.

Another important point was the reaction of the child when told about the letter or when the parent(s) had a conversation with the child about his/her weight. Out of the 16 parents who spoke to their children after receiving the letter, five parents described their child's initial reaction as negative, such as "defensive," "emotionally upset," "crying," or "angry." After talking with these children about the letter, three stated their children were "better" and that they understood why the information was sent home. The other 11 parents explained more neutral reactions such as the child being "open to having the discussion," "it didn't bother them" or "they were really ok with it."

Five parents chose to not have any conversation about the letter or diet and activity with their children. Three said it was because they did not want the child to "think they were overweight" or "be labeled" and the other two avoided it because they had a fear that talking about it could lead to other problems.

Themes and Sub Themes

Feelings about Receiving the Letter

When the twenty-one participants were asked the initial question, "What were your feelings about receiving the BMI notification letter," there were a variety of responses. Parent replies were in one of four categories, a positive/neutral response, a negative response, disbelief, or more than one emotion. One parent verbalized a common sentiment: "It's kind of like a double-edged sword. You know, it was probably appropriate to send that out to us, but I didn't want to receive it."

Positive/Neutral

Fourteen of the 21 parents who responded either positive or neutral viewed receiving the letter as an opportunity to make some needed changes, continue positive things they were already doing or re-start things they had done in the past. Four of the parents used the word “glad” to describe their overall feeling. One parent stated, “I’m really glad they did it, and I’ve heard other parents say they were glad too.” Irene focused on the health aspect stating, “I’m glad...I’m glad it was brought to attention because it is a health factor.” Robin addressed potential negative feelings by saying, “Yeah. It certainly didn’t hurt my feelings, and in a way I was glad...I was glad to receive it.” Wanda also stated, “I’m glad that I got the information because it helped me to take practical steps to try and change some things.” Other positive comments included statements such as: “I remember thinking; well this is a nice thing to do. To let me know that the school has looked at that and that they are watching it.” And finally:

After getting the letter, it just made me think a little bit more like ‘Ok, let’s look at the crackers we buy, let’s look more at labels and fiber and sugar content.’ It just made me a little bit more aware. So that was good.

Six of the neutral responses were from parents who did not have a strong feeling about receiving the letter. Twelve parents stated they knew their child was overweight and regardless of their overall feelings, the letter came as no surprise: “I guess I wasn’t terribly surprised. I was half expecting it because she’s been overweight for quite a while.” Another parent addressed receiving the letter as:

She had just gotten her physical from the doctor’s office and so we were kind of expecting it. So when it came we weren’t shocked at all but still as a parent

you're just like, 'Oh my goodness, my daughter?'

Fifteen participants mentioned how the letters permitted them to move to the next level with their children. "Actually it allowed me the opportunity to be able to discuss different strategies and validate my perception. So to have the situation addressed and reiterated made me realize that my thoughts were right on."

The significance of a third party providing the information to the parents was also an important finding. "So it wasn't any surprise, shock or feeling of indignation. I mean it was just, 'Yeah, well ok someone else pointing it out.'" Another parent expressed a similar feeling saying, "I got it and thought this is what I suspected all along; however, no one ever came right out and told me...including the doctor." And Anna said, "I was just waiting for someone to verify what I already thought."

Negative

Although many parents made some disapproving remarks, only two parent responses were categorized as completely negative. One of these parents took real issue with the logic of doing the screening at all: "I just really don't see the benefit of doing it? I opened it up, saw it, and promptly threw it into our trash because I was NOT very happy." The other parent was very concerned about labeling the child and how that would affect him: "Oh, my gosh! Am I really raising a fat child, an *obese* child? We just didn't want to start labeling him as heavy or overweight and I didn't want him to be labeled by others as fat."

Twelve parents talked about guilt or shame they felt when the letter arrived but the two parents with negative responses talked about having a harder time with these feelings:

I always stress so bad when I get the letter. I feel like I'm just letting my daughter down...because I'm ashamed of it too. Maybe that is why I take the letter so hard and so personally. I feel that I really try hard for my children with anything they do...school, activities, their food. Do I need a piece of paper to tell me my daughter's overweight? OF COURSE NOT!

Disbelief

Even after receiving the notification letters, there were two parents who still did not believe their children to be overweight:

I thought it was crazy kind of...(chuckle). Because when I think of a child being overweight, I think of it as a visual thing, like you can noticeably see that they're overweight, and I don't see that at all on my son.

The other parent was caught off guard by the letter: "I read it, read it over again, and somewhat disregarded it. I was confused because I didn't believe it and I didn't understand why I was getting it."

More than One Emotion

The final sub theme is that of more than one emotion. After receiving the letter, three of the parents initially felt one way but then after talking to others or receiving the letter more than one year, changed their reaction. Two parents were initially very upset and one stated:

Well I guess it was like a slap in the face. I was so mad, but after I calmed down I realized, how do you get the parents to wake up and do something if they want to do something.

The other parent stated she was mad after receiving the letter, annoyed during most of the interview but toward the end said, “Maybe some of the good things we’ve talked about today did come from that letter coming home in the first place. Maybe that did prompt some of these things.” The third parent in this sub theme was pleased to begin with but moved to another level after receiving the letter year-after-year: “I became increasingly agitated by it. So, the last year I got it, and I just started ripping it up. It really kind of irritated me.”

When asked if they thought there is an obesity problem in our country with children, all parents but one answered with a strong “yes” or “definitely.” One parent described his feelings as “mixed”:

I think there are certain occasions where there are issues. Is it an epidemic? I’m not certain that is the case. I see plenty of kids on all levels of it so...I think there’s a little crisis creation going on.

Causes of Obesity

When discussing causal factors, each of the participants identified specific causes they felt contributed to their child’s obesity. Then, they were given the opportunity to describe what they considered to be general causes leading to the problem of obesity in school-age children. As mentioned earlier, the visual of the tree manifested itself when thinking about how many of the causes were rooted deep within various parts of the parent’s and children’s lives.

Specific Causes

The specific causes mentioned most often were portion sizes (n=11) and eating out (n=9). The amount of food these children eat was mentioned over and over again.

Parents noted that their heavy kids seemed to eat more than others: “She eats a lot, like she’ll eat two hamburgers at one time.” Karen described the difference at her house: “All my kids eat the same thing. Now what sometimes happens is, I notice he eats more of whatever I make than the others...or bigger portion sizes.” Stacey referenced her son’s recent growth and attributed it directly to the amount of food he eats: “He has a tendency to eat a lot and so um, he has grown significantly in the last 3 years. I mean just last night he had 14 fish sticks!”

Throughout the interviews, participants talked about how often their families ate out. Anna was the first to bring it up: “We do a lot of fast food and a lot of fries, but I never realized that it kept adding up.” Karen, a single mom of four kids who works two jobs, also talked about her challenge: “I guess it is one thing I struggle with because sometimes I think we eat out too much and I know that’s a key factor.” Robin blamed herself for her son eating out so much:

Oh, I created the monster (laughing), going to soccer games and stuff. I had to drag him everywhere ‘cause he was 6-8 years younger than his brothers, so it was like, ‘Come on, we gotta go, come on and I’ll buy you something at the concession or McDonalds.’ I swear, I totally created the monster.

Some parents struggled with both issues simultaneously. They mentioned how as a country we have “super-sized everything.” Lori specifically talked about the portion sizes when eating out: “The portions....you can’t just get a cheeseburger anymore, you’ve gotta get the triple decker, and like even bagels are bigger!”

Although only three parents specifically mentioned lack of time as a cause of their child’s obesity, five more talked about the time challenges of being working

parents. All eight felt these things contributed to a busy lifestyle which inevitably led many of them to eating out more often or taking more trips to the drive-thru. Barb was honest about her feelings: “I wish I could sit down and do better with meal planning. I work full time and have four in organized sports, so it’s just so easy to run through McDonald’s and get everybody food.”

The final specific cause mentioned frequently was inactivity (n=8). These parents alluded to the idea that their heavier children engaged in more sedentary activities, therefore making it difficult for them to get enough exercise. There were a variety of reasons parents gave for their children not being more active: watching TV, playing video games, and reading were things these children were doing. Felicia had a tone of frustration in her voice when she talked about this: “My kids watch too much TV, and they’re not outside playing like they should be.”

When talking about inactivity, parents pointed out the safety issue and how that contributes to her children not being able to go outside and get some exercise. Stacey felt a definite struggle with safety and her boys: “Cars are faster and go speeding down our street. They don’t go outside because they want to be on their bikes in the front and I want them to stay in the back.”

Getting enough exercise was also tied to hectic lifestyles by eight parents. Felicia commented, “My kids aren’t playing enough, I mean I’m guilty of it. My kids are involved in this, this, and this and that’s the most exercise they get, just going to practices and running around. But I know it’s not the same.” Olivia also talked about this: “We’re busy, and we both work. Our kids can’t go outside alone and play like we used to, so they sit inside and do other things.” Robin summed up this topic: “My kids

are so busy, you know. They're shuffled off to activities right after school whether it's piano or this or that, and they don't have time to just go outside and play!"

General causes

For the general causes of childhood obesity, most parents identified a busy life style (n= 14) as the leading reason. Working parents (n=8) and multiple children in multiple activities (n=8) were contributing factors to this type of lifestyle. Danielle had a very simple explanation, "The problem is...schedules are *crazy!*" Hailey posed the question:

Parents are so on the go now, working 9 to 5. Then kids have their activities, and by the time you get home, you have to try to prepare a healthy dinner. Some parents even have to bring home work with them. How do you balance all that?

Parents often compared the lifestyle children know today with how they grew up:

Most parents work, we don't have the stay-at-home mom like I did, where dad's working and mom's home. I didn't have to worry about feeding myself. My kids, I mean a lot of times they just have to fend for themselves (Karen).

Tammy was powerful in her description:

We pack a calendar. And when we pack a calendar, we are not prepared to eat or exercise. Historically people would come home and eat at certain times and meals were scheduled and bed times were scheduled. Not now, so some of the messages we are giving our children are poor.

Inactivity (n= 8) and screen time (n=8) were intertwined in many parents general explanations for children being overweight. When posed the question about what they

felt caused obesity in society, parents quickly responded, “I really think a lot of kids are sedentary,” “Too many kids are sitting in front of the TV,” and “Now you got TV 24/7, video and computer games.” Courtney verbalized frustration in her response: “There’s a hundred stations and there’s video games and there’s computer games and all that, you know. Sitting in the house is much easier than going outside and finding something to do!”

Eight parents attributed some of the inactivity to safety issues, stating their concern that kids can not be outside alone anymore. Emily was one of the parents who mentioned this more than once during her interview:

When they go outside down the sidewalk, you worry about them. I tell my kids, “Call me when you get to your friends house ‘cause I wanna know you made it there.” As a society, we worry about them more. You know, we used to jump on our bikes and not come back until dinner time. Our parents didn’t know where we were, but they didn’t worry because we were probably safe.

Portion size (n=7) and eating out (n=7) were also mentioned as general causes. Many of the same descriptions were given in general terms that were presented from the parents who identified them as specific problems for their children. Barb emphasized, “We’ve all been raised that you need to eat everything on your plate, but now our plates are bigger and we have more on them.” Hailey was playful when she was describing how she assumes most parents feel: “It is a mental, physical, and spiritual thing just balancing everything. Sometimes it’s just easier to grab fast food and tell the kids, ‘do your homework and eat your McDonald’s.’” Tammy had more to say about portions, eating out and packing calendars:

We fill in as much as we possibly can, and so then our preparation for dinner or meals is not present, and we pick up things that are not good for us. And those things at most restaurants, the portion sizes have changed, a plate's not really a plate, it's a serving tray. And we eat it all. Our society's on a fast pace, we eat out a lot, we eat a lot, and what we are eating is poor.

Processed/convenience food (n=8) was the final general cause that many parents voiced a concern about. Again, many tied this to the busyness of families: "The convenience thing is an issue. It is a lack of time for families, and most of those foods really aren't that good for you." Irene talked about processed food and how it is specifically marketed for children: "All the processed foods that are available and pushed on kids, they don't do that with the healthy stuff, like fruit." She went on to joke about how her kids beg her for the stuff, and she often thinks, "Oh sure, I might as well just open up sugar packets, and you can eat that!"

