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Parenting practices related to positive eating, physical activity and sedentary behaviors in children: A qualitative exploration of strategies used by parents to navigate the obesigenic environment

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Parenting practices related to positive eating, physical activity and sedentary behaviors in children: A qualitative exploration of strategies used by parents to navigate the obesigenic environment

by

Jacy C. Downey

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Human Development and Family Studies

Program of Study Committee:
Clinton G. Gudmunson, Major Professor
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Iowa State University
Ames, Iowa
2014

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I would like to thank my parents for instilling curiosity in me, for demonstrating strong work ethic, and for showing us kids that a job well done reaps greater satisfaction than monetary rewards or recognition. Many thanks to our friends, my siblings, and my husband’s family for their encouragement and support. Returning to school meant sacrifices of time and attention of which you graciously accepted. Finally, the greatest appreciation of all goes to my three children for giving me the rewarding, challenging, and most important job I could ever ask for and to my husband for the love, patience, and support he provided, without question, so that I could chase my dreams.
Parents model and teach early health practices that persist into adulthood by establishing a foundation through which children understand related family beliefs, values, and expectations. The environment in which parents socialize children’s eating, physical activity, and screen-related behaviors has changed and has been widely faulted in the obesity epidemic. This phenomenological study examined the intentions, reflections, and strategies in which a purposefully selected group of mothers, scoring highly on the Family Nutrition and Physical Activity screening tool, shaped family culture related to physical activity, addressed screen-time behaviors, and established positive eating related routines.

Findings related to mothers’ knowledge and belief systems about parenting within this domain pointed to the impact of family health history and mothers’ own upbringing, reinforcing the powerful nature of early habit formation. Mothers prioritized this parenting domain and were intentional in their efforts, describing the power of modeling positive obesity-related behaviors and creating a culture that promoted activity over sedentariness. By focusing on establishing positive behaviors at home, and framing choices and opportunities in support of child autonomy, mothers believed they were preparing children to resist threats from the obesigenic environment. This study presents a strengths perspective and imparts a new narrative which serves to complement existing obesity research in representative and at-risk populations. Findings may inform obesity prevention and intervention programs as well as parenting education curricula.
CHAPTER I
INTRODUCTION

Overview and Research Questions

Stakeholders in the battle against obesity indicate that, due to the multi-faceted nature of obesity, a commitment to multiple strategies, including prevention, is necessary to curb the growth of the current epidemic (U.S. Department of Health and Human Services, 2011). Parents teach and model early health practices that persist into adulthood, thereby positioning them as key players in obesity-targeted prevention efforts. Although family-based obesity interventions have been shown to be effective (Christensen, 2004; Hogg, Barker, & McGuire, 1996; Nowicka & Flodmark, 2008; Sindall, 1997), little research has been dedicated to understanding the parenting context and practices whereby parents that are successful in building health-promoting behaviors do so on an every day basis. Specifically, Davison and Birch (2004) proclaim that research has rarely attempted to understand the details of behaviors of individuals who “resist environmental and lifestyle factors that promote passive and gradual weight gain” (p. 1092). Leading researchers in the area of parenting ecology and obesity have called for further study in the relationship between parenting practices and food choices (Campbell, Crawford, & Hesketh, 2007a), as well as physical activity and screen time (Hesketh, Hinkley, & Campbell, 2012) and the factors that impact the parental domain of health socialization.

The purpose of this study was to describe the practices and strategies used by a self-identified group of parents with strong commitments to intentionally socializing healthful eating, physical activity, and screen related behaviors of their children. Specifically, this
study attends to parents that are high-scoring (total score ≥ 29) on the behaviorally anchored rating (BAR) scale version of the Family Nutrition and Physical Activity (FNPA) screening tool (Johnson, Welk, Saint-Maurice, & Ihmels, 2012), an instrument that measures family behaviors and environment that place children at risk for becoming overweight. With this previously validated measure as a screening tool, this phenomenological study then examined how high-scoring parents navigate the obesigenic environment to develop and maintain children’s health-promoting behaviors. The research questions guiding this study were:

1. How do parents that intentionally socialize their children behaviors in this domain manage aspects of the obesigenic environment that threaten their obesity-preventive lifestyles, as related to eating, physical activity, and screen related behaviors?

2. What are the everyday, immediate experiences (reflections, intentions, and strategies) of such parents in their efforts to positively socialize their children’s eating, physical activity, and screen related behaviors?

This overview will: (a) describe aspects of the modern environment that have transformed childhood obesity from a rare occurrence in the 1970s to a modern epidemic, (b) highlight changes in parenting practices inspired by the modern environment (c) outline the obesity epidemic, and (d) define family behaviors that are linked to overweight and obesity and (e) report on current guidelines. After context is established, the overarching theoretical dimensions informing this study will be described and followed by a statement on research positionality. The chapter concludes with a summary and description of the organization of the remainder of this doctoral dissertation.

Social and Environmental Context

Prior to the last 3-4 decades, most parents did not have to intentionally act to prevent a great majority of children from becoming overweight or obese due to a less threatening obesigenic environment (Savage, Fisher, & Birch, 2007). Attention to parenting health...
socialization has greatly increased as the prevalence of obesity in children and adolescents has almost tripled since the late 1970s (Fryar, Carroll, & Ogden, 2012). The current environment in many industrialized countries has been widely faulted with contributing to the obesity epidemic in both children and adults (Battle & Brownell, 1996). Influences from a modern environment promote weight gain by encouraging energy over-consumption coupled with under-expenditure resulting in a discrepancy in the energy balance affected by physical activity, calorie intake, and time spent in sedentary behaviors. The current social climate in the United States fosters lifestyles characterized by a 22 percent increase in per-capita availability of food-energy between 1970 and 2004 (Economic Research Service, 2009), a great majority of adults and youth failing to meet physical activity recommendations (U.S. Department of Health and Human Services, 2012), and advances in technology that allow for excessive amounts of time spent in a physically idle state (Linde & Jeffery, 2010). To avoid weight gain within this environment, most individuals must deliberately choose not to over-consume and choose to incorporate physical activity into daily patterns.

Changes in contextual factors related to both immediate and broad environments have powerful effects on the ecology of parenting and impact the health practices of young and old alike. Immediate and specific family demographic characteristics, such as ethnicity (Crawford, Story, Want, Ritchie, & Sabry, 2001), income, and educational status (Sobal & Stunkard, 1989) have been linked to disparities in obesity risk and prevalence. Certain ethnic minorities have increased exposure to obesity (Crawford et al., 2001), as do family members headed by parents with lower incomes and less education (Sobal & Stunkard, 1989). Children’s obesity risk behaviors, such as poorer diets, and lower levels of physical activity and physical education as well as increased time spent in sedentary activities, have been
linked to low maternal education and family income (Hesketh, Crawford, & Salmon, 2006). The connection between these family demographic factors and parenting practices, however, are largely speculative at this point, as little research has been devoted to explaining the mechanisms underlying the relationship between diminished resources and obesity risk behaviors (Campbell, Hesketh, & Davison, 2010). Additionally, individual children’s preferences for specific foods and activities, ability to perform or preference for physical activities, and weight status affect the way parents approach eating and activity-related practices (Campbell et al., 2010).

Broad environmental factors described by Campbell and colleagues (2010) such as organizational and community characteristics and policy and media influences also influence parenting processes related to obesity. The dynamics of eating in America have changed considerably since the 1970s such that opportunities to obtain food are plentiful, food is widely accessible and does not require substantial physical labor to acquire (Linde & Jeffrey, 2010). As parents spend more time at work, convenience food has become highly valued (Anderson & Butcher, 2006) as has low cost foods consumed away from home and passive means of entertainment. These are features associated with obesity-promoting behaviors (Ebberling, Pawlak, & Ludwig, 2002). Similarly, community characteristics can negatively impact the availability of healthy food. For example, when grocery stores that sell produce and a larger variety of food are sparsely located while fast food and convenience stores are strategically placed throughout neighborhoods, accessing healthy food becomes more difficult (Block et al, 2011). Additionally, a growing trend of eating out has resulted in higher caloric consumption as compared to eating at home (Zoumas-Morse, Rock, Sobo, & Neuhouser, 2001). Media sources, particularly television advertising, have propagated the
appeal of convenience foods. Wrought with inexpensive, easily accessed, calorie-dense, nutrient-minimal foods and drinks (Harnack, Stang, & Story, 1999; Nestle et al., 1998; Popkin, 1998; Witkowski, 2007) in super-sized portions (Harnack, Jeffrey, & Boutelle, 2000; Young & Nestle, 1995), the modern food industry has received much scrutiny for driving current dietary behaviors (Nestle, 2002). Often packaged for convenience, soft drinks and snacks have also played a role in the epidemic of obesity (Anderson & Butcher, 2006). Although the size of snacks has not changed, the prevalence of snacking across age groups, frequency of snacking, and the energy density of snacks increased from 1977 to 1996 (Jahns, Siega-Riz, & Popkin, 2001).

Areas where children and adolescents spend time influence the type of exposures to food that youth encounter. A nationally representative study of U.S. high schools reported that healthy food was less available than unhealthy foods (Delva, O’Malley, & Johnston, 2007). The quality and quantity of food served at school, however, has been brought to the forefront with the Healthy Hunger-Free Kids Act of 2010 that enacted strict guidelines on foods served at breakfast and lunch (Food and Nutrition Service, 2010). Children spend more time outside of school away from parents, and dual parent employment has also been linked to increased risk of childhood obesity (Anderson, Butcher, & Levine, 2003). Parents that work long hours report difficulty in finding time and energy to monitor and guide their children’s food intake (Seagren & Terry, 1991). Children that are cared for outside of the home are also influenced by the food practices of child-care providers (Wright & Radcliffe, 1992); an important concern as preschool children age 6 and under spend an average of 29.3 hours per week under the care of a nonparent (Snyder & Dillow, 2011).
Adult leisure-time physical activity levels, defined as activity accumulated outside of occupation, have remained stable or increased slightly over the last few decades (Harnack & Schmitz, 2010). However, declines in active transportation, work-related and domestic-related physical activity and an increase in sedentary pursuits have resulted in an overall decline in physical activity in Americans (Harnack & Schmitz, 2010). Similar to adults, the majority of youth in America do not reach current physical activity recommendations. An accelerometer study found that only 42 percent of children age 3-11 and eight percent of adolescents performed 60 minutes of daily moderate- to vigorous-intensity activity on 5 of the previous 7 days (Troiano et al, 2008). Children in the United States spend approximately 2,000 hours each year in academic settings, yet the 2011 National Youth Risk Behavior Survey reported that only 29 percent of high school students engaged in 60 minutes of daily activity in the seven day period prior to the survey (Centers for Disease Control and Prevention, 2012). Growing social pressure to improve academic achievement has resulted in omission of recess and physical education resulting in less than half of children in the U.S. participating in daily physical education (Center for Disease Control and Prevention, 2001). Evidence, however, is accumulating that suggests some positive links between school-based physical activity and academic achievement (Basch, 2011), possibly opening political doors for support of increased physical activity at school.

The neighborhood built environment, including open spaces, parks, and sidewalks, may provide opportunities for physical activity. However, the safety of these areas from crime and traffic as well as parental perception of the safety in the neighborhood play an important role in children’s utilization of structures encouraging physical activity (Tappe, Glanz, Sallis, Zhou & Saelens, 2013). Potentially influenced by the physical environment,
only 13 percent of American children in elementary and middle school walked or biked to school in 2001 as compared to 50 percent of students that actively commuted to school in 1969 (McDonald, Brown, Marchetti, & Pedroso, 2011). Accumulating high amounts of sedentary behavior carries a risk to health regardless of one’s physical activity level such that insufficient physical activity and high sedentariness represent two distinct risk factors. A nationally representative survey reported that children in grades 3-12 spend an average of 8 hours per day exposed to the media environment with 26 percent of children simultaneously engaging in more than one outlet (i.e. internet surfing while watching television) (Roberts, Foehr, & Rideout, 2005). The dramatic increase in accumulated screen time (television, computers, video games, etc.) has been suggested to partially explain the rise in obesity prevalence since the 1980s (Finkelstein, Ruhm, Rosa, 2005).

In modern households, sixty-eight percent of children have a television in their bedrooms, only one-fifth of parents however, admit to enforcing rules related to watching “most” of the time (Roberts et al, 2005). A dose-response relationship between television viewing and higher body weight in children and adults has been cited in a large number of studies such that the more viewing accumulated, the higher the weight status (Crawford, Jeffrey, & French, 1999; Dietz & Gortmaker, 1985; Giles-Corti, Macintyre, Clarkson, Pilora, & Donovan, 2003; Tucker & Bagwell, 1991; Tucker & Friedman, 1989; Robinson et al., 1993; Sidney, Sternfeld, Haskell, Jacobs, Liu, & Hulley, 1996). A longitudinal study following children from early to middle childhood found that patterns related to television watching in households are changing. Mothers reported more televisions in the home, an increased frequency of watching television during meals, and double the number of
televisions in children’s bedrooms at time two (Saelens et al., 2002). Television watching is believed to displace more physically demanding activities and has been linked to passive calorie consumption (Epstein, Paluch, Consalvi, Riordan, & Scholl, 2002; French, Story, & Jeffrey, 2001; Robinson, 1998). This dynamic is believed to work through the scenario that individuals that spend significant time watching television also do so during meals, leading to distracted eating and an increase in the number of calorie-dense food advertisements viewed. Many advertisements specifically target children and are presumed to increase desire for highly marketed foods (Ebberling et al., 2002). Television viewing is also associated with increased sedentary behavior, and has been linked to overweight in adolescents through reductions in physical activity and poor nutritional intake as mediated by exposure to advertisements (Ludwig & Gortmaker, 2004) for soft drinks, cereal, candy, and fast food (Bowman, Gortmaker, Ebberling, Pereira, & Ludwig, 2004).

Today, parents that do not intentionally socialize their children to have positive eating, physical activity, and screen-related behaviors may run a higher risk that their children will become overweight or obese as suggested by obesity trends (Savage et al., 2007). The National Health and Nutrition Examination Survey reported that more than two-thirds of adults are considered overweight (BMI = 25-29.9) or obese (BMI = 30 and greater; Flegal, Carroll, Kit & Ogden, 2012), and one-third of children ages 6 to 19 are considered overweight (85-95th percentile) or obese (above the 95th percentile) (Ogden, Carroll, Kit, & Flegal, 2012) as compared to the early 1970s when 4-6 percent of youth from 2-19 years old were considered obese (Fryar et al., 2012). Additionally, children and adolescents mirror the trends of their adult counterparts (Ogden, Lamb, Carroll, & Flegal, 2010a; Ogden, Lamb, Carroll, & Flegal, 2010b; U.S. Department of Health and Human Services, 2001) such that
overweight children become overweight adults. Current literature reports parental obesity as one of the most powerful predictors of childhood obesity (Reilly et al., 2005; Zeller et al., 2007), likely resulting from a combination of shared genes, habits, and environment.

Obesity is recognized as a precursor to a large list of diseases and health ailments (U.S. Department of Health and Human Services, 2012), an enormous drain on health care resources (Freedman, Mei, Srinivasan, Berenson, & Dietz, 2007; Thorpe, Florence, Howard, & Joski, 2004), as well as a major contributor to the decline of many psychosocial indicators related to “quality of life” (Davison & Birch, 2001; Strauss, 2000; U.S. Department of Health and Human Services, 2011). The obesity-related chronic conditions of heart disease, hypertension, and type 2 diabetes, rarely diagnosed in children and adolescents in the past, are growing in incidence and threaten the health of young people (May, Kuklina, Yoon, 2012).

Obesity has also been linked to, “several types of cancers (endometrial, postmenopausal breast, kidney, and colon cancers), musculoskeletal disorders, sleep apnea, and gallbladder disease” (Finkelstein et al., 2005, p. 240). Associations between obesity have also been observed with psychosocial and mental indicators of health such as low self-esteem, depression, poor body image, social stigmatization, and discrimination (U.S. Department of Health and Human Services, 2001). Beyond physical and mental repercussions, overweight and obesity is a tremendous economic burden in the United States, accounting for almost 10 percent annually of all medical spending (Finkelstein, Trogdon, Cohen, & Dietz, 2009). Due to the morbidity, mortality, quality of life, and health care costs associated with obesity, it is imperative to achieve a better understanding of the factors contributing to this public health crisis.
In conclusion, although weight gain is accumulated when energy intake exceeds energy expenditure, the impetus for the obesity epidemic is believed to be more complicated— as described in this paper. Significant shifts in diet and activity patterns of the population have been largely influenced by dramatic changes in behavioral and environmental determinants occurring over the last several decades (Harnack & Schmitz, 2010).

In response to the increase in obesity prevalence, dietary and activity recommendations have been released. The ability to meet these recommendations, however, requires consideration of the current social and environmental context. The 2010 Dietary Guidelines for Americans (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2010) reflect the need to address the high prevalence of obesity by recommending that Americans work to manage weight by monitoring caloric intake, physical activity, and time spent in sedentary behaviors. Additionally, the Guidelines included 23 specific recommendations including increased consumption of fruits, vegetables, whole grains, fat-free and low-fat dairy products, and seafood, and suggested a reduced intake of foods with sodium (salt), saturated fats, trans fats, cholesterol, added sugars, and refined grains.

The 2008 Physical Activity Guidelines for Americans (Physical Activity Guidelines Advisory Committee, 2008) suggest that children and adolescents should perform a minimum of 60 minutes of physical activity each day with most of the 60 minutes spent in moderate or vigorous aerobic activity. Each week should include at least 3 bouts of vigorous-intensity activity. Additionally, youth should incorporate both muscle-strengthening and bone-strengthening activity at least 3 times each per week.
Additionally, the Center for Disease Control and Prevention suggests that parents follow the American Academy of Pediatrics recommendation to limit media time to 1-2 hours or less per day (Shelov & Altmann, 2009).

**Parenting and Early Socialization**

Research in human development and family studies recognizes that family relationships, such as those of parents and children, are critical to healthy development due to the unique and mutual connection that fosters intimate interactions that occur over a prolonged period of time (Thompson, 2006). In this focus on early socialization, relational partnerships are impacted by current behaviors of parent and child, which are situated in the context of previous transactions afforded by the nature of the long-term parent-child relationship. Close relationships such as those between parent and child allow family members to create and re-create mental representations of each other such that the child comes to know what a parent expects, appreciates, and tolerates, thereby impacting the socialization of the child (Dweck & London, 2004).

*Parent-child relational quality and early socialization*

The quality of the parent-child relationship is impacted by displays of warmth, establishing a positive atmosphere in which children can be more highly influenced by parents, and through sensitive and responsive parenting (Laible & Thompson, 2008). Mutual reciprocity, the obligation to attend to the needs and wishes of one’s partner, also enhances the likelihood that a child will become secure, appropriately respond to stress, and be receptive to the specific parenting practices and strategies utilized to achieve advantages in distinct domains of socialization (Laible & Thompson, 2008).
Similar to the role of broad influences, parenting style has been linked to early socialization. Macoby and Martin (1983) described the continuum in which parents demonstrate warmth/hostility and control/autonomy in their relations with their child(ren) and suggested that there are categories by which parenting style can be classified. Research supports authoritative parenting style, characterized as one that encourages warm interaction and boundary setting, as most conducive to healthy child development (Baumrind, 1996). Though not specifically studied herein, the concept of parenting styles provides insight to this study. The degree that parents are generally sensitive and responsive in their practices provides a context that may weaken or support more immediate strategies that are used by parents to socialize children in specific areas (Darling & Steinburg, 1993). One of these areas is the domain of parental feeding which classifies parental feeding style based on the levels of demandingness and responsiveness used in feeding situations (Ventura & Birch, 2008).

Both the adult caregiver and the child contribute to the early socialization of the child via bidirectional influences (Kuczynski, 2003) that are colored by the blend of warmth, security, and mutual reciprocity in the relationship. Though bidirectional in nature, relational processes can be described as those that are regulated more heavily by parents, those controlled predominantly by the child, and those that are regulated by the dyad. This research study is limited to the intentional and immediate processes primarily regulated by parents.

Parenting strategies in parent-child relationships

Varying contexts inspire dynamic parenting practices, and parenting practices that are domain-appropriate are more likely to be effective (Grusec, 2011). Within the setting of broad parenting relational processes, four of the more immediate practices primarily under the control of parents that are used to socialize children are described as: modeling, proactive
regulation, routine setting, and systems of rewards, reinforcements and punishments (Laible & Thompson, 2008).

Modeling contributes to socialization of children such that observation of parental behavior inspires imitation of behavior in children (Forman & Kochanska, 2001). Proactive regulation, another immediate parenting process, can be understood as deliberate actions or monitoring by parents intended to affect access, availability, or exposure to an experience as a means of increasing chances that children will display desired behaviors (Holden & West, 1989). Parents also socialize young children through use of routines and rituals that provide the foundation through which children understand family beliefs, values and expectations, identify roles and responsibilities, and develop suitable conduct (Laible & Thompson, 2008). Structure, in particular, has been found to be important to healthy development as young children scaffold new learning within their understanding of previously attained knowledge; knowledge situated within standards set in everyday familiar situations (Hudson, 1993). Finally, parents shape the behavior of their children through a complex system of rewards and punishments intended to guide children’s actions across various domains (Grusec & Goodnow, 1994; Grusec, Goodnow, & Kuczynski, 2000).

**Researcher Positionality**

A qualitative researcher is positioned as an instrument through which a phenomenon is both considered and illustrated for the reader, making the position of the researcher on the issue to be studied an important consideration. To this end, it is important to understand that I greatly value good health and that of my family. I cannot think of a greater symbol of personal passion than the values that parents choose to instill in their children. Alongside a strong work ethic, good manners and honoring the golden rule, my husband and I have raised
our three children to protect and care for their minds and bodies, as there is nothing as precious to us as good health. As with teaching a child to ‘say please and thank you’ and to ‘do the job right the first time,’ instilling positive health behaviors takes daily attention.

I also value the health of others. My passion has been in health and wellness, as specifically viewed from a prevention standpoint, for as long as I can remember. I spent a decade working in the healthcare industry and earned a master’s degree in public health in 2001. More recently, I have worked with public schools and nonprofit agencies in preventive health-related ventures that have been both rewarding and frustrating due to an environment that often makes poor choices the easy choices. Resistance to recent efforts to implement guidelines for snacks eaten at school and rewards given to students provides a realistic example of the important yet not widely embraced changes that are being considered in schools across the nation. Success of such guidelines necessitates support from parents.

Since I graduated from a small college, I knew I wanted to return to teaching in this type of environment. When I returned to school to get my doctoral degree, I did so from a perspective enlightened by maturity and parenthood. I felt strongly that my previous education and experiences would serve me well in preparing young adults for careers in health-related fields. Additionally, I had spent years conversing with physicians about the growing problem of lifestyle-related diseases. It became clear to me that many of the obstacles to proper care remained outside of the reach and scope of the medical field as it is currently structured. Basic nutrition and activity education had not been enough to halt the obesity epidemic; the impediments were too pervasive.

A personal family health crisis opened my eyes to the individual, family, community, and social factors that also affect health; I needed to understand more. I wanted to do more.
Upon returning to graduate school, I devoured literature related to family behaviors and health with much of my attention drawn to the epidemic of obesity. With obesity being the pressing problem that it is, there was much to study that broadly pointed to predictive factors (i.e. eating dinner as a family is a positive health practice) yet little that actually described what these factors looked like in practice (i.e. What is to be eaten for dinner? Who was involved in shopping for and preparing it? What goes on during planning, preparation, and eating of meals?) How were families to have healthy behaviors in a world full of conveniences (i.e. fast-food, drive-through restaurants, pre-packaged foods, and sedentary entertainment) and quick fixes (i.e. diet pills and technological advances that reduce physical activity) that threaten good health? This research will strive to answer questions like these as I work to understand this phenomenon from the point of view of parents who self-report reflections, intentions, and strategies used to socialize their children’s health practices.

Throughout the process of uncovering the insight of this select group of parents, I worked to stay abreast of my biases. I, also, consider myself to be an “intentional mother” in this regard, though time and energy constraints mean that I struggle with being consistent in practice. While the connection I felt to my participants resulted in an instant sense of comraderie, I was careful to avoid projecting personal experiences and convictions onto the data. I regularly journaled to stay abreast of my biases, ensuring I did not miss nuances, the phenomenology of the “why” and the “how” mothers managed this parenting domain. It is my hope that I was able to share the stories of these twelve mothers so to be authentic to their stories.
Summary

This study posits to uncover important insight as there is a paucity of information about how parents that are intentional in practice, in regards to guiding children’s eating, physical activity and screen related behaviors, do so on an everyday basis. Because parents share environments with and are primary agents of child socialization, focusing inquiry on parents who are intentional in their socialization strategies and investigating the aspects that influence health-related practices, routines, and behaviors are needed to address the alarming prevalence of obesity in children and adults. Because health behaviors established in childhood often follow individuals into adulthood, contextual insight regarding how early socialization contributes to the obesity trend has been identified as a gap in knowledge. Armed with knowledge reflecting the day-to-day wisdom and experiences of parents, future obesity efforts can be informed by a better understanding of the considerable influences that parents may have on promoting healthy eating, physical activity and screen related behaviors. Through rich description of this phenomenon, researchers and practitioners can become more aware of parenting-related nuances impacting obesity, unveil areas ripe for intervention, advise prevention measures, and inform policy. Additionally, the insight gained from this study may be valuable to family life educators as they work to improve the health of children and families.

Dissertation Organization

This chapter opened with contextual information about the evolution of the obesigenic environment, parenting within this domain, and the behaviors associated with obesity. The remainder of this document will be organized as follows: Chapter 2 introduces the conceptual framework and summarizes the current state of the literature on aspects of parenting
connected to obesity-related practices. Chapters 3 and 4 are two separate empirical manuscripts for submission to the *Family Relations* journal and the *Journal of Family Issues* to be considered for publication. Graduate student Jacy C. Downey is first author and primary researcher. Clinton G. Gudmunson, second author, served as mentor and contributed to conceptualization and study design. Chapter 5 contains overall discussion, implications of this research, limitations of the study, areas for future directions, and a conclusion.
CHAPTER 2.
LITERATURE REVIEW

The contribution of family ecology to children’s eating, physical activity and screen-related behaviors can be understood within the broader context of early socialization as described in the previous chapter. This chapter introduces an applied model outlining parent-regulated influences on children’s obesity-related behaviors, defines the parameters of the model as it relates to this study, provides a comprehensive review of literature, and illuminates areas where information is lacking.

**Conceptual Framework: The Family Ecological Model**

The Family Ecological Model (FEM) was developed by Davison and Campbell (2005) to understand the context in which parenting occurs by considering immediate and broad influences impacting the ecology of parenting. The inner circles of the FEM model illustrate how specific parenting processes influence children’s health behaviors as related to eating, physical activity and sedentary behaviors (commonly also referred to as screen-related behaviors). As this models projects, the four immediate aspects of parenting that relate to obesity-related behaviors—knowledge and beliefs, modeling, shaping, and accessibility—are influenced by more broad contextual characteristics (outer ring) of the child, family, community, organizations, policies, and media as described previously (Campbell, Hesketh, & Krahnstoever Davison, 2010).
In this study, the four aspects of parenting located within the inner circles of Figure 1 are understood as domain-specific applications of immediate, parent-regulated socialization processes associated with the promotion of obesity-preventive behaviors in children. As an applied model, the outer ring of the FEM bridges parenting practices and external environments, allowing for situated real-world implications to be accounted for. The four parental practices that will guide this study are parental knowledge and beliefs, modeling, accessibility, and shaping.

Parental knowledge and beliefs and beliefs can be conceptualized as the attention and importance parents ascribe to healthy eating and activity, specific knowledge about appropriate diets and activity patterns, attitude toward the parental responsibility of
embedding healthy habits in their children, consideration of children’s competencies, and perceptions of the risks that threaten their goals for their children (Campbell et al., 2010, p. 300). Consciously and subconsciously, parents arrange daily activities around their knowledge and beliefs through establishment of the routines and rituals that provide the necessary predictability and organization important for healthy child development (Howe, 2002). Through these routines, such as the family meal or aggregated physical activities, behavioral expectations are set and standards of conduct form (Thompson, 2006).

Modeling is the demonstration by parents of appropriate behavior. Modeling by parents not only provides opportunities for observational learning but also can be achieved through joint participation, coaching, and observing activities parents desire children to emulate. Parents can also model behavior by choosing not to participate in or support undesirable conduct.

Accessibility can be described as the parental practice of manipulating children’s contact with factors related to specific behaviors and is influenced by the ways in which they manage children’s exposure to opportunities and the availability of selection. Under the umbrella of providing access, parents have proactive influence on their children through facilitation of opportunities (enrolling, transporting, financing, etc.), and by providing equipment for physical activity or by making certain foods available and accessible and avoiding others. Similarly, parents can regulate screen time by decreasing access to media and technology and limiting viewing time.

Finally, shaping in this model was identified as the use of rewards and punishments, however the literature has shown that parents shape their children’s behaviors using other strategies such as encouragement, restriction, pressuring or providing incentives and/or
reinforcement in return for desired conduct. Parents shape their children’s behavior through both direct and indirect means. Rewarding a preferred behavior with unhealthy foods or the privilege of playing video games, for example, can result in mixed expectations such that the child ascribes more value to the less healthy reward than the behavior being incentivized. Similarly, balancing the multiple demands of parenthood can inadvertently influence children’s behavior as has been reported through using the television to entertain or occupy children while parents focus attention on other responsibilities. Just as restricting screen time may make the activity more desirable, pressuring children to eat vegetables may result in the child assigning a negative value to a behavior deemed positive by parents. This paradoxical relationship demonstrates how parental attempts to regulate conduct have powerful and sometimes inadvertent effects on the lifestyles and socialization of children (Grusec & Goodnow, 1994; Grusec et al., 2000). Thus, parents face challenges in shaping children’s behavior across multiple and diverse domains, and underscores the need for contextual understanding of the dynamics involved in these immediate parenting processes.

Immediate Parenting Practices and Obesity Risk Behaviors in Children

The family as well as other proximal systems can have a significant effect on the likelihood for children to become obese. Inherently, children are dependent upon interactions with others and most directly from those with their parents or caregivers. Especially pertinent to obesity, behavioral risk factors related to eating routines, physical activity practices, and sedentary behavior are developed in the setting of the family ecosystem (Davison & Birch, 2001). Parents are influential in shaping the health practices of children including diet and eating routines, physical activity, screen-related behaviors, as well as funding and providing access to opportunities that may encourage physical activity
(Davison, Cutting, & Birch, 2003; Savage et al., 2007). Parents also serve as educators, role models, gatekeepers, facilitators, and advocates for children as they develop health behaviors. By addressing the dynamics of related parenting practices and the methods in which healthy behavior is fostered, the utility of learning, modeling and socializing health practices and the regular opportunities that parents provide for these interactions can be better understood (Golan & Crow, 2004).

**Eating behaviors**

A family and home environment that is conducive to promoting healthy habits is essential to preventing obesity (Golan & Weitzman, 2001), however the family food environment (Davison & Campbell, 2005) is a complicated domain that is impacted by more distal child characteristics (SES, culture/ethnicity) and preferences as well as parental factors as influenced by larger social contexts. These distal aspects have been well studied and will only be a secondary consideration in this research. The review of eating behaviors will focus specifically on the four immediate FEM aspects of parenting that have been related to child-feeding practices.

**Knowledge and beliefs.** Informed individuals made better food selections (Worsley, 2002), and children of mothers’ with higher nutritional knowledge and concern for healthy dietary habits were more likely to have increased diet quality (Gibson, Wardle, & Watts, 1998). A review by Worsley (2002) suggested that nutrition knowledge plays a small but important role in establishing positive eating behaviors. Parents function as nutritional gatekeepers (Wansink, 2006), making maternal and parental knowledge of nutrition an important determinant of the home food environment and subsequent child practices. Vereecken and Maes (2010) assessed maternal nutrition knowledge by asking mothers to
respond as to the degree in which their beliefs aligned with 10 statements representing common misconceptions about children’s diets (i.e. “It is preferable that preschoolers below the age of 4 consume whole fat milk rather than semi-skimmed milk.”). Higher maternal nutrition knowledge was shown to have a positive impact on overall diet quality in this study and others (US Department of Agriculture Economic Research Service, 2000) and specifically on children’s intake of total fat, saturated fat, cholesterol, sodium, and fiber (Variyam, Blaylock, Lin, Ralston, & Smallwood, 1999).

Reference to fruit and vegetable intake, often used as a dietary health barometer, is found in six of the nine recommendations set forth by the 2005 Dietary Guidelines (United States Department of Agriculture, 2004) and is therefore the subject of much investigation. The influence of maternal nutrition knowledge and beliefs on fruit and vegetable intake, however, has been mixed or indirect. For example, Gibson and colleagues (1998) found a strong association between mothers’ nutritional knowledge and children’s fruit and fiber consumption, but not with vegetables, macronutrients or sweets. However, an association failed to be made between parental nutritional knowledge and attitude and child fruit and vegetable intake in another study (Hudson, Stotts, Pruett, & Cowan, 2005). The influence of parenting knowledge about obesity-related behaviors on related child behaviors was mediated by other factors and processes within the complex home food environment in some studies (Campbell, Crawford, Abbott, McNaughton, & Ball, 2009; Hendrie, Coveney, & Cox, 2011). A 39-item scale (Campbell, Crawford, & Ball, 2006) was used to assess the family food environment, asking parents to rate their level of agreement with statements reflecting parenting beliefs and processes such as, “My child eats enough vegetables to keep her healthy;” an item that loaded highly on the parental perceptions of adequacy of child’s
eating factor. Hendrie and colleagues (2011) used this tool to examine the influence of the family environment on children’s obesity risk behaviors. Parental knowledge was indirectly associated with children’s fruit and vegetable intake in this study, working through higher parental diet quality and a positive family food environment.

Data on the relationship between parental knowledge and child outcomes is less established. Higher parental nutrition knowledge was associated with lower prevalence of overweight in children in one study (Variyam, 2001) but not in another (Hudson et al., 2005), while a recent study that combined parental knowledge of nutrition and physical activity into one measure found a direct association with increased child BMI (Hendrie, Coveney, & Cox, 2011).