Capabilities

When it came to making changes, all but two parents said they looked at what they were doing and either reassumed positive things they had done in the past or started doing new things to improve their child's diet and/or activity level. Overall the code "change" was used 190 times in the transcripts, which gives some indication about the things parents were attempting to do. After receiving the BMI notification letter, 10 parents used the words "becoming more conscious" or "conscientious" about the general habits of their families. Anna, Karen, and Wanda all said, "I started being more conscious of what we were eating." Felicia and her husband also saw receiving the letter as a opportunity for their family: "We approached it as, 'Yeah we need to start

eating better as a family. We need to maybe get out and do more things.’ We approached it as a ‘we’ thing instead of a ‘he’ thing.”

The sub themes identified in the theme of capabilities include changes in diet, changes in physical activity, and support/communication with others. Some parents made a number of general changes, and some focused on one or two things. Some parents talked to their children about the changes they were making and some just started making them. Valerie explained her strategy: “We just made sure everybody was committed to it and started doing it [making changes] in smaller steps as opposed to you know, ‘alright tomorrow you can’t have this, this, or this.’ You know, doing it in baby steps.” Parents also turned to various individuals for encouragement and support when it came to making the changes.

Changes in Diet

When it came to diet, 16 parents felt they had some basic knowledge of immediate changes they could make. Gabrielle was a good example of this:

I knew I had to start modifying his diet somewhat. I knew what I should do, and I knew it wouldn’t be easy. But I just started changing some small things that weren’t too hard. I just had to make the effort.

The types of changes most often reported were portion control (n=16), healthier choices (n=15), what parents made available/shopping habits (n=12), and increasing fruit and vegetable intake (n=8).

When parents started noticing the children’s eating habits, they made the connection that it was not always what they were eating that was bad for them, it was how much. Hailey was one of the 16 parents who stated she was working on this:

Portion control is a big thing. It's not so much that we eat unhealthy food because we've tried to replace foods that are not so healthy with foods that are [healthy]. So I think now the focus, my goal, is to focus more on the portion control.

Seven of these parents were trying to educate their children about serving sizes: "I try to point out the serving size on packages so they can see what they are," Irene said. And Olivia has been doing this too:

We are trying to get into the discussions of 'Ok, here's the size of a bowl of cereal you're pouring. Your serving has this much, and on the box, a serving is only a half a cup. Here's how much a half a cup really is. So you actually have 3 of those' (laughter).

Robin was attempting to control her son's portion sizes:

Before [the letter] he'd grab the bag of chips and sit and eat and eat. So now when I see him grab the bag, I take it and get a bowl and say this is the portion you can eat of these.

Making healthy choices (n=15) was the next most common change that parents talked about. Because parents realized they can not be with their children all the time, it was important for them to teach the children about healthy options. "We're trying to encourage him to make better choices" was John's comment and a frequent expression among parents. Stacey tried to make a game out of it for her children: "I have the little food models...and we say, here's some food. You like this but which one of these is better for you?" Sharing examples of engaging the children in the decision-making process was a frequent occurrence among parents:

We need to tell our kids, make good choices and then watch what they are doing. If I see my son eating 12 cookies, I'm going to say, 'Hey the choice is no longer yours, it's mine.' But we need to give them the chance. I have a cabinet that has cookies, crackers, candy...it has choices. You can open it at any time and get popcorn with butter or popcorn without butter. But I tell people, you have to give them choices so they know how to control it when they leave me.

Twelve parents adjusted the way they shopped and what they made available to their children. Removing soda and sugared drinks and having healthier options, such as water or sugar free Kool-Aid was a strategy that some parents used. Lori tried something else:

I didn't quit buying snacks, I just didn't buy as many....Also if I bought like, ice cream, I would get low fat or sugar-free. I would bring home snacks that were better, like fiber bars or granola bars to have on hand.

Gabrielle was surprised her children responded so well to the changes she made: "I started buying food differently. I would stop and think about the healthiness of it. And as I changed what I brought home, I noticed that they would eat things that I never thought they would."

The final change eight parents made was attempting to increase fruit and vegetable intake. Anna felt like she started from scratch: "I took everything out of the kitchen, all the bad things I used to buy. Now when you open the refrigerator they're not there anymore. The first things that hit him are fruits and vegetables." Karen, a mom on WIC, started purchasing more vegetables for her family as well:

I've noticed that we can get a few extra things sometimes, so I've been trying to buy things like carrots. They do like carrot sticks. They like [them] in ranch but I'm thinking, well at least you are getting a little bit of nutrition.

Valerie talked about her husband's approach when he does the cooking: "He's trying to get creative. He chopped up some broccoli in mashed potatoes. They thought it was some seasoning. They're getting more of their vegetables and they don't know the difference."

Changes in Activity

Increasing the amount of activity (n=15) the kids got was another adjustment parents made. Parents commented on how they started to see this as a very important lifelong aspect to health as a whole. Those that felt they had the resources, joined gyms or encouraged their children to get involved in activities. Some parents had to be very persistent in their quest for finding the right activities. Anna struggled to find an activity that her son wanted to do:

He doesn't really like sports, and he hates crowds. It has been really hard to try to find something to get him active. I had to be very determined to find something for him. Finally I found a trainer at a gym that he loves, and he works so well with him.

John brought up the importance of getting his son outside: "I've taken some steps to try and engage him in more outdoor activities where he's moving around and not stuck in front of a computer or video game." Parents found themselves getting active right along with their children, making it a more positive experience: "I've tried

to get us all more active. I know how important it is and we just weren't taking the time to do it. And now that we are, we really enjoy it."

Support/Communication with Others

When it came to support for making changes in lifestyle, 18 parents felt they had at least one person to turn to for encouragement and/or guidance. Fourteen parents communicated the findings to their child's primary care provider, but some looked to others for help as well. Twelve participants spoke with family members for support; those mentioned were their spouse, their own parent(s), and/or their sibling. Four parents said it helped to speak with other parents, especially those whose children had also received a BMI notification letter. Three people spoke with other health care providers, such as a nurse or dietician. Two parents spoke to personal trainers, and one went to the "lunch lady" at her daughter's school. Only three participants said they did not mention anything about the letter or request help from anyone.

Barriers

Parents were up against many challenges when attempting to make changes or obtain support for their children. They verbalized the difficulty of making changes and also maintaining positive habits for a lifetime: "It's a lot easier said than done" and "When you want to make a change you have to be consistent, and it can't be stop, start, stop, start. And that is hard!" were quotes used by some parents commenting on how daunting and complex it can be. From the parents' descriptions, the sub themes financial, lack of time, lack of control, lack of knowledge, other children, and age were identified as barriers. Gabrielle's statement resonated with so many parents: "So much

of these things [changes] just take effort, and I know a lot of parents are like me, they just do not make the effort because it is hard. They are tired too!”

Financial

When discussing barriers, finances were a dominant topic for 16 of the parents. The reasons varied, but two main categories mentioned were the cost of eating healthy and the price of joining a gym or participating in activities. Eleven parents made general comments about the cost of eating healthy: “It’s pricier to buy healthy food,” “healthy foods are so expensive,” or “foods that are good for you are expensive” were specific comments that parents made pertaining to buying healthy foods. Barb talked about the cost of feeding her five growing boys:

It is very expensive to feed a family right now. We are both working full time, and we don’t get any outside resources and it’s very expensive to eat healthy. You know, apples are like \$1.88 a pound. It’s much easier to run to Wal-Mart and go, oh, you want those cookies that are a dollar? One pound of apples doesn’t get my family very far. You get, like, two apples, here boys....split these! You can each have a slice (laughter).

Irene, who also has a large family, talked about the financial burden of feeding her seven children:

As far as money goes, it’s huge right now--there’s not enough money in the budget for healthy food all the time so you’ve got to make choices. It’s expensive to buy fruit as opposed to going to Sam’s Club and getting a case of 12 packages of 6 count chocolate covered donuts for like \$4.50. It’s hard to compete with that.

Three of the parents specifically talked about the impact of receiving government funding of some sort and how that limited their purchases even more: “I get WIC right now and like on those vouchers you have very specific guidelines, in my opinion, eating healthy is not always economically feasible.”

Emily was one of the seven parents who mentioned the cost of activities: “It seems like all the activities for kids cost something. It’s all about the money. At the end [of the month], we don’t have that much money left over.” Mandy spent a lot of time talking about finances. Her husband lost his job, and she is dealing with some financial stresses:

It isn’t in our finances to have our [gym] membership any more. That’s an additional cost that we don’t need right now. And to eat well is very expensive. I have to be really careful right now. Yes fresh veggies are wonderful, but they are so pricey--do we go without--absolutely!

Lack of Time

Just as many participants identified lack of time as a cause of their child’s obesity; fifteen parents also identified it as a barrier. Busy lifestyles and multiple activities were the same reasons given for the parent’s lack of time to plan and prepare healthy meals for their families: “I don’t have time. It’s eight o’clock at night and they are getting home from practice. And yes, I should have had something sitting in the crock-pot for eight hours but I didn’t come home from work during lunch.” John summarized his feelings, “People have busy lifestyles these days, it’s tough! It just seems like there’s just never enough time to do the things we probably should be doing.”

Lack of Control

The lack of control was difficult for 14 parents. There were certain things parents felt they had no control over, and those were seen as barriers to success for their children. The three circumstances identified most often were children being away from the parent, not being able to affect their preferences when it comes to diet and exercise, and “sneaking” food. The lack of control became obvious when the children were in school, with other family members, or making decisions on their own.

School was mentioned frequently due to what the children ate and things they were offered. Parents felt even if they packed their child’s lunch, they were still able to trade or get food from other sources: “His friends will give him their extra food” or “he’s trading his crackers and cheese for tator tots!” were concerns parents had that they felt they could not do anything about.

The parents being interviewed were not always comfortable when the children were with other adults either. They felt grandparents and spouses were not always helpful in supporting their efforts and contributed to their problem with lack of control. Felicia struggled with how to deal with this dilemma:

My husband’s mom loves food and loves dessert. And loves to cook...and she will always have cake and cookies [when we go to her house]. We’ll be like she’s trying to eat healthier, but she’ll say she likes to do it for the kids and to let them be kids.

Eight parents talked about the time frame from when the children arrive at home after school to when the parents get home from work as a major obstacle. Emily talked about her difficult position: “They come home from school by themselves right now,

and I can say don't turn on the TV, do this instead, but I'm not there to monitor it."

Felicia, a single mom, shared a similar concern: "I work full-time. When they get home, I'm not there. I can't monitor what they are doing when I'm not home with them."

Six parents also felt a certain amount of surrender when it came to a child's preferences about eating and exercising. Emily was one parent who stated her daughter preferred activities that were sedentary and she would like her to exercise more but enjoy it: "I'd like her to find something that she enjoys doing and not something we have to force her to do." And finally Gabrielle felt some frustration about her child's dietary preferences: "I think it's hard for my kids who really don't like vegetables and fruit. They don't like chicken...or things that are healthy for you. My oldest son will eat maybe five vegetables." There is a reality to the statements made by Natalie and Robin: "I can't follow him around all day. I can't follow any of my kids around all day telling them what to eat or do" and "We've had the conversations, it's all you can do, but you can't do it for them."

Eight parents verbalized concern about these children "sneaking" food. Parents described how this created a whole other set of concerns as Olivia described her feelings after finding candy wrappers in her son's backpack and in the closet in his room: "I was struck with fear like 'Oh gosh is this a problem? Do I need to look anywhere else?' You know, is he hoarding food? Does he feel like he is not getting enough to eat?" Valerie was concerned when she found what she considered a "stash of food" in her daughter's closet when helping her clean:

My husband and I are making sure that she doesn't have anything else hidden

in her room. Because when I found the food and the chocolate and various wrappers in her purse, I was like ‘why is that food in your purse in the closet?’ She really didn’t have much to say.

Lack of Knowledge

The lack of knowledge (n=14) was the next sub theme for the barriers parents encountered. Parents felt they had a general lack of knowledge (n=12) when it came to diet and activity, they were unaware of community resources (n=12), and did not know how to communicate with their children about obesity (n=11).

Some parents struggled with “feeling overwhelmed” and not knowing what to do or where to go after receiving the BMI letter. Twelve parents spoke very generally about their lack of knowledge when it came to making changes. Anna stated: “I didn’t know what to do; you’re kind of on your own on what to do next and I wasn’t sure where to go.” Five parents stated they knew “what” to do; they just were not sure “how” to do it. They talked about the huge amount of information “out there” but not knowing what to do individually for their child. Mandy commented, “I learn things one way and then they change everything from year- to-year (laughter). It’s like eat all the carbs you want, then don’t eat any carbs.”