The dynamics surrounding shopping and planning for meals and establishing a mealtime routine is considered a reflection of parental values, beliefs, and knowledge (McIntosh, et al., 2010). In a study of middle school children the frequency of shared meals was inversely associated with obesity (Taveras et al., 2005). In longitudinal analysis, breakfast consumption was found to decrease the odds of overweight (Campbell, Crawford, & Ball, 2006; Berkey, Rockett, Gillman, Field, & Colditz, 2003; Niemeier, Raynor, Lloyd-Richardson, Rogers, & Wing, 2006; Barton et al., 2005) while the practice of eating dinner while watching television was linked with increased BMI in older children (Macfarlane, Cleland, Crawford, Campbell, & Timperio, 2009).

Some beliefs about suitable eating habits in children such as requiring plates to be cleaned may not be appropriate in the current energy-rich setting. Though widely practiced, traditional feeding behaviors employed when food was scarce and production was laborious (praise for cleaning of plate, considering chubby children healthy) may no longer be suitable
in our current environment (Savage et al., 2007). These beliefs, however, are often firmly embedded in culture, family rituals, traditions, and routines and likely affect the way parents feed their children.

**Modeling.** The family meal presents an opportunity for parents to affect children’s eating habits via modeling as has been shown by the consistent association found between parent and child dietary intake (Patrick & Nicklaus, 2005; McIntosh et al., 2010; Pearson, Biddle, & Gorely, 2008; Robinson-O’Brien, Neumark-Sztainer, Hannan, Burgess-Champoux, & Haines, 2009; van der Horst et al., 2007; Rasmussen et al., 2006; de Vet, de Ridder, & de Wit, 2011) and also through observational learning of parental consumption of different types of foods (Patrick & Nicklaus, 2005). The nutritional behaviors of parents positively influence the types (Oliveria, Ellison, Moore, Gillman, Garrahie, & Singer 1992) and amounts (Hood et al., 2000) of foods that children consume as does eating meals as a family (Gillman et al., 2000; Neumark-Sztainer, Hannan, Story, Croll, & Perry, 2003). Parents’ dietary behaviors have also been linked with increased risk of child overweight (Hood et al., 2000).

Similarly, children can be motivated to try new foods, and discouraged to consume less healthy items (Dietz & Stern, 1999). Parents can encourage young children to taste new foods by modeling “acceptance” (Skinner et al., 1998), as providing and encouraging children to eat foods within a positive social context has been shown to aid in the development of children’s preference for healthy foods (Hearst, 1999; Pearson et al., 2008).

**Accessibility.** Parental influence over the home food environment affects the food preferences of children as supported longitudinally by the similarities in food preferences between parents and children (Skinner, Carruth, Bounds, Ziegler, & Reidy, 2002). However,
a link between parent manipulation of food availability and child weight status has not been established (Ventura & Birch, 2008). A review by Cooke (2007) highlighted the importance of repeated exposures or “tastings” as a means of influencing children’s eating habits, adding that familiarity accounted for greater than half of the variance in food preference. Studies have shown that there are developmental differences in the number of exposures needed to influence preference, with infants requiring only a single tasting to affect intake in one study (Sullivan & Birch, 1994). Timing of initial exposure is also important to later consumption. Infants introduced to lumpy, solid foods that needed chewing after 10 months of age were less likely to eat fruits and vegetables at age 7 as compared to those introduced to semi-solids between 6-10 months, suggesting that delaying introduction of lumpy foods negatively impacts eating habits in middle childhood (Coulthard, Harris, & Emmett, 2009).

Children commonly begin showing signs of neophobia, or fear of unfamiliar foods, around age two which often limits the quality and variety of their diets resulting in inadequate consumption of fruits and vegetables (Cooke, 2007). Ten or more exposures in 2-year olds (Birch & Marlin, 1982), and eight to fifteen exposures in 3-4 year olds (Liem & de Graaf, 2004) were required to lead to increased preference while upwards of twenty opportunities for tastings were necessary before new foods would be sampled in 10-12 year olds. (Loewen & Pliner, 1999). Encouraging parents to continue offering previously declined foods beyond the average of 2-3 times, and pairing a new food with an accepted food are suggested strategies to decrease neophobia (Skinner et al., 2002). Likewise, preparing fruits and vegetables in bite-size portions and alongside a dip may increase desirability (Burchett, 2003). Additionally, children reported increase intake of fruits and vegetables when they were consistently located on the counter or in the refrigerator and were
“ready to eat” (Hearn et al., 1998). More practical tips to establish positive feeding patterns in children are needed (Cooke, 2007).

Mothers’ regulation of children’s access to foods is another expression of how socialization of children’s eating habits is primarily under parental control. Along with the impact of taste preferences, Blanchette and Brug’s (2005) review on determinants of fruit and vegetable consumption in 6-12 year old children, posited that availability and accessibility of fruits and vegetables was the most important factor related to children’s intake. Opportunities for improving children’s eating patterns were affected by increased access to a variety of foods including those that mothers themselves did not like and thus did not make available to children (Skinner et al., 2002). Similarly, making foods and drinks considered “less healthy” available at home increased adolescent consumption of problem foods (Campbell et al., 2007b) and was associated with reduced fruit and vegetable intake (Hanson, Neumark-Sztainer, Eisenberg, Story, & Wall, 2005). A positive association between availability of both core foods (fruit, vegetable & dairy) and non-core (sweet and salty snacks and sweetened beverages) and intake corroborates the need for parents to ensure that the refrigerator is stocked with healthy food (Spurrier, Magarey, Golley, Curnow, & Sawyer, 2008) and children are repeatedly offered a variety healthy food items (Dietz & Stern, 1999).

**Shaping.** Parents use many strategies to shape children’s eating patterns; however, more general parenting styles may also influence the way they feed their children. A review by Ventura and Birch (2008) posited that parenting style, typologies of parenting behaviors that describe the tone of interactions between parents and their children, provides a framework under which parents employ specific strategies to shape their children’s feeding-
related practices. Under the context of food-related practices, the authoritarian feeding style, characterized by parental control of the food domain with little input from the child, is the most studied feeding typology (Patrick, Nicklas, Hughes, & Morales, 2004) and is described as parent-controlled. Parents demonstrating permissive feeding style provide little to no input on their children’s eating patterns, and authoritative feeding is described as encouragement by parents balanced with input from the child.

Some authoritarian feeding strategies such as restriction, pressure, and the use of a system of rewards and punishments may have unintended consequences and need to be better understood (Wardle, Carnell, & Cooke, 2005). Parents restrict certain types of food as a means of controlling intake, however restriction has been associated with adverse eating practices in some work (Zive et al., 1998; Birch, Fisher, & Davison, 2003; Fisher & Birch, 1999a; Jansen, Mulkens, Emond, & Jansen, 2008; Johnson & Birch, 1994), including in a longitudinal cohort (Birch et al., 2003; Fisher & Birch, 1999a; Fisher & Birch, 1999b; Fisher & Birch, 2002; Francis & Birch, 2005) but not all investigations (Spurrier et al., 2008; Campbell, Crawford, & Ball, 2006; Kroller & Warschburger, 2008). The association between restriction and weight status in children presents mixed results with no association reported in most cross-sectional studies (Carnell & Wardle, 2007; Haycraft & Blissett, 2008; Powers, Chamberlin, van Schaick, Sherman & Whitaker, 2006). Longitudinal evidence in girls (Francis & Birch, 2005) and children considered at risk for overweight (Faith et al., 2004) associated restriction of foods with increased child weight.

Restriction has not been uniformly associated with negatives outcomes. The findings of a recent three-year prospective study by Campbell and colleagues (2010) presented challenging results, as restriction was associated with lower BMI in 5-6- year old children.
but not in 10-12-year olds. Two other longitudinal studies found food restriction in one-year old children predicted lower BMI a year later (Farrow & Blissett, 2008) and no association between restriction and weight status (Spruijt-Metz, Li, Cohen, Birch, & Goran, 2006), calling for further investigation of the contexts under which various restrictive strategies are used by parents. An important step in broadening the conceptualization of restrictive practices was presented in a study by Ogden and colleagues (2006) that identified differences in overt (restricted food is available but intake is limited by parents) and covert (restricted food is not brought into the home) means of restriction. This delineation called for closer examination and description of parental feeding practices.

Parents also attempt to control their children’s diets by pressuring their children to eat more food and/or more healthful items. Pressure to eat fruits and vegetables has been associated with decreased intake in some studies (Wardle et al., 2005; Fisher, Mitchell, Smicklas-Wright, & Birch, 2002) while no association was found in another study (Bourcier, Bowen, Meischke, & Moinpour, 2003). Pressure to finish a meal was associated with increased fat intake (Zive, et al., 1998) and increased consumption of problematic foods (Kroller & Warschburger, 2008) in children. The influence of pressure on child weight outcomes, however, is not clear. Some cross-sectional studies found parental pressure was associated with lower weight status in children (Matheson, Robinson, Varady, & Killen, 2006; Powers et al., 2006; Spruijt-Metz, Lindquist, Birch, Fisher, & Goran, 2002) while another reported a positive correlation between pressure to eat and increased relative weight of children (Klesge, Malott, Boschee, & Weber, 1986). Faith and colleagues (2004) suggested that parental use of pressure in feeding practices predicts child overweight over time.
Using certain foods in a system of reward and punishment as a means of controlling children’s feeding patterns has been less studied. The coercive use of food has been infrequently separated from restriction, possibly confounding interpretation of results (Kroller & Warschburger, 2008; Spurrier et al., 2008). Using food as a reward or punishment has been associated with poorer eating habits in children (Kroller & Warschburger, 2008; Spurrier et al., 2008; Newman & Taylor, 1992; Wardle, Herrera, Cooke, & Gibson, 2003; Vereecken, Keukelier, & Maes, 2004); an affect suggested to persist into adulthood (Puhl, & Schwartz, 2003). Causal evidence of the impact of using reward for consumption of specific foods on child weight status has not been established (Ventura & Birch, 2008). Qualitative studies (Campbell et al., 2007a; Sherry et al., 2004; Baughcum, Burklow, Deeks, Powers, & Whitaker) have provided insight as to some strategies used by parents to control children’s behaviors using food. Less healthy foods are often paired with more healthy choices as a means of encouraging children to consume more of the healthy items. Likewise, foods can be used to pacify children, as a bribe or reward for good behavior or withheld as punishment.

In conclusion, only parental modeling and monitoring of children’s diets were associated with healthier children’s dietary behavior in a systematic review of reviews (de Vet et al., 2011). Other studies reported lower parental control linked to increased consumption of fruits and vegetables (Kroller & Warschburger, 2008) and vegetables and dairy (Patrick, Nicklaus, Hughes, & Morales, 2005). A review by Ventura and Birch (2008) found that pickiness, eating in the absence of hunger, and increased preference for sugary foods were associated with controlling feeding practices. It has been suggested that parents may be most effective when they regulate the types of foods that children are exposed to while children decide how much they consume, a division of responsibility between parent
and child (Satter, 2004). Campbell and colleagues (2006) proposed that future work focus on understanding how parents make practical decisions about child feeding practices with special attention paid to uncover how parents manage factors that compete with healthy lifestyles. Additionally, a need exists to understand interactions around feeding-related parenting at times and places outside of the family meal when energy dense, less nutritious food is commonly available (Musher-Eizenman, & Holub, 2007).

**Physical activity behaviors**

The health behaviors of parents and parenting practices specific to health-promoting lifestyles have been associated with positive physical activity behaviors in children (Gustafson & Rhodes, 2006). Like eating practices, parents also play an important role in socializing children’s physical activity behaviors. With childhood obesity a looming concern, there is a need to more thoroughly understand how parents influence their children’s physical activity patterns (Trost et al., 2003). Four aspects of the FEM related to parenting for an active lifestyle are described below: knowledge and beliefs, modeling, exposures/availability/accessibility, and shaping.

**Knowledge and beliefs.** Research focusing on parental beliefs about children’s physical activity patterns centers on the value parents place on children’s physical activity and their perception of children’s interest and abilities, often expressed under the broad construct of parental support of children’s activity (Campbell et al., 2010; Heitzler, Martin, Duke, & Huhman, 2006). Trost and colleagues (2003) found that the relationship between children’s physical activity patterns and importance that parents place on physical activity behavior, and, to a lesser extent, parent’s physical activity-related enjoyment and behavior was mediated by parental support of children’s activity such that the influence of parental
knowledge and beliefs on children’s activity level worked through encouragement and provision of resources by parents. Parents were found influential in supporting activity patterns of children through funding and providing access to opportunities that encourage physical activity (Davison et al., 2003; Savage et al., 2007) as well as watching events, co-participating in activity, and reinforcing children’s participation (Trost et al, 2003).

Additionally, a qualitative study found some parents perceived young children to be naturally and adequately engaged in physical activity thus not needing support to be active (Hesketh et al., 2012).

A particular form of parental belief described by Eccles’ value expectancy model posits that parents socialize children’s physical competencies through providing related experiences and maintaining an expectation of activity such that children perceive themselves competent and therefore are attracted to and become more engaged in physical activity (Eccles & Harold, 1991; Eccles, Jacobs, & Harold, 1990). Aligning with Eccles’ model, parental support has been associated with higher perceived competence in children’s physical abilities, thought to, in turn, increase children’s desire to be physically active (Brustad, 1993; Trost et al., 2003). However, a longitudinal study found girls with low perceived athletic competence did not respond to parental support following Eccles’ model as other studies have shown in children (Davison, 2004; Davison et al., 2003; Dunton, Jamner, & Cooper, 2003; Hoefer, McKenzie, Sallis, Marshall, & Conway, 2001; Sallis et al., 1992; Kimiecik & Horn, 1987). This finding suggests that parents may need to work with children, especially those that are not naturally inclined to be athletic, to help them build skills and confidence or find alternate ways to be active (Davison, Symons Downs, & Birch, 2013).
**Modeling.** Parent role modeling is the most commonly studied parental support construct related to child physical activity. Children with active parents are more likely to be active (Hinkley, Crawford, Salmon, Okely, Hesketh, 2008). However, the influence of parental modeling varies with child age and the number of active parents. Younger children (2-9 year-old) and teenagers (12-18 year-old) responded more strongly to the influence of parental modeling compared to adolescents (9-12 year-old), according to meta-analyses (Pugliese & Tinsley, 2007) of 30 studies. Children with two parents to model physical activity were more active than children with one active and one inactive parent; children with no active parents had the lowest activity levels (Gustafson & Rhodes, 2006). To assess role modeling, researchers have considered similarities in physical activity levels between children and adolescents and their parents; imparting mixed results. Controversy exists, in part, due to various ways that physical activity in youth is measured and large variability in study design (Welk, Corbin, & Dale, 2000; Gustafson et al, Rhodes, 2006; Kimiecik & Horn, 1987). Studies using accelerometers or validated tools to assess physical activity levels were more likely to report a correlation between parent and child activity levels than were studies using non-validated questionnaires or interviews as the means of measurement (Gustafson & Rhodes, 2006).

Beyond observational learning that arises from modeling, more active parents intend to support children’s involvement in physical activity more often than less active parents (Gustafson & Rhodes, 2006). Conditional support, described by the presence or direct involvement in the child’s activity, has been cited in related literature (Beets, Cardinal, & Alderman, 2010). In regards to physical activity, this may include modeling, playing together, family aggregation of exercise, parent coaching of children’s athletic teams, or
attending a sporting events. Direct involvement of parents with children in physical activities has been shown to be more impactful on children’s behaviors prior to adolescence (Beets et al., 2010; Institute of Medicine, 2004). Children also have been reported to have higher activity levels when parents are present even if parents do not participate (Duncan, Duncan & Strycker, 2005), demonstrating that parents have multiple ways they can model the importance of physical activity. Further research should attempt to distinguish the various ways that parents socialize children’s physical activity (Welk, Wood, Morss, 2003).

**Accessibility.** Parents can promote healthy activity practices in children by making equipment available at home that fosters physical activity such as bicycles, scooters, ball, Frisbees, etc. (Dunton et al., 2003). Encouraging children to spend time outdoors is also important as outdoor play is one of the strongest and most consistent parent-related correlates of physical activity in children (Sallis, Prochaska, & Taylor, 2000). Additionally, parents can increase access and availability to opportunities to be active through planning family outings that involve physical activity (Davison et al., 2003). Higher levels of physical activity in children are associated with general facilitation by parents such as enrolling, funding, and transporting children to organized recreation and opportunities to be active (Sallis et al., 2000; Sallis et al., 1992; Hovell, Kolody, Sallis, & Black, 1996; Welk et al., 2003; Heitzler et al., 2006) A study of 9-year old girls found that mothers were more likely to influence activity levels by improving access and logistic support to opportunities to be active while fathers’ modeling behavior was linked to increased physical activity levels (Davison et al., 2003).

**Shaping.** Parental use of a reward or punishment systems has not been well studied in shaping children’s physical activity behaviors as influencing children’s eating behavior.
Parents, however, shape children’s physical activity behavior through motivational support that serves to initiate, inspire, prolong, intensify, praise, or reinforce physical activity in children (Beets et al., 2010). Parental encouragement and reinforcement of activity was associated with higher physical activity levels in children and adolescents (Bungum, & Vincent, 1997; Sallis et al, 1992; Arrendondo et al., 2006; Pugliese & Tinsley, 2007; Bauer, Nelson, Boutelle, & Neumark-Sztainer, 2008) as well as multiple other activity-related outcomes (Beets et al., 2010). Verbal encouragement also contributes to children’s perceived competence about their physical ability, which has been associated with higher activity levels (Brustad, 1993).

Further research is needed to understand how parents can establish an environment supportive of children physical activity (Jackson, Crawford, Campbell, & Salmon, 2008). Multiple parent-related mechanisms, influenced by parental knowledge and beliefs, modeling, facilitation, and shaping, have been associated with higher activity levels in children, however comprehensive understanding of how parents influence children’s behaviors is lacking (Trost et al., 2003; Sallis et al., 2000; Baranowski, Anderson, & Carmack, 1998). A systematic review of reviews suggested that unlike parental influence on dietary practices, youth physical activity levels are not highly influenced by parent-related intrapersonal factors such modeling, parental support, or home opportunities for physical activity. The authors purported that this finding is likely explained by the nature in which physical activity occurs (outside of the home) such that the influence of the home environment is reduced (de Vet et al., 2011). Although physical activity levels in children and overweight have been well studied, data linking specific physical activity-related parenting practices and child weight status is inconsistent and/or missing. Evidence of a
relationship between physical activity-promoting parenting strategies and child weight outcomes is weak; only two studies with conflicting results were found (Hovell et al., 1996; Rosenkranz & Dzewaltowski, 2011).

Sedentary or screen-related behaviors

Children that spend more time in sedentary behavior are at an increased risk of obesity (Andersen, Crespo, Bartlett, Cheskin, & Pratt, 1998; Jago, Baranowski, Baranowski, Thompson, & Greaves, 2005). Previously, sedentary behavior was not consistently operationalized such that low physical activity and sedentary behaviors like television viewing were measured together. Recently, sedentary behavior has been established as a risk factor for obesity independent from that associated with low levels of physical activity (Sallis et al., 2000), and now is being measured with sedentary behavior-dedicated tools. The most consumed media-related behavior in children, television viewing, (Woodard & Gridina, 2000) was also related to increased snack consumption and lower intake of fruits and vegetables (Muller, Koertringer, Mast, Languix, & Frunch, 1999), and substitution of physical activity for sedentary behavior was associated with greater weight loss in obese children in experimental research (Epstein et al., 2002).

Knowledge and beliefs. Although there is a growing public health concern over obesity risks related to youth sedentary behavior, parents reported greater concern about the content of the media their children are consuming rather than the amount, possibly explaining why parental concern has not translated into decreased viewing time in children (Woodard & Gridina, 2000). Children whose parents believe television should be prohibited during mealtime were more likely to meet current recommendations of two or fewer hours per day of television (Salmon, Timperio, Carver, & Crawford, 2005); a finding consistent with
longitudinal data (Saelens, et al., 2002). Similarly, parents of high-screen users, children accumulating greater than two hours per day, reported fewer screen-related rules and a less negative attitude about screen use (He, Piche, Beynon, & Harris, 2010). Reducing television viewing time was shown to lower children’s BMI or fat mass gain (Robinson, 1999; Gortmaker et al., 1999; Doak, Visscher, Renders, & Seidell, 2006), however only 20 percent of parents that establish limits actually enforced their television viewing rules most of the time in children age 8-18 (Roberts, Foehr, & Rideout, 2005). About one-quarter of children report that their parents have rules about the amount of time they can spend playing video games (Roberts et al., 2005).

**Modeling.** Parental modeling of inactivity may also influence children’s level of physical activity. Negative modeling, marked by high levels of sedentary behavior, was more highly correlated between parents and children than the parent-child association of physical activity (Fogelholm, Nuuttilen, Pasanen, Myohanen, & Saatela, 1999), and correlations between high levels of child and parent television viewing, in particular, have been reported (Davison et al., 2005; Jago, Fox, Page, Brockman, & Thompson, 2010). Longitudinal analysis showed that mothers’ and fathers’ obesity-related behaviors cluster such that both parents are likely to practice either obesigenic or non-obesigenic behaviors, creating home environments that are either promoting or preventive of obesity (Davison & Birch, 2004). As such, daughters of obesigenic families consumed a higher proportion of fat, viewed more television, and had higher increases in BMI over time; an effect beyond that explained by genetic susceptibility (Davison, Francis, & Birch, 2005).
**Accessibility.** Forty-eight percent of all families with children 2-17 years old have an average of approximately three television sets plus four other common sources of media entertainment in their homes (Woodard & Gridina, 2000), providing easy access to multiple avenues to choose sedentariness over physical activity (Salmon, et al., 2005; Pate, Mitchell, Byun, & Dowda, 2011). A review by Marshall and colleagues (2006) reported that the average television viewing time in youth was 2-2.5 hours per day plus an additional 0.5 hours per day for computer use and 0.75 hours per day of video gaming. Parents control children’s access to media, therefore understanding the strategies used to regulate screen time was deemed important to address as higher levels of television viewing was associated with increased in BMI in a study by Francis and colleagues (2003) in girls age 5 to 9. Keeping televisions out of children’s bedrooms was associated with reduced risk of child overweight as demonstrated by Dennison and colleagues (2002). This study found that children with television sets in their bedrooms watched almost 5 hours more per week than those without a set available in their bedroom, positioning the children consuming more television at higher risk for overweight. Television viewing was also linked to child overweight through increased snack consumption and lower intake of fruits and vegetables (Muller et al., 1999).

**Shaping.** Monitoring by parents has been shown to be effective in curbing media consumption as children whose media use is regulated report lower levels of use (Pate et al., 2011; Van den Bulck & Van den Bergh, 2000). Both physical activity and screen time recommendations need be observed to promote healthy weight in children. A recent review of cross-sectional studies reporting that although higher levels of screen time has been independently correlated with child weight status in most studies, sedentary behavior and
low levels of physical activity also appear to go hand and hand (Prentice-Dunn & Prentice-Dunn, 2012).

The way in which parents control children’s access to screens may not be consistent as suggested by the increased television viewing levels on weekends (Gorely, Marshall, & Biddle, 2004), findings that girls are more sedentary than boys, and time spent in screen related behaviors increases with age peaking around 9-12 years old (Matthews et al., 2008; Marshall et al., 2006). This may be due, in part, from reports that television was often used as a means to distract or babysit children while parents are busy with other household activities (He, Irwin, Sangster Bouck, Tucke, & Pollett, 2005). Similarly, television was seen as educational and/or a good way to spend time as a family in other studies (Pocock, Trivedi, Willis, Bunn, & Magnusson, 2010; Jordan, Hersey, McDivitt, & Heitzler, 2006). Using screen time to shape behavior has not been as well studied as using food in this manner, but manipulation of screen time has been suggested as an area for future research (Campbell et al., 2010). In qualitative work, about half of interviewed parents reported using television as a reward, restricted access as a punishment, or limited time children spent watching television (Jordan et al., 2006), suggesting that qualitative inquiry may aid in understanding the ways parents manipulate media privileges.

In summary, similar to eating and physical activity much more needs to be understood about how parents socialize children’s screen related behaviors. Although television-viewing levels have been used to capture sedentariness in many studies, youth screen behavior has been described as increasingly diverse and not adequately represented by measuring television viewing alone (Gorely et al., 2004). Additionally, continued work to understand sedentary behavior as a distinct behavior from inadequate separate physical activity is
warranted. Children and adults have reported sufficient physical activity while also being highly sedentary; an example of the complicated task of delineating obesity risk factors (Marshall et al., 2006). Finally, media use comprises much of the way families spend their time at home. A reduction in screen time would require more than just setting and enforcing limits. It would likely require the restructuring of child and adult leisure time (Jordan et al., 2006), and the perceptions about such a tradeoff are largely unknown.

Conclusion

Guided by an adapted version of the applied Family Ecological model (FEM) (Davison et al., 2005), literature pertaining to the role of parental knowledge and beliefs about healthy eating, physical activity, and screen related behaviors in the socialization of children’s health habits was examined. Additionally, the contribution of parental modeling of desired behaviors through observational learning and family aggregation or co-participation of positive practices was also considered. Finally, the strategies used to shape children’s behaviors through the use of rewards and punishments or pairing a desired behavior with a positive or negative outcome were evaluated, as well as the extent to which parents make food accessible, provide opportunities to be active, and regulate screen time. When situated within the context provided in Chapter 1 that described influences from multiple systems and environments as well as relational processes complicated by specific child and family dynamics, this literature review provides a basis to investigate the essence of parental socialization of children’s eating, physical activity, and screen related behaviors.

Reviewed literature supported the important influence of parents in socializing children’s eating, physical activity, and screen related behaviors, however, multiple researchers called for further examination of the related environmental influences and more
detailed, practical strategies used by parents to foster healthy behaviors in their children (Cooke, 2007; Campbell et al., 2006; Davison et al., 2013; Wardle et al., 2005; Musher-Eizenman et al., 2007; Welk et al., 2000; Jackson et al., 2008; Trost et al., 2003; Sallis et al., 2000; Baranowski et al., 1998; Salmon et al., 2005; Campbell et al., 2010; Marshall et al., 2011; Bourcier et al., 2003; Hesketh et al., 2012). Largely missing from the review of literature was detailed description of practical, research-based strategies used by parents to positively impact children’s eating, physical activity, and screen related behaviors within an obesigenic environment. With over two-thirds of adults and one-third of children considered overweight or obese, healthy weight individuals are in the minority, their voices relatively unheard.

The Current Study

Through rich and thick qualitative description, the current study fills this gap in understanding by providing insight into strategies used by a specific culture of parents as they socialize their children’s eating, physical activity, and screen-related behaviors. Although mothers or fathers could have been interviewed, only mothers met study criteria and provided their perspectives. These mothers introduced a new narrative by giving voice to a population who are purposeful and committed in this domain of parenting. The findings are limited by the characteristics of the select group of mothers in this sample, as the results may differ as compared to a study in a different population. However, testaments from high-scoring mothers provided insight that increased understanding of parenting within this domain that could not have emerged from a more generalizable or at-risk population.
CHAPTER 3.

MOTHERS’ STRATEGIES FOR PROMOTING CHILDREN’S HEALTHY EATING, PHYSICAL ACTIVITY, AND SCREEN-RELATED BEHAVIORS

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Abstract

Parents model and teach early health practices that persist into adulthood by establishing a foundation through which children understand related family beliefs, values, and expectations. This phenomenological study examined the ways in which a purposefully selected group of mothers, scoring highly on the Family Nutrition and Physical Activity screening tool, shaped family culture related to physical activity, addressed screen-time behaviors, and established positive eating related routines. Findings related to mothers’ knowledge and belief systems about parenting within this domain pointed to the impact of family health history and mothers’ own upbringing, reinforcing the powerful nature of early habit formation. Mothers prioritized this parenting domain and were intentional in their efforts, as they maneuvered threats from the obesigenic environment, to support children’s autonomy of related behaviors. This study presents a strengths perspective and imparts a new narrative which serves to complement existing obesity research in representative and at-risk populations.

*Key Words: Autonomy, Beliefs, Eating behaviors, Knowledge, Parenting, Physical activity behaviors, Screen-related behaviors*
This phenomenological study makes meaning of the reflections, intentions, and strategies of a specific group of parents that are intentional in their efforts to positively socialize their children’s eating, physical activity, and screen-related behaviors. By utilizing purposeful sampling methods, this study presents an opportunity to provide a specific perspective and obtain a new narrative by giving voice to this overlooked population. Specifically, the purpose of this study is to provide detailed contextual description of the knowledge and belief systems of a select group of intentional mothers as they shape their children’s eating, physical activity, and screen-related behaviors within influences presented by the environment.

**Literature Review**

The obesity-related chronic conditions of heart disease, hypertension, and type 2 diabetes, rarely diagnosed in children and adolescents in the past, are growing in incidence and threaten the health of young people (May, Kuklina, Yoon, 2012). Associations have also been made between obesity and psychosocial and mental indicators of health such as low self-esteem, depression, poor body image, social stigmatization, and discrimination (U.S. Department of Health and Human Services, 2001).

The National Health and Nutrition Examination Survey (NHANES) reported that more than two-thirds of adults are considered overweight (BMI = 25-29.9) or obese (BMI = 30 and greater) (Flegal, Carroll, Kit & Ogden, 2012), and one-third of children ages 6 to 19 are considered overweight (85-95th percentile) or obese (above the 95th percentile) (Ogden, Carroll, Kit, & Flegal, 2012) as compared to the early 1970s when 4-6 percent of youth from 2-19 years old were considered obese (Fryar, Carroll, & Ogden, 2012). Additionally, children and adolescents mirror the trends of their adult counterparts (Ogden, Lamb, Carroll, &
Flegal, 2010a; Ogden, Lamb, Carroll, & Flegal, 2010b; U.S. Department of Health and Human Services, 2001) such that overweight children become overweight adults. Current literature reports having obese parents as one of the most powerful predictors of childhood obesity (Reilly et al., 2005; Zeller et al., 2007), likely resulting from a combination of shared genes, habits, and environment. Obesity trends suggest that, as a result of threats from the current environment, parents that do not intentionally socialize their children to have positive eating, physical activity, and screen-related behaviors may run a higher risk that their children will become overweight or obese (Savage, Fisher, & Birch, 2007).

Parenting and early socialization within the domain of eating, physical activity, and screen-related behaviors

One of the ways in which parents socialize young children is by establishing a foundation through which children understand family beliefs, values, and expectations, identify roles and responsibilities, and develop suitable conduct (Laible & Thompson, 2008). The ways in which parents shape the family culture related to physical activity, address screen-time behaviors, and establish eating-related routines, for example, are considered a reflection of parental values, beliefs, and knowledge (McIntosh, Kubena, Tolle, Dean, Jan, & Anding, 2010). Study of early socialization has found that varying contexts inspire dynamic parenting practices, and parenting practices that are domain-appropriate are more likely to be effective (Grusec, 2011). Parental knowledge and beliefs about the parenting domain of obesity-related behaviors can be conceptualized as the attention and importance parents ascribe to healthy eating and activity, as well as specific knowledge about appropriate diet (Birch et al., 2001; Savage et al., 2007; Worsley, 2002) and activity patterns. Likewise, parental beliefs are represented in their attitude towards the responsibility of embedding
healthy habits in children, their consideration of children’s competencies, and their perceptions of the risks that threaten their goals for their children (Campbell, Hesketh, & Krahstoever Davison, 2010, p. 300).

Parents are powerful socialization agents for shaping children’s early eating behaviors, serving as role models (Scaglioni, Salvioni, & Galimberti, 2008) and gatekeepers of children’s access to food (Wansink, 2006). However, parental impact on children’s eating practices is also influenced by contextual and environmental factors. Beydoun and Yang (2009) found that the weak to moderate resemblance between parent-child diet quality was explained by the impact of body image and influence from outside factors such as school, peers, and media consumption which increase as children age.

Parents are influential in supporting activity patterns of children through funding and providing access to opportunities that encourage physical activity (Davison, Cutting, & Birch, 2003; Savage et al., 2007), as well as maintaining an expectation of activity that enables children to perceive themselves as competent (Eccles & Harold, 1991; Eccles, Jacobs, & Harold, 1990). Parents also influence child physical activity by watching events, co-participating in activity, and reinforcing children’s participation (Trost et al, 2003). Parental support is especially important when children are not naturally inclined to be athletic or competitive, as a means to help them build skills and confidence or find alternate ways to be active (Davison, Symons Downs, & Birch, 2013). A systematic review of reviews suggested that unlike parental influence on eating practices, youth physical activity levels are not highly influenced by parent-related intrapersonal factors such modeling, parental support, or home opportunities for physical activity. The authors purported that this finding is likely
explained by the nature in which physical activity occurs (outside of the home) such that the influence of the home environment is reduced (de Vet et, de Ridder, & de Wit, 2011).

Although there is a growing public health concern over obesity risks related to youth screen-related behavior, parents reported greater concern about the content of the media their children are consuming rather than the amount, possibly explaining why parental concern has not translated into decreased viewing time in children (Woodard & Gridina, 2000). Parents of high-screen users, children accumulating greater than two hours per day, reported fewer screen-related rules, a less negative attitude about screen use, and had fewer rules about their children's screen use. (He, Piche, Beynon, & Harris, 2010).

**Conceptual Framework: The Family Ecological Model**

The contribution of family ecology to children’s eating, physical activity, and screen-related behaviors can be understood within the broader context of early socialization. The Family Ecological Model (FEM), developed by Davison and Campbell (2005) to understand the context in which parenting occurs, considers both immediate and broad influences impacting the ecology of parenting. The inner circles of the FEM model illustrate how specific parenting processes influence children’s health behaviors. The four immediate aspects of parenting that relate to obesity-related behaviors are influenced by more broad contextual characteristics of the child, family, community, organizations, policies, and media (Campbell, Hesketh, & Krahnstoever Davison, 2010). Mothers were asked to describe their beliefs related to influencing children’s obesity-related behaviors as well as to describe life events and external factors such as family of origin, education, and work-related experiences that have shaped how they have become deliberate in this domain of parenting.
True to the goal of phenomenological study, the FEM informed and supported the development of interview questions and contributed to final stages of analysis but did not constrain the development of new information.

**Method**

A thorough engagement between researcher and participants was needed in order to gather deep, rich description of intentional parenting for positive eating, physical activity, and screen-related behaviors in children within the current environment; therefore, in-depth interviews were utilized. One-on-one interviews are the principal means of collecting data for phenomenological studies as they foster extensive interaction between researcher and participant and elicit the “in-depth, context-rich personal accounts, perceptions, and
perspectives” from individuals sharing a common experience (Bloomberg & Volpe, 2012, p. 252). Interviews were held in a private conference room, informed consent was obtained (see Appendix B), and an interview protocol (see Appendix C) guided interaction between researcher and participants. (See Appendix D for the cross-referencing matrix). Grand tour questions (Glesne, 2006) focused on parenting processes related to eating, physical activity, and screen-related behaviors, exposed rich details of each of the four immediate parenting practices used to socialize children’s obesity-related behaviors. Specific questions and probes, some of which inspired by broad contextual influences, were used to gain further understanding of the participants’ experiences (Bloomberg & Volpe, 2012). The interviews were audio-recorded, transcribed (see Appendix E for the transcriptionist confidentiality agreement), and analyzed. Transcripts were checked against recordings in situations when data was unclear or ambiguous. An audit trail was recorded throughout all stages to capture the process of conceptualization, sampling, data collection, analysis, findings, and dissemination. (see Appendix F for the interview summary sheet & Appendix G for excerpts of the audit trail).

Sampling

Insight from a specific subset of parents was needed to understand the phenomenon of interest (Bloomberg & Volpe, 2012), therefore the researcher utilized purposive sampling techniques to target individuals particularly knowledgeable about the phenomenon under investigation. Although purposive sampling precludes generalizability, it is a preferred method to reach participants exhibiting specific characteristics that are willing to talk about their unique positions (Bloomberg & Volpe, 2012). The correspondence letter, administered to parents of elementary students attending four schools (student enrollments were 419, 377,
429, and 458) in a small Midwestern city (population 15,000), contained a key informant survey that identified parents meeting study criteria and contained the behaviorally anchored rating (BAR) scale version of the Family Nutrition and Physical Activity (FNPA) screening tool (Johnson, Welk, Saint-Maurice, & Ihmels, 2012), demographic questions (i.e. marital status, educational level, employment, race, number and ages of children, household income) and a request for contact information (see Appendix H). The FNPA assesses ten risk factors associated with overweight/obesity in children, loads on a single factor and has been shown to have good internal reliability (alpha = 0.72) (Johnson et al., 2012). The BAR scale version of the FNPA consists of ten questions scored on a 3 point scale. Parents were asked to select the response that most closely resembled patterns in their family. Total scores could range from 10-30, with high scores indicative of healthier family environment and behaviors.

Parents had to have at least one child in elementary school to be administered the survey as the Family Nutrition and Physical Activity (FNPA) screening tool (Johnson et al., 2012) has been shown to identify family behaviors and environments that may predispose children of elementary age to overweight. Additional children in the family may be any age or gender as long as one child in elementary school resides in the home. Targeted participants could be mothers, fathers, or other primary caregivers, however of the 346 parents that completed the survey, all those with top scores (score ≥ 29/30) in this study were mothers. Parents could elect to complete the survey on paper or electronically. Of the 382 participants that initiated the survey, 346 completed the survey. Total scores were distributed with the following frequencies: ≤ 20 (19), 21 (14), 22 (28), 23 (22), 24 (43), 25 (65), 26 (48), 27 (55), 28 (31), and 29 (21).
Participants

The sample for this study was selected based specifically on scoring highly ($\geq 29/30$) on the FNPA screening tool. A small percentage ($n = 21, 6.1\%$) of parents qualified for the study based on the total FNPA score (eligibility criteria $\geq 29/30$), which signified healthier home environment and parenting practices within this domain. Recruitment continued until data saturation, evident when participant responses became largely repetitive, was reached (Lofland & Lofland, 1995). Of the 21 qualified participants, twelve mothers were able to be contacted and participated in two-hour in-depth interviews. Mothers participating in interviews were given a $15$ gift card to a local grocery store for their involvement. The average scores for each of the 10 survey items for interviewed mothers ($n = 12$) are listed in Appendix I. (see Appendix J for survey item scores for surveyed and interviewed participants). Mothers’ real names were replaced with pseudonyms (see Table 1).

All of the interviewed mothers were Caucasian and all were within the 26-41-age range. An average of 2.5 children lived in the home, and all of the mothers were currently married less one who was divorced as described in Table 1 (see Appendix K and L for demographic description of surveyed and interviewed participants). Mother’s highest level of education attained included: some college or vocational training (1), associate’s degree (2), bachelor’s degree (5), master’s degree (1) and advanced degree (3). Four mothers were not employed outside the home. Of the employed mothers, two were self-employed, four employed by someone else, and one was working and going to school. The mode household income range response chosen by participants was $80,000-109,999$. 
Analysis

In the first step of the eidetic analysis, by attending to psychological detail and focusing on understanding the meaning of the participants’ experiences, the researcher underwent an intentional analysis aimed at uncovering the essence of the phenomenon (Wertz, 2005). The researcher prepared for analysis (see Appendix M for a model for data collection and analysis and Appendix N for the approach to phenomenological methodology) by identifying meaning units, strings of words and sentences within the transcripts that convey important concepts (Wertz, 2005). Relevant phrases were tagged with pertinent descriptive information to provide contextual support to each excerpt and meaning units were organized to provide a situated description in preparation for an eidetic analysis (see Appendix O for an excerpt of a transcript with meaning units noted and Appendix P for an example of eidetic analysis of 4 meaning units). In an intentional analysis, the researcher considers the details of individual parts (meaning units) and how the parts relate to the overall participants’ circumstances, all while considering how the participants’ perceptions, emotions and behaviors have impacted her experience (Wertz, 2005; see Appendix Q for an example.)

In the second step, the researcher reduced the data into themes as elements clustered around central ideas within each interview and across participants (see Appendix R for an example of theme creation). Essential characteristics of the phenomenon were discerned from the superfluous in a process described as imaginative variation (Wertz, 2005) (see Appendix S), while the widely held and essential elements of the shared experiences were preserved, allowing the researcher to grasp the essence of the experience (Husserl, 1962) (see Appendix T for an example). Thirdly, input was sought from participants through member
checks and colleagues through peer-debriefing exchanges, which ensured that participant experiences aligned with researcher’s depiction and enhanced the accuracy of the interpretation (Bloomberg & Volpe, 2012) (see Appendix U, V, W, X for correspondence and feedback from reviewers). In the final stages, external and previously held frames of reference were incorporated to determine how the conceptual framework and relevant concepts enlightened the analysis (Wertz, 2005, p. 172).

**Findings**

The following three themes were identified and are displayed in Table 2 (see Table 2).

*Theme 1: Childhood and family history provide motivation*

Participants were asked to describe past experiences and events that have shaped them into the type of parent that stresses the importance of positive eating, physical activity, and screen-related behaviors. Mothers ($n = 11$) emphasized their own upbringing as strong motivation to either parent similarly or to parent differently in response to their own childhood experiences. Most mothers noted that parental influences during development were highly influential in not only forming their own personal habits but also in inspiring them to focus on instilling positive habits in their own children. Jo, mother of three, reflected on the impact of her own childhood, “my parents made it easier for me to make the right choices and so why not do it [for my children] now so then they can make the right choices easier too in the future.” Mothers noted that they experienced a time of rebellion against their structured upbringing related to eating, but maturity eventually graced them with respect and appreciation of their parents’ efforts and inspired them to keep some traditions, establish new ones, and rid of others in their own families. Many noted that although they
were raised with particularly strong models of positive eating habits, their parents did not always participate in regular physical activity.

Many mothers \((n = 8)\) remarked of diabetic, heart diseased and obese family members making an impression on them whether it was the way the ill member(s) impacted their parents formation of “house rules” or more directly on the participants themselves. References to struggle with weight, disease, or illness of close family members were commonly noted as motivation for their own parents’ convictions, as described by Jo

She [my mom] wanted to watch my dad’s health because my grandma is diabetic and my dad is diabetic. My mom’s always saying, ‘you can’t have this in the house’. Even from a young age we were really aware, I guess. My parents would make us aware, ‘eating this will cause this and eating this will cause that’. My grandpa had a heart attack when I was pretty young, so I think kind of woke up both of my parents a little bit more. That’s when they were really big on healthy eating . . . well bigger I guess. My mom’s really conscious about it, ‘we’re going to have it this way tonight because this is better, you know it’s in the heart cookbook’.

The less dominant theme of a history with poor body image \((n = 4)\) emerged as a motivating factor for mothers’ emphasis on healthy habits. One mother, Leigh, recalls being labeled as “fat and bad at sports” as the beginning of a lifelong struggle with negative body image that she believes to have led her to give up on healthy habits and succumb to weight gain. She later adopted positive habits but continues to struggle to manage both her negative self-talk and her weight and is careful to orchestrate related conversations with her daughters, “they may not be [athletic], but I want them to know that they can use their bodies to do what they want to do and that other people can’t tell them what is good or bad or otherwise.”
Another mother of two children, Mary, reported a sense of control over her issues with poor body image through eating healthy and participating in regular exercise. Many mothers noted periods of weight gain, poor body image and, ultimately, maturity as impetus for returning to or adopting positive behaviors.

**Theme 2: Mothers personally value positive health behaviors**

Mothers personally valued the short and long term benefits they believed to be associated with living a healthy lifestyle ($n = 12$). Mothers referenced a strong desire to live differently than family members and others diagnosed with lifestyle-related diseases with multiple references to avoiding obesity, diabetes, cardiovascular disease, mobility restrictions, etc. as motivation for engaging in healthy behaviors. Dawn, mother of two boys, discussed how health concerns of family members provides motivation for supporting healthy habits in her children, “My mom has diabetes. Chris’ [her husband] parent’s both have diabetes . . . like type II cause they’re obese. So I do think that that plays a huge part in how we want to make sure that genetically they’re [their sons] not more prone.”

Mothers described themselves as personally valuing a healthy diet and, more commonly, regular physical fitness. Mothers’ sentiments were characterized by a passionate interest in health behaviors and actively sought related information, ranging from taking a recent college course to reading academic health articles to scouring blogs. Approximately half of the mothers ($n = 5$) either currently or previously were employed in a health-related field and some of their spouses ($n = 3$) are also employed in the health field.

Mothers realized the physical, mental, and emotional benefits of engaging healthy behaviors. Mothers described the way adopting regular exercise into their routine makes
them feel, “it’s almost like a drug the endorphins you get make you feel good and you almost just need that every day.” Steph talked how she became devoted to living a healthy lifestyle, I think that when are you are healthy and you are fit you feel good and that, in and of itself, becomes kind of addictive. When you know what it’s like to feel really good, why would you ever want to go back to feeling awful?

Steph later described the process of becoming healthy as a transition from lethargic to “euphoric” and announced it as an “aha moment” when she made the connection between her health-related habits and the way she felt physically, mentally and emotionally. Other mothers ($n = 11$) described exercise as stress relieving and empowering while many praised physical activity as a source of pride, self-esteem, and self-confidence. Mothers regularly discussed negative consequences of “pigging out on junk” with their children as well as used tactics to capitalize impact by focusing on areas in which her children were motivated. Marie, mother of two children, described such a conversation in which she was encouraging her son to eat a balanced meal, “Protein makes you strong. It gives you big muscles. We’ve obviously told him that before and . . . we’ll play on that.”

**Theme 3: Focus on health intensified upon becoming a parent**

Mothers ($n = 12$) explained that parents are charged with teaching their children what they know to be good and right, therefore, by knowing how important it is to have healthy behaviors, they were responsible for fostering them in their children. Likened to other parental roles such as teaching their children right from wrong, mothers sensed the fleeting nature in which they were the primary influence in this realm of their children’s lives. One especially resilient single mother of two boys, Railene, spoke of the need to build a solid foundation when the boys are young so they would be strong enough to make good decisions
in the face of the temptations and outside influences that would increase with age. Another mother, Dawn, made an insightful comment about the need for guidance on forming healthy lifestyles,

I don’t think it’s [incorporating regular physical activity into their lives] something that’s just innate in us. I think that it’s something that they have to learn. As toddlers they’re moving all the time and it’s not like they have to learn how to exercise, but as they get older they’re more sedentary . . . reading or being in front of a screen or hanging out with friends. I think that they need to learn how to incorporate that [physical activity] into their lifestyle.

Similarly, another mother of three young boys, Ann, agreed that children need to be taught about health habits as they were not naturally going to make good choices, “otherwise [without parents taking this on as a responsibility] how are they going to know?”

All mothers ($n = 12$) identified the positive socialization of their children’s health behaviors as a top priority, while Kristie described this as an area in which she “cannot fail.” Mothers described the responsibility as urgent, commenting that, “when they’re young they learn to eat for when they’re older. It [positively socializing children’s behaviors] should be a big priority, a lot bigger than what it is.” One mother described how they living their priorities meant absolute intentionality, such that all actions and words supported her and her husband’s child-rearing goals. This same mother, Steph, credits her success to eliminating that which distracted her from her goals. Her family’s busy life forced her to focus on only the highest of priorities, noting that, “I’m deliberate in everything, and it’s so scheduled because we only have this little tiny window of time.” Marie, a mother of two young children remarked on how she is continually striving to find ways to be deliberate in reaching
her parenting goals in anticipation of fending off outside influences. When considering the upcoming baseball season which finds the family at the baseball fields multiple nights each week, one mother projects, “I’m going to have to start planning when they’re in those activities. You have to be more clever with dinner . . . use a crock pot more, maybe.”

Mothers emphasized that they wanted healthy habits to be more than just another rule to follow. While some mothers believed their children were too young, many mothers ($n = 9$) believed their children had internalized the importance of positive health habits. Aspen, mother of three, described her goals, “[Understanding why is] very important because sooner or later they’re leaving my house. I want it to be important to them, too, so that they continue on and . . . they don’t just do it now because I say they have to.” Mother were careful to respect the specific stage of their children’s development ($n = 12$) as they were aware of the age-related differences in which they were able to affect internalization. When children are younger, providing reasons for certain “house rules” are often unnecessary, as acting simply out of habit, being happy to please mom, or “because it’s good for you” may be sufficient to achieve compliance. In regards to physical activity, Marie, a mother of younger children, remarked that often the “fun factor” is enough to entice younger children to be active but may not be enough inspiration for a lifetime,

Even if it’s just us playing tag in the basement . . . that was fun. We all laughed and Wilbur [the dog] chased us and [the kids] associate it with fun.” [As they grow older] I hope they find an interest. It doesn’t have to be an actual varsity sport or anything but something that keeps them active because I think [older] kids . . . they’re less likely to go just work out for fun.
Repetitively reinforcing the reasons for healthy choices throughout development reinforced mother’s values and supported internalization by aiding children as they made associations between house rules and desired behaviors. Aspen described the value of a lesson on nutrition she shared with her daughter while making dinner, “I think it helped connect the dots on why, ‘we’re not just being mean or grumpy or not letting you have macaroni and cheese because I want to make your life miserable’.”

Marie described a typical interaction in regards to curbing screen-time, demonstrating how she manages pushback while nudging her young son toward internalization by redirecting his attention to matters important to him.

‘Mom you’re so mean. Why don’t you ever let me watch TV as long as I want to watch TV? When I get bigger I’m going to watch TV all day long’. That’s what he always says and I tell him, ‘it’s not good for your brain to sit and watch TV. Your muscles want to be running and active.’ [This tactic works] because he’s so into that [being big] right now.

As outside influences become more pervasive, mothers are careful to use age appropriate language and present reasons in ways that cater to children’s interests. Julie, mother of three, reflects on previous conversations, “my kids are athletes so we talk about ‘what do you need to eat to have enough energy to go do what you have to do’.” In commenting on the growing influence of non-parental sources as children age, Ann discussed school food, “I think they [parents] have all the power, most of the power, I think we lose a little bit in the school system. I think it would help if schools . . . if they really only offered healthy fresh prepared meals …I think it would be a lot easier to form those habits rather than to try to break them here [at school].”
As a less dominant theme, some mothers not only deliberated how they would manage future roadblocks but also took advantage of applicable circumstances as they presented themselves, making life lessons an opportunity for further discussion and reinforcement ($n = 5$). Jo described using her gestational diabetes to teach her children about good and bad sugars. Likewise, a young son’s stomachache presented an ideal opportunity for Railene to teach about the importance of healthy eating habits,

This is why we have to drink water and this is why I tell you that you have to have a variety of foods. [This] is why this stuff [a stomachache] happens because there’s not enough of all these good vitamins and all these nutrients and all this good stuff to help your body work right.

*Theme 4: Acceptance of the extra effort*

While some exhibited positive habits prior to parenthood and did not have to undergo major lifestyle changes to “live” their priorities for the benefit of their children, all mothers noted that great energy, a strong commitment, sacrifice, and even feeling stigmatized as part of the process of embedding and supporting internalization of desired behaviors. Mothers ($n = 12$) spoke of time and effort investing in modeling appropriate behaviors, transporting children to activities to participate in physical activity, planning for healthy family meals around activities, and the constant juggling of the busy schedules of multiple children.

Younger children presented more work for mothers in terms of introducing and encouraging healthy eating practices but required less effort to engage them in physical activity as they were considered by many mothers to be naturally active. Ann, mother of three young boys, explained, “It’s a battle to eat healthy sometimes, but it’s not a battle to go out and play or do swimming lessons and things that are going to keep them active. They like
it.” Managing barriers and logistics became more of a challenge as children grew older and were more involved in structured physical activity and sports. Julie described how she guided her children as they packed lunches and snacks in preparation for an all-day swim meet where food choices would be limited to the concession stand,

[I would say] think about what you’re going to need to eat to keep your body going while you’re swimming… It’s really hard at those events because it’s boring for them when they’re not swimming. They just want to sit and eat because what else do you do? You know you’re sitting for eight hours . . . so at least I know if we limit what they take, and it’s all good choices, then if they eat it all in the first two hours of the day . . . well, it isn’t like they ate six bags of chips.

Mothers (n= 12) commonly remarked that early diligence and consistency were invaluable in laying the groundwork for developing healthy habits. Marie, mother of three, remarked that remaining committed is difficult, “I think self-discipline is huge. All this stuff [healthy behaviors], in reality, sounds good and I’m passionate and believe it. But nothing helps unless you have self-discipline to integrate it. There are still some days where I don’t want to.”

Effort to set clear expectations and observance of house rules eventually resulted in diminished pushback from children, though mothers (n = 12) admitted to instances when limited time and energy challenged their convictions. Dawn, shrugged her shoulders and reminisced about earlier battles with her children, “It’s harder to say no than it is to say yes.”

Time is one of the things that make it hard. Everybody’s busy all the time, and there are days when it would be so much easier to go to the drive thru at McDonalds and that be their dinner than to go home after a long day and cook. I’m constantly having
to make the choice, ‘is this really what I want to do’? Some days tired wins out and you get something [away from home] for supper and that’s just how it is. I think time is the biggest [barrier] because being healthy is a huge time commitment. It’s conscious decisions every day. That’s what it comes down to. You just are making a conscious decision every day to be healthy.

Ann described how the strictness of screen-time monitoring could be adjusted based on competing duties, “They’ll watch their TV shows that they like probably a little more than I should be letting them. Sometimes it’s hard to keep them entertained when you’re tired or you have laundry to do or something like that.” Mothers also described an internal struggle in regards to monitoring screen-time. Screens presented a contradiction for many mothers, as the appropriate balance between allowing access to educational tools and limiting addictive and sedentary-promoting agents was continually evolving.

Mothers were frustrated that healthy foods were not often convenient. Multiple references were made to the many times it would have been easier to just “drive thru” than to plan and prepare a healthy meal. Mothers stressed that parenting for healthy behaviors was complicated by our current environment- one in which temptation is inevitable. Frustratingly, Julie described a typical night at the ball fields, “Junk is everywhere. Like the concession stand, ‘we’re going to have fried cheese curds and donuts and French fries’. Who needs to sit at the little league field and eat that?” Though mothers concurred that they often had to forgo ease and expediency in meals, or miss their favorite show on television to make time for their own or their children’s physical activity, these mothers accepted sacrifices to be a part of parenting. Marie provided a glimpse into her enlightened attitude about such
sacrifices when she commented, “Those [making sacrifices] are all true factors and for anything we do.”

Beyond the sacrifices associated with positively socializing their children’s eating, physical activity, and screen-related behaviors, mothers described feeling a sense of stigma ($n = 8$). Not all mothers were bothered by criticism from others, however all mothers admitted that it was evident that their family “did things differently” than most. Mothers described situations in which they have felt stigmatized as a result of their commitment. Steph described the harsh criticism she feels from others, “Yeah, well I think it’s easy to blame . . . to point fingers at somebody that has something that you want but you haven’t figured out how to get.” Another mother, Mary, described reactions from others, “I think people think its pretentious. That’s what I get from them. It’s like I’m not trying to be pretentious, just healthy.” Many mothers felt a sense of scrutiny when limiting children’s intake of unhealthy items. Mothers disagreed with the premise of children’s unrestricted ingestion of junk food and felt they were battling a cultural norm, as it is not socially acceptable to restrict children’s consumption. While mothers felt that the current environment was not supportive of their efforts, the resolve of this select sample of mothers was captured when Steph proclaimed, “If I’m going to let this be an obstacle that’s my fault. They’re [obstacles] are only as big as you make them.”

**Discussion**

This phenomenological study provided insight into the dynamics associated with positively socializing children’s eating, physical activity, and screen-related behaviors, resulting in a better understanding of the knowledge and belief systems of a unique population of mothers. This select group of mothers qualified for the study by scoring highly
on the FNPA screening tool (Johnson et al., 2012), shown to identify family behaviors and
environments that may predispose children of elementary age to overweight. While the
study design allowed mothers, fathers, and other primary caregivers to participate, 88.8% of
those surveyed were mothers, 8.6% were fathers, and 2.7% were other caregivers.
Importantly, all participants meeting criteria to be interviewed were mothers, thereby limiting
transferability of findings solely to mothers. Demographic factors may have also played a
part in the inability to recruit fathers as participants in this study were reached through their
children’s schools and literature suggests that mothers more commonly communicate with
their children’s school (Winquist Nord, 1998), and females are more likely to participate in
survey research (Sax, Gilmartin, & Bryant, 2003). Based on responses to survey questions,
interviewed mothers might be considered educationally and socioeconomically privileged,
and it is unclear how favorable resources and environments may have contributed to the
likelihood to practice purposeful parenting. Perhaps mothers that were able to ensure that the
basic needs of their children were met were more able to dedicate their time and energy to
obesity-preventive practices. Future work may consider how to specifically capture the voice
of purposeful fathers and to more clearly understand how privileged status may influence
parental socialization of obesity-preventive behaviors.

Aligning with the FEM (Davison & Campbell, 2005), mothers’ knowledge and
beliefs about obesity-related behaviors were important determinants in shaping the ecology
of parenting in this domain. Mothers believed that positively socializing their children’s
eating, physical activity, and screen-related behaviors required extensive time, energy,
sacrifice, and commitment. However, by naming this area of socialization as a top
priority and aligning their attention to their children’s eating, physical activity and screen-
related behaviors, mothers justified the effort required to dedicate themselves to this responsibility. The insights provided by studying this population may inspire future research to consider how parental value systems may influence parenting strategies and practices across other domains.

Mothers reflected on their own upbringings as motivation for their commitment, reinforcing the powerful nature of early parent-child relations on behavior formation. Though behaviors established in their own childhoods were influential, mothers acknowledged the environment in which they are currently parenting as vastly different from their own, requiring regular attention and reevaluation of their focus and strategies. While firmly committed to establishing patterns in support of related goals for their children, as suggested by the FEM mothers were also attentive to the dynamic needs and competencies of individual family members as well as the evolving influence of risk factors from outside the family unit (i.e. school, media, social norms; Campbell et al., 2010). Mothers agreed that positively influencing their children’s eating, physical activity, and screen-related behaviors was hindered by cultural and environmental factors, however the mothers in this purposefully selected sample were adamant that what was expected and enforced within their home was tantamount to outside influence. Additionally, mothers anticipated outside threats to increasingly become more widespread and complicated as children developed and acted deliberately preparation for them. This belief provided mothers timely motivation to build a solid foundation of expectations related to eating, physical activity, and screen-related behaviors in the early years when children are most impressionable to parental influence (Laible & Thompson, 2008). These findings highlight the need for contextual insight of elements outside the family environment that influence parental socialization in this domain,
and specifically to understanding the competing nature of home and external factors on related child behaviors.

For these mothers, the creation of a specific family culture was vital to the process of guiding children’s habits. Shaping family culture meant personally embodying valued behaviors. These findings support previous research on parental nutrition knowledge (Savage et al., 2007; Worsley, 2002) and modeling (Beydoun & Young, 2009) as determinants of child eating practices. Although other work suggests that the impact of home environment on youth physical activity is not as substantial as with eating behaviors (de Vet et al., 2011), mothers in this study strongly attributed their success in positively socializing their children’s physical activity habits to parental modeling. Mothers spoke not only of providing a good example of desired behaviors but also of consistently nudging their children towards internalization of the short and long-term physical, mental, and emotional benefits of physical activity. Mothers’ strategies included blatant conversations as well as creating an “active” mentality such that family entertainment was regularly structured around physical activity rather than the more sedentary pursuits that characterize much of family entertainment.

The concept of internalization, an emergent finding in this study, is a process through which one discovers value for an activity that was previously performed for other reasons (Roth, Assor, Niemiec, Ryan, & Deci, 2009). Mothers in this purposive sample described a desire to help their children internalize the value of positive behaviors- primarily those related to physical activity. Motivation for a specific behavior may arise from regulation of the behavior, acting through external controls (parent pressure or use of rewards and punishment) which results in weak internalization or to a deeper form of internalization in
which the child acts with a sense of volition such that the activity is autonomously controlled (Roth et al., 2009). Previous research on parental support of autonomy suggests that parents support internalization best when embracing the perspectives of their children and acknowledging their feelings such that they use reasoning and allow choices over valuing obedience (Joussemet, Landry, & Koestner, 2008). The influence of autonomy development on physical activity has been described (Deci & Ryan, 2002), however further investigation on parental support of child autonomy across other behaviors associated with obesity may be warranted. Parental support of autonomy was not specifically outlined in the FEM but can be considered a dimension of parental knowledge and beliefs—at least in this sample of high-scoring mothers. Future study might also consider how dynamics associated with child development and changing threats from the environment may impact how parents are able to support positive obesity-related behaviors becoming autonomously controlled by children. It is unclear if this finding is transferable to other populations, therefore future study might specifically address the degree to which other samples of parents support children becoming autonomous in their obesity-preventive behaviors.

Limitations and Implications for Research and Practice

This qualitative analysis utilized purposive sampling to increase understanding and provide a detailed description of the parental cognitions, behaviors, strategies, and responses to family and environmental dynamics used by a specific type of parent to socialize children’s obesity-related behaviors. Little research has been dedicated to understanding the context in which intentional parents socialize children’s obesity-related behaviors while living within a non-supportive environment. It is important to note that the intention of this study was not to determine causation as the nature of the study does not allow for such
claims. Enlisting this unique population prohibits findings from being simply aligned or deviated from previously held reports of more generalizable samples. As described, findings are also limited by the privileged characteristics of this select group of parents in this sample and do not allow for the impact of many commonly studied sociodemographic variable (race, ethnicity, education level, etc.) to be fully understood. Future work might also focus on families of non-traditional structure and consider how biological parenthood may impact the children’s socialization of obesity-related behaviors.

However, hearing the voices of parents that are committed to fostering and maintaining practices that are known to be obesity-preventive presents a great opportunity to develop a new narrative, teeming with rich and timely information that may provide insight into parenting within this complex socialization domain. As best practices are commonly integrated into applied settings, future obesity-related efforts can be informed by a better understanding of the considerable influences that parents may have on promoting healthy eating, physical activity, and screen-related behaviors when devoted to positively socializing related behaviors. Insight from these mothers could be incorporated into education directed at public health initiatives, pediatricians, primary care physicians, and nurses about the importance of stressing intentionality to parents of young children to inspire the important work of setting expectations and developing positive habits related to eating, physical activity, and screen-related behaviors. Trusted professionals could be trained to encourage parents to carefully select eating-related strategies, and similarly, to build activity into the family culture. Specifically, parents need direction on how best to navigate media and cultural influences to be able to support the development of their children’s positive body images across various developmental stages. As part of regular well-child visits and larger
public health campaigns, parents can be coached to make socialization of children’s eating, physical activity, and screen-related behaviors a top priority, provided customized support to guide them through their children’s developmental stages, and directed to resources to support their efforts at the national and local levels. Future inquiry might focus on how best to promote positive habits while supporting healthy body images as children near adolescence when environmental influences become more powerful.

Finally, mothers in this study felt a sense of competition with cultural norms and stigmatized for their convictions, suggesting that a greater challenge may lie in changing public opinion such that evidence-driven determinants of child health are valued and supported by more than a small subset of committed parents. As suggested by Savage and colleagues, the perception of a “large, rapidly growing child who is crossing percentiles on the growth chart” need shift from a welcomed and natural badge of healthy development to a health concern (Savage et al., 2007, p. 30). Ultimately, widespread education directed at the public, parents, and health professionals is needed to change the tone surrounding this important parenting domain.
<table>
<thead>
<tr>
<th>Participant</th>
<th>Basic Description</th>
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<tbody>
<tr>
<td>Julie</td>
<td>married mother of three (ages 13, 11, &amp; 8)</td>
</tr>
<tr>
<td>Steph</td>
<td>married mother of three, two living at home (ages 15 &amp; 7)</td>
</tr>
<tr>
<td>Mary</td>
<td>married mother of two (ages 5 &amp; 2)</td>
</tr>
<tr>
<td>Leigh</td>
<td>married mother of two (ages 6 &amp; 4)</td>
</tr>
<tr>
<td>Kate</td>
<td>married mother of three (ages 14, 9, &amp; 7)</td>
</tr>
<tr>
<td>Ann</td>
<td>married mother of three (ages 4, 4, &amp; 4)</td>
</tr>
<tr>
<td>Dawn</td>
<td>married mother of two (ages 10 &amp; 7)</td>
</tr>
<tr>
<td>Railene</td>
<td>divorced mother of two (ages 7 &amp; 6)</td>
</tr>
<tr>
<td>Jo</td>
<td>married mother of three (ages 6, 3, &amp; 1 month)</td>
</tr>
<tr>
<td>Aspen</td>
<td>married mother of three (ages 6, 4, &amp; 2)</td>
</tr>
<tr>
<td>Kristie</td>
<td>married mother of two (ages 10 &amp; 7)</td>
</tr>
<tr>
<td>Marie</td>
<td>married mother of three (ages 10, 8, &amp; 6)</td>
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<tr>
<td>Theme</td>
<td>Description</td>
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<tr>
<td><strong>Childhood and family history are motivation</strong></td>
<td>Mothers were inspired by their own upbringing as reference was often made to the way their own parents shaped related behaviors. Many recalled their parents referring to weight, disease, or illness of close family members as motivation for their convictions. Mothers also commented on their own lifelong struggle with poor body image as motivation for developing positive obesity-related habits.</td>
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<tr>
<td><strong>Mothers personally value positive health behaviors</strong></td>
<td>Mothers desired to create healthier lifestyles than family members with health issues, and passionately sought information. Mothers valued the short- and long-term benefits associated with positive behaviors.</td>
</tr>
<tr>
<td><strong>Focus intensified upon becoming parents</strong></td>
<td>Upon motherhood, participants described a sense of responsibility to lead their children to develop healthy eating, physical activity, and screen-related habits. Mothers named this domain as a priority, lived and parented intentionally, and worked to help their children internalize the benefits of positive behaviors and become autonomous. Mothers noted that they altered their strategies based on the ages and developmental stages of their children.</td>
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<tr>
<td><strong>Acceptance of the extra effort</strong></td>
<td>Mothers reported making sacrifices to remain committed to their child-rearing goals and often felt they battled social norms. However, by naming this area of parenting as a top priority, mothers were able to invest the energy and commitment necessary to withstand threats from outside influences.</td>
</tr>
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CHAPTER 4.

NAVIGATING AN OBESIGENIC ENVIRONMENT: A PHENOMENOLOGICAL STUDY OF MOTHERS’ HEALTH SOCIALIZATION OF CHILDREN

A paper submitted to the *Journal of Family Issues*

Jacy C. Downey and Clinton G. Gudmunson

Abstract

The environment in which parents socialize children’s eating, physical activity, and screen-related behaviors has changed and has been widely faulted in the obesity epidemic. This phenomenological study examined the intentions, reflections, and strategies of a purposefully selected group of mothers, self-reported as successful in socializing their children’s obesity-related behaviors, as determined by scoring highly on the Family Nutrition and Physical Activity screening tool. Findings reveal that mothers utilized the power of modeling positive obesity-related behaviors and creating a culture that promoted activity over sedentariness. By focusing on establishing positive behaviors at home, and framing choices and opportunities in support of child autonomy, mothers believed they were preparing children to resist threats from the obesigenic environment. The voices of these mothers present a strengths perspective and provide a narrative which complements research in representative and at-risk populations. Findings may inform obesity prevention and intervention programs as well as parenting education curricula.

*Keywords:* Autonomy support, Eating behaviors, Parenting, Physical activity behaviors, Screen-related behaviors, Socialization
This phenomenological study elucidates the approaches used by a specific group of health-conscious parents as they socialize their children’s health-related behaviors. Purposive sampling was used to select parents that were self-reported as successful in promoting children’s positive eating, physical activity, and screen-related behaviors. Thus, this study provides a “strengths” perspective on parenting health socialization. Specifically, the purpose of this study is to provide detailed contextual description of the reflections, intentions, and strategies used by a select group of intentional mothers as they model, provide access, and shape their children’s eating, physical activity, and screen-related behaviors amidst the threats that prevail in an obesigenic environment. The obesigenicity of an environment has been defined as “the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations” (Swinburn, Egger, & Raza, 1999, p. 564). Shaping, refers to strategies to influence children’s behaviors, and includes encouragement, restriction, use of a reward and punishment system, pressuring, or providing incentives and/or reinforcement in return for desired conduct (Campbell, Hesketh, & Krahnstoever Davison, 2010).