Olivia, like many parents, toiled over healthy snacks for her children:

In terms of snacks, I go ok what do we get? I’m thinking well, maybe applesauce but that’s so sugary. Crackers and cheese? So much fat. What is good and what is not? And what can you get kids to eat?

All parents were asked questions regarding their knowledge of community resources and where they got health information after receiving the letter. Twelve

participants verbalized that they were not aware of any local community resources available for obese children. Nine participants felt they had to go out on their own to find people or resources that were valuable to them. These individuals mentioned resources such as health care providers (n=8), gyms or the YMCA (n=6), health information online (n=8), and information from other forms of media (n=6). Overall, there was a real feeling of lack of information available to parents, especially for challenges of the school-age population.

The final category in this section and probably the most distressing to parents was the lack of knowledge about how to communicate to the child about the letter or changing their habits. Eleven participants mentioned their concern over not knowing how to broach the topic with their children. Fear and frustration were two words that accompanied the lack of knowledge. Frequently, the “fears” revealed were that they would create self-esteem issues or more eating problems if they brought it up or talked about it too much: “We don’t want our daughter to be so insecure about who she is that she is tied to her weight and becomes bulimic or anorexic.” Paige has heard her daughter make comments about her weight and she was not sure how to respond: “She has started making a couple comments about being fat. I try to say, ‘you’re not fat, you just need to exercise more’ or something like that, ‘cause I don’t want it to affect her self-esteem.” Many parents talked about “walking a fine line” or not wanting to “push kids to the edge.” Emily was concerned about both: “You don’t know where the line is, you know? If you hold them away from it are they just gonna want it more and binge eat? Are you gonna throw them over the edge?”

Karen and Valerie were in the same place when they described their distress about how to proceed: “I’ve tried, but he is still overweight, no matter what!” and “Every time we take her to the doctor, she’s gained more.” They both ended these statements the same way: “I don’t know what else to do.”

Other Children with Different Body Types

Another barrier that many parents saw as an extremely difficult challenge was having one child overweight and other children who are not. Fourteen parents expressed uneasiness when it came to multiple children in the family with differing body types and taste preferences. Many parents verbalized they were unsure how to deal with the complexities when children live in the same environment. Felicia described her quandary: “The thing that is hard is I have another child who is taller and thinner. How do you tell one kid ‘you can’t have this’ and the other one, ‘oh, yeah you can have another helping?’” Gabrielle has a slightly different issue with her children: “I have one kid who eats everything and the other who eats nothing. It is really a balance--trying to find things that are healthy and they both will eat.” Olivia spent a while talking about her oldest child who is overweight, but makes better food choices than the younger two, who do not have any weight concerns:

The other two ask for more food, more often than he does, and so it’s interesting trying to say yes to them but then I say no to him more. I did find myself last year trying to stop because I didn’t want food to become an issue for him.

Paige expressed another struggle: “Of course with my kids, I encourage the slim one to eat and then the not so slim one to stop eating (laughter). What’s striking to me is they’re in the same environment...they have the same environment.”

Age

Age (n=8) was the final sub theme for barriers, and it was particularly problematic for school-age children for a couple of reasons. If the families were fortunate enough to belong to a gym, this age group was not allowed to utilize the cardiovascular or weight equipment. Parents found this extremely frustrating: “I brought this up to the trainer. ‘How do you expect parents who have a child with obesity and telling them exercise is good but then they’re not allowed up here on the equipment?’” Another mom pointed out that when she investigated the age for equipment use at their gym it was 18 and older: “So it struck me, what do you do for kids that you want to get more physical opportunities?”

The other reason parents mentioned age as a barrier was tied to safety: “We have a treadmill at home, but I don’t want her on it without an adult around.” The safety concern was mentioned when it came to physical activity and being outside alone: “He can’t just go ride his bike around the block. He’s still just 8, there’s that fear of strangers and things.” Valerie hit on two different worries in her statement: “We’ve got dogs that surround our house and then I don’t like them out in the front because we live on a very busy street.”

Role Modeling

Role modeling (n=17) was a theme that became apparent early in the interviews since most of the parents touched on it at some point. Parents felt strongly about the

importance of their accountability in role modeling positive health behaviors. Generally, 14 parents felt they demonstrated positive health behaviors in terms of diet, activity, or both. Hailey verbalized well what many parents tried to explain: “I believe as parents, our kids follow what we do versus what we say. They’ve seen a consistency with mom working out. So I really believe we set the pace for the direction we want our kids to go.” Mandy was also profound in her statement:

My job is to take care of myself so I can take care of them. So this is important to me. Granted I may get a little off but I gotta be around for these guys as much as God will let me.

Twelve parents spoke about the importance of role modeling positive exercise or activity habits. Simple things such as running, going to the gym, walking, or biking were all activities that parents mentioned that they or their spouse participated in and how important it was for their children to see them doing those things. Courtney emphasized how she felt about showing her kids: “I try to lead by example. I try to be active and have them see me going to the gym and exercising at home.”

Even parents who did not like to exercise talked about the magnitude of letting your kids see you do it. Paige is a good example of this: “I try to go to the gym Monday through Friday for 40 minutes a day. I’ve been pretty good lately. Although I never get that buzz they say that you’re supposed to get when you go (laughter).” Tammy also spoke to this:

My kids are fully aware that it is a struggle for me. It’s not always easy, but I try to stay active and involved because it gives me an opportunity to keep moving and that is important. So to us participating in a sport is not just a

sport, it's another opportunity to educate and prepare them.

The other area discussed in terms of positive role modeling was eating habits. Seven parents mentioned things they do to try to model good behavior when it comes to eating. Felicia commented, "Both my husband and I try to eat healthy, lots of fruits and vegetables. We don't carry a lot of junk food in[to] the house." Irene talked about how she grew up and seeing her father model certain behaviors made her want to do better for her children:

When I grew up my dad did all the shopping and he didn't like fruit either so it was the same things over and over, meat and potatoes. So I have started trying to eat more fruit and getting different kinds of vegetables. It makes a difference in what you offer them from the beginning.

There was also some discussion with seven parents who saw certain behaviors as negative either from themselves or their spouse. Three moms were very sensitive to how difficult it can be: "I haven't been the healthiest and I don't want her like that you know" and "I've had my own battles with weight, and I can see him developing the same tendencies I get." Four parents came right out and voiced concern over their spouses negative behavior: "When it comes to role modeling, the hard part is my husband um, he's just not the best example in the world!" Courtney was lighthearted when she talked about her husband not being the most positive role model for their children: "He's overweight. He should be getting a letter, maybe I'll send one to him (laughter)."

Parents identified other individuals they felt had an influence and should be positive healthy role models to their children. Those mentioned included grandparents,

older siblings, teachers, principals, and priests/pastors. Tammy touched on the impact certain people can have when she said, “Personally I would like our principal, our ministers, pastors/priests, and school leaders to engage more so they can show me and the kids that health and wellness are a big deal. That it is important for everyone.”

Primary Care Provider Response

There were two sub themes or leaves developed on the tree regarding communication with their child’s health care provider. The BMI notification letter these parents received indicated that the findings should be considered a screening tool and not a definitive measure. The letter went on to state the child’s health provider is the best person to evaluate whether or not his/her measurements are within a healthy range and encouraged them to share these findings with that individual. Out of the 21 parents interviewed, 14 said they had communicated with their child’s physician about either the letter itself or their concern for the child’s weight. Of the 14 participants who talked to their physicians, six felt their physicians were supportive, six had a neutral approach, and two parents felt the interaction was negative.

Of those reporting a positive or supportive interaction, parents felt the physicians took the time to speak with the child, parent, or both about ways to keep healthy by eating well and being active. Some parents also said their doctors explained potential complications of obesity and discussed referrals if they would be interested in them in the future. Robin was thrilled with her child’s doctor’s approach:

He talked to him about making changes. He was so good with him. He told him ‘You will be approaching puberty, and it can be your friend or you can eat your way right through it. It is up to you to decide.’ He was just awesome.

Although Valerie felt very encouraged about the conversation at the doctor's office, she pointed out what she considered a mixed message:

They talked about how she needed to watch a few things and that if she could maintain her weight and continued to grow taller, she would move down into the lower category. And then they gave us a gift certificate to McDonald's or Burger King! So I thought that was fascinating. On the one hand they are telling us that we need to be careful and then handing us fast food coupons.

The parents that felt they received a neutral response from physicians said their doctors told them it was "not something to worry about" or the parent described their reaction as "not concerned." They felt the doctors knew their child's growth patterns, activity levels and general eating habits, and this was reassuring to them. Wanda was concerned when she presented the letter to the doctor but his response was comforting to her: "He talked about his activity level, what he eats, where he's always been on the growth curve and said, 'looking at his history, I'm not concerned. We'll just keep watching it.'"

The two parents who described their physician interaction as negative both verbalized frustration that the doctor did not do anything. Anna was extremely frustrated, and she ultimately switched physicians: "The doctor didn't tell me anything. All she said was make sure he gets exercise and do a low fat diet!" The other mom was more direct in her feelings: "I have a hard time with our family practice doctor. He didn't want to talk to her about it because he is a wimp."

The two main reasons the seven parents gave for *not* communicating with the doctor were the child had either recently had a visit and there was no mention of obesity

at the appointment or the parents believe the only time to see the doctor is “when you are sick.”

School's Role

During all the interviews, there was some discussion about what the parents thought the school's role should be in regards to childhood obesity. In order for parents to be successful in making changes or implementing a healthy lifestyle with their children, it was apparent to the parents that the other environment in which a child spends the majority of their time needs to play an active role. Topics the parents discussed included the following: educating children more about nutrition and activity (n=10); incorporating more activity into the school days (n=8); responsible snacking and parties (n=8); and the most talked about subject in this theme, school lunches (n=18).

Education about Nutrition and Activity

When it came to educating children about nutrition and activity, Mandy was extremely passionate about how important it is for the schools to be involved: “If you want to make exercise a positive thing and nutrition a positive thing, why aren't we teaching them more about it in school?” Parents specifically remarked on the amount of time kids spend at school and how important it is for them to be exposed to positive health and nutrition throughout the day:

If kids go to bed at a decent hour like 8:30 or 9:00, the majority of their day is spent at school. So maybe we need to go back and see what's going on during the day. We need to look at the big picture, a lot is pointed back at the parents, but if you think about it, kids are away from their parents most of the day.

Stacey spoke to the importance of introducing the information as early as possible:

The more they are exposed to it the better, and I think it needs to happen before the 4th grade, like [in] kindergarten. That's when they are most impressionable. Then by the time they are in 4th grade when they get their health, they've been introduced to the basics.

One parent talked about teachers being creative in every subject to educate kids:

It doesn't just have to be health or PE, it can happen in science or math. I mean hit it both ways. Give our kids an opportunity to learn something and then talk to the parents and get them involved. Hey tonight let's try to make this meal or talk about what experiment we learned today while in class!

Emily spoke about the challenges of schools having a lot on their calendars and offered suggestions:

PE could be more in nutrition too. Do the exercise, but then do nutrition as well. I don't think they are doing much to teach them about health and nutrition at school because I know they have a lot of expectations on them as well.

Increased Activity

Eight parents talked about the disappointment of cut backs in physical education and recess and how they feel this is also affecting the education of kids in terms of health. Parents voiced the need for more activity throughout the day. None of the schools that the children attend get physical education everyday. The most reported was two days a week for about 30 to 40 minutes and some even talked about the older

school-age kids not getting any recess. Felicia and her husband had visited the principal at their school because of this concern:

We can't believe they only get 20 minutes for recess a day and PE twice a week. Kids can't sit all day--they just don't get enough active time....They need to give back the stuff [recess and PE] they took away.

Karen also mentioned the lack of access to activity at her child's school:

If you don't make a team, then you don't get any activity during the day because even in PE they are not active, they are learning about the rules. They aren't jumping rope – they aren't being as physical as when we were in school.

Responsible Snacking and Parties

The next sub theme parents felt concern about was responsible snacking and food at school-sponsored parties. These eight parents often started this discussion with a comment such as: "Schools have gotten better but...there is still plenty of room for improvement." John commented on his perception: "One of the things I see is the schools using candy as a reward for the kids, although a lot of people do it, so I guess everyone's a little bit guilty of it." Paige referred to the amount and types of food parties: "I usually help plan the parties. And I know I'm taking sugar cookies for the kids to frost and decorate, and I'm bringing them another sugary cookie for them to eat." Fast food and pizza were also mentioned as frequent "rewards" or food at parties and parents felt these were often unnecessary, but it "was what the kids wanted."