**Literature Review**

Being overweight in childhood increases the likelihood of becoming an overweight adult (Singh, Mulder, Twisk, Van Mechelen, & Chinapaw, 2008), making early formation of eating, physical activity, and screen-related behaviors an area of focus to curb obesity trends. Parents, as socializing agents, face many barriers that impact their ability to successfully guide children’s eating, physical activity, and screen-related behaviors (Davison, Cutting, & Birch, 2003; Savage, Fisher, & Birch, 2007). The modern environment, in which opportunities to obtain food and drink are plentiful and widely accessible (Linde & Jeffery,
and offerings are palatable and convenient, has resulted in higher caloric consumption in meals, specifically those more commonly being consumed outside the home (Zoumas-Morse, Rock, Sobo, & Neuhouser, 2001). Children’s diets, characterized by highly tempting, low-nutrient, calorie dense foodstuffs on ‘kid menus’ do not align with the diverse and balanced meals needed to promote healthy growth and development.

The majority of Americans, youth and adults, do not reach current physical activity recommendations (Physical Activity Guidelines Advisory Committee, 2008), attributed, in part, to the multitude of opportunities to be entertained without expending energy. Television viewing is associated with increased sedentary behavior and has been linked to overweight in adolescents through reductions in physical activity and poor nutritional intake, mediated by exposure to advertisements (Ludwig & Gortmaker, 2004) for soft drinks, cereal, candy, and fast food (Bowman, Gortmaker, Ebberling, Pereira, & Ludwig, 2004).

**Parenting and early socialization of obesity risk behaviors in children**

Accumulated time spent in the intimate parent-child relationship allows parents to develop expectations and routines important for healthy child development (Dweck & London, 2004). As in other domains, parenting practices tailored to address the dynamic contexts associated with eating, physical activity, and screen-related behaviors are more likely to be effective (Grusec, 2011).

Through recognized routines that provide the necessary predictability and organization important for healthy child development (Howe, 2002), parents socialize young children, consciously and unconsciously, to understand family beliefs, values, and expectations and develop suitable conduct (Laible & Thompson, 2008). Additionally, parents serve as educators, role models, gatekeepers, facilitators, and advocates for children and are
influential in shaping children’s eating, physical activity, and screen-related behaviors (Davison et al., 2003; Savage et al., 2007). By addressing the dynamics of related parenting practices and the methods in which healthy behavior is fostered, the utility of learning, modeling, and socializing health practices and the regular opportunities that parents provide for these interactions can be better understood (Golan & Crow, 2004).

*The dynamics associated with eating behaviors*

Parents shape children’s eating habits through modeling desired conduct, and setting and enforcing food-related expectations (i.e. restriction, rewarding, accessibility, pressure, coercion, reintroduction of foods to establish familiarity, controlling portion size, etc.; Savage et al., 2007). Beyond modeling nutritious diets (de Vet, de Ridder, & de Wit, 2011), parents can encourage young children to taste new foods by modeling “acceptance” (Skinner et al., 1998).

Availability and accessibility were the most important factors related to children’s intake of fruits and vegetables in a review of determinants (Blanchette & Brug, 2005). Additionally, children reported increase intake of fruits and vegetables when they were consistently located on the counter or in the refrigerator and were “ready to eat” (Hearn et al., 1998). On the contrary, making foods and drinks considered “less healthy” available at home increased adolescent consumption of problem foods (Campbell, Crawford, & Hesketh, 2007) and was associated with reduced fruit and vegetable intake (Hanson, Neumark-Sztainer, Eisenberg, Story, & Wall, 2005).

Some strategies used to shape children’s eating patterns, such as restriction, pressure, and the use of a system of rewards and punishments, have been associated with unintended consequences in children’s food-related behaviors in some studies and need to be better
understood (Wardle, Carnell, & Cooke, 2005). Parents also attempt to control their children’s diets by pressuring their children to eat more food and/or more healthful items. Pressure to finish meals was associated with increased fat intake (Zive, et al., 1998) and increased consumption of problematic foods (Kroller & Warschburger, 2008) in children. Using food as a reward or punishment has been associated with poorer eating habits in children (Kroller & Warschburger, 2008; Spurrier, Magarey, Golley, Curnow, & Sawyer, 2008; Newman & Taylor, 1992; Wardle, Herrera, Cooke, & Gibson, 2003; Vereecken, Keukelier, & Maes, 2004); an affect persisting into adulthood (Puhl & Schwartz, 2003). It has been suggested that parents may be most effective when they regulate the types of foods that children are exposed to while children decide how much they consume, a division of responsibility between parent and child (Satter, 2004).

The dynamics associated with physical activity behaviors

Like eating practices, parents also play an important role in socializing children’s physical activity behaviors (Gustafson & Rhodes, 2006). Parent role modeling is the most commonly studied parental support construct related to child physical activity, finding that children with active parents are more likely to be active (Hinkley, Crawford, Salmon, Okely, Hesketh, 2008). Beyond observational learning that arises from modeling, more active parents support children’s involvement in physical activity more often than less active parents (Gustafson & Rhodes, 2006) through indirect modeling of the value of physical activity, demonstrated by playing together, family aggregation of exercise, a parent coaching a child’s athletic team, or attending a sporting event (Trost et al, 2003).

Accessibility is an important parent-related correlate of physical activity in children. Parents promote healthy activity practices in children by encouraging children to spend time
outdoors (Sallis, Prochaska, & Taylor, 2000), making equipment available at home that fosters physical activity (Dunton, Jamner, & Cooper, 2003), and funding and providing access to opportunities that promote physical activity (Davison et al., 2003; Savage et al., 2007). Eccles’ value expectancy model suggests that accessibility impacts socialization when parents provide opportunities and maintain an expectation of activity such that children perceive themselves as physically competent and therefore are more likely to be physically engaged (Eccles & Harold, 1991; Eccles, Jacobs, & Harold, 1990). Similarly, planning family outings that involve physical activity increases access and opportunities to be active (Davison et al., 2003).

Parents shape children’s physical activity behavior through motivational support that serves to initiate, inspire, prolong, intensify, praise, or reinforce physical activity in children (Beets, Cardinal, & Alderman, 2010). A systematic review of reviews suggested that unlike parental influence on dietary practices, youth physical activity levels are not highly influenced by parent-related intrapersonal factors such modeling, parental support, or home opportunities for physical activity. The authors concluded that this finding is likely explained by the nature in which physical activity occurs (outside of the home), such that the influence of the home environment is reduced (de Vet et al., 2011).

*The dynamics associated with screen-related behaviors*

Children and adults have reported sufficient physical activity while also being highly sedentary, a paradox not difficult to conceive, as media time comprises much of the ways families spend their time at home (Woodard & Gridina, 2000). Access to media has grown (Woodard & Gridina, 2000), providing multiple opportunities to choose sedentariness over physical activity (Salmon, Timperio, Carver, & Crawford, 2005; Pate, Mitchell, Byun, &
Dowda, 2011). Parental modeling of inactivity may also influence children’s level of physical activity. Negative modeling, marked by high levels of sedentary behavior, and specifically television viewing (Davison, Francis, & Birch, 2005; Jago, Fox, & Page, Brockman, & Thompson, 2010), are highly correlated (Fogelholm, Nuutinen, Pasanen, Myohanen, & Saatela, 1999). Monitoring by parents has been shown to be effective in shaping media consumption, as children whose media use was regulated report lower levels of use (Pate et al., 2011; Van den Bulck & Van den Bergh, 2000). Similarly, parents of high-screen users, children accumulating greater than two hours per day, reported fewer screen-related rules, a less negative attitude about screen use (He, Piche, Beynon, & Harris, 2010), and reduced enforcement of television viewing rules (Roberts, Foehr, & Rideout, 2005).

**Conceptual Framework: The Family Ecological Model**

The Family Ecological Model (FEM) developed by Davison and Campbell (2005) was utilized to inform study conceptualization, the development of interview questions, and contributed to final stages of analysis. However, in observance of the inductive approach, the researcher maintained the phenomenological attitude such that previous and external knowledge did not constrain the development of new information. The FEM describes the immediate and broad influences involved in the ecology of parenting understood as domain-specific applications of immediate parent-regulated socialization processes associated with the promotion of obesity-preventive behaviors in children. As this models projects, knowledge and beliefs, modeling, shaping, and accessibility, the four immediate aspects of parenting that relate to eating, physical activity, and screen-related behaviors, are influenced by more broad contextual characteristics of the child, family, community, organizations, policies, and media as described previously (Campbell, Hesketh, & Krahnstoever Davison,
Mothers were asked to describe strategies used to shape children’s obesity-related behaviors such as modeling of desired behaviors, monitoring children’s access to food, screens, and opportunities to be active, and the dynamics associated with establishing eating- and activity-related ‘house rules’. Mothers were also asked to explain influences specifically related to the family as well as external factors emanating from school, neighborhood, and media, for example, that support or constrain parenting practices within this domain.

Figure 1: The adapted Family Ecological Model (FEM) (adapted from Davison & Campbell, 2005). The circles represent immediate factors while the outer ring represents dimensions of the broad environment.
Method

One-on-one interviews, often used in phenomenological studies, were used to elicit detailed description of participants’ perspective in regards to the socialization of children’s obesity-related behaviors. Informed consent (see Appendix B) was obtained and an interview protocol (see Appendix C) guided interaction between researcher and participants. (See Appendix D for the cross-referencing matrix). The researcher utilized grand tour questions and probes (Glesne, 2006) to expose rich details of the practices used to positively influence children’s eating, physical activity, and screen-related behaviors. The interviews, held in a private conference room, were audio-recorded, transcribed (see Appendix E for the transcriptionist confidentiality agreement), and analyzed. In the circumstance in which data was unclear, transcripts were checked against recordings. The researcher kept an audit trail throughout the process of conceptualization, sampling, data collection, analysis, findings, and dissemination. (see Appendix F for the interview summary sheet & Appendix G for excerpts of the audit trail).

Sampling

To understand the phenomenon of positive parenting of children’s obesity-preventive behaviors, a purposive sample of particularly knowledgeable individuals was comprised (Bloomberg & Volpe, 2012) by administering the behaviorally anchored rating scale version of the Family Nutrition and Physical Activity (FNPA) screening tool to parents of elementary students attending four schools (student enrollments were 419, 377, 429, and 458) in a small Midwestern city (population 15,000). The key informant tool was used to identify parents exhibiting intentional socialization strategies related to obesity-preventive behaviors. A correspondence letter was distributed to parents using both paper and electronic means and
contained the behaviorally anchored rating (BAR) scale version of the Family Nutrition and Physical Activity (FNPA) screening tool (Johnson, Welk, Saint-Maurice, & Ihmels, 2012), demographic questions (i.e. marital status, educational level, employment, race, number and ages of children, household income) and a request for contact information (see Appendix H). The FNPA, which loads on a single factor and has been shown to have good internal reliability ($\alpha = 0.72$; Johnson et al., 2012), assesses ten risk factors associated with overweight/obesity in children. Parents were asked to select responses that most closely resembled patterns in their family to ten questions scored on a 3-point scale. Total scores could range from 10-30, with high scores indicating healthier family environment and behaviors. Parents with at least one child in elementary school that scored highest were eligible to participate in 2-hour in-depth interviews, as the FNPA (Johnson et al., 2012) has been shown to identify family behaviors and environments that may predispose children of elementary age to overweight. Additional children in the family may have been any age or gender as long as one child in elementary school resided in the home. Of the 346 parents that completed the survey all top-scorers were mothers (total score = 29/30), however participants could have been mothers, fathers, or other primary caregivers. Of those initiating the survey ($n = 382$), 346 completed the survey, with 197 utilizing the paper version and the remainder electing to participate electronically. Total scores were distributed with the following frequencies: $\leq 20$ (19), 21 (14), 22 (28), 23 (22), 24 (43), 25 (65), 26 (48), 27 (55), 28 (31), and 29 (21).

Participants

A small percentage ($n = 21, 6.1\%$) of parents administered the screening tool qualified for the study based on the total FNPA score (eligibility criteria $\geq 29/30$), which
signified healthier home environment and parenting practices within this domain. Of the 21 qualified participants, twelve mothers were able to be contacted and recruitment continued until data saturation, evident when participant responses became largely repetitive, was reached (Lofland & Lofland, 1995). Interviewed mothers were given a $15 gift card to a local grocery store. The average scores for each of the 10 survey items for interviewed mothers ($n = 12$) are listed in Appendix I. (see Appendix J for survey item scores for surveyed and interviewed participants). Mothers’ real names were replaced with pseudonyms (see Table 1).

Interviewed mothers were within the 26-41 age range, had an average of 2.5 children, and were Caucasian. All of the mothers were currently married except one who was divorced as described in Table 1 (see Appendix K & L for demographic description of surveyed and interviewed participants). Mother’s highest level of education attained included: some college or vocational training ($n=1$), associate’s degree ($n=2$), bachelor’s degree ($n=5$), master’s degree ($n=1$) and advanced degree ($n=3$). Two mothers were self-employed, four employed by someone else, one was working and going to school, and four mothers were not employed outside the home. The most commonly elected household income response range of participants was $80,000-109,999.

**Analysis**

Initially, the researcher identified meaning units, strings of words and sentences within the transcripts that convey important concepts (Wertz, 2005) (see Appendix M for a model for data collection and analysis and Appendix N for the approach to phenomenological methodology) and provided contextual support to create a situated description (see Appendix O for an excerpt of a transcript with meaning units noted and
Appendix P for an example of eidetic analysis of meaning units). The researcher then attended to psychological detail and focused on understanding the meaning of the participants’ experiences (Wertz, 2005), considering the details of individual parts (meaning units), how the parts relate to the overall participants’ circumstances, and how the participants’ perceptions, emotions and behaviors have impacted her experience (Wertz, 2005).

In the second step, data was reduced into themes as elements clustered around central ideas within each interview and across participants (see Appendix Q for an example of theme creation). Imaginative variation was employed to discern essential characteristics of the phenomenon from the superfluous (Wertz, 2005; see Appendix R), allowing the researcher to grasp the essence of the experience (Husserl, 1962; see Appendix S for an example). Next, to enhance accuracy and ensure that participants’ experiences aligned with researcher’s depiction (Bloomberg & Volpe, 2012; see Appendix T, U, V, & W for correspondence and feedback from reviewers), information was incorporated from member checks and peer-debriefing exchanges with colleagues. Finally, using the conceptual framework and relevant concepts, the researcher considered how external and previously held frames of reference enlightened analysis (Wertz, 2005, p. 172).

**Findings**

The following three themes were identified and are displayed in Table 2 (see Table 2).

*Theme 1: A good habit is hard to break*

When asked about their intentions, mothers ($n = 12$) aspired to create a mentality of active living within their families. Mothers believed that expectations and positive habits
were created through consistency and commitment to routine starting early in childhood. One mother, Steph, reflected on her influence, “it [making healthy choices] eventually grows into a habit and habit [which], as we all know, is stronger than anything.” Mothers firmly believed that children imitate the behaviors of their parents, and they were careful to model the behavior they wished to be emulated. Personally valuing their own physical fitness, mothers ($n = 11$) expressed their high regard, verbally and through modeling, to their children. Many mothers brought their children to the gym with them or made sure children attended athletic events in which parents were participants, so their children could experience that feeling, “When you’re surrounded by all these other people that do the same thing that you do, that enjoy the same things.” All mothers commented on the power of setting a good example,

They see us enjoy it… and I know they’ll do what we do. They won’t do what we say. I could tell [them]… this is what you should do, but if I’m not doing it they’re not going to do it. I know that.

Family entertainment was centered on physical activity and a regular part of the way these families spent time together ($n = 12$). Aspen, a married mother of three, described their families intentions, “We’ve made a conscious decision that we want to do it [physical activity] with them and I want our family time to be, some of it to be, based around activity… rather than… ‘let’s just go all watch TV’.” Another mother of three children, Julie, remarked that while she appreciated her children’s involvement in structured sports, that hour of practice “doesn’t preclude the other twenty two hours of the day that you just get to sit and do nothing”.
Instead of simply sending children out to play, many mothers \((n = 11)\) made time to join their children in unstructured activity, using the time to model both the importance of physical activity and also the enjoyment they experienced by living active lifestyles. Multiple mothers \((n = 8)\), especially those with younger children, commented on the value of a place where families can be active together, “so the Y opening has been a Godsend for us…prior to the Y… the indoor workout places around here were really for adults. There was nothing for kids …at least not little kids.”

Mothers reported looking for ways to incorporate activity into their lives, admittedly leaving little time to sit, “Kids want to play… they’ll be active playing if you don’t put a screen in front of them.” All mothers in this study reported their children consumed two hours or less of screen-time per day and some mothers did not allow video games at all during the week. Mothers believed how they modeled screen-time was important when encouraging kids to live active lives. Mary, believed modeling the unimportance of media was important, “Some households… have the TV on all the time and we don’t, so they don’t see us sitting around and watching TV very often.”

Mothers described both formal \((n = 6)\) and informal \((n = 4)\) means of monitoring screen-time, with formal measures more necessary with younger children. Some mothers \((n = 3)\) did not feel that their children required screen-time to be limited as their children were not accustomed to much down time, and attributed this to earlier efforts, “It’s the result of many years of parenting.” Other mothers set daily limits to monitor screen-time or designated video games off-limits on weekdays. Marie, mother of two, remarked that it was easier to lure children away from screens when an active alternative was presented, softening the blow of the end of screen-time because “the less active [option] just isn’t as tempting.”
Participants also described the importance of forming mealtime expectations. Mothers ($n = 9$) went out of their way to maintain the family meal as a way of both ensuring their children had healthy meals and for modeling positive eating-related behaviors. Requiring attendance, mothers reserved at least one family meal each day and enforced rules that maintained that meals were uninterrupted by screens. Dawn explained this house rule to her older son, “We don’t watch TV while we’re eating…. you just keep eating… [when you watch TV] you’re not thinking about what you’re consuming.”

The repetitive nature of feeding a family meant that mothers used multiple strategies to influence their children’s eating-related habits. Mothers believed that children should eat nutritiously and not be limited to the commonly accepted child menu of “chicken tenders and macaroni and cheese,” therefore they planned for, prepared, and served simple, whole, balanced meals. Marie, married mother of two, described how she planned for and prepared healthy meals, “When I’m shopping, if it’s got any more than five or six ingredients in it…[then it’s] out.” Mothers ($n = 7$) chose meals that required little planning, contained simple ingredients made with pantry “staples” to decrease preparation time, and often resorted to the crockpot as a way to avoid eating out or driving through a fast food establishment on busier days. Leigh relied upon a family tradition to help her family eat healthily. Each prepared meal must pass the “color test,” a strategy that allowed her to teach her daughters about balanced meals while also giving them an opportunity to make an approved choice, “Everything has to be colorful…when it comes to the vegetable a lot of times we’ll give them the option… It needs to be green, so do you want broccoli, beans or peas?”
As a rule, mothers would not succumb to becoming short order cooks to appease individual preference, instead they fixed one meal for all. Mothers \((n = 10)\) created the expectation that children, within reason, would try a specified number of bite(s) but did not require children to clean their plates. In the situation that children did not like what was served after trying it, a less dominant theme emerged as some mothers \((n = 3)\) allowed an equal replacement from the same food group while others \((n = 4)\) offered a single substitution such as an apple or peanut butter sandwich- but commented that these occurrences were rare.

In preparing meals, mothers \((n = 8)\) reported substituting more healthy ingredients for less healthy ones. Mothers \((n = 8)\) directed hungry children to the nutritious foods in a meal over more of less healthy items, “I will cut off the limit of cookies…or pizza, things…we have but aren’t great. [Saying to them,] if you are still hungry you can have more but it needs to be one of these things.” Capitalizing on her son’s desire to be “strong like Daddy,” Marie, mother of two children, directed her young son to the protein on his plate, “It’s not the noodles that are going to make you strong…protein makes you strong. It gives you big muscles.”

Mothers allowed occasional treats but often substituted made-at-home for store-bought versions, putting a healthier “spin on fun.” All mothers \((n = 12)\) referred to soda pop and candy as restricted items. Many mothers allowed pop when eating at a restaurant, noting that they believed that by allowing it as a rare treat they could avoid the negative consequences they believed accompanied deprivation. In restricting items, however, mothers were deliberate in using less-confrontational tactics to curb behaviors such as keeping problematic foods out of the house, “I don’t want them to have unhealthy relationships with
food. I don’t want to have anything to barter with… [my strategy is] more like… [it’s] not in the house.”

**Theme 2: Mothers use of framing to support autonomy**

Mothers created expectations of positive behaviors and helped children to learn and choose healthy options. One mother of three, Kate, likened her efforts to “baby proofing my house” so that her children could make choices that mothers and children could be proud of. Mothers realized that in order for healthy behaviors to persist amidst the many threats presented by the obesigenic environment, the formation of their children’s autonomy must be supported. One divorced mother of two young boys reasoned, “If they don’t know why they’re doing it then it easily [can go] the other way.”

Mothers (n = 8) worked to support their children’s internalization of positive eating habits by helping them to know what, when, where, and how they could make good choices. Mothers strived for eating-related interactions to be positive, therefore, they avoided fighting about food and instead relied upon controlling access such that the majority of the food in the house was approved. Mothers worked to make approved foods more inviting by cleaning, cutting, storing, and arranging produce and other nutritious items in pre-determined locations. Mothers used storage locations in the home to help children learn “anytime” versus “sometime” foods, such as “the bottom drawer that pulls out… that’s the snacks, so anything that’s in there is fair game.” Low level snack drawers in the pantry, designated shelves in the refrigerator, and a fruit bowl at eye level are tactics mothers discussed to help children make good choices while less healthy foods were kept out of sight. Mary described how advanced preparation helped ensure that her children had healthy snacks,
“just open the frig and grab… a bunch of [cleaned and cut up] celery. It’s even easy to offer that to the kids… right away when they’re hungry. I think it does make a difference if you have it prepared and even, as an adult… it’s eas[ier] to offer it. I think it does make a huge difference.”

As with eating behaviors, mothers ($n = 12$) were careful to use language that supported the internal rewards of physical activity in hopes that children would embrace the means and not just the end, “I monitor how much I talk about the win and focus on making sure I talk about like how good it feels to be active and how…if I set a personal goal and achieve it…how good it feels.” Mothers also supported their children’s physical activity through supplying proper shoes and attire, gear and sports equipment, and, importantly, transportation, as mothers of multiple children commented on the constant juggling required to get each child to their activities. Mothers also de-valued sedentariness by preferentially purchasing active gaming systems, “If they’re playing Wii… it’s Wii sports, so they’re bowling or they’re jogging or they’re playing tennis…they’re not sitting”.

Mothers spoke of their desire to help their children “find something that they love that they can do forever” - whether it be structured physical activity, competitive sports or more unstructured activities. Marie describes her thoughts,

I hope they find an interest…it doesn’t have to be an actual like varsity sport or anything but something…that keeps them active cause I think kids could be, they’re less likely to go just work out.

This often meant that mothers encouraged and facilitated opportunities for their children to sample a variety of activities. In the event that a child was not especially interested in mainstream physical activity, mothers found themselves rearranging schedules and creating
opportunities for children to be active. When asked to describe how they navigated threats from the current environment, mothers admitted to keeping eating away from home at a minimum. Julie described her intentions, “I’m making sure that I am cooking the vast majority of our meals that we’re eating and we’re not eating at a restaurant or at the ball field.” Frustrated by the lack of healthy and convenient options when eating out, mothers \((n = 9)\) admitted to arranging outings so that they could eat at home prior to departure. Marie, a married mother of three active boys, described how she managed to provide healthy meals during the summer when the family spends many nights of the week at the baseball fields, “they’re getting their baseball stuff on… and I’m in there literally brown bagging their stuff for the car, so it’s ‘here’s yours, here’s yours, here’s yours, let’s go!’”

Mothers allowed occasional indulgences, but upon splurging on food or screen-time, mothers \((n = 9)\) found ways to bookend the splurges such that the unhealthy event was preempted and/or followed by compliance to more positive behaviors. As Ann, mother of three young boys commented, “Where this meal is really bad, we have to eat healthy the rest of the day.”

In a less dominant theme, mothers \((n = 4)\), in varying degrees, described how they taught their children about food labeling and food quality. The majority of mothers read labels and avoided certain ingredients while some grew and prepared some of their own foods to avoid using processed goods. Julie used these opportunities as learning experiences for her children, “At the grocery store we’ll pull the box and read the ingredients label and [I’ll say] that’s just garbage. Let’s find something that’s similar but [more healthy]….or [I tell them] we can make healthier versions at home.” Many mothers \((n = 6)\) discussed hunger
and satiety, and Dawn described a novel behavioral prompt used to help her children learn portion size,

We have… glass prep bowls and they know that’s… the snack bowls. I’ve tried to teach them that, if they just fill that up and then put the box away, they’re not going to just… sometimes you’re not thinking as you consuming a box of crackers.

Many mothers ($n = 7$) described how they worked to support their children in forming healthy relationships with food by avoiding emotional eating or using food as a reward. Mary was adamant in her resolve, “We don’t reward with food. That’s just not an option.”

Understanding that each child presented different challenges, mothers approached eating and activity related conversations with careful attention to each child’s abilities, preferences, strengths, and needs. In leading her children to healthy eating habits, Julie described the transition in approach that was necessary as children developed:

As they’re younger, it’s just you give them this and this, and maybe less information… more this is what we’re eating and it’s healthy… but now that they’re older and able to make their own decisions… we have more discussions… and I do give them opportunities to make more choices.

By using age-appropriate tactics and language supportive of healthy body images, mothers believed they were helping their children find value in positive behaviors. Mothers believed that younger children responded better to clear, simple, and repetitive messages that catered to their interests such as eating healthily to grow “big like Daddy” while mothers of older children kept “a close monitor on the verbiage that gets said around the house” to preserve healthy body images. Careful to choose language which supported a positive self-image, mothers often positioned food as fuel for the body, enabling children to do what they
loved, “think about what you’re going to need to eat to keep your body going while you’re swimming.” Some mothers \( n = 6 \) described the specific influence of media on body image as powerful and in need of tempering, describing much of what is broadcast as, “so misleading . . . and the kids have no sense of how to filter that out.”

**Theme 3: Home and away**

Mothers \( n = 11 \) believed that behaviors shaped at home were most impactful such that occasional splurges were not worthy of concern. Over and over these mothers spoke of the influence of parents as taking authority over children’s eating, physical activity, and screen-related behaviors, stating “that meal at home you have with your parents… [is] a bigger influence…than [those meals] away from us.”

Mothers emphasized focusing on ‘house rules,’ aiming for healthy behaviors “80% of the time,” and not making a big deal about splurges that occurred at restaurants, holidays, and weekends at grandparents as the best approach. The majority of mothers let their children order at restaurants without limitations, “It’s not worth stressing out… I can make the other meals count.” Mothers were aware of the recoil associated with forbidden foods and commented that it was just not realistic to never have a treat and “by having it [splurges] not be the norm… but have it not be a tragedy… is what keeps it from feeling like you’re sacrificing.” Instead, mothers spoke of these occasions as opportunities to teach children how to make “real-world choices” amidst the threats presented by the obesigenic environment.

Participants were asked to describe how they worked around the influences that threatened to derail socialization goals for their children. Mothers \( n = 8 \) agreed that obstacles that presented themselves more than occasionally, such as long, cold winters, often
resulted in more screen-time than mothers desired. Mothers admitted that getting the family outside was a key to their success as being outside inspired children to naturally be active, so unless particularly inclement weather, mothers continued to encourage children to play outside during the cold months. Mary described how she has become more creative to encourage activity under less supportive conditions, such as “playing tag or hide & seek in the basement.” Mothers agreed that screen-time increased when children were “stuck” inside, so mothers encouraged children to forgo screen-time on nice days so to account for the lopsided screen-time accumulated during winter months.

Mothers’ perspectives on outside influences, particularly their children’s schools, were mixed and often an area of contention. Ann commented on school lunch as a source of exposure to less healthy foods, “If they could just…not put the bad stuff in front of them.” Other mothers ($n = 7$) did not let school lunch bother them and allowed their children to choose if they wanted to pack their lunches, admitting, however, that packing lunches limited the diversity of their children’s meals. Mothers complimented physical education and recess provided by schools but generally wished health was more of a priority.

**Discussion**

The purpose of this study was to investigate the approaches used by a purposively selected sample of mothers as they navigated threats from the obesigenic environment to successfully socialize their children’s eating, physical activity and screen-related behaviors. Although purposive sampling precludes generalizability, it is a preferred method to reach participants exhibiting specific characteristics (Bloomberg & Volpe, 2012). The results of this study reveal that mothers used actions and words to express beliefs, values, and expectations (Laible & Thompson, 2008) for children’s conduct within the domain of
obesity-related behaviors. While study design allowed mothers, fathers, or other primary caregivers to participate, 88.8% of those surveyed were mothers, 8.6% were fathers, and 2.7% were other caregivers. Importantly, all participants meeting criteria to be interviewed were mothers, resulting in an absence of insight from purposeful fathers. This may be due to mothers more commonly managing school-related parenting responsibilities (Winquist Nord, 1998) as well as the increased likelihood of females to complete surveys (Sax, Gilmartin, & Bryant, 2003), thereby limiting transferability of findings solely to mothers.

Mothers in this study emphasized the importance of providing a positive example of desired behaviors for their children, believing that, within the current environment, children would not adopt healthy behaviors simply as a result of instruction. While living their priorities alongside their children, and establishing positive eating, physical activity, and screen-related routines, mothers helped children come to know which behaviors were expected, tolerated, and appreciated (Dweck & London, 2004). The comments shared by these mothers are important and provide contextual information about the dynamics associated with purposeful parenting within this domain.

**Insight related to physical activity and screen-related behaviors**

Using domain-appropriate parenting practices (Grusec, 2011), mothers shaped the family culture to promote activity over sedentariness. Mothers expressed the importance of regular physical activity by praising, encouraging, and reinforcing the benefits of physical activity, serving as models, and through direct involvement with children in family aggregated physical activity (Beets et al., 2008; Trost et al., 2003). Mothers also supported children’s physical activity by providing access to opportunities and resources that encourage physical activity, including equipment (Dunton et al., 2003), funding and transportation
(Davison et al., 2003; Savage et al., 2007), and by planning active family events (Davison et al., 2003). Mothers worked to create a “be active” family culture by avoiding the negative modeling of sedentary behavior in which a strong parent-child association has been reported (Fogelholm et al., 1999). Mothers also regulated children’s access to screens (Pate et al., 2011; Van den Bulck et al., 2000) and provided active alternatives to sedentariness.

Mothers facilitated children’s individual physical activity preferences and worked to help children appreciate activity outside of structured sports. By discussing the value of physical activity and promoting activities in which children could engage across the lifespan, mothers believed they were supporting children’s internalization of the benefits of regular physical activity.

*Insight related to eating behaviors*

As suggested by the FEM, mothers modeled positive eating habits as well as acceptance of new foods (Skinner et al., 1998), encouraging children to appreciate the diversity essential for a healthy diet. Mothers in this study fostered positive eating habits behind the scenes through regulating accessibility, stocking the pantry and refrigerator with healthy choices, and cleaning and cutting produce so it was “ready-to-eat” (Hearn et al., 1998)

Much of the literature on shaping children’s eating behaviors points to the use of a reward and punishment system, restriction, pressuring or providing incentives and/or reinforcement in return for desired conduct (Campbell et al., 2010). However, mothers in this study relied on preparing the majority of the family meals as well as modeling healthy and diverse diets to shape desired eating behaviors in lieu of strategies found to be related to poor eating habits. Capitalizing on the powerful yet less confrontational strategy of controlling
children’s access to food, mothers ensured the majority of food in the home was ‘approved’ (Savage et al., 2007). In this manner, mothers in this study did not simply aim for compliance to house rules but provided opportunities for their children to choose from accepted options. Mothers believed this strategy encouraged autonomy in eating practices as has been found to result in a deeper form of internalization (Roth, Assor, Niemiec, Ryan, & Deci, 2009). Previous research on parental support of autonomy suggests that parents support internalization best when embracing the perspectives of their children and acknowledging their feelings such that they use reasoning and allow choices over valuing obedience (Joussemet, Landry, & Koestner, 2008). Mothers described a desire for their children to develop autonomy in choosing positive eating and activity-related behaviors.

*The power of the home environment*

Although mothers supported autonomy development of positive eating, physical activity, and screen-related behaviors as a strategy to aid children in managing ongoing threats from the obesigenic environment, mothers also believed the consistent structure provided at home minimized the impact of external influences. Additionally, mothers described aiming for positive behaviors ‘most of the time’ but acknowledged that this was not always possible or desirable. Using occasional indulgences at restaurants, holidays, community events, and time with grandparents, etc., as opportunities for learning and to circumvent the possibility that children might feel deprived, mothers believed they could avoiding the backlash associated with the restriction of foods (Wardle et al., 2005). These findings help to fill a gap in understanding in the unique ways parents address eating related interactions at times and places outside of the home when energy dense, less nutritious food is commonly available (Musher-Eizenman & Holub, 2007).
Aligning with the FEM (Davison & Campbell, 2005), mothers aided children in establishing powerful eating, physical activity, and screen-related habits through modeling, setting clear expectations about related knowledge and beliefs, controlling accessibility, and instituting strategies to shape behavior. The concept of internalization, an emergent finding in this study, was not specifically outlined in the FEM but can be considered a dimension of parental knowledge and beliefs as suggested by this sample of high-scoring mothers. It is unclear if this finding is transferable to other populations, therefore future study might specifically address the degree to which other samples of parents support children becoming autonomous in their obesity-preventive behaviors. Additionally, while accepting that external environments threatened their family’s lifestyles, mothers in this study chose to focus on the home environment. Future research might contemplate how parents leverage the family environment as they compete against outside elements to socialize children’s eating, physical activity, and screen-related behaviors. Specifically, research could consider how evolving threats from the obesigenic environment might impact parental support of child autonomy.

**Limitations & Implications for Practice**

The narrative initiated by these intentional mothers provides insight into the strategies used by a unique subset of parents as they socialize their children’s eating, physical activity, and screen-related behaviors, and offers a promising avenue for further research into this complex socialization domain. As described, findings are limited by the characteristics of this select group of parents in this sample and do not allow for the impact of many commonly studied sociodemographic variable (sex, race, ethnicity, education level, socioeconomic status, etc.) to be generalized to other populations. The high educational and income
characteristics of the studied subset potentially suggest that privileged status may have played a part in the ability of mothers to act purposefully in this parenting domain. Future research may focus on recruiting fathers as well as to uncover how favorable resources and environments may influence parental socialization of obesity-preventive behaviors.

However, themes from this study are important and may inform obesity treatment and prevention programs and related parenting curricula, as best practices are commonly integrated into applied settings. These findings may also provide insight at a local level. Members of the medical community and local government and recreational departments could partner to promote existing local organizations and opportunities that encourage active lifestyles to young families, especially in cold weather months.
Table 1. Description of Interviewed Participants

<table>
<thead>
<tr>
<th>Participant</th>
<th>Basic Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Julie</td>
<td>married mother of three (ages 13, 11, &amp; 8)</td>
</tr>
<tr>
<td>Steph</td>
<td>married mother of three, two living at home (ages 15 &amp; 7)</td>
</tr>
<tr>
<td>Mary</td>
<td>married mother of two (ages 5 &amp; 2)</td>
</tr>
<tr>
<td>Leigh</td>
<td>married mother of two (ages 6 &amp; 4)</td>
</tr>
<tr>
<td>Kate</td>
<td>married mother of three (ages 14, 9, &amp; 7)</td>
</tr>
<tr>
<td>Ann</td>
<td>married mother of three (ages 4, 4, &amp; 4)</td>
</tr>
<tr>
<td>Dawn</td>
<td>married mother of two (ages 10 &amp; 7)</td>
</tr>
<tr>
<td>Railene</td>
<td>divorced mother of two (ages 7 &amp; 6)</td>
</tr>
<tr>
<td>Jo</td>
<td>married mother of three (ages 6, 3, &amp; 1 month)</td>
</tr>
<tr>
<td>Aspen</td>
<td>married mother of three (ages 6, 4, &amp; 2)</td>
</tr>
<tr>
<td>Kristie</td>
<td>married mother of two (ages 10 &amp; 7)</td>
</tr>
<tr>
<td>Marie</td>
<td>married mother of three (ages 10, 8, &amp; 6)</td>
</tr>
<tr>
<td>Table 2. Findings</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>A good habit is hard to break</strong></td>
<td>Mothers believed that a strong commitment was needed to positively socialize children’s eating, physical activity, and screen-related behaviors. Mothers clearly expressed their expectations, and created and consistently observed house rules to help their children form good habits. Mothers modeled behavior they wished to be emulated, emphasized the importance of eating together, and worked to create a ‘be active’ mentality while de-valuing sedentary pursuits.</td>
</tr>
<tr>
<td><strong>Framing to support autonomy</strong></td>
<td>Meanwhile, using strategies that catered to their children’s ages and developmental stages, mothers worked to support their children as they came to internalize the benefits of healthy behaviors. Mothers presented opportunities to for their children to be successful and prepared for situations when it was difficult to make a good choice.</td>
</tr>
<tr>
<td><strong>Home and away</strong></td>
<td>Mothers believed that behaviors shaped at home were most impactful. Knowing that threats from the environment were ubiquitous, mothers found ways to work around them, using situations that arose as learning opportunities. To keep their children from feeling deprived, mothers strove for healthy behaviors 80% of the time.</td>
</tr>
</tbody>
</table>
CHAPTER 5.
DISCUSSION AND CONCLUSIONS

These phenomenological studies characterized the factors that led to mothers’ health-focused mindset as they steered child-rearing practices related to eating, physical activity, and screen-time as well as described mothers’ efforts to create and maintain a family culture of health within our current obesigenic environment. Guided by an adapted version of the applied Family Ecological Model (FEM; Davison et al., 2005), insight from mothers that scored highly on the FNPA screening tool was obtained, providing valuable contextual description of practical, research-based strategies used by mothers to positively impact children’s behaviors known to be associated with obesity.

The purpose of this study was to capture reflections, intentions, and strategies of parents that are intentional in their efforts to positively socialize their children’s eating, physical activity, and screen-related behaviors amidst threats presented by the obesigenic environment. By utilizing purposive sampling, mothers provided a unique perspective and introduced a new narrative by giving voice to a population who are intentional and purposeful in the socialization of their children’s health-related behaviors.

**Theoretical Contributions and Future Directions in Research**

Four immediate, parent-regulated processes (modeling, proactive regulation, routine setting, and system of rewards, reinforcements and punishments) have been applied, generally, to many areas of early socialization (Laible & Thompson. 2008). Additionally, literature on early socialization describes parenting practices that are domain-appropriate as more likely to be effective (Grusec, 2011). Moreover, longitudinal analysis has shown that mothers’ and fathers’ obesity-related behaviors cluster, such that both parents are likely to
practice either obesigenic or non-obesigenic behaviors, creating home environments that are either promoting or preventive of obesity (Davison et al., 2004). The Family Ecological Model (FEM), developed by Davison & Campbell (2005), provides a framework specifically for considering the socialization of children’s eating, physical activity, and screen-related behaviors as a collective domain (see Figure 1). The FEM outlines the context in which parenting occurs by considering the immediate and broad influences impacting the ecology of parenting in this realm. The four immediate aspects of parenting that relate to obesity-related behaviors (knowledge and beliefs, modeling, shaping, and accessibility) are influenced by broad contextual characteristics emanating from factors related to child, family, community, organizations, policies, and media (Campbell et al., 2010).

![Figure 1: The adjusted Family Ecological Model (FEM) (adapted from Davison & Campbell, 2005). The circles represent immediate factors while the outer ring represents dimensions of the broad environment.](image-url)
Interviewed mothers prioritized socialization of child eating, physical activity, and screen-related behaviors and spoke of intentionality as critically important in navigating continual threats from the obesigenic environment. The emergent finding that mothers purposefully worked to build and maintain a culture of healthy eating and activity provides impetus for further research that considers the “clustering” of parental processes as related to socialization of children’s eating, physical activity, and screen-time behaviors.

Mothers in this study used strategies related to those found in the inner ring of the FEM. Importantly, parental knowledge and beliefs about healthy eating, physical activity, and screen-related behaviors emerged as important concepts and provide valuable insight as mothers’ socialization strategies were deliberate and intentional in both thought and practice. The findings from the current study help to fill a gap in research as few published studies have described parental knowledge and beliefs within the collective domain of obesity-related behaviors.

Additionally, mothers stressed the utility of parental modeling of desired behaviors through observational learning and family aggregation of positive practices. Finally, mothers described the strategies used to shape children’s behaviors, commenting on the dynamics associated with the use of pressure, restriction, and rewards and punishments, as well as the extent to which they made food accessible, provided opportunities to be active, and regulated screen-time.

The dynamics associated with eating, physical activity, and screen-related behaviors that were described by mothers hinged upon the four immediate parent-child relational processes (inner circles). However, mothers suggested that these immediate parenting practices were not used uniformly or in isolation, as parenting strategies were selected based
on specific child and family dynamics and were impacted by influences from multiple systems and environments (outer influences). The inter-connectedness of immediate and broad contextual influences described in the FEM is characterized by one of the tactics used by mothers in this study. As a means of encouraging physical activity in children that were not motivated by the competitive activities highly valued in society and regularly offered in schools and communities, mothers sought alternatives to structured sports and centered family time around active entertainment.

Findings from this study also suggest that related parenting strategies vary based on the age and developmental characteristics of specific children. The concept of parental support of child internalization and autonomy of healthy behaviors emerged as an important finding. The mothers in this study believed that age and developmentally appropriate encouragement supported child internalization of the benefits of healthy behaviors which mothers believed to be an essential component of the behaviors becoming autonomously controlled. Mothers fostered internalization in incremental fashion as developing children were increasingly able to understand the reasons why adopting healthy behaviors was important for both short- and long-term consequences. Additionally, in pursuit of child internalization mothers thoughtfully controlled access and presented tools and opportunities for children to learn what, when, where, and how to make positive eating and activity-related choices. Prior research has considered the influence of autonomy development on physical activity (Deci & Ryan, 2002), but few have considered how parents support child autonomy across eating, physical activity, and screen-related behaviors. Future research might attempt to further develop this concept by considering how parental processes related to autonomy support are influenced by the ages and developmental stages of the children in the family.
Additionally, insight from children is needed to determine how the process of internalization is influenced by various parenting strategies and affected by dynamics associated with parenting across developmental stages. Perhaps parental support of child autonomy in obesity-related behaviors could be considered, specifically, through the lens of the parenting aspects described in Davison & Campbell’s FEM (2005).

**Limitations**

While the study design allowed mothers, fathers, and other primary caregivers to participate, 88.8% of those surveyed were mothers, 8.6% were fathers, and 2.7% were other caregivers. Importantly, all participants meeting criteria to be interviewed were mothers, thereby limiting transferability of findings solely to mothers. Demographic factors may have also played a part in the inability to recruit fathers as participants in this study were reached through their children’s schools and literature suggests that mothers more commonly communicate with their children’s school (Winquist Nord, 1998), and females are more likely to participate in survey research (Sax, Gilmartin, & Bryant, 2003). Based on responses to survey questions, interviewed mothers might be considered educationally and socioeconomically privileged, and it is unclear how favorable resources and environments may have contributed to the likelihood to practice purposeful parenting. Perhaps mothers that were able to ensure that the basic needs of their children were met were more able to dedicate their time and energy to obesity-preventive practices. Future work may consider how to specifically capture the voice of purposeful fathers and to more clearly understand how privileged status may influence parental socialization of obesity-preventive behaviors.

Despite limitations based on study design, this research gives voice to a neglected population. With over two-thirds of adults (Flegal et al., 2012), and one-third of children
(Ogden, et al., 2012) considered overweight or obese, healthy weight individuals are now in the minority. The undertaking of the current work gave a voice to this minority by enrolling a group of mothers intentionally practicing behaviors to encourage healthy weight in their children. These mothers provided rich description of the strategies used to socialize behaviors associated with obesity in children, however, the lack of diversity in this sample limited the ability to consider the influence of broad demographic and socioeconomic factors on parental socialization strategies in this domain. The findings, although authentic for this particular culture, are neither representative nor generalizable and may differ as compared to studies in different populations. However, the insight provided by the select group of mothers provided contextual information that would not emerge from a more generalizable or at-risk population and may serve as inspiration for work in other populations.

Implications

The findings of this study may inform obesity intervention and prevention programs as well as education directed at public health initiatives, pediatricians, primary care physicians, and nurses about the importance of stressing intentionality to parents of young children to inspire the important work of setting expectations and developing positive habits related to eating, physical activity, and screen-related behaviors. For example, mothers in the present study embraced covert and less-controversial ways of restricting problem foods that have been associated with healthier feeding styles (Odgen et al., 2006). In avoidance of making food an area of contention, mothers believed and worked to create a home environment supportive of child autonomy such that mothers intentionally provided pre-approved food options and decreased opportunities in which it was difficult for children to make good choices. By eating healthily “most of the time” yet allowing access to tempting,
less healthy foods on occasion, these mothers believed they were helping children to embrace positive eating behaviors and teaching them how to eat within the current environment while avoiding the negative consequences associated with forbidding certain foods. Likewise, trusted professionals could be trained to encourage parents to carefully select eating-related strategies, and similarly, to build activity into the family culture. As part of regular well-child visits and larger public health campaigns, parents can be coached to make socialization of children’s eating, physical activity, and screen-related behaviors a top priority, provided customized support to guide them through their children’s developmental stages, and directed to resources to support their efforts at the national and local levels.

In conclusion, according to the FNPA screening tool used in this study only 6.1 percent of the 346 surveyed participants scored highly enough to meet inclusion criteria, perhaps symbolizing the difficult and sensitive nature of parenting within an environment and culture that encourages obesity. (Note: Descriptive information and the average scores for each of the 10 survey items for the complete population and for surveyed participants (n = 346) are listed in Appendix I, J, K & L). Mothers in this study reported feeling stigmatized for their convictions and in competition with cultural norms and the media. Many described feeling unsure about how best to encourage obesity-preventive habits while supporting healthy body image in their children, especially as children neared adolescence when outside influences become more powerful. Parents need direction on how best to navigate media and cultural influences to be able to support the development of their children’s positive body images across various developmental stages. It seems that one of the greatest challenges in the battle against obesity may reside in changing public opinion such that evidence-driven determinants of health are valued and supported by more than the minority.
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APPENDIX A

FNPA SCREENING TOOL

Instructions: For each category, please circle the description that best fits your elementary-aged child or your family. It is important to indicate the most common or typical pattern and not what you would like to happen. Please read carefully.

<table>
<thead>
<tr>
<th>1. Breakfast Patterns</th>
<th>My child rarely eats breakfast and we don’t typically eat together as a family.</th>
<th>My child does not regularly eat breakfast but we eat together as a family on most days of the week.</th>
<th>My child eats breakfast on most days but we don’t typically eat together as a family.</th>
<th>My child eats breakfast on most days and we typically eat together as a family.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Family Eating</td>
<td>Our family regularly eats fast food and we eat while watching TV.</td>
<td>Our family regularly eats fast food but we rarely eat while watching TV.</td>
<td>Our family rarely eats fast food and we rarely eat while watching TV.</td>
<td>Our family rarely eats fast food and we rarely eat while watching TV.</td>
</tr>
<tr>
<td>3. Food Choices</td>
<td>Our family uses prepackaged foods frequently and we usually do not eat fruits and vegetables with meals (or as snacks)</td>
<td>Our family uses prepackaged foods frequently but we regularly consume fruits and vegetables with meals (and as snacks).</td>
<td>Our family eats mostly freshly prepared meals but we usually do not eat fruits or vegetables with meals (or as snacks).</td>
<td>Our family eats mostly freshly prepared meals and we regularly consume fruits or vegetables with meals (or as snacks).</td>
</tr>
<tr>
<td>4. Beverage Choices</td>
<td>Our child frequently drinks soda pop or other sweetened drinks, and rarely drinks low fat milk with meals or at snacks.</td>
<td>Our child frequently drinks soda pop or other sweetened drinks, but frequently drinks low fat milk with meals or at snacks.</td>
<td>Our child rarely drinks soda pop or other sweetened drinks, but rarely drinks low fat milk with meals or at snacks.</td>
<td>Our child rarely drinks soda pop or other sweetened drinks, and frequently drinks low fat milk with meals or at snacks.</td>
</tr>
<tr>
<td>5. Restriction and Reward</td>
<td>I don’t monitor my child’s snack food consumption and snack foods such as candy are frequently used as a reward for good behavior.</td>
<td>I don’t monitor my child’s snack food consumption but snack foods such as candy are not used as a reward for good behavior.</td>
<td>I monitor my child’s snack food consumption but snack foods such as candy are used as a reward for good behavior.</td>
<td>I monitor my child’s snack food consumption and snack foods such as candy are not used as a reward for good behavior.</td>
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<tr>
<td>6. Screen Time</td>
<td>My child watches television or plays on the computer (or with video games) for more than 4 hours each day.</td>
<td>My child watches little television but plays on the computer or with video games for 2–4 hours each day.</td>
<td>My child doesn’t play on the computer (or with video games) but watches television for 2–4 hours each day.</td>
<td>My child watches television or plays on the computer (or with video games) less than 2 hours each day.</td>
</tr>
<tr>
<td>7. Television Usage</td>
<td>I rarely monitor the amount of TV my child watches and my child has access to a TV in his/her bedroom.</td>
<td>I monitor the amount of TV my child watches but my child has access to a TV in his/her bedroom.</td>
<td>I rarely monitor the amount of TV my child watches but my child does not have access to a TV in his/her bedroom.</td>
<td>I monitor the amount of TV my child watches and my child does not have access to a TV in his/her bedroom.</td>
</tr>
<tr>
<td>8. Family Activity</td>
<td>I rarely participate in physical activity (e.g. walking) and our family does not play games outside, ride bikes, or walk together very often.</td>
<td>I participate regularly in physical activity (e.g. walking) but our family does not play games outside, ride bikes, or walk together very often.</td>
<td>I rarely participate in physical activity (e.g. walking) but our family plays games outside, ride bikes, or walks together fairly frequently.</td>
<td>I participate regularly in physical activity (e.g. walking) and our family plays games outside, ride bikes, or walks together fairly frequently.</td>
</tr>
<tr>
<td>9. Child Activity</td>
<td>My child participates in almost no physical activity during his/her free time <strong>and</strong> is not enrolled in any organized sports or activities with a coach or leader.</td>
<td>My child participates in some physical activity a few days a week (2-3 days) in his/her free time <strong>but</strong> does not typically participate in any organized sports or activities with a coach or leader.</td>
<td>My child does not participate in physical activity in his/her free time <strong>but</strong> does participate in some organized sports or activities with a coach or leader a few days a week (2-3 days).</td>
<td>My child regularly participates (i.e. on most days) in physical activity in his/her free time <strong>and</strong> also participates in sports or activities with a coach or leader.</td>
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<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10. Family Routine</td>
<td>Our family does not have a daily routine or schedule for our child’s bedtime <strong>and</strong> our child gets less than 12 hours of sleep each night.</td>
<td>Our family does not have a daily routine or schedule for our child’s bedtime <strong>but</strong> our child typically gets at least 12 hours of sleep each night.</td>
<td>Our family follows a daily routine or schedule for our child’s bedtime <strong>but</strong> our child tends to get less than 12 hours of sleep each night.</td>
<td>Our family follows a daily routine or schedule for our child’s bedtime <strong>and</strong> our child typically gets at least 12 hours of sleep each night.</td>
</tr>
</tbody>
</table>
APPENDIX B

INFORMED CONSENT DOCUMENT

INFORMED CONSENT DOCUMENT

Title of Study: Iowa Family Health Study
Investigators: Jacy Downey (researcher), Dr. Clinton Gudmunson (major professor)

This is a research study. Please take your time in deciding if you would like to participate. Please feel free to ask questions at any time.

INTRODUCTION
This study is being conducted by a graduate student at Iowa State University as part of the dissertation process, a requirement of a doctoral program. Dr. Clinton Gudmunson is a faculty member in the department of Human Development and Family Studies and will be advising this project.
The purpose of this study is to better understand how parents are successful in their ability to develop and maintain positive eating, physical activity, and sedentary behaviors in their children.

DESCRIPTION OF PROCEDURES
If you agree to participate in this study, your participation will involve completing a short survey and possibly being interviewed about your parenting experiences related to your children’s eating, physical activity, and sedentary behaviors. If you are contacted, the interview will take approximately 1.5 – 2 hours to complete and will involve answering interview questions. Subsequent interactions will be via email. If you agree to participate, the interviews will be conducted as your schedule allows in a location convenient for you. The interview sessions will be audio-recorded with a digital audio-recorder and then transcribed.

RISKS
While participating in this study you may experience possible discomfort as a result of disclosing information.

BENEFITS
If you decide to participate in this study there will be no direct benefit to you. It is hoped, however, that the information gained in this study will eventually benefit other parents.
COSTS AND COMPENSATION
You will not have any costs from participating in this study. You will be offered an honorarium worth $15 for your time spent participating in this study. This will require that we ask for you to sign a receipt of payment form to comply with federal and state tax and accounting regulations.

PARTICIPANT RIGHTS
Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time. You may skip any questions you do not wish to answer and you may stop answering questions at any time. You may decide not to participate in the study or leave the study early for any reason and it will not result in any penalty or loss of benefits to which you are otherwise entitled.

CONFIDENTIALITY
Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy your records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality the following measures will be taken: The subjects will be assigned a code name that will be used on all documents. Any other identifying details obtained in the course of an interview or observation will be altered to protect confidentiality. All data gathered will be kept in a password coded and encrypted computer file. Audio-recordings will be erased following analysis. By signing this consent form, you give us permission to use and share this information, within the limits described above.

QUESTIONS OR PROBLEMS
You are encouraged to ask questions at any time during this study.

- For further information about the study, contact me at: Jacy Downey (researcher) by phone (515-480-2932) or by e-mail at jdowney@iastate.edu
- Or you may contact my advisor at: Clinton Gudmunson, Ph.D. (major professor) by phone (515-294-8439) or by e-mail cgudmuns@iastate.edu
- If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011.
APPENDIX C

INTERVIEW PROTOCOL
IOWA FAMILY HEALTH STUDY

Participants in the semi-structured in-depth interviews will be made up of “high-functioning” families as related to their nutrition, physical activity, and sedentary behaviors.

Introduction (Interviewer script)

My name is Jacy Downey, and I am the lead researcher of this project, which is the final step in my PhD program. Thank you for consenting to be involved in this research study. Your answers will be kept strictly confidential. I am happy to clarify any questions or observations you might have at any time during this interview.

The purpose of this interview is to talk with parents that place a high priority on the development and maintenance of healthy eating, physical activity, and sedentary (TV, video games, etc.) behaviors to be able to understand the strategies that you use on a daily basis. You are being asked to participate in this study because you scored highly on our screening survey. I am very interested in learning how you guide your children’s behaviors in regards to eating, physical activity, and sedentary behaviors.

I want to stress how very grateful I am for this opportunity. I understand that you have many demands on your time. Your ideas and input on this subject are very important to me.
Interview Protocol

A. Objective: Focused Experience
• To put the participant’s experience as a high-functioning parent in the context of their life history

Grand Tour questions: You were asked to participate in this interview because you scored highly on the screening survey. For the sake of this study this qualifies you as a “high-functioning” parent in regards to your children’s eating, physical activity, & sedentary behaviors. How did you come to be a parent that stresses the importance of positive eating, physical activity, and sedentary behaviors in your children?

More specific questions/probes:
  o What are your beliefs in regards to parents’ ability to influence their own and their family’s health practices?
  o What events in your past family, school, or work experiences have shaped you in this way?
  o How do you feel about the role/responsibility of parents in constructing positive health practices and attitudes in their family?
  o Can you tell me about how you feel about parenting specifically for positive eating, PA, & sedentary behaviors?
  o Where does “establishing and maintaining positive health behaviors” fall on your parenting priority list?
  o To what degree would you say that your children are aware of your desire for them to be healthy?
  o How important is it that your children understand that having healthy behaviors is a priority?
  o What is your idea of positive (a) eating, (b) PA, & (c) sedentary behavior in children?
  o How did you become knowledgeable about positive health practices/behaviors?

B. Objective: Strategies
• To concentrate on the concrete details of the participant’s present lived experience in the area of parenting with a focus on positive health behaviors related to nutrition, physical activity, and sedentary behaviors.
• To understand the health-promoting strategies/tools that parents and families employ to maintain positive health as a priority
• To understand defensive strategies put in place to lessen the temptations of the modern environment (sedentary professions, sedentary entertainment, media, screen time, fast food, overscheduled families, transport time, bleacher time,
schedules and demands of dual-earning families, single parenthood, safety concerns, etc.)

**Grand Tour Question:** Please describe your parenting practices related to nutrition, physical activity, and sedentary time that help you guide your children’s behaviors? Please include any tricks, habits, routines, rituals, expectations, etc that you use to help your children make healthy eating, physical activity, & sedentary choices on a daily basis?

**More specific questions/probes:**
Let’s start with eating and move to PA and finally sedentary behaviors.

- In what circumstances do you & your children discuss healthy (a) eating, (b) PA, & (c) sedentary related issues?
- What kinds of conversations and behavioral tactics do you utilize to foster an attitude of positive obesity-related behaviors in your children?
- How do you encourage your children to be physically active? (structured conversations, routines, modeling, restrictions, goal-setting, social reinforcement, improving accessibility)
- What does physical activity look like in your family? (exercise together, parent coaching, family sports contests, pedometers, PA charts)
- What does meal preparation and mealtime look like? (plan, shop & cook together, keep produce visible and cut up, fruit & veggies chart, sometime/anytime drawers, etc.)
- How do you encourage your family to eat healthily? (structured conversations, routines, modeling, restrictions, goal-setting, social reinforcement, monitor accessibility)
- How do you shape your children’s time in sedentary behaviors? (structured conversations, routines, modeling, restrictions, goal-setting, social reinforcement, monitor accessibility)
- What kinds of things to you think about and plan for each day to keep your children healthy?

**C. Objective: Influences and barriers**

- To understand the factors that influence your children’s obesity-related health behaviors
- To understand the barriers that make it difficult to develop and maintain positive obesity-related health practices
- To understand the resources that make it easier to develop and maintain positive obesity-related health practices
Grand Tour Question: Please describe what makes it easy or hard to establish or maintain positive eating, physical activity, & sedentary behaviors in your children on a daily basis?

More specific questions/probes:
Let’s start with eating and move to PA and finally sedentary behaviors.

- Please describe what might influence your children’s health behaviors that are particular to your home and family environment? (family structure, ethnicity/culture, socioeconomic status, parent educational status)
- Please describe what might influence your children’s health behaviors that are particular specific characteristics your children? (age, gender, personality, preferences, competencies)
- Please describe any developmental stages, critical periods or specific life events in which it was more difficult or less difficult to maintain health as a priority? (toddler pickiness, adolescent defiance, rules at friends’ houses, etc.)
- How have your health-related parenting tactics changed as your kids grew older?
- How might, if at all, cultural traditions, holidays, special occasions or seasons affect your health practices?
- Please describe what or who else influences you and your children’s eating, PA, & sedentary behaviors?
- Please tell me, if at all, about ways that your children’s school environment influences how you parent in this regard?
- Please tell me, if at all, about ways that your children’s daycare influences how you parent in this regard?
- Please tell me, if at all, about ways that your children’s extracurricular activities influence how you parent in this regard?
- Please tell me, if at all, about ways that you/your partner’s jobs influences how you parent in this regard?
- Please tell me, if at all, about ways that your community influences your ability to parent in this regard? (neighborhood environment: safety, access to recreational space, access to supermarkets, venues to access healthy foods)
- Please tell me, if at all, about ways that the media or other outside sources (culture, norms, policies) influence your ability to parent in this regard?
- What other stressors affect your ability to parent for positive nutrition, PA, & sedentary behaviors?
- Describe the barriers that you face in regards to establishing and maintaining these healthy practices?
- Describe the types of behaviors or situations you might avoid in order to maintain your children’s positive health behaviors? (fast-food, concession stand, convenience stores, eating out, television or video games during the week, stationary video games, peers’ homes, school food, aisles of the grocery store)
- What do you rely on to help your children have positive eating, PA, & sedentary behaviors?
- What resources help you?
- What do you need to help you?

What’s next…

Sometimes in a situation like this (after a conversation is over) I think of something I wish I would have shared. With this in mind, I would like to email you in a few days to inquire if there is anything else you would like to add or expand upon from this interview. You are free to reply “no thanks.” I will not be offended. Additionally, towards the end of my analysis I will contact you with an excerpt of the findings and ask you to provide feedback on the way that the findings resonate or don’t resonate with your experience.

Thank you so much for sharing your parenting experiences. It is my hope that the insight learned from this study will inform parenting education resources and possibly services and programs related to children’s health and wellness. I am pleased to offer you a $15 honorarium in the form of a gift certificate.
APPENDIX D

CROSS-REFERENCE MATRIX

Research Question 1: How do high-scoring parents manage aspects of the obesigenic environment that threaten their obesity-preventive lifestyles, as related to eating, physical activity, and screen-related behaviors?

Research Question 2: What are the everyday, immediate experiences (reflections, intentions, and strategies) of high-scoring parents in their efforts to positively socialize their children’s eating, physical activity, and screen-related behaviors?

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Grand Tour Questions</th>
<th>Component of adjusted FEM model addressed</th>
</tr>
</thead>
</table>
| RQ 2: You were asked to participate in this interview because you scored highly on the FNPA screening tool. For the sake of this study this qualifies you as a “high-scoring” parent in regards to your children’s eating, PA, & sedentary behaviors. How did you come to be a parent that stresses the importance of positive eating, physical activity, and sedentary behaviors in your children? | o What are your beliefs in regards to parents’ ability to influence their own and their family’s health practices?  
o What events in your past family, school, or work experiences have shaped you in this way?  
o How do you feel about the role/responsibility of parents in constructing positive health practices and attitudes in their family?  
o Can you tell me about how you feel about parenting specifically for positive eating, PA, & sedentary behaviors?  
o Where does “establishing and maintaining positive health behaviors” fall on your parenting priority list?  
o To what degree would you say that your children are aware of your desire for them to be healthy?  
o How important is it that your children understand that having healthy behaviors is a priority?  
o What is your idea of positive (a) eating, (b) PA, & (c) sedentary behavior in children?  
o How did you become knowledgeable about each of these positive health practices/behaviors? | Inner circles: Knowledge & Beliefs |
| RQ 2: Please describe your parenting practices related to eating, physical activity, and sedentary time that help you guide your children’s behaviors? Please include any “tricks” that you use to help your children make healthy eating, PA, & sedentary choices on a daily basis? Let’s | | Inner circles |
RQ 1: Please describe what makes it easy or hard to establish or maintain positive (a) eating, (b) PA, & (c) sedentary behaviors in your children on a daily basis? Let’s start with eating and move to PA and finally sedentary behaviors.

<table>
<thead>
<tr>
<th>Inner circles: Modeling, Shaping, Accessibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>o     In what circumstances do you &amp; your children discuss healthy (a) eating, (b) PA, &amp; (c) sedentary related issues?</td>
</tr>
<tr>
<td>o     What kinds of conversations and behavioral tactics do you utilize to foster an attitude of positive obesity-related behaviors in your children?</td>
</tr>
<tr>
<td>o     How do you encourage your children to be physically active? (structured conversations, routines, modeling, restrictions, goal-setting, social reinforcement, improving accessibility)</td>
</tr>
<tr>
<td>o     What does physical activity look like in your family? (exercise together, parent coaching, family sports contests, pedometers, PA charts)</td>
</tr>
<tr>
<td>o     What does meal preparation and mealtime look like? (plan, shop &amp; cook together, keep produce visible and cut up, fruit &amp; veggies chart, sometime/anytime drawers, etc.)</td>
</tr>
<tr>
<td>o     How do you encourage your family to eat healthily? (structured conversations, routines, modeling, restrictions, goal-setting, social reinforcement, monitor accessibility)</td>
</tr>
<tr>
<td>o     How do you shape your children’s time in sedentary behaviors? (structured conversations, routines, modeling, restrictions, goal-setting, social reinforcement, monitor accessibility)</td>
</tr>
<tr>
<td>o     What kinds of things do you think about and plan for each day to keep your children healthy?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outer ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>o     Please describe what might influence your children’s health behaviors that are particular to your home and family environment? (family structure, ethnicity/culture, socioeconomic status, parent educational status)</td>
</tr>
<tr>
<td>o     Please describe what might influence your children’s health behaviors that are particular specific characteristics your children? (age, gender, personality, preferences, competencies)</td>
</tr>
<tr>
<td>o     Please describe any developmental stages, critical periods or specific life events in which it was more difficult or less difficult to maintain health as a priority? (toddler pickiness, adolescent defiance, rules at friends’ houses, etc.)</td>
</tr>
<tr>
<td>o     How have your health-related parenting tactics changed as your kids grew older?</td>
</tr>
<tr>
<td>o     How might, if at all, cultural traditions, holidays, special occasions or seasons affect your health practices?</td>
</tr>
<tr>
<td>o     Please describe what or who else influences you and your children's health behaviors? (family demographics, child characteristics, organizational characteristics, community characteristics, policies, media, culture)</td>
</tr>
</tbody>
</table>
children’s eating, PA, & sedentary behaviors?
- Please tell me, if at all, about ways that your children’s school environment influences how you parent in this regard?
- Please tell me, if at all, about ways that your children’s daycare influences how you parent in this regard?
- Please tell me, if at all, about ways that your children’s extracurricular activities influence how you parent in this regard?
- Please tell me, if at all, about ways that you/your partner’s jobs influences how you parent in this regard?
- Please tell me, if at all, about ways that your community influences your ability to parent in this regard? (neighborhood environment: safety, access to recreational space, access to supermarkets, venues to access healthy foods)
- Please tell me, if at all, about ways that the media or other outside sources (culture, norms, policies) influence your ability to parent in this regard?
- What other stressors affect your ability to parent for positive nutrition, PA, & sedentary behaviors?
- Describe the barriers that you face in regards to establishing and maintaining these healthy practices?
- Describe the types of behaviors or situations you might avoid in order to maintain your children’s positive health behaviors? (fast-food, concession stand, convenience stores, eating out, television or video games during the week, stationary video games, peers’ homes, school food, aisles of the grocery store)
- What do you rely on to help your children have positive eating, PA, & sedentary behaviors?
- What resources help you?
- What do you need to help you?
APPENDIX E

TRANSCRIPTIONIST CONFIDENTIALITY AGREEMENT

Malinda Mabry-Scott Transcription Services
244 Porters Bluff
Clarksville, TN 37040
931-906-9897/931-206-5414

June 26, 2013

Dear Jaclyn Downey:

I, Malinda Mabry-Scott understand that the audio files that I will be transcribing for the Understanding Health-Promotion in Families: A Qualitative Exploration of Nutrition, Physical Activity and Sedentary Behaviors Study often contain highly sensitive and personal information, as will the transcripts. I will take the following steps to protect these data:

1) I will keep the audio files and transcripts stored in a password-protected computer; only I know this password.
2) If I print hard copies of these files, I will keep them in a locked cabinet to which only I have access.
3) I will delete all project-related files once my work on this project has ended, and will shred any paper copies of these files at that time.
4) I will encrypt all files that I send to team members.
5) I will not otherwise share these data, or discuss their contents, with anyone outside the team.
APPENDIX F

INTERVIEW SUMMARY SHEET

Site: ____________________________ Type of Interview: ____________________________
Interviewers: _____________________ With Whom: ____________________________
Interview Date: ___________________ Code for Interview: ________________________

1. Briefly describe the participant and family discussed in this interview.

2. What were the main ideas/themes around related health behaviors & practices that stood out?

3. Describe the interview in 3 words.

4. Summarize the information gathered in target areas:

<table>
<thead>
<tr>
<th>Target area-Information</th>
<th>Health practice/behavior details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family description</td>
<td></td>
</tr>
<tr>
<td>Eating</td>
<td></td>
</tr>
<tr>
<td>Physical activity</td>
<td></td>
</tr>
<tr>
<td>Sedentary/Screen related behaviors</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Follow-up</td>
<td></td>
</tr>
</tbody>
</table>
4. Anything else identified as salient, interesting or important that is relevant to the research topic?

5. Any ethical issues, dilemmas or situations arise?

6. Any new questions or issues to cover in future interviews?

7. Any questions for my major professor or committee members?
APPENDIX G

EXCERPTS OF AUDIT TRAIL

AJ-Dawn
12/12/13 - 2:13
Post-int summary 12/12
Transcribed 12/12

Sent member check
Received comments

FR 2
Mother
26-29
Married
2 kids 10-7
Bachelor
FT homemaker
$179,000-199,999
European
Dear Parents,

My name is Jacy Downey. I am a mother of three children in the Indianola school district and a volunteer on the Indianola School Wellness Committee. I am also a PhD student at Iowa State University and am completing a research study as a partial requirement of my program. My study was designed to further the understanding of how parents influence their children’s eating, physical activity, and screen-time behaviors.