Stacey's explanation also resonated with other parents:

We've done the vegetable thing and stuff like that, but it just doesn't go over

as well. We have a challenge, we have things like cookies that are not necessarily the healthiest thing, but they are the quickest and there is not as much going to waste.

School Lunches

Overall, parents were discouraged about school lunches. Twelve parents felt the quality of lunches at their child's school was poor; six parents were positive, and three did not feel strongly either way. The parents who were more negative about lunches felt the schools should do a better job of providing healthy balanced meals. "Hot lunches are horrible" and "The menu is not very healthy" were complaints of a number of parents. Natalie summarized the sentiment of many parents when talking about the hot lunch program: "It would be so much easier to send him to school and know that he's gonna get a nutritious healthy meal. But like I said it's not that good, and it's not that healthy." Tammy was also extremely discouraged by the lunches that her child's school provides and talked about the importance of the message that we are sending to the kids:

I just feel like our lunch program needs to be revisited, and I've felt that way for a long time. If we are telling our kids we need to eat healthy food to fuel our bodies, then shouldn't the meals that are taking place at school be a solid example of that?

Courtney talked about the lack of variety served daily: "They'll have like three kinds of starches on their tray. They'll have like some kind of potato, then they'll give like a bag of goldfish, and then have corn. I'm like, are you kidding?"

Parents were also concerned about the lack of choices. Seven parents talked about the lack of choices at lunch for the school-age kids and how they felt if they had a couple of healthy options to choose from each day it may be a more positive experience. Some were aware that the older grades often got more choices such as soup and salad bar and questioned why all grades could not make use of that option. Natalie offered her suggestion:

Something like a fruit cart where they can choose what kind of fruit they want would be nice, you know. Maybe if they had a couple choices to choose from everyday then I think kids would be more likely to choose something healthy, especially if they had a choice between fruits and vegetables.

The quantity of food was another frequently broached topic. Karen gave an example of her struggle with mixed messages and portion sizes:

I had to go to the nurse's office at his school and up on the walls they have all these portion things, and how to eat right and stuff. Well, they show you a serving as being a half a hamburger and a little bit of fries. Then I'm thinking, you're not serving the kids those portion sizes. You're already increasing their food intake. So they're never going to eat right from the beginning.

Hailey, a single mom, who feels she is doing what she can at home to educate and role model healthy eating and exercise, spoke to the essential need for parents, school, and community to work together:

It is a parent's responsibility, and I think even beyond educating the parents we need to educate the teachers as well. So it's not just something you give a pamphlet to the teacher and say, send this home with your kids. No, we need to

educate the principals, the superintendent. They need to buy into the fact that we're trying to take proactive measures to reduce obesity in our country so you have to start with a foundation. And the foundation is your principal and the teachers at the school. So if they aren't on board with it, it'll just be another process that we go through [during] the school year. You have to really get them to buy into this healthy journey.

Health Screening Process

When parents talked about the health screening process, there were three distinct areas they addressed: before the process began, during the screenings, and after the screenings were completed. During the interviews, the question was asked if the parents thought schools should be doing health screenings at all. Five parents felt the BMI screenings should not be performed at school. The two reasons they gave were the school not having time to do it well and that it is information that should come from a doctor: "I don't think it should be the school telling me that my daughter's overweight. It's a private issue, you know. It's a health concern that should be dealt with in a family, not with the school." Another parent responded, "I think the schools have too much stuff already that they have to deal with. I think this is a parental issue."

When asked the same question of whether it should be done, the other sixteen participants felt it was valuable and should be done: "Well it has to come from somewhere." Since many parents said they do not take their children to the doctor every year once they are in school, they felt it was good information to have:

I think it's good information, much like the eye screenings or anything else. I mean it's good feedback to the parents they may not initially catch it or may

not be cognizant of the situation, and as a parent it's good to have it pointed out to you.

Prior to the screenings the two main categories of concern were a lack of communication and lack of knowledge of the process. Eleven parents felt communication regarding health screenings was poor. Some issues mentioned were: unaware screenings were being done, what screenings were being done, the process for getting the information back to parents, and information provided was too general.

Anna, who was surprised by the lack of communication prior to her child's letter coming home, stated: "I wondered why it just came out of the blue. There was nothing, it just arrived. I think if parents are forewarned that something is coming, they will be much more receptive to it." Paige validated Anna's feeling by acknowledging that her principal did a good job of communicating and because of that she experienced a more positive reaction to receiving the letter:

It was good the principal told us the letters are gonna be coming out. I think if I didn't know they were coming, it would have been more shocking. We had several opportunities to hear this was going to be happening. She sent a notice home early in the year about the screenings, she mentioned it at a Parent-Teacher League meeting and then it was in a newsletter.

The lack of knowledge about the process ties closely with the lack of communication between the school and the parents. Eleven parents talked specifically about not knowing anything about the health screening process. When Courtney was asked how she might change things to make the process better, she replied, "I really

don't know how I would change anything because I don't know anything about how it's done." Olivia also had a number of questions about the process:

I don't even know what any of the screenings entail. Do they get scoliosis?

Blood pressure? Is it just our school? Was I supposed to sign off on something?

Are they just testing kids who have gotten something in the past? All of this kind of information would be good to know.

When it came to the screening process itself, the only major concern expressed by parents was that it was conducted in a private and confidential manner (n=5) for the sake of their children. Parents remembered their own health screening days of long lines in a wide open gym: "I hope they do it in a more private area. It's so hard when all the boys and girls are down there together; everyone knows what's going on with everyone else."

After the health screenings, confidentiality and privacy were also a concern for getting the information from the school to the parents. Eight of the 21 parents felt the information should be mailed and not something given to the students to bring home, even if they are in confidential envelopes: "I know it is an added expense, but send the letter home to the parents. I mean it was a great explanation once I got it." Lori joked about the anonymity of it all: "I think the letter was ok. She brought it home though. I think it probably should have been mailed. And maybe with no return address so she wouldn't know who to be mad at (laughter)." Robin felt mailing the letters would eliminate any concern parents might have of their child being set apart: "It should be all or none; I would say give one to everyone or, even better, mail them out so the kids don't feel singled out."

Giving some sort of letter to every child (n=5) was another suggestion by parents to avoid differentiating children. This would also give parents and children feedback when they have made positive progress or just to let them know where all their kids are on the growth charts. Danielle was adamant: “I want the letter now that if she does lose 20 pounds or grows to catch her weight, I want the letter that says, ‘Wow look how great she is!’” Olivia also pointed out the benefit of every child getting one: “I didn’t get a letter for my other child and it would be interesting to get something saying, ‘Here’s the range they are in.’ Maybe somebody’s on the cusp. As a parent, you should know the result if everybody’s being tested.”

The final sub theme under health screenings involves the specific information that is sent home to parents. Of the parents who commented on this subject, all felt very strongly that more information needed to be provided (n=15). When these parents received the BMI notification letter, they were not provided with any additional health information other than the recommendation to follow up with a primary care provider. Repeatedly during the interviews parents asked for ideas on community resources available for children and adults and suggestions on what changes they could make regarding diet and exercise. Courtney, who was not happy about receiving the letter, was straight forward with her idea: “If you are gonna tell me that my child’s overweight, well...then help me. There were no suggestions on what to do besides you need to go to the doctor.” Anna was more passive with her comments: “A little more information would have been helpful. After I got the letter, I just didn’t really know what to do.” Although some parents felt they had some general knowledge and it is explained in the notification letter, Valerie said, “I think some parents are still in that

stage that really, what is a BMI and how important is it for us to watch?" Tammy provided insight into what she and other parents may want,

Don't just tell us there is a problem, but give some recommendations or some help. One, see the pediatrician because they are at risk for some health things. But two, here are some little things you can do as a family, or some adjustments you can make. Then a parent would say, there is some substance to this that I need to pay attention to.

Summary

It is essential to understand the perceptions of parents and the barriers they experience when receiving notification that their child may be overweight. The explanations provided in this chapter offer insight from 21 parents with complex personal, family, and social lives. The findings can serve as the foundation for discussions among parents, school officials, health care providers, and community members about what can be done to assist the families of overweight children.

CHAPTER 6

RELATIONSHIP OF THE STUDY TO THE LITERATURE

He who plants a tree, plants a hope.
Lucy Larcom, "Plant a Tree"

The purpose of this multiple case study was to explore the perceptions of parents whose school-age children received a BMI referral letter stating that their child is overweight. As states mandate BMI screenings in schools, the results of this study have implications for parents, schools, health care professionals, and communities. I set out to gain an understanding of parental insight. One of the main goals for conducting this study was summarized by Fallowfield and Jenkins (2004). They concluded from their research that in order to make the communication process as effective as possible, we need to understand what is most important to parents and their families. In order to discuss the implications and meanings of the themes presented in the previous chapter, the original research question and sub questions will be re-examined.

Return to the Research Questions

Grand Tour Question

The overarching question of this research study was how did parents feel about receiving a letter stating their child may be overweight? The imagery of a "seed being planted" was especially significant for this question, since it describes how many of the participants saw receiving the letter as the beginning of what was to come.

As Mikhailovich and Morrison (2007) found, when discussing a child's weight with parents, health care providers should expect a variety of responses. This study found that although there was a wide range of reactions, 14 parents felt positively about receiving the letters than the two that had negative feelings. Young-Kubik, Fulkerson,

Story, and Rieland, (2006) also found that most parents were not upset about the letters and were only “slightly or not at all uncomfortable” with receiving the results.

McGrath (2005) and Kennedy-Sheldon, Barrett, and Ellington (2006) described the emotional reaction that health care providers may encounter when dealing with parents who have received this type of information. They stressed the importance of being aware that it could happen, prepare for it, and do what can be done in advance to prevent it. This study provided some insight into what parents feel is important for them to know prior to the screenings and what would be helpful for them to have after they are completed. It became clear that whether the response was positive or negative, there still may be an emotional reaction. When talking to the parents about the health of their child, it was impossible to remove the emotions from the conversations.

Another area that related directly to emotion was the concern over the classification of children as overweight. Even parents who felt the information was important to receive still had fears of their child being “stigmatized” or “labeled.” Mikhailovich and Morrison (2007) found a similar parental uneasiness in their study and Puhl and Latner (2007) devoted an entire article to the research available on the consequences of childhood obesity and the role that weight stigma may play in mediating negative health outcomes. They reviewed intervention studies that have been conducted and outlined the importance of continuing to study effective strategies to improve attitudes. They concluded that the problem is a societal one and that population-level efforts at reducing stigma are needed.

Sub Question One

What are the perceptions of parents regarding the causes and seriousness of children being overweight?

Returning to the tree metaphor, while the body of the tree receives most of the appreciation, the tree can not be nourished and grow without its roots. When interviewing the parents, it was discovered that in order to make changes within individuals, families and communities, it was important to understand the depth and extensiveness of the perceptions of what causes have contributed to obesity in children.

Twenty parents were aware of the seriousness of the problem of childhood obesity in our country and, as Etelson, Brand, Patrick, and Shirali (2003) found, most had a similar, high level of concern, especially about the health risks involved. One of the prominent topics in the literature was parents not recognizing obesity in their children (Baughcum, Chamberlin, Deeks, Powers, & Whitaker, 2000; Etelson, Brand, Patrick, & Shirali, 2003; Myers & Vargas, 2000; Sutherland, Gill & Binns, 2004).

Unlike the findings in those studies, 12 parents in this study verbalized they had recognized their child as overweight even prior to receiving the letter. After receiving the notification letter, 19 participants began taking steps to change it. As Dr. M. Butler emphasized in a telephone interview, “the earlier the recognition and intervention, the better off the *child and family* are” (personal communication, May, 30, 2008). These parents agreed and saw the letter as the opportunity to start doing something about it.

Both specific and general causes of obesity were identified by parents and they acknowledged many of the same causes that are present in the literature. Examples of what contributes to the problem in the literature that participants in this study also

identified were reduced physical activity, increased television watching and computer use, and increased fast food consumption. (Hardy, Harrell, & Bell, 2004; Lobstein, Baur, & Uauy, 2004; Paxson, Donahue, Orleans, & Grisso, 2006; Schwartz & Puhl, 2003). Participants in this study also included busy lifestyles, portion sizes, and processed and convenience foods as causal. The literature often alluded to these as well but they were not as prominent.

Parents identified a number of factors that contributed to a busy lifestyle, which was the most frequently mentioned cause in the study. Working parents and multiple children in many activities added to the chaos of the families' lives. Parents felt this led to the down fall of the families' eating and activity habits. In one way or another, every parent mentioned this as a contributing factor.

These parents were also in agreement with some of the environmental factors that the IOM (2005) included as contributing such as urban and suburban designs that discourage physical activities and unsafe play areas. Kids not being able to play outside because of their age, living on busy streets, and other safety concerns all led to inactivity that many thought contributed directly to obesity.

A thought-provoking depiction of obesity in the future comes in the children's movie Disney-Pixar's *Wall-E* (Morris & Stanton, 2008). The movie seems to be making a statement about the obesity crisis with suggestions of how lack of movement and poor diet can lead to obesity. In the movie, the humans spend all day on floating chairs, with no exercise or outdoor activities, consuming endless quantities of extra-large everything while surfing and chatting on video screens. The similarities between what parents in

this study identified as causes of obesity, such as inactivity, portion sizes, and access to technology, and what the movie portrays are uncanny.

Another finding from this study was although they were not all cardiovascular risk factors like Dietz (2002) and Dietz and Gortmaker (2001) estimated, 10 of these children whose parents were interviewed had already developed various health complications that could be associated with obesity. As the literature supports and Dr. M. Butler (personal communication, May, 30, 2008) emphasized, obesity causes a number of co-morbidities that can shorten the life of an individual.

Sub Question Two

What are the perceived capabilities of parents in making changes for the treatment for childhood obesity?

The parents' responses varied in type, frequency, and intensity of changes made and who they relied on for support. As mentioned earlier, one positive outcome of receiving the letter was all but two parents reported making lifestyle changes. Vaughn and Waldrop (2007) addressed key components necessary for prevention and treatment of obesity to be successful. One of their major recommendations, that parents from this study were addressing, is the concept that this was not just "the individual child's problem" but that it was necessary to involve all family members in order to be successful. Parents talked about how the letter was the motivation behind making changes as a family and those that did, recognized it as positive for everyone.

Almost every parent (n=16) revealed they made some changes in the child's diet which is very promising compared to the findings of Young-Kubik, Fulkerson, Story, & Rieland, (2006) who found that less than 8% (n=345) of their survey participants

planned on making diet-related changes. They also found that only 25% of the parents planned to increase the amount of exercise or activities for the child compared to the 75% of parents in this study who made some sort of change in activity for their child.

Crawford, Timperio, Telford and Salmon's (2006) study was one of the first to examine parental concerns about weight status and what weight control strategies they used to prevent unhealthy weight gain in their children. Many strategies parents identified were similar to what the parents in this study were attempting to do.

Promoting a balanced diet and healthy eating, increasing physical activity, encouraging more fruit intake, and educating their child about healthy lifestyles were consistent in both studies. Their study found that parents were not recognizing obesity in their own children and parents are more likely to initiate healthy behaviors if they think their child is overweight. Based on their findings, recommendations include programs raising parental recognition and providing parents with practical strategies to prevent weight gain in children.

Other broad changes parents were making that were supported by the literature were initiating gradual changes, focusing on permanent changes rather than quick fixes, understanding and controlling portion sizes, making healthy food choices available, and reducing the availability of sugar-sweetened beverages and sodas (Caprio, 2006; IOM, 2005; Lindsay, Sussner, Kim, & Gortmaker, 2006; Vaughn & Waldrop, 2007).

Overall, 18 parents in this study felt they had at least one supportive individual to go to when they needed encouragement which, based on the literature, is important. Studies have emphasized how strongly parents feel about the necessity of having positive support in order to make and maintain changes (McGrath, 2005; Mikhailovich

& Morrison, 2007; Price, McNeilly, & Surgenor, 2006; Strauss, Sharp, Lorch & Kachalia, 1995). Borra, Kelly, Shirreffs, Neville, and Geiger's (2003) study found that to be successful programs must include the family and incorporate information about where to go for support and Stewart, Chapple, Hughes, Poustie, and Reilly (2008) suggested that helpful support mechanisms may be the greatest dynamic in achieving and maintaining lifestyle changes.

Sub Question Three

What are the perceived barriers to parents in making changes for the treatment of childhood obesity?

Findings from this study are consistent with what is present in the literature indicating parents faced many challenges at multiple levels when attempting to make changes (Hardus, VanVuuren, Crawford, & Worsley, 2003). Parents verbalized individual challenges but there were a number of similarities in the barriers they encountered. Finances, lack of time, lack of control, lack of knowledge, challenges with other children, and age were all barriers identified by parents.

In an article discovered after the initial literature search was completed, Styles, Meier, Sutherland and Campbell (2007) reported the use of focus groups to identify parents' and caregivers' concerns about obesity in young children. A number of their findings were consistent with the themes and sub themes from this study. Their focus group participants also reported lack of time as one of the most significant obstacles to developing healthy habits. Time pressures were mentioned frequently by 15 participants in this study as well, specifically when faced with work, multiple children, and family commitments. Parents expressed their uneasiness regarding their lack of time for meal

planning, shopping, and preparation, which they felt eventually led to more eating out. Long hours at work and school also limited their time for physical activity. Eight parents verbalized these busy lifestyles lead to a lack of energy to even play with their children which were all consistent findings between the two studies.

Finances were a big concern in participant's perceptions of being able to buy healthy food options for their families. The parents cited food and activity costs as something that 16 of them were up against when trying to implement change. Similar concerns about finances were echoed by the parents and caregivers in Styles, Meier, Sutherland and Campbell's (2007) study.

Attempting to control food amounts and choices for their children was an issue of concern for 14 parents. They expressed a need to guide and control to a certain extent, but at the same time they struggled to enforce behaviors they felt they had little control over. They talked about the difficulty they had trying to influence the eating and activity habits of their children. Styles, Meier, Sutherland, and Campbell's (2007) participants also talked about how "exhausting" it was to try to shape their children's eating and activity habits. The lack of control parents expressed contradicts what Myers and Vargas (2000) reported when 53% of the parents in their study felt they did not have a problem controlling what their child ate. In their study of parents as key players of prevention and treatment of obesity, Golan and Crow (2004) recommended that parents should not restrict the amount of food a child eats at a meal but rather serve as a source of influence by regulating the quality and pattern of the food environment and by setting appropriate limits. This may also apply to the concern for the parents in this study who were unsure of how to deal with their children "sneaking food."

Although the level of knowledge varied widely from case-to-case, 14 parents reported that they lacked knowledge to confidently make changes for their children. When provided with information about children being overweight, parents want ideas and suggestions on what to do and where to go (Vaughn & Waldrop, 2007). They wanted information that would allow them to make informed and educated decisions for their children and families. These were all strategies mentioned previously in the literature as well (McGrath, 2005; Price, McNeilly, & Surgenor, 2006; Strauss, Sharp, Lorch, & Kachailia, 1995). Justus, Ryan, Rockenbach, Katterapalli, and Card-Higginson (2007) wrote about their interactions with parents regarding mandated annual Child Health Reports. Those parents also wanted dependable information regarding how to improve the health of their children. Mikhailovich and Morrison (2007) found the need for clear and supportive information and that available resources in their community should be included. This is a significant statement, since 12 participants in this study were not aware of any resources available to them.

There was confusion expressed about what is in the media and literature regarding “how and what” children should be doing when overweight. Twelve parents felt they had a small amount of knowledge related to general nutrition and physical activity. Even if they felt they had some knowledge, 14 parents expressed an interest in improving health knowledge for themselves as well as for their children. They talked about the explosion of information in the last few years and how it is hard to know who and what to believe. Information from a reliable and trustworthy source would be valuable. Specifically, for nutrition, they wanted to know healthy ideas for feeding their children, healthy food preparation, and how to incorporate more fruits and vegetables

into meals. For activity, parents were interested in types of activities and appropriate activity levels for school-age children. Similar concerns of being “overwhelmed” and what to do were found among the focus groups of Styles, Meier, Sutherland, and Campbell (2007).

The lack of knowledge regarding how to communicate with children about the letter or changing their habits was another apprehension for 11 participants and five parents were so troubled they chose not to discuss it at all. In one study, half of the participants chose not to discuss their child’s findings with the children (Young-Kubik, Fulkerson, Story, & Rieland, 2006). Styles, Meier, Sutherland, and Campbell’s (2007) participants identified concern about self-esteem as one of the main motives for not discussing weight or weight-related issues which was also a reason given by parents in this study.

Parents need to be reassured that children want guidance. More importantly, anxiety about children’s weight and obesity is increased when it is not discussed because parents do not know what to do about it. Borra, Kelly, Shirreffs, Neville, and Geiger (2003) encouraged parental discussion with children to affect diet and activity choices with the knowledge that children are ready and expecting to have these discussions. Vaughn and Waldrop (2007) recommended being encouraging rather than critical and to use “non-coercive persistence.” Research shows that parents who talked to their children about BMI notification had more positive outcomes than they expected (Young-Kubik, Fulkerson, Story, & Rieland, 2006).

Fourteen families experienced the challenge of dealing with children of varying weights. This occurrence affected parents in many ways and often left them feeling

conflicted. They wanted to help their overweight child, but they did not want the other family members to feel deprived. Vaughn and Waldrop (2007) suggested, when making changes regarding obesity, everybody can and should be treated the same. They emphasized it is important to look at the situation as being more about the health of the family rather than one child.

In another study found after the completion of the initial literature review, Hart, Herriot, Bishop, and Truby (2003) found parents were more focused on short-term outcomes. However, the parents in this study were concerned about long-term health concerns. They summarized their findings with similar strategies that have been cited in the literature. Interventions they suggested include focusing on the family level instead of individual responsibility, broad guidelines involving whole-diet and whole family advice, promoting dietary variety to help erase the myth of healthy eating being restrictive, expensive, and unattainable and promoting frequent activity as an important and achievable component of a healthy lifestyle.

Sub Question Four

What are the parents' perceptions of their roles and the roles of others involved in the treatment of childhood obesity?

Role Modeling

In Davison and Birch's Ecological Systems Theory (2001), it was suggested that change in an obese child is affected by the child's own behaviors but parenting approaches must be considered as well. Seventeen parents agreed that they have an impact on their child's intake and activity levels. As the theory implies, parents influence behaviors and these parents felt a responsibility to role model healthy eating

and activities. Vaughn and Waldrop (2007) concurred that especially for this age group, parents are crucial decision makers and role models. They set the tone for activity level and choices for the family.

DeVille-Almond (2005) wrote,

It is important to help parents acknowledge their responsibility as role models to their children and help educate both parent and child in healthy eating and lifestyle. Families should be encouraged to recognize that adopting healthier more active lifestyles need not involve a financial burden. Even small changes such as eating together as a family, establishing order to eating habits and taking part in simple activities such as playing in a park can make a positive difference (p. 22).

One discrepancy between this study and the study conducted by Styles, Meier, Sutherland, and Campbell (2007) is many of the parents in their study felt inadequate as role models for their children whereas in this study fourteen parents felt they demonstrated positive health behaviors. Both studies recognized that family conflicts arose around food and weight problems when the parents and other family members had differing opinions about what should be done.

Negative role modeling by themselves or others was a stressor for seven parents. Spouses and grandparents were specifically mentioned as individuals who often directly impacted their child's behaviors. Stewart, Chapple, Hughes, Poustie, and Reilly (2008) also found one of the biggest challenges is other members of the close or extended family, particularly grandparents, undermining their efforts to change lifestyle.

Primary Care Provider Response

Some trees multiply by spreading their seeds so they take root in other places. However, a tree's reach is limited to the extent of its own branches. It must therefore seek out other, more mobile couriers to transport its seeds. Parents saw their child's primary care provider as outside their own reach to obtain the information and support. Fourteen of the 21 participants spoke with their child's provider about the child's weight and their concerns. This finding is a significantly higher percentage than in Young-Kubik, Fulkerson, Story, & Rieland's (2006) study that indicated only 8% (n=349) of parents planned on seeking medical services.