I am kindly asking for you to participate in a survey that will only take approximately 5 minutes to complete. At the beginning of the survey you will find information that discusses your rights and responsibilities as a participant in this study as well as the procedures of the study. Please show that you understand by checking the box at the bottom of the page. You will then be asked to respond to 21 questions. I understand that you may have more than one child living at home, however please answer the survey questions as if you are referring to your elementary age child(ren). By choosing the category that best describes the typical patterns in your household—not the desired patterns—you are providing very valuable information. The questions at the end of the study will be demographic in nature. These questions are asked so that I can consider how the information learned from this study may be influenced by the diverse backgrounds of the participants. All information will remain confidential.

It is possible that a small number of you may be invited to participate in an interview, therefore you will also be asked to provide your contact information. Please note that you will not be contacted except in reference to this study and your information will not be shared. In closing, it is important to me that you understand that I am deeply grateful to you for completing this survey. The information obtained from this study will not only help me to complete my program requirements but will also inform the development of important wellness initiatives at your children’s school.

Jacy Downey
Iowa State University
515-480-2932
jdowney@iastate.edu
I am aware that I am being asked to participate in a research study.

I am aware that the purpose of this research is to increase the understanding of how parents influence children’s eating, physical activity and screen behaviors.

I am aware that my participation in this study is voluntary and that I can skip any questions I do not wish to answer, refuse to participate, or leave the study at any time without penalty.

I am aware that it is possible that I may experience discomfort as a result of disclosing information.

I am aware that there is no direct benefit to me for participating in this study, however the information learned from this study may eventually benefit parents and children.

I am aware that my identity will be kept confidential to the extent permitted by applicable laws and regulations.

I am aware that my participation in this study may be limited to this survey or that I may be invited to participate in an interview which could last up to 2 hours. If I am interviewed, I may also be contacted for feedback.

I am aware that if I have questions about the study or in the event of a research-related injury, I have the right to contact the researcher (Jacy Downey @ 515-480-2932 or her advisor, Dr. Clinton Gudmunson @ 515-294-8439), the Institutional Review Board (515-294-4566), or the Director of the Iowa State University Office for Responsible Research (515-294-3115).
I agree that I understand what is being asked of me by participating in this study.

**Instructions:** For each category, please circle the description that best fits your elementary-aged child or your family. It is important to indicate the most common or typical pattern and not what you *would like* to happen. Please read carefully.

<table>
<thead>
<tr>
<th>1. Breakfast Patterns</th>
<th>My child rarely eats breakfast <strong>and</strong> we don’t typically eat together as a family.</th>
<th>My child does not regularly eat breakfast <strong>but</strong> we eat together as a family on most days of the week.</th>
<th>My child eats breakfast on most days <strong>but</strong> we don’t typically eat together as a family.</th>
<th>My child eats breakfast on most days <strong>and</strong> we typically eat together as a family.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Family Eating</td>
<td>Our family regularly eats fast food <strong>and</strong> we eat while watching TV.</td>
<td>Our family regularly eats fast food <strong>but</strong> we rarely eat while watching TV.</td>
<td>Our family rarely eats fast food <strong>but</strong> we eat while watching TV.</td>
<td>Our family rarely eats fast food <strong>and</strong> we rarely eat while watching TV.</td>
</tr>
<tr>
<td>3. Food Choices</td>
<td>Our family uses prepackaged foods frequently <strong>and</strong> we usually do not eat fruits and vegetables with meals (or as snacks)</td>
<td>Our family uses prepackaged foods frequently <strong>but</strong> we regularly consume fruits and vegetables with meals (and as snacks)</td>
<td>Our family eats mostly freshly prepared meals <strong>but</strong> we usually do not eat fruits or vegetables with meals (or as snacks)</td>
<td>Our family eats mostly freshly prepared meals <strong>and</strong> we regularly consume fruits or vegetables with meals (or as snacks)</td>
</tr>
<tr>
<td>4. Beverage Choices</td>
<td>Our child frequently drinks soda pop or other sweetened drinks, <strong>and</strong> rarely drinks low fat milk with meals or at snacks.</td>
<td>Our child frequently drinks soda pop or other sweetened drinks, <strong>but</strong> frequently drinks low fat milk with meals or at snacks.</td>
<td>Our child rarely drinks soda pop or other sweetened drinks, <strong>but</strong> rarely drinks low fat milk with meals or at snacks.</td>
<td>Our child rarely drinks soda pop or other sweetened drinks, <strong>and</strong> frequently drinks low fat milk with meals or at snacks.</td>
</tr>
<tr>
<td>5. Restriction and Reward</td>
<td>I don’t monitor my child’s snack food consumption and snack foods such as candy are frequently used as a reward for good behavior.</td>
<td>I don’t monitor my child’s snack food consumption but snack foods such as candy are not used as a reward for good behavior.</td>
<td>I monitor my child’s snack food consumption but snack foods such as candy are used as a reward for good behavior.</td>
<td>I monitor my child’s snack food consumption and snack foods such as candy are not used as a reward for good behavior.</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>6. Screen Time</td>
<td>My child watches television or plays on the computer (or with video games) for more than 4 hours each day.</td>
<td>My child watches little television but plays on the computer or with video games for 2-4 hours each day.</td>
<td>My child doesn’t play on the computer (or with video games) but watches television for 2-4 hours each day.</td>
<td>My child watches television or plays on the computer (or with video games) less than 2 hours each day.</td>
</tr>
<tr>
<td>7. Television Usage</td>
<td>I rarely monitor the amount of TV my child watches and my child has access to a TV in his/her bedroom.</td>
<td>I monitor the amount of TV my child watches but my child has access to a TV in his/her bedroom.</td>
<td>I rarely monitor the amount of TV my child watches but my child does not have access to a TV in his/her bedroom.</td>
<td>I monitor the amount of TV my child watches and my child does not have access to a TV in his/her bedroom.</td>
</tr>
<tr>
<td>8. Family Activity</td>
<td>I rarely participate in physical activity (e.g. walking) and our family does not play games outside, ride bikes, or walk together very often.</td>
<td>I participate regularly in physical activity (e.g. walking) but our family does not play games outside, ride bikes, or walk together very often.</td>
<td>I rarely participate in physical activity (e.g. walking) but our family plays games outside, ride bikes, or walks together fairly frequently.</td>
<td>I participate regularly in physical activity (e.g. walking) and our family plays games outside, ride bikes, or walks together fairly frequently.</td>
</tr>
</tbody>
</table>
### 9. Child Activity

| My child participates in almost no physical activity during his/her free time and is not enrolled in any organized sports or activities with a coach or leader. |
| My child participates in some physical activity a few days a week (2-3 days) in his/her free time but does not typically participate in any organized sports or activities with a coach or leader. |
| My child does not participate in physical activity in his/her free time and does participate in some organized sports or activities with a coach or leader a few days a week (2-3 days). |
| My child regularly participates (i.e. on most days) in physical activity in his/her free time and also participates in sports or activities with a coach or leader. |

### 10. Family Routine

| Our family does not have a daily routine or schedule for our child’s bedtime and our child gets less than 12 hours of sleep each night. |
| Our family does not have a daily routine or schedule for our child’s bedtime but our child typically gets at least 12 hours of sleep each night. |
| Our family follows a daily routine or schedule for our child’s bedtime but our child tends to get less than 12 hours of sleep each night. |
| Our family follows a daily routine or schedule for our child’s bedtime and our child typically gets at least 12 hours of sleep each night. |

### 11. Identity of person taking the survey

1 = Mother  
2 = Father  
3 = Other (please list) _______________

### 12. Age of person taking the survey

1 = 18-25  
2 = 26-39  
3 = 40-49  
4 = 50-59  
5 = 60-69  
6 = more than 70
13. Current marital status of person taking the survey

1 = Single, never married,
2 = Married,
3 = Married/Separated,
4 = Divorced,
5 = Cohabiting,
6 = Widowed,
7 = Not cohabiting but in a committed relationship

14. Number of children living in the home

1 = 1
2 = 2
3 = 3
4 = 4
5 = 5
6 = 6
7 = more than 6

15. Age of children (please list)

16. Highest achieved educational level of person taking the survey

1 = Less than High School,
2 = High School,
3 = Some college or vocational training
4 = Associates,
5 = Bachelors,
6 = Masters,
7 = Advanced Degree (JD, Ph.D, PsyD, etc.)

17. Current work situation of person taking the survey

1 = Working now, employed by someone else,
2 = Self-employed,
3 = Temporarily laid off,
4 = Unemployed, looking for work,
5 = Full-time homemaker,
6 = Retired,
7 = Permanently disabled, unable to work,
8 = Student, not working,
9 = Other (please specify)__________________
18. Total household income level

1 = less than 20,000
2 = 20,000-49,999
3 = 50,000-79,999
4 = 80,000-109,999
5 = 110,000-139,999
6 = 140,000-169,999
7 = 170,000-199,999
8 = more than 200,000

19. Race/ethnicity of person taking the survey

1 = European American,
2 = African American,
3 = Hispanic,
4 = Asian American,
5 = Other,
6 = Multi-Ethnic

20. Name of person taking the survey (You will not be contacted except in reference to this study.)

21. Phone number and/or email address of person taking the survey
## APPENDIX I

*Table 1. Survey items for interviewed participants (n = 12)*

<table>
<thead>
<tr>
<th>Survey Item</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast Patterns</td>
<td>3.0</td>
</tr>
<tr>
<td>Family Eating</td>
<td>3.0</td>
</tr>
<tr>
<td>Food Choices</td>
<td>3.0</td>
</tr>
<tr>
<td>Beverage Choices</td>
<td>2.8</td>
</tr>
<tr>
<td>Restriction and Reward</td>
<td>3.0</td>
</tr>
<tr>
<td>Screen Time</td>
<td>3.0</td>
</tr>
<tr>
<td>Television Usage</td>
<td>3.0</td>
</tr>
<tr>
<td>Family Activity</td>
<td>3.0</td>
</tr>
<tr>
<td>Child Activity</td>
<td>3.0</td>
</tr>
<tr>
<td>Family Routine (sleep)</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Total score</strong></td>
<td><strong>29.0</strong></td>
</tr>
<tr>
<td><em>(Top score possible 30/30)</em></td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX J

*Survey items for surveyed and interviewed participants*

<table>
<thead>
<tr>
<th>Survey item</th>
<th>Mean Score Surveyed Participants $n=346$</th>
<th>Mean Score Interviewed Participants $n=12$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast Patterns</td>
<td>2.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Family Eating</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Food Choices</td>
<td>2.6</td>
<td>3.0</td>
</tr>
<tr>
<td>Beverage Choices</td>
<td>2.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Restriction and Reward</td>
<td>2.6</td>
<td>3.0</td>
</tr>
<tr>
<td>Screen Time</td>
<td>2.6</td>
<td>3.0</td>
</tr>
<tr>
<td>Television Usage</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Family Activity</td>
<td>2.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Child Activity</td>
<td>2.6</td>
<td>3.0</td>
</tr>
<tr>
<td>Family Routine (sleep)</td>
<td>2.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Total score (Top score possible 30/30)</td>
<td>25.0</td>
<td>29.0</td>
</tr>
</tbody>
</table>
APPENDIX K

Table 2. Demographic description of interviewed mothers

<table>
<thead>
<tr>
<th>Identity</th>
<th>Interviewed Participants, n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Interviewed Participants, n</th>
</tr>
</thead>
<tbody>
<tr>
<td>26-39</td>
<td>11</td>
</tr>
<tr>
<td>40-49</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Interviewed Participants, n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>11</td>
</tr>
<tr>
<td>Divorced</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average number of children living in the home</th>
<th>Interviewed Participants, n</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Interviewed Participants, n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working now, employed by someone else</td>
<td>4</td>
</tr>
<tr>
<td>Self-employed</td>
<td>2</td>
</tr>
<tr>
<td>Full-time homemaker</td>
<td>4</td>
</tr>
<tr>
<td>Other (working and student)</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education Level (highest achieved)</th>
<th>Interviewed Participants, n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some college or vocational training</td>
<td>1</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>2</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>5</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>1</td>
</tr>
<tr>
<td>Advanced degree (JD, PhD, PsyD, etc)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total household income</th>
<th>Interviewed Participants, n</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; $20,000</td>
<td>1</td>
</tr>
<tr>
<td>$50,000-79,999</td>
<td>1</td>
</tr>
<tr>
<td>$80,000-109,999</td>
<td>4</td>
</tr>
<tr>
<td>$110,000-139,999</td>
<td>1</td>
</tr>
<tr>
<td>$140,000-169,999</td>
<td>2</td>
</tr>
<tr>
<td>$170,000-199,999</td>
<td>1</td>
</tr>
<tr>
<td>&gt; $200,000</td>
<td>1</td>
</tr>
</tbody>
</table>
## APPENDIX L

**Demographic description of surveyed and interviewed participants**

<table>
<thead>
<tr>
<th>Identity</th>
<th>Surveyed Participants (n = 346)</th>
<th>Interviewed Participants (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>88.8%</td>
<td>100%</td>
</tr>
<tr>
<td>Father</td>
<td>8.6%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>2.7%</td>
<td>0%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-25</td>
<td>1.2%</td>
<td>0.0%</td>
</tr>
<tr>
<td>26-39</td>
<td>64.1%</td>
<td>83.3%</td>
</tr>
<tr>
<td>40-49</td>
<td>32.1%</td>
<td>16.7%</td>
</tr>
<tr>
<td>50-59</td>
<td>1.7%</td>
<td>0.0%</td>
</tr>
<tr>
<td>60-69</td>
<td>0.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>&gt;70</td>
<td>0.3%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single/Never married</td>
<td>3.2%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Married</td>
<td>80.8%</td>
<td>91.7%</td>
</tr>
<tr>
<td>Married/separated</td>
<td>3.2%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Divorced</td>
<td>8.2%</td>
<td>8.3%</td>
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<tr>
<td>Cohabitating</td>
<td>3.5%</td>
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</tr>
<tr>
<td>Widowed</td>
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<td>0.0%</td>
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<tr>
<td>Not cohabitating but in a committed relationship</td>
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<td>0.0%</td>
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<tr>
<td>Average number of children living in the home</td>
<td>2.4</td>
<td>2.5</td>
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<tr>
<td>Range of number of children living in the home</td>
<td>1-7</td>
<td>1-3</td>
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<tr>
<td>Employment Status</td>
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<tr>
<td>Working now, employed by someone else</td>
<td>72.9%</td>
<td>41.7%</td>
</tr>
<tr>
<td>Self-employed</td>
<td>9.0%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Unemployed, looking for work</td>
<td>0.9%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Not employed outside the home</td>
<td>12.8%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Retired</td>
<td>0.3%</td>
<td>0.0%</td>
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<tr>
<td>Permanently disabled, unable to work</td>
<td>0.3%</td>
<td>0.0%</td>
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<tr>
<td>Other</td>
<td>3.8%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Education Level</td>
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<tr>
<td>High school diploma</td>
<td>7.6%</td>
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<tr>
<td>Some college or vocational training</td>
<td>21.0%</td>
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</tr>
<tr>
<td>Associate’s degree</td>
<td>13.7%</td>
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<tr>
<td>Bachelor’s degree</td>
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<tr>
<td>Master’s degree</td>
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<tr>
<td>Advanced degree (JD, PhD, PsyD, etc)</td>
<td>5.5%</td>
<td>25.0%</td>
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<tr>
<td>Total household income</td>
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<tr>
<td>&lt; $20,000</td>
<td>2.5%</td>
<td>8.3%</td>
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<td>$20,000-49,999</td>
<td>12.7%</td>
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<td>$50,000-79,999</td>
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</tr>
<tr>
<td>&gt; $200,000</td>
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APPENDIX M

Figure 2: Model for data collection and analysis

- Audio-Recorded Interviews
  - Analytic Memos
  - Transcribed Interviews
  - Interview Summary Sheets

- Meaning Units (initial, highly descriptive)
  - Organize
  - Elimination

- Situated Descriptions
  - Psychological Reduction
  - Intentional Analysis
  - Imaginative Variation

- Themes/Typologies of Knowledge
  - Within Case Comparison
  - Cross Case Comparison

- Essential Elements
  - Member Checks
  - Peer Debriefing
  - Researcher Interpretation

- Essence of the Phenomenon
### APPENDIX N
APPROACH TO PHENOMENOLOGICAL METHODOLOGY (WERTZ, 2005)

<table>
<thead>
<tr>
<th>Core elements</th>
<th>Research processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>The epoche of the natural sciences</td>
<td>Researcher sets aside previous theories to abstain from allowing influences to bias description early in the analysis; preconceptions inform advanced analysis</td>
</tr>
<tr>
<td>The epoche of the natural attitude</td>
<td>Researcher adopts the open phenomenological attitude of maximal curiosity and uses phenomenological psychological reduction to richly describe how participants make meaning of their lifeworld</td>
</tr>
<tr>
<td>Intentional analysis</td>
<td>Researcher considers the psychological processes that contribute to participants’ meaning-making</td>
</tr>
<tr>
<td>Intuition of essences (eidetic reduction)</td>
<td>Researcher employs free imaginative variation to distinguish the essential features from the incidental to arrive at the essence of the phenomenon</td>
</tr>
<tr>
<td>Synthesis of essences with researcher insight</td>
<td>Researcher abandons the epoche of the natural sciences to apply preconceived knowledge as a guide in advanced analysis</td>
</tr>
</tbody>
</table>
APPENDIX O
EXCERPT OF TRANSCRIPT WITH MEANING UNITS

R: And it'll be on um...what was important and what is still important is that it's off for reading and however much time that takes is what it takes and if there's something on that somebody wants to watch, the bigger deal I make about it the bigger deal they're going to think it is so if I don't make a big deal about TV they'll eventually not care. If I don't care about it they won't care about it. If I care about something they're eventually going to care about it so I'm not strict about it and there's some days that there's, the TV is not on at all depending on the weather and there's some days it's on for several hours. Sometimes we're paying attention to it and sometimes we're not but um, and Jack like it'll go and with video games and stuff, if he gets a new game he'll just play the hell out it and um, he'll play it for a couple of hours at night or an hour, however much time we have or like on Saturday if I'm cleaning that's what he wants to do if there's no one outside um, but eventually he tires of it.

I: Himself?

R: Himself

I: Ok

R: And I would rather it be left up to him or her. I mean I'm not saying I just let them do whatever they want. I just give them reign enough to make their own decisions because that's how you learn how to make decisions if by making decisions. Some of those decisions aren't going to be great. Some of them are. I'm just you know, it all goes back to that whole they'll do what I do.

I: Uh-huh

R: As long I'm not screwing up.

I: And you're pretty comfortable with that, so it's been proven to you?
## APPENDIX P
### EXAMPLE OF EIDETIC ANALYSIS OF MEANING UNITS

<table>
<thead>
<tr>
<th>Meaning Unit</th>
<th>Situated description: Explanations, within &amp; cross-case comparison</th>
<th>Participants, Transcript page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parenthood (part of parenting)</td>
<td>Parenting for good health is part of being a good parent; everything you do as a parent matters; parents are primary influence especially in first five years so need to start with strong habits to be able to fight threats from the world; who else would teach kids?; limited amount of time to guide her kids’ health habits so making the most of it; parents have primary influence; kids need a solid foundation; her parents helped her learn positive habits so she will help her kids</td>
<td>Julie, (2) Steph, (66, 73) Mary, (5, 6) Leigh, (7) Scuba, (8) Ann, (4) Dawn, (7, 30) Railene 11 Jo, (10) Aspen, (7, 8, 48, 76) Kristie, (5) Marie, (13, 102)</td>
</tr>
<tr>
<td>Deliberate, intentional</td>
<td>Sees other peoples choices and chooses to be different; handles all situations so align with her child-rearing goals; reads, watches others, and studies before she acts; prepares for threats; wants habits that she chooses to instill to be good; kids must be taught these behaviors- not naturally ingrained; parents send messages with their actions and non actions; make time for things that are important; has a plan for her family and good health is part of it; wants to raise healthy adults; none of her parenting is by accident so why should this be different?; knows kids do best with consistency and structure</td>
<td>Julie, (4) Steph, (27, 29) Mary, (6, 7, 61) Scuba, (4) Ann, (67) Dawn, (7, 8, 19, 29, 77) Railene, (18, 68) Jo, (18, 36) Aspen, (34) Kristie, (2, 4, 7, 43, 88) Marie, (94, 95, 101, 102)</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Because she has the power to influence her kids, she also has the responsibility to teach them what she knows is best; 100% responsibility; parents have the ability to influence kids’ habits especially before they go to school; what happens at home is biggest influence so make it good; kids do what parents lead them to do so if not encouraging positive habits then kids won’t develop them; knows her kids copy her so must honor this; habits are hard to break so</td>
<td>Julie, (2) Steph, (9) Mary, (7) Leigh, (83) Scuba, (3, 8) Ann, (4) Dawn, (3) Railene, (6) Jo, (11) Aspen, (8, 11) Kristie, (9, 15, 23)</td>
</tr>
</tbody>
</table>
they better be good; health is too important so she cannot fail at this job

| Parenting priority | Establishing positive health behaviors is a top 5 parenting priority; she makes time for only the really important things and this is one of them; making this a top priority helps her overcome threats and difficulties that hold other parents back; priority for herself so naturally wants positive behaviors for her kids; believes learn habits when young so parent should be very concerned about what and how they learn; top 2-3 on priority list; once she made a decision about her priorities she was able to lay the groundwork to make the behaviors “natural” for her kids | Marie, (29, 30) | Julie, (4, 5)  
Steph, (38, 72, 74)  
Mary, (13)  
Leigh, (52, 72)  
Scuba, (9, 35)  
Ann, (5, 35, 73)  
Dawn, (3, 12)  
Railene, (11)  
Jo, (12)  
Aspen, (12)  
Kristie, (15)  
Marie, (14, 44) |
### APPENDIX Q

**EXAMPLE OF INTENTIONAL ANALYSIS**

<table>
<thead>
<tr>
<th>Code</th>
<th>A</th>
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<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
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</table>

**Example:**

- **Influential Factors Growth:** Pushed in opposite direction of her childhood (food, PA, screen). Close to be in crisis more so to have more energy in response to her parents. NOT being this way conscious parenting decision.

- **More Journey Positive Health Habits:** When she personally realized the importance of good habits was as same age to having kids. More focus because of having kids.

- **Believes one needs to:** Stitching, empathy to feel self becoming stronger; need to know this to have the skills to instill healthy habits.

<table>
<thead>
<tr>
<th>Code</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
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</tbody>
</table>

**Further Example:**

- **Priorities:**
  - Before 2nd child was born realized the habit had already unhealthy habits in twenties and slowly changed the habits.

**Conclusion:**

- She has struggled with body image issues since high school, had unhealthy eating habits which the parent with extensive exercise participation but low wants to eat very healthy. Husband thinks she still overdoes exercise at times. Does not want her kids to struggle with the same so she is really careful about how she helps them develop their habits. She has friends with kids that seem to parent their kids for healthy habits as she follows their lead.

- Found healthier eating from WW right after graduating from college, was heavy & started going up was told it was fat and had all sports go up so on PA, when had kids helping them so would this was her biggest concern.

- **Other:**
  - was always a bigger person as a student, her family had balanced meal growing up but were of the view plate mentality, she was called fat & this made her give up trying to be like this as a younger person. Now she wants to provide herself & her family with the best chance possible to be healthy weight & doesn’t want to deal with being heavy so the family practices good habits, gave up that kids had to try everything on the table & were encouraged to finish that plate; she is choosing to focus on key health first, in spite of the fact that she is not a picky eater but in eating more; overall habits were not well taught by her parents, center for preschool sugar to be lower instead of ingredients. Low salt, reduced regrets (less on holidays, less on turns, etc.) & she doesn’t want that for her family. Both parents grew as relatively poor so did not have broad experience — taught them to be able to instill good habits for when she has kids pass on value at a young time.
APPENDIX R

EXAMPLE OF THEME CREATION:
“INTENSIFIED FOCUS UPON BECOMING A PARENT”

Intensified focus upon becoming a parent

- Parental role or responsibility
  - Parental role
  - Responsibility

- Top priority
- Deliberate & intentional
  - More than just a another rule to follow
    - Associates house rule/habit with health outcome
    - Considers age & developmental stage
APPENDIX S

IMAGINATIVE VARIATION OF ESSENTIAL CHARACTERISTICS

Her own childhood/family/history was a motivating factor

Because not parented this way:
Julie- started having healthy habits about the time she became a parent; wanted to be a mom with energy to keep up with kids (hers were not)

Because parented this way:
Ann- parents struggle with weight so tried to instill good habits in their kids; she went into health profession so believes this way of thinking is engrained in her
Jo- mother was very strict with food when growing up because of diabetes in family. This backfired in college but she quickly went back to healthy ways after gaining weight; when in grad school they cleaned up their habits and at same time became parents- wanted same for their child; husbands parents modeled PA but not hers; both her and husband in medical field so see consequences of poor habits & have shared interest in health; now have pressure to have healthy habits because of professions
Aspen- her mom struggles with maintaining healthy weight so eating well was definitely stressed growing up & especially focused on her vs her brothers (who her mom thought were built leaner thus less risk of gaining weight); she rebelled against her mom due to harshness but when became a parent she understands why but will be softer with her own kids; was college athlete and when sports career was over she gained weight so re-dedicated her habits

Because parented this way on one regard but not another:
Steph- family’s eating habits were healthy; no PA, mom a smoker; does not want to care for sick parents as they age; she did not have healthy habits until early twenties; made small changes over time after 2nd child’s birth
Leigh- her parents made balanced meals but had clean your plate mentality; WW taught her healthy eating in early 20s- before kids
Dawn- family’s eating habits were good but did not model PA; were obese & diabetic- she worries about the genetic tendency for these illnesses so is especially careful about creating good habits; she was a teacher so knows imp of modeling desired behavior
Railene- father was great example, mother & brother were not- chose to view mom as what not to do; she has always had good habits
Kristie- was raised this way with eating but not PA but married someone who did not eat healthy but was supportive & follows her lead; watched other people and took notes about what they would do & not do when became parents
Marie- always valued exercise but food growing up was not healthy; changed lifestyle in college (before kids) and lost weight; felt so much better & never looked back; wants this for her kids

*Because has poor body image:*

Mary- her motivation did not come from how her parents parented in this regard. She has a history with poor body image & unhealthy eating habits paired with extensive PA in high school; now rebounded to eat very healthy and still exercise a lot but thinks it is in control; does not want her kids to struggle like this so teaches healthy habits

Leigh- was called fat and led to believe she was bad at sports; developed a complex and became heavier as a result; does not want kids to fight this battle so wants to teach them best possible habits

Scuba- balanced meals yet candy as a child- wished her parents would have been more strict with her growing up; changed to healthy habits when an adult & more so when became a parent; has never fought weight issues

Jo- gained weight in college when she was out from under her mother’s wing & has struggled with body image since; wants kids to learn healthy habits to help them avoid weight gain and image issues

**Personally values/sees benefits of having positive health habits- knows how good it is to have positive habits and wants her kids to experience this life**

"feels better"

**Physical**

Julie- Poor choices means she feels bad, performance in PA suffers, reduced energy level

Steph- lethargic prior to becoming healthier then euphoric over becoming stronger; aha moment when realized connection between habits & how she felt

Leigh- feels physically healthier

Scuba- feels physically better with PA

Ann- loves to run, feels good to exercise

Aspen

Marie- physically feels better with PA- less sluggish, more energy- craves it

**Emotional**

Julie-believes good health is part of being happy; feels pride when kids make good choices

Steph- improved confidence, self-esteem- wishes she would have known earlier in life;

Mary- PA helps her be a better mom (more patient)

Leigh- likens how kids feel when playing outside to how PA makes her feel

Scuba- misses PA when off; stress reliever
Ann- joy of endorphins from regular PA & wants kids to experience joy & the excitement of events; the things that she enjoy are related to being healthy (job, past times)
Railene- believes sports were a source of pride & self-esteem, friendships, community involvement for her so sees benefits of PA now as preparatory for sports later for her kids
Aspen- increased self confidence from PA
Marie- motivation increased with PA

Mental-
Julie-improved focus
Steph- mental improvement with good habits
Leigh- more productive & focused
Mary- running allows her the pleasure of improving or goal achievement (does not talk about PA making her feel emotionally good)
Leigh- thinks that helping her girls avoid being teased about their weight will improve their happiness
Ann- believes PA helps kids burn off energy & bother each other less which is good for mom's sanity
Railene- stress relief from PA & feels relieved when knows she got her PA in each day & ate healthy
Aspen- feels she can control some controllables with good habits-empowering
Marie- focus improves w PA, more patient parent

Dawn- did not specify
Jo- focus on how bad she felt (body image) when gained weight not on how healthy habits make her feel now
Kristie- does not exercise but considers herself active but believes that healthy lifestyle is necessary part of being happy- no matter your size

Interested in health/passionate about subject/actively sought data-
Julie- reads; recent college courses
Steph- very passionate; experiments with self; asks others for advice
Mary- wishes she would have studied nutrition; big reader
Scuba- looks for info including clinical studies
Ann- profession helps keep her informed
Dawn- reads blogs, articles
Railene- looks for outside resources to help educate kids
Jo- chose health profession & husband is pediatrician- has access to articles and knows good research
Aspen- biochemistry major and nurse, husband teaches nut at college
Kristie- well read, librarian so has access to resources, harsh judge of others to focus her goals for parenting
Marie - her own realization of value of getting healthy made her passionate about helping her kids achieve this

**Intensified focus after becoming a parent**

*Parental role/responsibility- teaching positive health habits is a part of being a good parent; because she knows benefits of positive habits mom feels more responsible for helping her kids adopt; priority; deliberate* (meal planning, meal prep, clean & cut produce so ready-to-go, schedule meals at home around activities, bookends poor choices- screen, PA, eating)

Julie - parental responsibility to teach your children what you know/believe/have experienced to be best; she has the power to influence them so, much like other things, she must make it a top (5) priority & be intentional/deliberate in her actions; busy life forces evaluation of priorities & alignment of actions to priorities;

Steph - 100% parent responsibility to teach positive habits; about being involved and deliberate in all areas because strongly believes everything a parent does matters such that kids will do what parents do; all actions & words must support her child-rearing goals; wants kids to experience how thrilling/empowering it is to become strong; only makes time for her priorities and discards the rest/gets rid of distractions (TV, social media); tiny window of free time forces her to focus on highest priorities

Mary - due to her struggles with body imaging she is trying to fix herself by choosing the healthiest habits and thus thinks that her kids should have the same; she feels she has tremendous influence over her kids & knows what is healthy so has bigger responsibility to instill positive habits; top 5 on priority list; studies others looking for ways to be deliberate in reaching her parenting goals related to health habits;

Leigh - feels responsibility to her kids (and all kids- as a pastor); believes nutrition is linked to learning; not as dedicated to her own PA at this point but is making plans to get more PA when kids are in school FT;

Scuba - parents have power & responsibility- who else would do it?; believes one should do what they know to be healthy & she knows much of the long term repercussions from her job in health field; can always make time for PA because prioritizes health habits (top 5) above household cleaning, laundry and TV; deliberate
Ann - hired a nanny – this reflects that she wants to direct the care of her boys & hired one that would create healthy environment for boys; doesn’t know any other way then to be healthy herself; believes that must make it a priority or it won’t happen- her priority helps her overcome barriers; kids will not develop good habits if parents don’t deliberately lead them/teach them; she is careful about the habits she chooses to instill- need to be good because habits are powerful

Dawn - kids need to be taught about health habits- not naturally going to make good choices in this environment. Parents have limited time to guide kids and she is making the most of it- makes time for what she thinks is imp; people (after early childhood) do not innately know how to exercise or know how to incorporate it into their lifestyle; deliberately showing/talking about their values; parents actions send a message; is on her top 5 priority list & believes should be every parents priority but does not think it is the case now—but believes our culture is changing to support wellness

Railene - parents are primary influence especially in first 5 years before school so need to make a solid foundation by being intentional in all areas of parenting; she values (is a top 5 priority) both short term and long term effects of having healthy habits so thus she believes in appropriate modeling and coaching when little so that kids are prepared when outside influences increase; also older son is special needs and thrives with routine

Jo - returned to healthy habits after gaining weight in college; got pregnant while both in med school so were forced to tighten up life- make room for only the highest priorities- had to evaluate their use of time & be on same page in terms of parenting to be able to provide a healthy environment for her; her parents helped her learn good habits and she will do this also for her kids (less the strictness); sees parenting for healthy habits as part of responsibility of parenting; top of her priority list; believes positive health habits helps her parent in other areas

Aspen - married someone who is also passionate & knowledgeable so has bigger responsibility because knows the importance; her job to do all possible to set kids up for good health; parents have short time to instill good habits; habits are hard to breaks so should start off good; part of good parenting- likened to encourage kid to practice math or a sport- parents do this as a way to tell kids to do their best

Kristie - believes she had an idyllic childhood and wants to recreate that for her kids; judges others harshly in her goal of determining what is proper way to raise kids; before had children she and husband made all decisions about
how they would raise them so none of her parenting is an accident- has a plan; top 2-3 on priority list- no other way to raise kids- cannot fail at this part ; thinks all parents should embrace this goal (however her actions are contrary)

Marie- wanted her boys to see her being healthy and active because believes modeling to be very imp; changing to a better lifestyle has made her a diff parent than she would have been- for the better; responsibility of parenting thus get it done like with other prioritized areas; believes kids crave and benefit by structure so provides it in all areas; imp to create human beings so they can go out into the world and be responsible decent people

Believes & teaches poor health habits lead to poor health outcomes (short and long-term) & vice-versa

Short-term-
Julie- talks about how she & kids feel bad, performance in PA suffers, decreased energy level, trouble with focus
Steph- poor habits made her lethargic; daughter notices that eating poorly makes her feel awful
Leigh- knows she feels better being active; kids don’t yet make connections between eating a certain way and forming healthy habits; talks about fueling body & brain like gas in a car; tells girls that treating body right ensures that their bodies can do what they want them to; girls like PA because of the learning something new factor rather than health value
Scuba- PA is stress reliever; needs it daily
Ann- joy of endorphins; believes body can fix itself if properly taken care of (chiropractor); PA good for high energy boys- keeps mom’s sanity; doesn’t teach the immediate benefits yet (TOO YOUNG)
Dawn- discussed how kids feel after long periods of inactivity or after pigging out on junk; tries hard to help kids find PA that is positive experience; warned son about how getting in shape might be uncomfortable at times (normalized it)
Railene- thinks poor habits lead to sons’ hyperactivity, stomach aches, constipation and talks about this with boys
Aspen- believes daughter’s behavior (snotty) can be remedied with some PA
Marie- thinks poor habits lead to behave issue; being crabby, impatient, sluggish

Long-term-
Julie- Her family is overweight
Steph- extended family is unhealthy & overweight
Leigh- she & husband are both overweight but have good stats
Scuba - older child understands that good choices will pay off later; younger kids don't get long term effects
Ann - healthy habits keep body healthy for life
Dawn - links poor habits to obesity & T2D but focuses on teaching kids positive health habits at this stage not talking about weight
Railene - sees mom's health demise as result of poor habits (overweight, achy joints, sore back, hacking cough)
Aspen - payoff to habits - saw them as a nurse
Marie - believes harder for her kids to makes connection because no illness in family
Kristie - only says that health leads to happiness - does not give reasons or explanation to kids (NOT TYPICAL)

Wants kids to internalize the reasons why it is important so they will want positive health habits for themselves - “not just another rule to follow”

Short-term -
Julie - talks with kids about the relationship between poor health habits and immediate negative consequences (short-term outcomes); feels pride with kids good choices
Steph - same as Julie; talks about weight gain as an unbalanced equation; feels pride when kids make good choices
Mary - feels pride that kids look forward to being able to run/exercise like parents; kids are too young for making connections
Leigh - feels pride that her girls are not picky eaters (this is a hot button)
Scuba - feels pride when kids makes good choices (w/o arguing) - shows they know her expectations and hard work is paying off; at young age she is happy that they think PA is social and fun – later they will understand health benefits (as proven by older daughter)
Ann - proud to see boys healthy & happy but not trying to internalize yet
Dawn - pride when sees boys making good choices, reaping rewards of PA hard work; wants kids to understand relationship between poor habits and outcomes so they can begin to internalize
Railene - boys are young so mostly acting out of habit but older son is beginning to make comments that he understands importance; feels pride
when boys make good choices as it ensures she has adequately instilled the need

Jo- pride when kids are happy about making good choices; reasons are simple- “it’s not healthy” at this point but knows this will change; oldest is in touch with sugars due to mom’s gestational diabetes and need for PA because of mom getting back to exercise after having a baby

Aspen- believes kids know value of good habits due to rules and parents making time for healthy habits; talks about what kind of choices make them feel good or bad; talks about instant gratification w food as a trap; wants kids to also value good habits so explains why even though younger ones don’t understand yet she is repeating at various developmental levels; tries to connect the dots for her kids so they don’t think they are being punished by not being allowed junk; believes nut & behave are related; wants kids to find love of PA and learn diff PA so can do it forever (not just sports); feels pride & reward when kids make good choices

Marie- knows how poor choices make her feels so warns against this when encouraging boys but does not think boys internalize much now- mostly habit; believes poor choices lead to behave issues; not a lot of explanation beside it’s not good for you

Long-term-
Weight issue is sensitive, media/culture centered  *might be a separate theme
Weight not a theme- Scuba, Ann (age of boys), Marie (no disease in family so do not see ill effects

Kristie- only says that health leads to happiness- does not give reasons or explanation to kids (NOT TYPICAL); pride when kids follow expectations set for them

This is a developmental issue-

Julie- young kids do not understand as well as older kids; uses age appropriate language, creates opportunity to be successful for kids (may use care to describe process of getting in shape so kids are warned- know what to expect), more reasons/discussions as they develop; more difficult at certain stages than others (when little they do what told (+lighter schedule so fewer temptations), then get rebellious & independent in middle childhood, then begin to internalize and gets easier)
Steph- teenage daughter can make connection between poor habits & weight concerns but is yet to embrace PA; talks to younger son about fun of PA. He makes good eating choices out of habit. Has learned from older child and will be more prepared for his upcoming experiences; wants kids to see her struggles (to get fit, to stick to diet) and successes to understand that it isn’t easy but the choices were all hers.