The literature regarding the treatment of obesity in children is extremely limited. This places health care providers in a difficult position. Health care professionals are documented as being concerned about the obesity problem in children, yet most feel ineffective in addressing it (Barlow & Dietz, 2002; Caprio, 2006). Some of the reasons identified were: provider motivation, lack of time available for counseling, lack of education on using behavior modification strategies, lack of access to support services and competent treatment models, and lack of reimbursement (Barlow & Dietz; Caprio, 2006; Dietz & Gortmaker, 2001). Although six parents expressed contentment with their provider response, the other eight parents stated they received little guidance in how to proceed. This could be due to the reasons listed, but if parents were not given specific information they were left with the impression that they did not need to be concerned.

The concern for being ineffective reinforces the idea that health care professionals cannot treat the epidemic alone; school and community programs also

must tackle the behaviors contributing to the problem. The health care professionals in Sutherland, Gill, and Binns' (2004) study felt that schools also should play a major role in assisting them in combating the obesity problem.

School's Role

Davison and Birch (2001) also suggested that the school has a major impact and influence on the behaviors of both children and their parents. The National Association of State Boards of Education (2009) wrote that schools have many compelling tools to serve as a primary agent to address obesity. No other institution has as much continuous and intensive contact with children during their first two decades of life (Story, Kaphingst, & French, 2006).

Parents were unanimous that schools should play an active role in supporting efforts to reduce obesity. Graham-Lear (2007) agreed, "school health can no longer remain apart from community health and that community health, to meet its obligations to school-age children, could no longer ignore school health" (p. 415).

Generally, parents felt unsupported by the school in the efforts they were making. This sentiment was a consistent finding in the literature (Styles, Meier, Sutherland, & Campbell, 2007; Sutherland, Gill, & Binns, 2004). All parents made suggestions about how they could feel more supported. They proposed more education for children at a younger age about nutrition and activity, more activity during school, responsible snacking and parties, and improved school lunches.

Ten parents voiced the need for schools to support the positive things they were trying to do at home. They expressed the desire for schools to become a resource for health information that they could incorporate into their lives. Although they did not

mention it specifically, No Child Left Behind (NCLB), and its emphasis on academic standards and testing, has increased pressure on schools. This modification has forced many schools to shift their focus from things such as PE and health to more academic subjects (Haskins, Paxson, & Donahue, 2006). Parents talked about the changes in a “typical” school day in 2009 compared to what they had as children. Eight parents commented specifically on the lack of activity during the day.

Schools are under staffed when it comes to health services. Funding for school health typically resides within the local school budget and not the public health budget, so school health programs tend to compete directly with academic programs. This leaves many school health programs unable to deal with the intricacies of obesity treatment and community resources. Schools tend to focus more on illness care, first aid, and medication management (Graham-Lear, 2007). This was the case with seven of the nine schools involved in this study. In 2002, when the county terminated health services funding for the private schools, it was up to the each school to come up with the money to pay for their own health services. Parents acknowledged the financial and academic pressures schools are under but still remained determined in their expectations that more nutrition education and physical activity are needed. Murnan, Price, Telljohann, Dake, and Boardley (2006) discovered that nearly all their respondents thought health education and physical education should be provided more often. Hardus, vanVuuren, Crawford, and Worsley’s (2003) findings agreed that the public feels that schools should be offering healthy food and physical education daily.

Because so many parents cited busy lifestyles as causing and adding to their child’s weight problem, eight parents felt families, children, and schools would benefit

by including more activity into the day. Returning to the literature, the commitment to regular physical activity should be high on the priority list for all schools (Haskins, Paxson, & Donahue, 2006). Budd and Volpe (2006) found that younger children will especially benefit from programs that decrease sedentary behavior so it is appropriate for parents to request more activity.

Seventeen parents agreed with the findings of Evans, Finkelstein, Kamerow, and Renaud (2005) that they have the majority of the responsibility for their own children but they can not do it alone. They verbalized the need for strong support from schools in the form of more physical activity, earlier health education, and greater availability of healthy food. Schools can also have some bearing on the foods children consume at home and assist the parents' understanding of the importance of physical activity for their children's health (Haskins, Paxson, & Donahue, 2006).

School lunches were a dominant topic of 18 interviews. Twelve parents felt discontented with the quality, quantity and variety of what was being served. Eight parents tried to take school lunches out of the equation, but with the busy lifestyles they lead, they often found it easier to just let children eat what was being offered at school. They commented that it was unfortunate they were not as healthy as they could or should be. Styles, Meier, Sutherland, and Campbell (2007) also found parental dissatisfaction with the lunches and the school's effort. Parents in their study suggested "parents and cafeteria nutrition experts at our schools come together and try to come up with a way to get healthier food" (p. 290).

School nutrition is a complex issue that ultimately comes back to the issue of funding. Parent's perception that healthy food is expensive was also recognized at the

school level. In the study by Evans, Finkelstein, Kamerow, and Renaud (2005), the public supported school-based interventions that restricted the availability of unhealthy foods and “required” healthy eating, even if it meant a loss of revenue. In their article discussing the role of schools in obesity prevention, Story, Kaphingst and French (2006) noted that public distress with school food is growing and there is limited research showing how schools can provide healthy options without loosing money.

Many of the articles cited the importance of schools offering healthy meals (Barlow & Dietz, 2002; Crawford, Timperio, Telford, & Salmon, 2006; Davison & Birch, 2001; Sutherland, Gill, & Binns, 2004; Veuglers & Fitzgerald, 2005) but little research has examined healthy eating alone. Of the studies that have examined eating healthy in school, they are often one component of a bigger program or curriculum. These studies examined education, healthy eating and physical activity (Budd & Volpe, 2006; Davison & Birch, 2001; Dietz & Gortmaker, 2001).

Budd and Volpe (2006) identified guidelines for promoting healthy nutrition in school. Regarding lunches they recommended, “It is important that school administrators monitor the adage ‘do as I say not as I do.’ Food service must be involved in the obesity initiative and research.” Much of the literature identified the government as responsible if there are to be major changes in the school lunch industry. These changes will need to come in the form of mandates instead of the current practice of incentives (Davison & Birch, 2001; Hardus, vanVuuren, Crawford, & Worsley, 2003; Haskins, Paxson, & Donahue, 2006).

Health Screening Process

As the findings indicated, 16 parents thought the schools should be screening and reporting BMI which is consistent with much of the literature (Murphy & Polivka, 2007; Young-Kubik, Fulkerson, Story, & Rieland, 2006; Young-Kubik, Story, & Reiland, 2007). This finding contradicts what Murnan, Price, Telljohann, Dake, and Boardley (2006) reported when their survey found only 30% of parents thought schools should be screening and informing parents of their child's BMI.

Eleven parents spoke about the importance of communication throughout the health screening process. This was an equally significant finding of Justus, Ryan, Rockenbach, Katterapalli, and Card-Higginson (2007). They identified regular, reliable, and systematic communication that was disseminated throughout all levels of the program as imperative.

When the five parents expressed concern during the screenings, their apprehensions involved location and privacy. These were also concerns for the parents in Young-Kubik, Story, and Reiland's (2007) study. Parents voiced the main goal as making it as private as possible and this was also supported in the research (Krahn, Hallum, & Kime, 1993). Both the IOM and CDC recognize the implications of privacy and recommend that student data must be collected and reported validly and appropriately, with attention to privacy concerns and that explanation of the results and information on appropriate follow-up and resources are available when further health services are needed (IOM, 2005; CDC Executive Summary, 2007).

Another part of the privacy concern for eight parents was the distribution of the letters to the parents. Each school determines how the letters will be delivered to the

parents. The letters are provided to the schools in a sealed envelope with the referral letter enclosed addressed to the parent or guardian of that child. Seven of the participating schools send these letters home with the children in a folder or confidential envelope. The parents who were concerned about this felt very strongly that the letters should be addressed to them and mailed to the home. This finding was consistent with Murphy and Polivka (2007) and Young-Kubik, Story and Reiland (2007). The later study also found that all parents should receive the information, which five parents in this study also suggested. As Dr. Butler stated, “by sending out letters to all parents we are able to get their attention. We have a greater chance of turning it around before it becomes a problem. As health care providers, we would like to catch it going up the mountain, rather than standing at the top looking down” (personal communication, May, 30, 2008).

Fifteen parents in this study were concerned about the lack of information provided for follow-up. This is an essential component of the screening process and was frequently mentioned in the literature (Murphy & Polivka, 2007; Robinson, Lear, & Eichner, 2006). When Moyers, Bugle, and Jackson (2005) and Story, Kaphingst, and French (2006) focused on school nurses’ perceptions about overweight children, they found nurses often felt they lacked the knowledge to guide or counsel parents. This is significant since, often times, it is the nurse who is screening and sending referrals home to parents.

Conclusion

The findings of this study indicate that if the seed is planted, the message will take root in the minds and hearts of the parents. This research has provided parents the

opportunity to share their perceptions, accomplishments, challenges and recommendation for the BMI notification process. Many of their thoughts and feelings were corroborated by the literature. Health care providers, schools and communities need to consider what the parents have said. They must work together to find strategies and resources to help focus on the enhancement of health for our children.

CHAPTER 7

LIMITATIONS, IMPLICATIONS, AND FUTURE RESEARCH

We can learn a lot from trees; they're always grounded
but never stop reaching heavenward.

Everett Mamor

Limitations

The findings from this study contribute to the body of knowledge about parental perceptions of receiving a BMI notification letter indicating a child is overweight. There are however, as with any study some limitations. As a qualitative study, this sample may not be generalizable to all parents. The parents interviewed agreed to participate after receiving the invitation letter from the principal at their child's school. It is possible that a certain type of person who is interested in making changes or learning new information might be willing to participate in such a study.

The findings of this study emerged from the data collected from 21 parents, twenty were mothers and one father agreed to participate. This limits the amount of input from the perspective of the fathers of overweight children. Mothers have traditionally been responsible for most of the meal planning, shopping, and meal preparation so it seems logical that they would be the individuals to respond to participate.

All parents interviewed have children who attend private schools that do not have full-time school nurses. Only two participating schools have part-time nurses and those nurses have minimal contact with the students and parents. This is a concern for many reasons but it may have affected the parents' perceptions about their level of knowledge and who to go to for support.

Implications

In spite of these limitations, the results of this study have implications for many individuals in various settings.

Implications for parents

For parents to make an impact on their child's obesity, recognition and acknowledgement are essential. Parents need to understand and have some concern for the potential long-term health consequences of a child's obesity.

Parent involvement is vital to the development of any program with the goal of fostering healthy eating and physical activity among children. It is imperative for parents to understand their own role in influencing their child's health behaviors. Parents can learn how to create a healthy environment by offering a variety of inexpensive healthy foods, modeling healthy eating and activity habits, providing opportunities for physical activity, and discouraging sedentary activities such as TV watching or excess computer use. Making gradual changes and focusing on permanent, life-long habits instead of just quick fixes is important for success. Parents need to understand that a healthy lifestyle does not have to be restrictive, expensive or unachievable.

Parents can learn from and support one another in ways to adopt healthier, more active lifestyles that need not involve financial burden. In a time of budget cuts and positions being eliminated, parents must rely on what success others before them have had. They need to communicate with one another in order to share ideas, challenges, solutions, and suggestions.

Parents and children need to work together to learn how to communicate effectively and set realistic goals. Parents need education about how to talk with their children about eating and exercise habits in order to initiate and sustain the child's involvement in healthy eating and activity. Borra, Kelly, Shirreffs, Neville, and Geiger (2003) encourage parental discussion with children with the knowledge that children are ready and expecting to have these discussions. One of the main points for parents to take away from this study is to confront the barriers and make the necessary changes for the health of the family rather than just the health of one child.

Implications for schools

Schools are an essential agent in confronting childhood obesity. Because They have the opportunity to: influence the nutrition children receive on a regular basis, provide children with regular exercise, and offer education about how to establish healthy lifelong habits.

In 2004, Congress passed the Child Nutrition and Women, Infants, and Children Reauthorization Act mandating that schools have local wellness policies. The findings of this research provide schools with valuable insight into what parents may want in a curriculum or wellness program.