Mary- her kids are young so mostly just pleasing mom but she wants them to eventually internalize; believes they are getting a sense of what is imp because not much takes her away from them (SAHM) besides PA.

Leigh- kids are very young so blatant connections are not being made, more out of habit.

Scuba- daughter is a teen and wants to make more decisions for herself (drink pop) that make it hard to parent the younger kids; had conversations about being an example that showed she is internalizing.

Ann- boys are too young so don’t require reasons but expects that going to school FT will change that – create other influences that she will need to work around; she will work harder to help them understand as they get older.

Railene- boys are young so keeps explanations simple; has conversation as situations present themselves; talks about being fit & healthy but is aware that reasons will become more imp as they age.

Jo- kids are young so now habit forming is more imp that reasons but knows this will change, anticipates scheduling issues w structured PA & that body image will become an issue; also expects more barriers as they age.

Aspen- kids are young or not in public schools so not many influences; knows this will change so imp so set good habits.

More Effort

Julie- Admits that parenting for positive health habits takes more effort, a commitment and some sacrifices; though she has flexible work schedule which helps time/logistics are still a barrier, convenience sacrificed, temptation is everywhere; stigma of being a fanatic.

Steph- She lives her priorities and because of FT job & where she lived a lot of time was sucked up in commute & caring for property which meant little free time. Now live in town and expect to have simpler life with less stress;
senses that her ways are not the majority; when she was becoming healthier she had to be regimented (counted calories, tracked diet, PA goals, etc) but now is easier; effort is not more to her because she throws out all things that don't matter; believes obstacles are only as big as you allow them to be; no stigma

Mary- SAHM so feels that she has the time to devote to helping kids develop positive habits (NOTE- KIDS ARE YOUNG); Takes more effort to plan to be able to be the kind of model she wants to be & for her & husband to both get time for daily PA; fights stigma of being judged as pretentious or silly so tries to stay on the down-low

Leigh- kids are young so they are trained/obedient; other areas of parenting are harder (picking out own clothes); parenting this way is who she is so does not feel like job (NOTE- KIDS ARE YOUNG); biggest priority is for family to eat together at dinner so arranges life so this happens; time is biggest barrier (works many nights); no stigma

Scuba- takes more effort especially when kids enter school system where she feels she loses some power- though she feels most influence comes from home; believes that consistency in efforts now means less battles later; effort mostly comes from time/logistics because live out in country and have to commute to town multiple trips & she is the only driver most of the time & cant count on a neighbor to carpool; knows her family is diff than most but no stigma

Ann- battle to get her 4 year old boys to eat or manage screens but not hard for them to be active- natural; harder to keep monitoring screens when she is tired, has work to do or in winter; for some it might be easier to drive thru when time is pressed but not for her because of having young boys (not fun or easy to take them places); no stigma

Dawn- takes a commitment, time & energy to parent this way. She is lucky enough to be SAHM and can make time for her priorities w/o much competition from other responsibilities; comments that some parents don’t have energy or too stressed to say no (because harder to say no than yes); takes effort to arrange schedules so all get PA, fix and freeze healthy meals to keep her from drive thurs, introduce & encourage healthy foods against pushback

Railene- believes it is harder to eat at home vs drive thru or enforce screen time but also believes that sacrifices are a part of parenting- should be this way; finances and time is tight so she is forced to live her priorities; no stigma
Jo - hard to limit her own calories and maximize her kids (she worries about low weight); thinks mostly junk is convenient so struggles with eating while out and ease of cooking fresh vs processed; hard to get kids involved in PA because of their young ages & time/logistics; need to schedule in PA or wont happen

Aspen - believes it is especially a battle to teach good food habits & limit screens- must be willing to make it top 5 priority & put in the effort & be consistent until kids see it as an expectation & thus battles reduce; her self-discipline is biggest key because it is difficult to always be consistent (can’t be on the fence) because poor choice is easier choice (lots of threats); time crunch is not hard because SAHM and has kept kids from structured PA so not as busy; stigma that seem judgmental of others

Kristie- takes time & energy to shop for healthy foods; supposedly would be all natural & organic if had time but needs convenience foods due to busy life; says she is too busy for exercise but is active in daily life; grandparents take kids to Y & husband plays in yard but she doesn’t concern herself with exercise

Marie- feels that one must experience benefits of healthy habits to be able to commit to all it takes to lead kids- involves wiring yourself differently so that can push barriers aside (thus does not believe that just providing resources is enough); commute to town complicates- makes for time crunch- she is only driver some parts of year; takes more time to shop, prepare & fix healthy meals vs eat out; takes more effort, energy & diligence & especially hard when laying the groundwork when kids are little but becomes easier when expectation is there; many areas of parenting are hard/many distractions- why is this different?; Make it a top priority and get it done via forming habits; believes there is value sin kids seeing her push through obstacles to live her priorities; stigma – get labeled because not socially acceptable to restrict kids’ junk

**Habit/expectation creation & house rules- consistency is key; a good habit is hard to break**

*It starts with “we don’t know any other way” (habit forming)*

Julie (kids)
Steph (younger son only)
Mary (kids)
Leigh (kids)
Scuba (kids)
Ann (self & kids)
Dawn (kids & self)
Railene (kids & self)
Jo (kids & self- except for college experience)
Aspen (kids & self – except for college experience)
Kristie (kids & self- though not mainstream in many ways)
Marie (kids)

Modeling
Eat together regularly-
Julie, Mary, Scuba (often w/o dad), Ann (often w/o dad)
Steph-takes advantage of meal for conversations
Mary
Leigh- goes out of her way to have lunch with child in daycare & dinner with family even though works many nights
Dawn- will meet at Subway or even take food to dad’s work so can eat together
Marie- eat breakfast together but sometimes have to eat dinner in shifts

Parents get regular PA
Julie, Railene, Dawn, Jo, Aspen- kids imitate parents
Steph- takes kids with her to gym; talks about how fun & how getting fit is a process
Mary
kids go to gym w her, see her at races; takes planning for her to get PA (has to get sitter); chose gym w daycare
Leigh- go to Y together, kids see her exercise & see older kids be active at Y
Scuba- mom walks upper track while kids play at FHouse
Ann- go to daycare at Y so see her make it a priority
Aspen- runs or walks with a friend and daughter talks about how she looks forward to being old enough to do the same
Marie- walks dog in neighborhood – kids see her

Be active mentality-PA is part of family entertainment/past time, is fun; find activity for life- not just a sport that is temporary; leave little time to sit; be outside;
puts a healthy spin on life (walk after Thanksgiving dinner, active birthday parties, etc)-
Julie, Steph, Mary, Leigh, Scuba, Ann, Dawn, Railene, Jo, Aspen, Kristie, Marie

Family exercises together- mom joins kids in unstructured play- doesn’t just send them outside:
Julie- goes to Y together, joins them in unstructured play
Steph- takes kids with her to gym; involves them in races
Mary- bike rides, pool, more unstructured (kids are young)
Leigh- Monday is self-proclaimed “Family night at the Y”; stay longer after swim lessons
Scuba- FHouse open gym, play in yard
Ann- unstructured play together; takes kids to Y on Saturdays
Dawn- Y, run races with oldest son
Railene, Jo- unstructured PA + functional activity (walk for errands)
Kristie- she doesn’t exercise but husband plays with kids
Marie- Y or FHouse every night w kids

Live priorities (limited screen time for parents if expected for kids- model that screens are not a good use of time)- Julie, Steph, Mary, Leigh, Scuba, Ann, Dawn, Railene, Jo, Aspen, Marie

Shaping eating
Mealt ime structure:
Food not on the table- Julie, Steph, Dawn
Simple meals
   Steph, Kristie, Marie- 5-7 ingredients rule; easy to prep
   Leigh- tries to avoid casserole type meals- would rather be whole foods;
girls do a “color check” to makes sure have enough variety & produce
   Scuba, Ann, Jo- has go-to meals that are simple & easy to prep (may do produce, cheese & crackers or breakfast food)
Subs healthier ingredients-
   Julie, Steph- fixes most meals herself but makes subs in recipes to make as healthy as possible
   Mary, Dawn- when kids want sweets she tells them she can make better ones at home & then subs in healthier ingredients & lets kids help bake
   Leigh, Railene- wheat pasta, whole wheat crackers
   Scuba- will buy Sunchips when kids beg for chips
   Ann- wheat flour; add flax
Bite rules (must try but don’t have to finish)
   Julie- one bite but no fighting about food (follows supply but don’t regulate mentality)
   Steph, Leigh, Jo- must try
   Mary- assigns a certain number of bites (based on if she believes they actually don’t like the food or if just being stubborn); cooks 2 veggies per meal so they will at least like one of them
   Scuba-negotiates number bites of healthy food they do not love
   Ann- assigns number of bites because saying eat “some” does not work
   Dawn- 1 bite only for new foods for the first few exposures (not w familiar foods)
   Aspen- 3 bites
   Marie- 1 bite rule- eat what you take
   Kristie- believes her job is only to provide healthy food but does not require them to try it
Repeated introductions
   Julie, Ann, Dawn- one bite rule each time prepared
Steph- kids are not picky so once proven they do not like a food she allows an “equal replacement” from same food group
Mary- cooks it a diff way until finds most acceptable; even makes smoothies with certain foods
Leigh- won’t try unpopular foods again at home but might order at a restaurant & let kids try
Kristie- kids are picky so regularly fixes food they don’t like & never makes them try

Sneaky chef
Julie (adds in things but tells kids), Mary, Ann (no need as long as tastes good), Scuba (yes), Dawn (no- wants kids to know what a food tastes like)

Not a short order cook
Julie- won’t starve mentality
Steph- allows equal replacement
Mary- fixes 2 veggies so that kids will like at least 1; son does not like milk or cheese so allows cottage cheese & yogurt for dairy
Leigh- accounts for quirks-can sub for a diff fruit or veggie (“pick a green veggie”
Ann- sometimes makes separate meal-makes diff veggies for kids based on their preferences (young); allows PB sandwich on whole wheat bread only if don’t like meal; if did not eat much produce that day then she will choose one for dinner that she is sure they will like
Dawn- can have apple if don’t like meal
Jo- no replacement meal but asks for kids input (& they are not picky)
Aspen-kids can choose lunch but dinner is non-negotiable- no subs
Kristie- does not make kids try meal & can have an apple if don’t want it
Marie- 1 bite; tries to avoid making food she knows they hate; kids can make self PB sandwich if hate meal (only because kids are not picky)

Early exposure to food carefully considered
Julie- limited sugar
Mary- kids don’t even ask for junk because have never seen it- (young)
Leigh- witnessed family member feed toddler only “kid food” and decided she would be sure to teach them how to eat as a “person” & not be picky
Jo- husband is pediatrician so was careful to avoid sweets so not develop sweet tooth
Aspen- made own baby food

Direction to healthiest foods over others
Julie- allows more of healthiest food and limits least healthy in a meal
Mary- protein over noodle; 2 veggies offered so sure veggies are eaten
Leigh- salad before meal when out
Scuba, Mary, Dawn, Aspen, Marie- makes sure most healthy gets in before seconds are allowed

No TV during meals
ALL

Balanced meal
Steph- 40-40-20; red meat once/week, regular includes fish, salad w veggies always part of meal
Dawn, Railene, Jo- kids help prep meal so learn what balanced meal looks like
Marie- simple meals w common ingredients, adds fruits & vegetables to every meal

Restricts junk (pop, candy/sugar, junky cereal, packaged pastries)
Julie- allows pop when out to eat (rare); would allow Gatorade over pop but is undecided if any better than pop
Steph- allows pop when out to eat (rare) and does not believe in encouraging diet pop because thinks it becomes a crutch (“but it’s diet”) 
Mary- restricts junk. Pop by not bringing home; does not serve juice- high calorie and not as good for you as whole fruit
Leigh, Marie- allows pop when out to eat if had enough milk for the day
Scuba- only caffeine free pop and only when eating out – no refills; created a vitamin drink to give kids another beverage choice that she approves of; avoids convenience stores
Dawn- no pop at home, 10 g or less sugar rule for cereal
Railene- half a can a pop (caffeine free) on Sat movie night at home
Jo- mini can at grandparents
Aspen- no pop at home
Kristie- Juicy Juice allowed; clear pop at restaurants; lets kids have full sugar Kool aid & lemonade whenever they want
Marie- can have a sip of dad’s pop (since he insists on having it at home) but mom allows Gatorade but makes it from a packet & waters it down

Breakfast
Julie- most flexible meal but kids still choose from approved items
Steph, Jo- important
Mary, Kristie- imp so gets kids up early to have hot breakfast even though this is hard part of day
Leigh, Aspen- 1 daughter does not like breakfast food so eats lunch food for breakfast
Dawn- imp, fixes big breakfast every morning because it is the family meal; youngest son is not hungry in morning- she does not force (does not want him to eat when not hungry)

Prepares in bulk
Julie- makes multiple dishes and freezes as go-to meal; has marathon cooking days
Steph- makes big salad and adds to it all week long so part of every dinner
Leigh- cooks many chicken breasts at one time for the week to decrease prep time; makes extra & freezes food
Meal planning
Julie - arranges meals around weekly activities schedule; plans for 4 meals at home, a night eating out & a leftover night
Steph - repeats meals so doesn't have to plan; keeps typical items on hand; kids see her pack her lunch each day so reinforces that mom plans ahead to be able to make good choices
Mary, Dawn, Railene, Marie - plans for the week; Dawn looks at busy activity schedule to pick out days when need crockpot meal
Leigh - husband looks for healthy recipes while looking thru ads to informally plan meals; he stops for groceries as needed
Aspen - has to go out if town to get ingredients she needs to make her menu
Kristie - on 6 week rotation for menu with grocery list; posts menu - does not deviate

Family input on meals
Julie, Dawn - in advance when planning weekly meals; posts grocery list; avoids taking kids & husband to store
Mary, Jo - asks kids for input but avoids taking them to store to avoid temptation & battles over junk
Leigh - husband and daughter have routine of looking at weekly ads together to plan meals; often whole family goes grocery shopping together & eat a deli
Railene - plans meals for two weeks in advance & shops every day with boys

Crockpot, meal prep
Julie, Marie - flex schedule allows her to prep meals; uses crockpot on busy nights
Steph - she & husband work together to prep/grill meals so mom can go exercise after work
Mary - SAHM so has time to prep & cook; uses crockpot when busy
Leigh - husband gets home earlier so usually cooks
Scuba - job is flexible so can get to store or start dinner early
Ann - set out meat to thaw or use crockpot; kids eat more if help prep (young); has a nanny so can shop w/o kids
Dawn - involves boys in prep; uses crockpot often because swimming forces dinner to be so late
Aspen - has makeshift meals when in a hurry (cereal)
Kristie, Marie - uses crockpot during baseball season to avoid concession stand & drive-thru

Food not used as reward
Julie, Dawn
Steph, Mary - only following Halloween but otherwise does not
Mary - uses marble jar to work toward events as reward
Leigh, Jo - uses toys, stickers for reward
Aspen - coaxes young son to eat veggies with scoop of PB
Snacks

Steph, Railene- consistent rules
Julie- consistent rules; must ask first; produce first followed by other accepted snack (less healthy) if still hungry
Mary- kids are snack-centric so is an issue; kids have to ask to eat & know what is allowed
Leigh- kids know which are ltd and are allowed all the time; junky cereal (handful) has become a snack. She thinks it is not healthy enough for breakfast but does not want to completely restrict so uses it as a snack
Scuba, Jo, Marie- must ask, given pre-approved choices
Ann- must ask, given choices; believes diff to find healthy snacks that are convenient
Dawn- has glass bowls to help kids see appropriate serving size;
  schedules snacks at 10 & 3
Aspen- don’t have to ask- know what is approved
Kristie- not monitored but kids know what is approved

School lunch
Not a fan
Julie, Railene- lets kids decide btw hot & packed lunch but still has rules;
  packed- predictable & lack of variety
Steph- lets kids choose; packed- predictable & lack of variety
Mary- kids are too young but is already looking for ways to pack a healthy lunch
Scuba- doesn’t think school food is great but does not want kids having nitrates in deli meat everyday so wants mix between hot & packed
Dawn- sends packed lunch every day (so knows they will eat)
Kristie- thinks school lunch is bad so sends packed lunch everyday (which is also pretty processed- she contradicts herself)

Getting better
Jo- lets daughter decide- has to try 1 bite of school food items
Marie- she likes changes but kids do not

Not an issue
Leigh- girls take (balanced) lunch on days they don’t like the menu-don’t drink choc milk at home but allows it on Fridays at school- works with the influence of school

Shaping- PA
Providing a better alternative to sedentariness
Julie, Steph, Mary, Leigh, Scuba, Ann, Dawn, Railene, Jo, Aspen, Marie- works to provide active alternatives to screens; doesn’t leave time for sedentariness;
  soften the blow of ending screen time (“time is up. Let’s go for a bike ride”); easy to lure kids away from screens
Monitoring screen time

Formal monitoring
Mary - son get 1.5 hours/day using language he understands (2-3 shows); if pushes back she records and allows him to watch tom & entices him with a replacement activity
Scuba - 30 min/day during week; use timer
Marie - no video games during week (yet other screens are allowed)
Aspen - 1 hour max/day; uses microwave timer

Informal monitoring
Julie - when sense they have had enough she cuts off screens; no time rule needed because of earlier efforts to limit screens; no screens until chores are done
Leigh - TV is always on but she feels that kids are not watching much - cant say with confidence how much time spent on screens
Ann - does not feel that boys sit at screens long so does not need to limit
Dawn, Railene - 1 hour/day
Kristie - doesn't monitor - allows 1-3 hours/day & even before school??

Not much interest in screens
Steph, Jo, Railene, Kristie (not much interest in TV but son likes video games),
Aspen (TV)
Uses screen time in reward or discipline
Mary, Aspen, Kristie

Framing (consistent conversations about fueling body, moving body)
/Presenting opportunities that are “pre-approved”/and avoid unapproved choices/prepare for situations in which it is difficult to make a good choice;
Meanwhile mom is working to support internalization (so kids know what/how/where/when so can make good choices)

Arrangement/preparation/accessibility of food
Arrangement of food in house to help kids learn anytime from sometime foods
Mary - Pantry sectioned
Leigh - keeps candy on top of frig
Scuba - puts plate of cut up fruit on table while cooking dinner
Ann - has baggies of cut up produce in frig - bottom shelf so boys can reach
Dawn - puts fruit bowl at eye level, buys string cheese boys can open themselves, bottom drawer of cabinet in pantry is approved snacks (if in glass dome it is dessert not a snack); has snack size containers to limit portions
Railene - fruit bowl, veggies in drawer in frig, snack drawer with nametags - free access + whatever is on counter is approved. If put away then have to ask
Jo - has approved snack shelf kids can reach & drawer in pantry that is approved; baggies of produce in frig
Kristie- chips, cookies are locked in cabinet (not free to access), fruit on counter (avail)

Kids help pack their cold lunches for school
Julie, Steph, Leigh, Scuba, Dawn, Railene, Jo

Produce is cleaned & cut at all times
Steph, Mary, Leigh, Scuba, Ann, Dawn, Jo, Aspen, Kristie, Marie

Don’t buy it to control access, remove temptation is big!
Julie, Steph, Mary, Leigh, Scuba, Ann, Dawn, Railene, Jo, Aspen, Kristie, Marie

Makes tools available to support PA
Purchased Wii or other active game system- Steph, Leigh, Jo, Marie
Proper shoes & clothes (Steph), bikes, swing set, Frisbees, balls, jump ropes, basketball hoop -Mary, Leigh, Ann, Dawn, Marie, Kristie, Aspen
Transportation- Julie, Steph, Scuba, Kristie, Marie

Taking kids to grocery store
Julie, Mary, Scuba, Ann, Marie (will take 1 kids but not all)

Travel- avoid having to eat on the road- eat before they go
Julie, Steph

Adjust meals or screen time surrounding a splurge
Julie, Mary, Leigh, Dawn, Railene, Jo, Aspen, Kristie, Marie

Going out to eat very often and fast food is rarely/not an option
Julie, Steph, Mary, Ann, Dawn, Jo, Marie
Scuba (avoids convenience stores but allows fast food rarely- though she does not order)
Kristie- rarely eats fast food & is embarrassed when does

Concession stands (not an issue with young kids)
Julie- hates the contradiction of concessions at sporting events; never allows candy; might allow a Gatorade so kids don’t overly restricted; packs healthy food when at day long events; won’t pay for it
Steph, Railene- fixes a quick snack before going to event that has concessions and has a meal planned for after
Scuba- even though the kids know they are not getting junk at concession stand it is still a battle; mom never allows candy but might cave to Gatorade; won’t pay for it; eats before going to event; packs a cooler for day-long events
Ann- might bring a small sucker when going somewhere with a concession stand to replace a giant version sold there
Dawn- hates them (like Julie); packs a cooler
Marie- hates contradiction; kids eat PB sandwich & fruit on way to baseball fields
to avoid concession stand food or drive thrus; doesn’t bring money
Kristie- has crockpot meal waiting to avoid concession food; doesn’t pay for it

Hunger, satiety, portion size is discussed
Julie- don’t just fill a bowl- be wary of portion size; listen to body- don’t just eat
because the clock tells you to
Steph- recognize if true hunger
Mary- believes young kids eat according to hunger so tries to respect that
Jo, Dawn- treat is ok but make it a reasonable size – not king size; Dawn uses
glass bowls; Aspen uses specific nut bowl to control serving size
Kristie- has discussed serving size with her daughter because she is apple
shaped like mom

Food labeling/quality is discussed
Julie- misleading nature of food marketing
Steph- 5-7 ingredients rule & fresh is best
Mary- knowledgeable on animal welfare, buying local, hormones, etc . Wants
kids to know where food comes from- talks about their happy chickens (free
range)
Leigh- only discusses candy being bad for them
Scuba- nitrates in deli meat
Ann- avoids artificial ingredient; boys beg for junky cereal so will buy but then
limits to 1 day/week
Dawn- bakes vs buys sweets so can control ingredients; Prudent Produce, plants
garden; 10 g of sugar rule for cereal
Jo- local meats and eggs
Marie- garden so she can prepare & cook her own food to avoid processed
Kristie- upset with FDA for allowing unhealthy foods to make it to the shelf &
tells her kids about food marketing

Media is powerful & must be tempered (body image, food & toys/screen marketing)
Julie (body image), Steph (body image), Mary (snack packaging- convenience +
body image), Leigh (body image), Scuba (fast food commercials), Ann (junky
cereal), Dawn ( junk food commercials), Railene (junk food commercials), Jo (use
of celebrities to disseminate health info), Aspen (uses Biggest Loser to discuss
sensitive issues), Kristie (crazy??), Marie (marketing of electronics)

Careful to support a good relationship w food- avoid emotional eating
Julie- teen daughter was starting to develop unhealthy eating in response to
body image issues & mom immediately got her to a dietician
Mary- mom has past issues with disordered eating so is careful not to confuse
food and reward
Leigh- WW helped her break her habit of emotional eating so she is aware of this with kids
Scuba- will reward eating veggies with a fruit parfait or screen time
Ann- careful to not give candy as a reward for eating meals to avoid confusing kids about which food is more valued-calls it a treat and says they can have it later
Marie- careful not to reward with good workout with food- but if already had a dessert planned, kids would have to eat meal or would not get dessert- presents it as a choice
Aspen- rewards with dessert if eat healthy at times; rewards young son with PB if eats veggies

*In light of specific child characteristics- must parent differently*

Structured and unstructured PA is valued
Julie- insists kids are in a structured sport each season but only one at a time to avoid burnout & injury; encourages unstructured activity even if in a sport- “still 23 hours left in the day” after practice; husband helps coach & parents attend events
Steph- daughter does not like sports so mom encourages unstructured PA (walk to bus stop, for errands, etc); gives her a free pass from chores if agrees to PA
Mary- kids are young for much structured PA but will support this if interested; now lots of unstructured PA- will reward the effort
Leigh- wants girls to be exposed to many types of PA in case are not athletic like her
Scuba- one child is not interested in sports so she makes him choose an activity each season (does not have to be competitive), sign up for swim lessons or go to FHouse ; have outdoor chores that are physical; dad takes kids to Y for unstructured basketball, swim on weekends
Ann- boys are young so most PA is unstructured- will support both as boys age
Dawn- wants kids to find lifelong activities not just focus on sports; older son does not like structured PA but demands he be active so works out w mom at Y
Railene- mostly unstructured PA now (plays outside for a couple hours after school every day, walks for errands) but wants boys to learn & try PA so can be in sports later (she values sports highly for PA & social interaction)
Jo- kids are young so mostly unstructured (like Railene) though sees this changing & will support both
Aspen- like Dawn with lifelong activity so husband insists kids stay out of structured sports for awhile but will support sports later (for now they want their family time & are active together); oldest daughter is home-schooled and needs a goal/purpose to be active so mom has to be one step ahead of her to challenge her
Kristie- always has kids in structured PA & husband enjoys unstructured PA with kids but not mom
Marie- both are imp; boys like sports; middle son is less interested in sports but likes to swim so they joined the Y

_In light of developmental stage uses age-appropriate language/tactics_

Julie- talks about food as fuel for body so can do the things you want it to do in sports- meaningful to her sporty kids; carefully considers how she talks about the subject of weight and body image with daughters- especially teen
Steph- focuses on valuing a strong vs skinny body image with teen daughter; careful not to be self-absorbed with her appearance so daughter won’t over-value it; describes the process of getting fit to daughter that is not naturally active so she is prepared for the temporary struggle
Mary- protein makes him “strong like Dad” or is “good for him” so need to try it; talks about PA as fun & is careful to reward the effort not the win (“we love to watch you play soccer”); kids are young so naturally active; kids are too young to care about weight but mom has issues with body image so she is careful to watch how she addresses weight (body & verbal language); tries to give 5 year old son a choice to preserve his autonomy in this developmental stage
Leigh- believes kids are not interested in sedentary entertainment- yet getting them outside key; likens healthy food to fuel for car; though she has explained that she has to be careful to control her weight, the girls don’t connect with weight control (young); keeps focus off of weight- be good to your body so it will do what you want it to; kids care about the play so she uses that language
Scuba- prior efforts are paying off- kids know expectations; gives pre-approved choices in beverages; teenage independence is a struggle; enjoy because of social aspect and fun- not into health benefits
Ann- boys are young- believes naturally active; few outside influences at this young age; “eat to grow big like daddy”
Dawn- older son is motivated by money but not into competitive PA so Dad finds ways to pay him to exercise; also paid kids for giving up pop for a year; talks about healthy habits not weight- older son is sensitive; imp of trying new things; older son is noncompetitive so has had to focus more on helping him find joy in PA- mom tries to help him be successful
Railene- plans to stay on top of influences as they get older; fit & healthy vs weight
Jo- kids pick out veggies to plant in garden and to eat with dinner; sees body image issues getting stronger for daughter with aging
Aspen- gives reason for healthy choices over & over to support internalization- connects the dots so kids don’t think they are being punished; healthy eating to be at your best; her own mother was harsh about weight so she will be softer
Kristie- mantra “make a healthy choice”; daughter is built like mom so wants her to be healthy and conscious but not overly concerned about weight
Marie- “make sure it’s a healthy choice” or “it’s good to move your body”; easier now because groundwork has been laid; boys are lean so no image issues
Enlisting support & taking advantage of resources

Dad
Supportive & concerned about this
  Steph- good support but has demanding job so stressed & busy
  Mary- good team- have diff hot points
  Leigh- also overweight- perhaps looser with rules & not as good of example
  Ann, Dawn, Jo, Aspen, Kristie

Not supportive- creates issue
  Scuba- works a lot which makes his habits poor & bad example; brings home
  junk & pop (will enforce mom’s rules i.e. veggies) but does play w kids on
  weekends
  Railene- ex husband has younger son on Thursdays- causes problems with diet
  (leads to diarrhea)

Mostly supportive but not especially concerned about this
  Julie, Marie- is looser with parenting in this regard; demanding job makes his
  habits less positive

Kids’ friends, childcare, extended family in circle of support
  Friends positive influence in PA but negative influence in food & screens
    Julie, Steph, Scuba, Marie

Childcare
  Leigh, Scuba, Ann, Jo- positive
  Kristie- grandparents are childcare- not good influence on food

School influence is mixed- PE good but need more days of PE; candy reward is bad;
  lunch is mixed
  Julie (lunch bad), Steph (PE more), Mary (lunch bad), Leigh (PE good), Scuba
  (recess good), Ann (exposes kids to less healthy foods- bad), Dawn, Kristie
  (lunch bad, PE good), Railene (taught food pyramid- good); Marie, Aspen (candy
  reward is bad),

Resources
  Weight Watchers- Steph, Leigh, Ann
  Pinterest- Julie, Mary, Leigh, Marie
  YMCA- Julie, Leigh, Scuba, Ann, Dawn, Jo, Marie
  FieldHouse, local gyms, bike trails, park n rec, city parks, indoor swim lessons-
  Steph, Mary, Leigh, Scuba, Ann, Dawn, Jo, Marie
  Mom’s friends- Steph, Mary, Dawn, Jo, Aspen, Kristie

House rules- what is shaped at home is most impactful, so can allow occasional
  splurges - teaches them how to make real-world choices (threats) & avoid kids
  feeling deprived
Special occasions, holidays, school breaks, eating out, treats, time with grandparents, split custody, travel

Julie- relaxed about treats/eating out/holiday food/grandparent treats
Steph- she doesn’t make a big deal about treats so kids won’t over-focus on it; goal of healthy eating 80% of time; need to teach kids how to eat out so talks about choices but ultimately lets them order what they want; when daughter stays with her dad she has less healthy environment
Mary- same. Does not want kids to feel that certain things are forbidden because fear of recoil; she is primary influence now so is working hard to make home habits positive
Leigh- rare to have candy but allows other treats; does not make a big deal when have to eat junky because it is no the norm & wants her kids to get to do what other kids do (on occasion)
Scuba-same; holiday baking but then gets it out of house
Ann-same; holiday baking but then gets it out of house
Dawn, Railene, Jo, Aspen, Marie- same

Winter/bad weather means more screen time (Mary, Leigh) BUT...
Julie- so mom accounts for excessive screen time on bad days by allowing less on other days
Mary- prefer to be outside because kids find ways to be active but in bad weather she finds way to still be active- play tag in basement, indoor gyms, toddler time (park n rec), hide & seek, yoga, play dates, be sure to sign up for structured PA in winter; purposely “saved” swim lessons for winter for extra activity
Leigh- believes being outside is key to keeping kids active; allows Wii active games on bad weather days; swim lessons at Y
Scuba, Dawn, Marie- still want to be outside; FHouse or Y
Ann, Jo- still want to be outside; ride trikes in garage, play in basement, toddler time

Economics ??
Julie- eating out is expensive
Mary- too expensive to eat out especially when kids don’t eat much
Leigh-food ads help to plan menu- buy/cook what is on sale, stocks up when find a sale
Dawn- does not want to waste money on school lunch that boys wont eat; uses Prudent Produce to get organic food & then shops at Fareway for rest to save money
Railene- tight budget forces her to plan meals around sales, shop at farmer’s market
Jo- avoids eating out due to cost
Aspen- determined to make healthy food fit into budget but means she has to shop in Des Moines
APPENDIX T

ESSENCE OF THE PHENOMENON

THE ESSENCE OF DEVELOPING A MINDSET OF PRO-HEALTH

Her own childhood/family/history was a motivating factor
   Because how they were parented (similar or in contrast)

   Because has poor body image

   Because of health problems of family members

Personally values/sees benefits of having positive health habits; knows how good it is to have positive habits and wants her kids to experience this life
   Affective qualities: “feels better”- physically, emotionally, mentally
   Interested in health/passionate about subject/actively seeks data
   Preventive nature

Intensified focus after becoming a parent
   Parental role/responsibility- teaching positive health habits is a part of being a good parent; knows how good it is to have positive habits and wants her kids to experience this

   Top priority

   Deliberate & intentional (meal planning, meal prep, clean & cut produce so ready-to-go, schedule meals at home around activities, bookends poor choices- sedentary, PA, eating)

   More than just another rule to follow-Believes & teaches poor health habits lead to poor health outcomes (short and long-term) & vice-versa; Wants kids to internalize the reasons (short and long-term) why it is important so they will want positive health habits for themselves- “not just another rule to follow”; Depends on age & development

Takes More Effort
   Energy
   Commitment
   Sacrifice
   Stigma
THE ESSENCE OF CREATING & MAINTAINING A CULTURE OF HEALTH-MINDEDNESS

Habit/expectation creation & house rules; consistency is key; a good habit is hard to break (It starts with “we don’t know any other way” (forming expectations, habits)

Modeling
- All eat same meals
- Parents make time for regular PA for all members
- Family exercises together
- Live priorities (limited screen time for parents if expected for kids)

Shaping
- Mealtime structure (bite rules, repeated introductions, not a short order cook, direction to healthiest foods over others, no TV, balanced meal, food not used as reward)
- Providing a better alternative to sedentariness
- Monitoring screen time
- Be active-PA is part of family entertainment/past time, is fun

Framing (conversations about fueling body, moving body)/Presenting opportunities that are “pre-approved” (and avoiding unapproved choices),
  Accessibility--Meanwhile moms are purposely working to support internalization (so kids know what/how/where/when so can make good choices)
  - Arrangement/preparation/access of food
  - Makes tools available to support PA
  - Active video games

In light of specific child characteristics & developmental abilities
  - Structured vs unstructured PA

House rules- what is shaped at home is most impactful, so can allow occasional splurges- need to teach them how to make real-world choices (deal with threats to good health)

- Holidays, school breaks, bad weather, eating out, treats, time with grandparents

- Foster support from Dad, friends, extended family
- Make use of community resources
Good afternoon!!