Parents often felt unsupported by schools, but they also appreciated the challenges schools face just as they experienced their own struggles. Based on the causes of childhood obesity and barriers identified by the parents, schools should consider the following:

- A contact person should be identified at every school for parents to go to for health questions, concerns, and support. This is especially important in schools that have limited or no contact with nurses.
- Any health and wellness programs or policies developed should involve parents, teachers, food service staff, and administrators. Programs to assist parents in adopting healthy lifestyles must be based on components deemed important and acceptable by all those affected.
- Consider providing more health education to children at a younger age and incorporating more opportunities for physical activity throughout the school day.
- Provide parental support through activities such as Parent-Teacher meetings, websites, or newsletters. Specific areas of interest could include:
 - An explanation of the importance of physical activity and inexpensive ways of increasing daily activity;
 - Affordable and healthy meal planning ideas and snacking, particularly for the school-age population;
 - Healthy eating and activity goal setting for individuals and families;
 - Education about appropriate portion and serving sizes. This could also include information on how to read labels and understand general nutrition requirements;
 - Helpful ideas on ways to reduce the amount of consumption of fast foods, sugar-sweetened drinks and high-fat foods;
 - Suggestions and recommendation on healthy options when eating out;
 - Creative ways to increase fruit and vegetable intake in children.

- Evaluate school food environment and make efforts to improve the healthfulness of meals and all foods offered during the day and communicate this information to parents.
- Integrate innovative ideas into the educational curriculum such as school gardening, to teach children how to grow their own healthy foods and enjoy other types of outdoor physical activities.

The specific implications for schools to consider when sending BMI notification letters are:

- Prior to the screenings, facts about the health screening process need to be given to parents, at least twice. Information should include when the screenings are taking place, an explanation of why the BMI screening is being done, and a detailed description of the screening and referral process.
- Focus on the positive health benefits of screening, not just providing the parents with the child's BMI.
- It is important to include health risks so parents recognize the potential long-term consequences.
- Schools should include, with the referral letters, clear and concise age-appropriate information on healthy eating and physical activity, available local resources, and information on who to contact at the school if they have questions or concerns.
- Letters need to go to all children regardless of their weight status. This will help with the privacy and confidentiality concerns, and allow parents to know where all their children are on the charts.

- Develop a procedure that includes different strategies if parents have received letters for more than one year. For example, the first year, the accompanying information would include general nutrition and activity concepts. If the child is above the 95% the next year, they would receive more intensive suggestions and recommendations. Each year different interventions and suggestions would be included with the screening results and notification letter.

Implications for health care professionals

After speaking to these parents, it is more obvious than ever that as health care providers we need to be asking what we can do to achieve the best outcomes for children, families, and communities. Health care professionals must take an active role in the battle against childhood obesity. Specifically, nurses need to position themselves to be leaders and advocates for policies and programs that mandate BMI measurement with parental notification and appropriate follow-up when indicated.

First and foremost, health care professionals need to empower, educate and support all parents regarding healthy nutrition and activity in children. Based on the parent feedback, some of the specific implications for health care providers include:

- Increasing parental awareness of childhood obesity and the potential long term consequences.
- Interventions regarding overweight children are fairly new responsibilities of nurses. As health care providers, nurses need to educate themselves on what tools are available for parents and how they can assist parents to promote healthy lifestyles in children.

- Prepare for emotional reactions when discussing weight with parents and do what we can in advance to minimize anxiety parents may experience.
- Providing parents with guidance for talking to children about improving fitness and providing positive reinforcement about healthy eating without creating a preoccupation with a certain body image or a poor self concept.

Specific topics about how to improve the health of the school-age population may include:

- Teaching parents the importance of exposing children to a variety of healthy foods, especially fruits and vegetables.
- Educating parents on food selection and preparation, providing choices, and setting appropriate limits.
- Educating parents on various types of physical activities and appropriate levels for this age group.
- Education should be tailored to perceived needs and barriers on an individualized basis when possible.
- Any education should stress positive messages rather than stigmatize the overweight child or family.
- Collaboration with schools to provide all parents with a clear and respectful explanation of the BMI results and a list of appropriate follow-up actions and resources. Follow-up to the referral is necessary since without evaluation and treatment, the screening is a waste of professional time and money (Proctor, 2009).

- Advocate for healthy school environments and coordinate programs that will educate students and parents about healthy nutritional choices and increased physical activity.
- Develop individualized programs for schools that include the family, and incorporate specific information based on local needs as well as various types of support.

Implications for communities

Obesity is one of the nation's most serious health problems and this research has shown it goes beyond the individual and family responsibility. To control the epidemic of childhood obesity, action on all levels--medical, social, political, and educational--is fundamental (Caprio, 2006).

This study revealed that generally parents were unaware of resources available to assist them with childhood obesity. At the local level, public health programs and group support are needed to provide parents with strategies to help with obesity. If there are programs and resources in place, they need to be publicized and marketed so parents are aware of them. Another goal for communities is to determine how to maximize resource use by co-locating services and using system savings to expand care (Graham-Lear, 2007).

Communities could provide incentives for local organizations and agencies to work together to form and support community gardening networks. These types of gardening programs could encourage growing fresh produce, promote research, and conduct educational programs on healthy eating. The benefits of such a program would

assist communities and families to produce nutritious foods, reduce family food budgets, and create opportunities for exercise, recreation, and education.

At the state level, elected representatives need to consider legislation to establish nutrition standards, recommend or mandate nutrition education, require BMI screening and referral, and expand opportunities for physical education at school (Robinson, Lear & Eichner, 2006). In order to effect real and meaningful change, the government and industry must be involved.

Policymakers should play a role in helping raise public awareness for the need of more intervention research. First, the public must understand the complex nature of combating the childhood obesity epidemic. There is a certain amount of individual and familial responsibility but it has become a societal issue and society needs to take responsibility in making needed changes. Second, the importance of research to identify multiple prevention and treatment strategies cannot be overstated (Evans, Finkelstein, Kamerow, & Renaud, 2005). Effective strategies are also needed to improve attitudes and understand obesity as a societal problem. In order to control the obesity epidemic, multifaceted community, state, and nation-wide programs and policies are required. These programs should emphasize educational collaboration among parents, schools, and health professionals.

Implications for my professional work

The personal lessons I learned from this study are immeasurable. Some practical strategies that I away from this project are:

- Engage parents and health care providers at each school in the planning process prior to health screenings.

- Educate parents, students, and school staff on details of the screening and referral process prior to the implementation. This includes communicating directly with the parents in the form of newsletter announcement, email, or notes sent home.
- Critically examine the current screening program to ensure accuracy, efficiency, and confidentiality.
- Screenings are only one component of a comprehensive plan to improve health and wellness of the school community. Schools of nursing could work with the local schools to offer health input when needed.
- Identify and communicate support and resources for referred individuals and their families. This may be done by designing an interactive website that is accessible to parents, teachers, and principals.

Prior to beginning the research project, I realized there were a number of preconceived ideas about the parents of overweight children among parents themselves and society as a whole. One of the biggest lessons I learned from this study was how committed these parents were to doing what was best for their children. I was often moved by the depth of feeling the participants shared when discussing the causes of their child's obesity and the barriers they were facing. Many parents thanked me for letting them tell their story and voice their opinions about what they felt and experienced. It is I who should be thanking them. I wanted desperately to help and hopefully because of their willingness to share their insight, I will.

Future Research

During the course of the research, several questions emerged. Although interesting and intriguing, to the researcher, they were outside the scope of the study. However, they merit mention as considerations for future research.

The following are studies that could be developed immediately from these findings. The first study could be developed directly from the comments of the parents regarding their lack of knowledge and the need for more information. An investigation of how educational materials accompanying BMI notification with nutrition, physical activity and community resource information would affect the parent's response and/or the child's BMI.

The second study could lead to development of a Health Report Card for all health screenings. The Health Report Card could be sent to every parent with the results from all screenings. A survey of how parents felt about receiving this type of information could be conducted to determine if parents would be receptive to this process.

During the interviews, some parents commented about the gender of their child and how that affected their responses. Additional qualitative research should seek to examine the differences in perceptions of parents who have overweight female and male children. Also as more mothers work outside the home, expectations in the home are changing. Another qualitative study could focus on perceptions of fathers of overweight children.

This current study piqued an interest in working with schools to develop or enhance comprehensive school-based programs. Particularly determining the effects of health education and what effect this has on a child's BMI.

Since there were no studies in the literature that examined interventions that included multiple family members, longitudinal studies could be designed to follow the outcomes of parents who have received notification letters and made family changes. Studying the types of changes they made, if and how they maintained those changes and what impact they had on each individual's BMI would be beneficial.

Quantitative research would be helpful in some areas to reach a large number of individuals concerning the effectiveness of the specific suggestions offered by parents. One example may be examining follow-up actions taken by parents and what the intended and unintended physical, social, and psychological effects were. More research is needed to determine which strategies implemented by parents are most effective in improving BMI in children. And finally, investigating from the schools perspective, what administrators and staff feel their role is controlling childhood obesity. And what their capabilities and barriers are to implement and manage the BMI measurement and notification programs, particularly those in schools with no school nurses.

Conclusion

The negative impact of childhood obesity on current and future generations, in both their physical and fiscal well-being, will become overwhelming unless something is done (Justus, Ryan, Rockenback, Katterpalli, & Card-Higginson, 2007). This study has examined how parents felt about receiving a BMI notification letter indicating their child may be overweight. Findings of this study provide insight into parents'

perceptions about the causes, capabilities, and barriers they encountered when making changes for an overweight child. Parents offered an understanding of what they think their role and the role of others should be in order to be effective with their lifestyle changes. Hopefully, the findings of this study will provide guidance for schools, health care professionals and communities when attempting to implement programs to combat the epidemic of childhood obesity.

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APPENDICES

Appendix C
Body Mass Index (BMI) Referral Form
NOTIFICATION TO PARENT/GUARDIAN

To the Parent/Guardian of _____:

Creighton University School of Nursing recently performed the annual health screening at your child's school. Height and weight measurements were done and your child's Body Mass Index (BMI) was calculated. Your child's measurements were:

Height _____ inches Weight _____ lbs BMI _____

Body Mass Index Percentile _____

<p>BMI less than 5th percentile = underweight BMI between 85th and 95th percentile = at risk for being overweight BMI equal to or greater than 95 percentile = overweight</p>
--

<p>Source: Center for disease control and prevention (CDC) U.S. Department of Health and Human Services www.cdc.gov/growthcharts</p>
--

The BMI is simply a number that shows how a person's weight relates to their height. These findings are graphed on a percentile chart that compares how a child's BMI relates to other children their age and gender. It is an effective way to identify potential health risks associated with being overweight or underweight. Concerns about growth patterns exist when the BMI falls at either end of the spectrum or when there is a significant change in the percentile.

Many factors, including sports participation or family history, can influence height and weight in children and adolescence. BMI should be considered a screening tool and not a definitive measure. Your child's health provider is the best person to evaluate whether or not his/her measurements are within a healthy range, please share these findings with that individual. If you do not have a Primary Care Provider and would like one, call 449-5000 and someone will assist you in finding a Creighton Family Healthcare Physician at a clinic close to your home or work. If you have any questions, please feel free to contact the school.

Sincerely,

Misty Schwartz, RN, MSN
 Creighton University School of Nursing
 2500 California Plaza
 Omaha, NE 68178
 (402) 280-2141

Appendix D
Letter to Parents from Principal

Dear Parent:

Misty Schwartz, a doctoral student at the University of Nebraska-Lincoln is pursuing a Ph.D. in Higher Education and has invited you to participate in a research study that she is conducting. The purpose of her dissertation is to explore the perceptions of parents whose school-age children have received a Body Mass Index (BMI) referral letter stating that their child may be overweight according to the guidelines of the Centers for Disease Control (CDC).

She believes that in order to gain a better understanding of this process parents are the best place to start. Your participation can help health care professionals understand from a parents' point of view some of the experiences that go along with receiving a BMI referral letter. The process of parent notification could also be enhanced. If you received one of these referral letters in the last three years, she is interested in speaking with you about your experiences and thoughts. Your participation is voluntary and your responses will remain anonymous.

The data collection consists of an interview that will be scheduled at a mutually convenient time and place. If you would like to hear more about her research or if you would be interested in participating by sharing your experiences about receiving the BMI letter, please return the enclosed letter and she will contact you.

If you are unable to assist with this study, please return the enclosed letter as soon as possible. If you have any further questions, please feel free to contact her. Thank you for your time and consideration.

Sincerely,

Principal AAAA

Name _____

School your child attends _____

Please check one:

_____ **I wish to participate in the study by Misty Schwartz titled:**
Perceptions of Parents Regarding Body Mass Index Referral and Overweight in School-
Age Children. Please feel free to contact me.

_____ **I am possibly interested in participating but would like more information.**
Please feel free to contact me.

Please list the information where you would like to be contacted:

Home: _____

Work: _____

Email _____

Other: _____

_____ **I do not wish to participate in the study.** Please do not contact me.

Misty Schwartz, RN, MSN
16678 Ridgemont St.
Omaha, NE 68136
(h) 402-884-5029
(c) 402-981-0779
mistysch@cox.net

Marilyn Grady, Ph.D.
Secondary Investigator
University of Nebraska- Lincoln
402-472-0974

Appendix E
Institutional Review Board (IRB) Approval Letter



April 3, 2008

Misty Schwartz
Department of Educational Administration
16678 Ridgemont St Omaha, NE 68136

Marilyn Grady
Department of Educational Administration
128 TEAC UNL 68588-0360

IRB Number: 2008048610EP
Project ID: 8610
Project Title: Perceptions of Parents Regarding Body Mass Index (BMI) Referrals and Overweight in School-Age Children

Dear Misty:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study. Your proposal seems to be in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46).

Your project has been approved for the 6 schools for which you have letters. You are authorized to begin data collection.

Your stamped and approved informed consent form has been uploaded to NUgrant (Informed_Consent_Form-Approved.pdf file). Please use this form to make copies to distribute to participants. If changes need to be made, please submit the revised informed consent form to the IRB for approval prior to using it.

Date of EP Review: 03/28/2008

You are authorized to implement this study as of the Date of Final Approval: 04/03/2008. This approval is Valid Until: 04/02/2009.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

For projects which continue beyond one year from the starting date, the IRB will request continuing review and update of the research project. Your study will be due for continuing review as indicated above. The investigator must also advise the Board when this study is finished or discontinued by completing the enclosed Protocol Final Report form and returning it to the Institutional Review Board.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,
Dan Hoyt, Chair
for the IRB

Appendix F
University of Nebraska- Lincoln (UNL) Institutional Review Board (IRB) Informed
Consent Form



COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Educational Administration

University of Nebraska- Lincoln (UNL) Institutional Review Board (IRB) Informed Consent
Form

Identification of the project:

Perceptions of Parents Regarding Body Mass Index (BMI) Referrals and Overweight in School-Age Children

Purpose of the research:

The purpose of this research study is to explore the perceptions of parents whose school-age children have received a Body Mass Index referral letter stating that their child is overweight according to the guidelines of the Centers for Disease Control (CDC).

Procedures:

Participation in this study will require one hour of your time. You will participate in a 60 minute interview with the principal investigator regarding your experience of receiving a BMI referral letter. The interview will be audio taped with your permission, and conducted at a mutually agreed upon time and place.

Risks and/or discomforts:

You will be asked questions regarding your experience about receiving a BMI referral letter. This could resurface the memory of unpleasant feelings or thoughts, however the risk for participating in this study is not beyond the experiences you may encounter in everyday life. In the event of problems resulting from participation in the study, psychological intervention is available on a sliding scale fee at the UNL Psychological Consultation Center, telephone (402) 472-2351. A list of local providers and contact information will also be available.

Benefits:

There are no direct benefits for you participating in this study but there may be indirect benefits to you and others. This study may help health professionals to understand, from the parents' point of view, some of the experiences that go along with receiving a BMI referral letter. Because of your participation as a parent, the process of parent notification could be enhanced.

Confidentiality:

Any information collected during this study which could identify you will be kept confidential. The data will be stored in a locked cabinet in the researcher's home and will only be seen by the researcher and the secondary investigator during the study and for three years after the study is complete. The interview will be transcribed by a professional transcriptionist but your name will not be used on the tape or on any other documents. You will be assigned a pseudonym and this will be used during all transcriptions. The information from this study may be published in journals or presented at professional meetings, but your confidentiality will always be maintained. The audiotapes will be destroyed after completion of the study.

Page 1 of 2

Subject's Initials: _____



COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Educational Administration

Compensation:

There will be no compensation for participating in this research.

Opportunity to Ask Questions:

You may ask any questions concerning this research and have those answered before agreeing to participate in the study as well as anytime during the study. You may call the investigator at home at (402) 884-5029. If you have questions concerning your rights as a research subject that have not been answered by the investigator or to report any concerns about the study, you may contact the University of Nebraska-Lincoln Institutional Review Board at (402) 472-6965.

Freedom to withdraw:

You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigators or the University of Nebraska. Your decision will not result in any loss of benefits to which you are otherwise entitled.

Consent, Right to Receive a Copy:

You are voluntarily making a decision whether or not to participate in this research study. Your signature certifies that you have decided to participate having read and understood the information presented. You will be given a copy of this consent form to keep.

Signature of Participant:

Signature of Research Participant

Date

Name and phone number of investigator(s)

Principal Investigator:

Misty Schwartz, RN, MSN
(H) 402-884-5029
(W) 402-280-2141

Secondary Investigator:

Dr. Marilyn Grady, Ph.D.
(W) 402-472-0974

Appendix G
Institutional Review Board (IRB) Change in Protocol Approval Letter



December 11, 2008

Misty Schwartz
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Marilyn Grady
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IRB Number: 2008 04 8610

Project ID: 8610

Project Title: Perceptions of Parents Regarding Body Mass Index (BMI) Referrals and Overweight in School-Age Children

Dear Misty:

The Institutional Review Board for the Protection of Human Subjects has completed its review of the Request for Change in Protocol submitted to the IRB.

1. It has been approved to add 3 schools to the participant list.
2. It has been approved to have the principals send letters to all parents of children in the 2nd, 3rd, 4th, and 5th grades.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- Any complaint of a subject that indicates an unanticipated risk or that cannot be

resolved by the research staff.

This letter constitutes official notification of the approval of the protocol change. You are therefore authorized to implement this change accordingly.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,
Mario Scalora, Ph.D.
Chair for the IRB



Appendix H
Interview Protocol Form

Date of Interview: _____

Starting time: _____

Ending time:

Introduction:

I'd like to thank you for taking the time to meet with me today. I will be audio-recording this interview and taking notes while you share your story. I want to make sure I have an accurate account of our discussion and that my writing accurately reflects what you mean. At a later date, I will ask you to review the transcriptions so that I can be sure that I have accurately and completely captured your thoughts in regards to the topic we are discussing.

I am very interested in knowing more about your experience receiving the BMI referral letter indicating that your child may be overweight and how this may have influenced your life as a parent. While you are answering the questions, think back about your feelings at the time you received this letter. I want to know about your experience so I encourage you to freely share anything with me that you feel might be important in helping me understand your perspective as a parent.

<p>Interview Questions:</p> <p>Let's talk a little bit about the BMI referral letter you received.</p> <p>1. Could you describe what your feelings were about receiving this letter? (Sub-question 1)</p> <p>Probes: How did it make you feel as a parent?</p> <p>Is this information you feel is important to know?</p> <p>Do you think it is the school's role to get this information to parents?</p> <p>Is there a better way of getting the</p>	
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<p>information to you as a parent?</p> <p>2. Could you describe what you consider to be causes of obesity in our country? (Sub-question 1)</p> <p>Probes: Describe how you feel about the problem of childhood obesity in the United States.</p> <p>How serious do you think this problem is?</p>	
<p>3. Tell me about any changes you made after receiving the letter? (Sub-question 2 & 3)</p> <p>Probes: Did you make any health care changes?</p> <p>Have you started doing anything differently because of the letter?</p> <p>Have you changed your child's diet since the receipt of the letter?</p> <p>Have you changed your child's activities?</p>	

<p>Any changes as a family?</p> <p>Did you encounter any problems when trying to make changes?</p> <p>What would you say was the most helpful when you started making changes?</p> <p>What would you say the biggest barriers were?</p>	
<p>4. Was there any conversation or discussion about the contents of the letter with your child? (Sub-question 4)</p> <p>Probes: If so, how did you initiate that conversation?</p> <p>What was the child's response to the letter?</p>	

<p>Overall, How would you describe the conversation?</p>	
<p>5. Did you discuss the contents of the letter with any other individuals? (Sub-question 4)</p> <p>Probes: Who did you talk with?</p> <p>Spouse, significant other or other family members?</p> <p>Pediatrician or primary care provider?</p> <p>Other parents?</p> <p>Dietician?</p> <p>Nurse? Or School Nurse?</p> <p>Any other individuals?</p>	
<p>6. What resources do you feel are available to you to address this issue? (Sub-question 2 & 3)</p> <p>Probes: Personal resources?</p> <p>Were there any individuals you found particularly helpful?</p> <p>Community resources?</p>	

<p>Is there something stopping you from utilizing these resources?</p> <p>Any barriers to these resources?</p>	
<p>7. As a parent, how would you like to see the issue of height and weight screening information handled? (Sub-question 2 & 3)</p> <p>Probes:</p> <p>Do you think the school should be screening for BMI?</p> <p>Should schools send out the information to the parents?</p>	

Appendix I
Transcriptionist Confidentiality Agreement

Project Title: Perceptions of Parents Regarding Body Mass Index Referrals and
Overweight in School-Age Children

I, _____, hereby agree that I will keep the data for
Print name
the above stated research project confidential. I will not use it for my own purposes. I
will not disclose any information regarding the contents of the data or the study except
with the primary and secondary investigators of the study. I understand that this
agreement is in effect both during and after my involvement with the project.
I have read, understand, and agree with this Confidentiality Agreement.

Signature

Date

Appendix J
Peer Debrief Summary

1. This is a topic that could not be more important at this time, given the trajectory of childhood obesity. In health care the percentage of overweight children is known, unacceptable and consistently increasing over time, but the solutions are difficult, fragmented and fraught with barriers. Some of the most important barriers relate to family dynamics.
2. The manuscript does provide sufficient information to make an evaluation. Number of subjects, use of open-ended survey and depth of issues explored and reported appears to be exactly appropriate to qualitative research of a multi-faceted issue such as this.
3. There are numerous strengths of this manuscript. The importance of the topic is one, previously addressed. The type of data explored is in direct support of the problem. The “what”- methods and tools related to weight management, healthful eating, exercise and persistence, is known. What is not fully understood is the “why” – why the methods are not working and how providers can address, among others, the psychosocial barriers to solutions. The author has identified a way to creatively “capture” her population via a format commonly used by schools, i.e. the “chubby letter”, a format laden with great emotionality, shame, resistance and perceived affront to parenting ability. This is likely one of the most difficult venues in which to interview parents. What truly stands out in the document is the sensitivity with which the vignettes are captured. Another example of overall creativity is the author’s choice of an analogy in nature, the tree. This use of imagery ties together numerous aspects of the effects of this study, which are consistently woven throughout the manuscript. Lastly, there is a very comprehensive framework of themes and sub-themes, presenting a holistic approach to potential strategies and solutions. The most striking weakness, which seems beyond the author’s control, is the lack of identified resources or strategies that might be made available to the study population. This appears clearly outside the scope of the study, yet, was a stated need on the part of many participants. More broadly, the lack of resource availability went beyond local avenues, to a societal neglect and lack of investment in an issue which so profoundly affects the present and future health of children.
Additionally, this population may exemplify parents who are already somewhat or very motivated to make changes based on the fact that they agreed to participate. Thus, it is difficult to generalize to the broader population of parents with overweight children. The possibility of subjects’ underreporting food habits and overreporting exercise exists, as it would for anyone reporting these habits. Underestimation of food intake and overestimation of exercise are often found in food and exercise diaries in the practice setting. Finally, the number of subjects, as previously stated, appears appropriate for qualitative research but again limits the ability to generalize.

4. The stated contribution would unquestionably add to the field of psychosocial data related to childhood obesity. Such qualitative data not only should, but must be added to the literature on childhood obesity. It is also invaluable for laying the groundwork of ideas for further studies, and for adding to the body of literature support that scope of the issue extends beyond families to society as a whole.
5. The author, in this reviewer's opinion, achieved her stated contribution, and did so quite effectively.
6. The actual current contribution is, with appropriate editing, sufficient for publication. It adds to the existing body of literature on obesity in children. Psychosocial issues detailed are not new, but there are some conflicting findings to previous research. An example of this was a higher reported percentage of parents who voiced intention of making food and exercise changes within their families, as compared with a cited 2006 study.
7. Initial reading of the manuscript revealed the need for some minor revisions in form and grammar. The reviewer was informed that this process was in place concurrently to this review submission.

Barbara J. Synowiecki, MSN, APRN, C-PNP
November 6, 2009