Thank you, again, for agreeing to participate in my study! I am writing to provide the promised follow-up summary and request your feedback to help me refine the results of this project. Your input will help me determine if what I have interpreted resonates with your thoughts. I welcome as little or as much feedback as you feel comfortable providing, however it isn’t necessary to make editorial comments as this is an early draft summary and will undergo careful editing at a later time. With that being said, if something does not make sense please bring it to my attention.

As requested by many of you, I have attached a somewhat lengthy 6 page document that summarizes the 2 main themes that arose from time spent with you and the 11 other participants that I interviewed. Please note that the attached document is a conglomerate of the analysis of all 12 participant interviews, therefore you may or may not agree with each point-- and that is expected. There are a few guiding questions on the first page followed by the summary of the 2 themes. You are welcome to answer any questions that you feel are pertinent. Using “track changes” to make comments is an easy way to provide feedback. Please let me know if you need help in getting started.

If you are not interested in reading all 6 pages, you might enjoy reading just the short list of the subthemes under each main theme.

When you have finished with your review, please complete the feedback form on page 1 and send it to me. I also can be reached at 515.480.2932.

Gratefully, Jacy Downey
APPENDIX V

REVIEWER FEEDBACK FORM

Please read the provided summary and comment on the following questions:

1. What did I get right?

2. What did I leave out or under-emphasize?

3. What did you disagree with?

4. What would you have described differently?

5. What, specifically, did you connect with?

6. What did not resonate with you?

7. Anything else I should know?
APPENDIX W
SUMMARY SENT TO PARTICIPANT REVIEWERS

1: DEVELOPING A MINDSET OF PRO-HEALTH

1. Childhood and family history are motivation
2. Personally value positive health behaviors
3. Intensified focus upon becoming a parent
4. Acceptance of the extra effort

1. Childhood and Family History are Motivation
   All but one of the mothers emphasized the way their own parents managed this
domain as strong motivation to either parent similarly or to parent differently in response to
their own childhood experiences. References to struggle with weight, disease, or illness of
close family members were commonly noted as motivation for their own parents’
convictions. Mothers were inspired to keep some traditions, establish new ones, and rid of
others in their own families. However, many noted that though they were raised
with particularly strong models of positive eating habits, their parents did not always participate in
regular physical activity.
   Like many women, the mothers participating in this study have a history with and
often still battle poor body image. Some mothers felt a sense of control over issues with poor
body image through eating healthy and participating in regular exercise.

2. Personally Value Positive Health
   The majority of mothers described themselves as personally valuing a healthy diet
and regular physical fitness. Mothers’ sentiments were characterized by a passionate interest
in health behaviors, actively seeking related information, and the realization that they benefit
physically, mentally, and emotionally from having healthy behaviors. Mothers exhibited
strong beliefs that health behaviors impact both short- and long-term outcomes. Mothers
described exercise as stress relieving and empowering while many praised PA as a source of
pride, self-esteem and self-confidence. Many mothers referenced a strong desire to live
differently than family members in hopes of avoiding the long-term affects of unhealthy
lifestyles (obesity, diabetes, cardiovascular disease, mobility restrictions, etc).

3. Intensified Focus upon Becoming a Parent
   Many of the mothers commented that their emphasis on healthy behaviors deepened
as a priority upon parenthood. Mothers considered embedding positive health behaviors as
one of the responsibilities of parenting, and they have been able to do so by making this
domain a top priority, and being deliberate and intentional in their actions while supporting
the internalization of the importance of positive eating, physical activity, and screen-related
behaviors in their children. Likened to other parental roles such as teaching their children
right from wrong, mothers sensed the fleeting nature in which they were the primary
influence in this realm of their children’s lives, noting that like in other areas, children need
guidance on forming healthy lifestyles as children were not naturally going to make good
choices amidst so much temptation.
Assuming this as a priority meant that mothers lived with intentionality, such that all related actions and words supported the child-rearing goal of embedding healthy habits. Mothers emphasized that they also strive for their children to internalize the importance of positive health habits. Mother were careful to respect the specific stage of their children’s development as they were aware of the age-related differences in which they were able to affect internalization. When children are younger, providing reasons for certain “house rules” was often unnecessary, as acting simply out of habit, being happy to please mom, or “because it’s good for you” was sufficient to achieve compliance. In regards to PA, a mother of younger children remarked that often the “fun factor” is enough to entice younger children to be active but may not be enough inspiration for a lifetime commitment to regular PA. Repetitively reinforcing the reasons for healthy choices throughout development reinforced mother’s values and supported internalization by aiding children as they made associations between house rules and desired behaviors.

As outside influences become more pervasive, mothers were careful to use age appropriate language and present reasons in ways that cater to children’s interests as one mother had learned, “my kids are athletes so we talk about what do you need to eat to have enough energy to go do what you have to do.” Mothers not only deliberated how they would manage future roadblocks, but they also took advantage of applicable circumstances as they presented themselves, jumping on opportunities for further discussion and reinforcement of valued behaviors.

4. Acceptance of the Extra Effort

While some exhibited positive habits prior to parenthood and did not have to undergo major lifestyle changes to “live” their priorities for the benefit of their children, all mothers noted that energy, a strong commitment, sacrifice, and sometimes even feeling stigmatized were part of the process of embedding and supporting their children’s internalization of desired behaviors.

Mothers spoke of time and effort investing in modeling appropriate behaviors, transporting children to activities to participate in PA, planning for healthy family meals around activities, and the constant juggling of the busy schedules of multiple children. Younger children presented more work for mothers in terms of introducing and encouraging healthy eating practices but required less effort to engage them in physical activity as they were considered by many mothers to be naturally active. Managing barriers and logistics became more of a challenge as children grew older and were more involved in structured PA and sports.

Mothers commonly remarked that early diligence and consistency were invaluable in laying the groundwork for developing healthy habits. Effort to set clear expectations and observance of house rules eventually resulted in diminished pushback from children, though many mothers admitted to instances when limited time and energy challenged their convictions as often “it’s harder to say no than it is to say yes.”

Mothers stressed that parenting for healthy behaviors was complicated by our current environment- one in which temptation is inevitable. “Junk is everywhere like the concession stand…we’re going to have fried cheese curds and donuts and French fries… who needs to sit at the little league field and eat that.” Mothers were frustrated that healthy foods were not often convenient. Multiple references were made to the many times it would have been easier
to just “drive thru” than to plan and prepare a healthy meal. Though many concurred that they often had to forgo ease and expediency in meals, or miss their favorite show on television to make time for their own or their children’s physical activity, these mothers accepted sacrifices to be a part of parenting.

Not all mothers were bothered by criticism from others, however all mothers admitted that it was evident that their family “did things differently” than most. Mothers described situations in which they have felt stigmatized as a result of their commitment to this domain of parenting as the current environment was not supportive of their efforts. For example, many mothers felt a sense of scrutiny when limiting children’s intake of unhealthy food items as they felt they were battling a cultural norm in which it is not socially acceptable to restrict children’s consumption.

2: CREATING AND MAINTAINING A FAMILY CULTURE OF HEALTH-MINDEDNESS

1. A good habit is hard to break
2. Framing to support internalization
3. Create a positive environment
4. Home and away

1. **A good habit is hard to break**

   Mothers believed that expectations and positive habits were very powerful and were created through consistency and commitment—especially in early years. Mothers firmly believed that children imitate the behaviors of their parents, and they were careful to model the behavior they wished to be emulated. Mothers were acutely aware that their children’s behaviors, both positive and otherwise, were influenced by their own practices. Mothers personally valued their own physical fitness and expressed their high regard, verbally and through modeling, to their children. Many mothers brought their children to the gym with them or made sure children attended athletic events in which they were participants. All mothers commented on the power of setting a good example. Mothers often made time to join their children in unstructured activity, using the time to model both the importance of PA and also the enjoyment they experienced in living active lifestyles. Multiple mothers commented on the value of a place where families can be active together, and praised the opening of the local YMCA and FieldHouse.

   Mothers described both formal and informal means of monitoring screen time, with formal measures more necessary with younger children. Some mothers did not feel that their children required screen time to be limited as their children were not accustomed to much down time, and attributed this to earlier efforts, “It’s the result of many years of parenting.” Mothers remarked that it was easier to lure children away from screens when an active alternative was presented, softening the blow of the end of screen time because “the less active [option] just isn’t as tempting.”

   The repetitive nature of feeding a family meant that mothers used multiple strategies to influence their children’s food-related habits. Mothers believed that children should eat nutritiously therefore they planned for, prepared, and served simple, whole, balanced meals.
Mothers chose meals that required little planning, contained simple ingredients made with pantry “staples” to decrease preparation time, and often resorted to the crockpot as a way to avoid eating out or driving through a fast food establishment on busier days. Most mothers did not believe in being short order cooks to appease all family members’ preferences—instead they fixed one meal for all. Most mothers created the expectation that children, within reason, should try a specified number of bite(s) but did not require children to clean their plates. In the situation that children did not like what was served after trying it, some mothers allowed an equal replacement from the same food group while others offered a single substitution such as an apple or peanut butter sandwich— but commented that these occurrences were rare.

In preparing meals, mothers reported substituting more healthy ingredients for less healthy ones and homemade treats for purchased items as well as directing children to the nutritious foods in a meal over more of less healthy items. Mothers allowed occasional treats but often substituted made-at-home for store-bought versions. Soda pop, fast food, and candy were commonly referred to as restricted items. Many mothers allowed pop when eating at a restaurant, noting that they believed that by allowing it as a rare treat they could avoid the negative consequences they believed accompanied deprivation. In restricting items, however, mothers were deliberate in using less-confrontational tactics to curb behaviors such as keeping problematic foods out of the house.

Mothers described the importance of regular family meals and went out of their way to maintain this family time as a way of both ensuring their children had healthy meals and for modeling positive food-related behaviors.

2. Framing to support autonomy

Mothers created expectations of positive behaviors and helped children to learn and choose healthy options. One mother likened her efforts to “baby proofing my house” so that her children could more easily make positive choices. Mothers realized that in order for healthy behaviors to persist amidst the many threats presented by the environment, the formation of their children’s autonomy must be supported. Mothers worked to support their children’s internalization of positive eating habits by helping them to know what, when, where and how they could make good choices. Mothers strived for food-related interactions to be positive, therefore, they avoided fighting about food and instead relied upon controlling access such that the majority of the food in the house was approved.

Mothers believed society to be overly “snack-centric.” With so many appealing options as competition, some mothers felt they went out of their way to find healthier options for children to choose from. Mothers worked to make approved foods more inviting by cleaning, cutting, storing, and arranging produce and other nutritious items in pre-determined locations. Many mothers used storage locations in the home to help children learn “anytime” versus “sometime” foods. Low level snack drawers in the pantry, designated shelves in the refrigerator, and a fruit bowl at eye level were tactics mothers discussed to help children make good choices while less healthy foods were kept out of sight.

Frustrated by the lack of healthy and convenient options when eating out, mothers admitted to arranging outings so that they could eat at home as much as possible. Mothers allowed occasional indulgences, but upon splurging on food or screen time, mothers found
ways to bookend the splurges such that the unhealthy event was pre-empted and/or followed by compliance to more positive behaviors.

In varying degrees, mothers described how they taught their children about food labeling and food quality. The majority of mothers read labels and avoided certain ingredients while some grew and prepared some of their own foods to avoid using processed goods. Mothers used these opportunities as learning experiences for their children. Many mothers discussed hunger and satiety and one mother used glass snack bowls as a behavioral prompt used to help her children easily recognize and learn portion size. The majority of mothers described how they worked to support their children in forming healthy relationships with food by avoiding emotional eating or using food as a reward.

Mothers were careful to use language that supported the internal rewards of PA in hopes that children would embrace the means and not just the end, talking about how good it feels to be active. Mothers also supported their children’s PA through supplying proper shoes and attire, gear and sports equipment, and, importantly, transportation as mothers of multiple children commented on the constant juggling required to get each child to their activities. Mothers also de-valued sedentariness by preferentially purchasing active gaming systems and avoiding much down time that invites sedentariness.

Mothers approached eating and activity related conversations with careful attention to each child’s abilities, preferences, strengths, and needs.

Mothers spoke of their desire to help their children “find something that they love that they can do forever” - whether it be structured PA, competitive sports or more unstructured activities. This often meant that mothers encouraged and facilitated opportunities for their children to sample a variety of activities. In the event that a child was not especially interested in mainstream PA, mothers found themselves rearranging schedules and creating opportunities for children to be active.

For younger children, mothers felt that some health messages may be over their kids’ heads, but, by using age-appropriate tactics and language supportive of healthy body images, mothers believed they were helping their children find value in positive behaviors. Mothers believed that younger children responded better to clear, simple, and repetitive messages that catered to their interests such as eating healthily to grow “big like Daddy” while mothers of older children kept “a close monitor on the verbiage that gets said around the house” to preserve healthy body images. Careful to choose language that supported a positive self image, mothers often positioned food as fuel for the body, enabling children to do what they loved. Mothers described the influence of media on body image as powerful and in need of monitoring.

3. Creating a positive environment

Although mothers described the many environmental threats to good health that undermined their intentions, mothers were proactive in enlisting support and utilizing resources to help achieve their eating, PA, and screen-related goals for their children.

Although all of the mothers reported that they were the main drivers of their children’s socialization in this domain, most spoke of their husbands/partners as team players. Though less influential due to competing priorities or less passionate in their resolve, mothers were able to recruit their husbands to support them in enforcing “house rules”. Specifically, mothers noted that parenting for positive behaviors was time
consuming, making them grateful for their husbands support especially in areas of unstructured PA, like playing catch.

Mothers leaned on friends, family, and outside resources for support, advice, and inspiration, and actively sought opportunities for their children to be active within the community. Mothers praised the local park and recreation department, gyms, bike trails, family programs at the YMCA, school facilities, and praised their community for its overall support of active lifestyles.

4. Home and away

Mothers believed that behaviors shaped at home were most impactful such that occasional splurges were not worthy of great concern. Over and over these mothers spoke of home and parental influence as tantamount, describing the meal eaten at home with parents as a bigger influence than those eaten out. Mothers emphasized focusing on ‘house rules,’ aiming for healthy behaviors “80% of the time,” and not making a big deal about splurges that occurred at restaurants, holidays, and weekends at grandparents as the best approach. The majority of mothers let their children order at restaurants without limitations, believing that they could make the other meals “count”. Mothers were aware of the recoil associated with forbidden foods and commented that it was just not realistic to never have a treat. By treating less-than-healthy eating as an occasional splurge and not the norm, mothers hoped they could keep their children from feeling deprived. Instead, mothers spoke of these occasions as opportunities to teach children how to make “real-world choices” amidst the threats presented by the environment.

Obstacles that presented themselves more than occasionally, such as long, cold winters often meant more screen time than mothers desired. Mothers admitted that getting the family outside was a key to their success as being outside inspired children to naturally be active. Unless particularly inclement weather, mothers continued to encourage children to play outside during the cold months as there were fewer distractions. Mothers described how they have become more creative and agile to encourage activity under less supportive conditions, such as “playing tag or hide & seek in the basement.” Mothers also took advantage of local indoor offerings, signing children up for swim lessons at the Y or going to “open gym.” Mothers agreed that screen time increased when children were stuck inside, so mothers encouraged children to forgo screen time on nice days so to account for the lopsided screen time accumulated during winter months.

Mothers’ perspectives of the influence of their children’s school was mixed and often an area of contention. One mother commented on school lunch as a source of exposure to less healthy foods, while other mothers did not let school lunch bother them and allowed their children to pack their lunches. Mothers complimented physical education and recess provided by schools but generally wished health was more of a priority.
APPENDIX X

SUMMARY OF MEMBER CHECKS

<table>
<thead>
<tr>
<th>What, specifically did you connect with?</th>
<th>Difficulty in balancing full time work/parenting</th>
<th>Motivation of emphasizing more physical activity after not having that modeled for me (and seeing the repercussions of that as older adults in our families age). Acceptance of extra effort. Creating a positive environment. Home and away. Liked that you emphasized that it’s more important what we do at home and give ourselves some grace when we are in situations we can’t control.</th>
<th>I really connected with the idea of really teaching children to making good choices when it comes to eating….in turn creating a positive relationship with food. I often wonder and try to figure out where my thoughts/perspective on food/body image took a wrong turn and really want to make sure the same does not happen with my children. I also really agree with the fact that to create this healthy life style for children it will take extra effort in today’s society.</th>
<th>I especially connected with the notion of wanting to create healthy meals at home rather than going out or doing the drive-thru when that is so much easier. I also resonated with allowing treats when we go out rather than dealing with the issues that deprivation cause. Finally, the part about praising family-friendly PA opportunities like the YMCA and field house are important to me.</th>
<th>How convenience plays a big role in unhealthy habits</th>
</tr>
</thead>
<tbody>
<tr>
<td>What did not resonate?</td>
<td>Nothing</td>
<td>Everything resonated with me.</td>
<td>Nothing</td>
<td>Nothing</td>
<td>Nothing</td>
</tr>
<tr>
<td>Anything else I should know?</td>
<td>Nope – you did great!</td>
<td>Great job, Jacy!! Hope the rest of your project goes well!</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What, specifically did you connect with?</strong></td>
<td><strong>Difficulty in balancing full time work/parenting</strong></td>
<td><strong>Motivation of emphasizing more physical activity after not having that modeled for me (and seeing the repercussions of that as older adults in our families age).</strong></td>
<td><strong>I really connected with the idea of really teaching children to making good choices when it comes to eating....in turn creating a positive relationship with food. I often wonder and try to figure out where my thoughts/perspective on food/body image took a wrong turn and really want to make sure the same does not happen with my children. I also really agree with the fact that to create this healthy lifestyle for children it will take extra effort in today’s society.</strong></td>
<td><strong>I especially connected with the portion on wanting to create healthy meals at home rather than going out or doing the drive-thru when that is so much easier. I also resonated with allowing treats when we go out rather than dealing with the issues that deprivation cause. Finally, the part about praising family-friendly PA opportunities like the YMCA and field house are important to me.</strong></td>
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<td><strong>Nothing</strong></td>
<td><strong>Nothing</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Anything else I should know?</strong></td>
<td><strong>Nope – you did great!</strong></td>
<td><strong>Great job, Jacy!! Hope the rest of your project goes well!</strong></td>
<td><strong>Nothing I can think of other than I really appreciate the work you are doing.</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX Y
IRB DOCUMENTATION

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1138 Pearson Hall
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Date: 11/5/2013
To: Jacy Downey
900 E Plainview Ave
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CC: Dr. Clinton G Gudmunson
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Tera R Jordan
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From: Office for Responsible Research

Title:
Parenting Practices Related to Positive Eating, Physical Activity and Sedentary Behaviors in Children: A Qualitative Exploration of Strategies Used by Parents to Navigate the Obesigenic Environment

IRB ID: 13-288
Approval Date: 11/5/2013
Date for Continuing Review: 6/29/2015
Submission Type: Modification
Review Type: Expedited

The project referenced above has received approval from the Institutional Review Board (IRB) at Iowa State University according to the dates shown above. Please refer to the IRB ID number shown above in all correspondence regarding this study.

To ensure compliance with federal regulations (45 CFR 46 & 21 CFR 56), please be sure to:

- Use only the approved study materials in your research, including the recruitment materials and informed consent documents that have the IRB approval stamp.
- Retain signed informed consent documents for 3 years after the close of the study, when documented consent is required.
- Obtain IRB approval prior to implementing any changes to the study by submitting a Modification Form for Non-Exempt Research or Amendment for Personnel Changes form, as necessary.
- Immediately inform the IRB of (1) all serious and/or unexpected adverse experiences involving risks to subjects or others; and (2) any other unanticipated problems involving risks to subjects or others.
- Stop all research activity if IRB approval lapses, unless continuation is necessary to prevent harm to research participants. Research activity can resume once IRB approval is reestablished.
- Complete a new continuing review form at least three to four weeks prior to the date for continuing review as noted above to provide sufficient time for the IRB to review and approve continuation of the study. We will send a courtesy reminder as this date approaches.

Please be aware that IRB approval means that you have met the requirements of federal regulations and ISU policies governing human subjects research. Approval from other entities may also be needed. For example, access to data from private records (e.g., student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. IRB approval in no way implies or guarantees that permission from these other entities will be granted.

Upon completion of the project, please submit a Project Closure Form to the Office for Responsible Research, 1138 Pearson Hall, to officially close the project.
Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.
INSTITUTIONAL REVIEW BOARD (IRB)  
Modification Form for Non-Exempt Research

Title of Project: Parenting practices related to positive eating, physical activity and sedentary behaviors in children: A qualitative exploration of strategies used by parents to navigate the obesigenic environment

Principal Investigator (PI): Scot Downey  
Degrees: MPH

University ID: 355084730  
Phone: (515) 480-2932  
Email Address: jdowney@lstate.edu

Department: Human Development & Family Studies

FOR STUDENT PROJECTS (Required when the principal investigator is a student)

Name of Major Professor/Subscribing Faculty: Clinton Gustafson

University ID: 533256324  
Phone: (515) 294-8439  
Email Address: cgustafson@lstate.edu

Alternate Contact Person: Tera Jordan  
Email Address: trh@lstate.edu

Correspondence Address: Palmer 1364  
Phone: (515) 243-9408

Please notify the IRB Office if your contact information has changed since the last review.

ASSURANCE

* I certify that the information provided in this application is complete and accurate and consistent with any proposal(s) submitted to external funding agencies. Misrepresentation of the research described in this or any other IRB application may constitute non-compliance with federal regulations and/or academic misconduct.
* I agree to provide proper surveillance of this project to ensure that the rights and welfare of the human subjects are protected. I will report any problems to the IRB. See Reporting Adverse Events and Unanticipated Problems for details.
* I agree that modifications to the approved project will not take place without prior review and approval by the IRB.
* I agree that the research will not take place without the receipt of permission from any cooperating institutions when applicable.
* I agree to obtain approval from other appropriate committees as needed for this project, such as the IACUC (if the research includes animals), the IRB (if the research involves biohazards), the Radiation Safety Committee (if the research involves x-rays or other radiation producing devices or procedures), etc., and to obtain background checks for staff when necessary.
* I understand that IRB approval of this project does not grant access to any facilities, materials, or data on which this research may depend. Such access must be granted by the unit with the relevant custodial authority.
* I agree that all activities will be performed in accordance with all applicable federal, state, local, and Iowa State University policies.
Modification Information

The submission of a modification form is required whenever any changes are made to an approved project that requires expedited review or approval from the convened IRB. Modifications may include, but are not limited to,

- a change in the title;
- changes in investigators or key personnel;
- resubmission of a federal grant proposal involving changes to the original proposal;
- changes in the funding source (only when federal funding is involved);
- changes to data collection materials [e.g., informed consent documents, advertisements, survey or interview questions, etc.]; or
- any other changes from the originally approved protocol [e.g., changes to confidentiality measures, inclusion/exclusion criteria, addition of an intervention or stimuli, etc.].

NOTE: All modifications must be approved by the IRB prior to implementation unless the change is necessary to protect the safety of participants.

Please provide answers to all questions, except as specified. The fields will expand as you type. Incomplete forms will be returned without review.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Was your project initially determined to be eligible for exempt review? This information can be found in the approval letter you received when the study was last reviewed.</th>
</tr>
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<tr>
<td></td>
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<td>If Yes, STOP! This is not the correct form! Please submit a Modification Form for Exempt Research form instead.</td>
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<td>If No, please complete Parts A and B below.</td>
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Part A: Changes in Personnel

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>1. Does the modification involve a change in Principal Investigator? If Yes, STOP! The new principal investigator must submit a completed new Application for Approval of Research Involving Humans.</th>
</tr>
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<td></td>
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<td>2. Are you adding or removing members of the key personnel? If Yes, complete Table A.1 below.</td>
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</table>
Table A.1

1. List any individuals who are no longer part of the key personnel:

2. Complete the following table to list any new key personnel:

<table>
<thead>
<tr>
<th>NAME</th>
<th>Interpersonal contact or communication with subjects, or access to private identifiable data?</th>
<th>Involved in the consent process?</th>
<th>Contact with human blood, specimens, or other biohazardous materials?</th>
<th>Other Roles in Research</th>
<th>Qualifications (i.e., special training, degrees, certifications, coursework, etc.)</th>
<th>Human Subjects Training Date</th>
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Please complete additional pages of key personnel as necessary.
3. Do any of the individuals listed above have a conflict of interest management plan in place with the Office of the Vice President for Research & Economic Development?

☐ Yes  ☑ No

4. Does your study include children (persons under age 18) as research subjects?

☐ Yes  ☐ No

If Yes, please read and respond to the following:

ISU policy requires that background checks be completed for all researchers and key personnel who will have any contact with children involved in this research project. Details regarding this policy can be found here. Principal Investigators and faculty supervisors are responsible for ensuring that background checks are completed BEFORE researchers or key personnel may have any contact with children. Records documenting completion of the background checks must be kept with other research records (e.g., signed informed consent documents, approved IRB applications, etc.) and may be requested during any audits or Post-Approval Monitoring of your study.

☑ Agreed  4.a. Please check here to indicate that you have read this information and agree that you will comply with these requirements.

Part B: Administrative Modifications

☑ Yes  ☐ No  ☐ N/A  1. Are there any changes to the project title?

If Yes, please specify new title: Parenting practices related to positive eating, physical activity and sedentary behaviors in children: A qualitative exploration of strategies used by parents to navigate the obesigenic environment

☐ Yes  ☐ No  ☐ N/A  2. Is there a change in funding source?

If No or N/A, skip to Part C.

If Yes, please select from the following:

☐ Project is no longer funded. — Proceed to Part C.
☐ Project will have a new funding source. — Please answer questions 2.a. through 2.g.
☐ Project will have a change in funding source. — Please answer questions 2.a. through 2.g.

☐ Yes  ☐ No  2.a. Will this change result in the project having any external funding?

If No, skip to Part C.

If Yes, please identify the type(s) of source(s) from which the project is directly funded.

☐ Federal agency
☐ State/local government agency
☐ University or school
☐ Foundation
CHANGES TO METHOD OF DATA COLLECTION:
ORIGINAL: 3 semi-structured interviews with a 21-item Family Nutrition and Physical Activity (FNPA) screening tool for triangulation, reply to study relevant text messages, and submit photographs that symbolized healthy behaviors. Follow-up correspondence was expected to occur through email.
MODIFICATION: Initially, parents scoring highly on the 10-item behaviorally anchored FNPA screening tool (different version than originally proposed) will be invited to participate in a single 1.5-2 hour interview to take place in participant homes as agreed upon by each participant. The survey will also include elements of consent, demographic questions, and a request for contact information. As needed to reach saturation, a snowball sampling strategy (Patton, 2001) may also be employed, asking participants to refer others that they believe may also meet the inclusion criteria as described below.
Participants enrolled through snowball sampling will also complete the FNPA screening tool. The participants will all have at least one child in elementary school as the Family Nutrition and Physical Activity Tool (Johnson et al., 2012) has been shown to identify family behaviors and environments that may predispose children of elementary age to overweight. Targeted participants can be mothers, fathers, or other primary caregivers, however interviews will be scheduled with the parent (self-identified) that is most focused on socialization of eating, physical activity, and sedentary behaviors in children.
Additional children in the family may be any age or gender as long as one child in elementary school resides in the home. An electronic version of the survey may be used if needed to reach more participants. High-scoring participants will be invited to a one-time interview. An updated interview protocol is attached.

CHANGES TO SOURCES OF DATA:
ORIGINAL: Family Nutrition and Physical Activity screening tool—original version.
Interview protocol.
MODIFICATION: Family Nutrition and Physical Activity screening tool—Behaviorally Anchored Rating scale version. Interview protocol was slightly altered to reflect a reduction from 3 interviews to 1 interview.

CHANGES TO RECRUITMENT METHODS:
ORIGINAL: A “Meet-up” would be formed and participants would be recruited through this web-based service that functions to network like-minded others within close geographic range. After establishing the group, I would privately invite qualifying participants to be interviewed.
MODIFICATION: Recruitment will be established primarily through the distribution of a survey which includes the elements of consent, the screening tool, demographic questions, and a request for contact information. Distribution will occur through elementary schools in a medium sized community in central Iowa. Parents of elementary children that score highly on the paper version of the behaviorally anchored rating (BAR) scale version of the Family Nutrition and Physical Activity screening tool (FNPA) (Johnson, Wells, Saint-Maurice, & Ihmels, 2012) will be invited to be interviewed.
Primarily, the FNPA screening tool will be available to parents of elementary-aged children at schools in said community during parent-teacher conferences in November 2013. Additionally, the survey will be made available to parents not attending parent-teacher conferences in both paper and electronic formats. To ensure confidentiality and protection of data, the study material will be distributed to parents and returned by parents at each school on the night of conferences by positioning study material drop-boxes in multiple locations at each school. Parents choosing not to fill out the survey at conferences, will be offered a self-addressed and stamped envelope. An electronic version of the study materials may be utilized if needed to obtain participants that qualify to be interviewed. High-scoring parents will be approached to participate in an in-depth interview with a goal of interviewing 10-20 participants, and adding more participants as needed to reach saturation of findings (Bloomberg et al., 2012). In the BAR scale version used in this study, ten questions are scored on a 3 point scale with total scores ranging from 10-30. Parents will be asked to select the response that most closely fits their family’s patterns. In that I am now proposing to use a paper version of the survey and have altered recruitment methods, I have changed the recruitment script.
CHANGES TO NUMBER OF PARTICIPANTS:
ORIGINAL: 50
MODIFICATION: approximately 1800 of which up to 25 will be interviewed

CHANGES TO COMPENSATION PLANS:
ORIGINAL: $15 for each of 3 interviews = $45
MODIFICATION: $15 for 1 interview

- Attach a copy of any revised materials or documents with all changes clearly marked.
- Attach a final, "clean" copy of any revised materials or documents for inclusion in the file and the addition of an IRB approval stamp.

1.c. Explain the rationale for each proposed change:

RATIONALE: Changes to recruitment methods/data collection, sources of data and number of participants were due to recommendations by my committee to improve the rigor of the study. The decrease in compensation reflects a reduction in the number of interviews.

- Yes  No 1.d. Does the modification involve a change to the study materials, such as the following? (Check all that apply.)

- Recruitment materials
- Informed consent documents
- Survey instruments/questionnaires
- Interview or focus group questions or scripts
- Debriefing statements
- Other; please specify:

1.e. Please provide a detailed description of each change noted above in 1.d. The description should be complete, such that review of other documents (including attachments) is not required to understand the change.

CHANGES TO RECRUITMENT MATERIAL AND SURVEY:
ORIGINAL: I was going to reach participants through a website and send out the original version of the FNPA survey and informed consent document by mail or email.
MODIFICATION: I am now proposing to utilize the Behaviorally Anchored Rating scale version of the FNPA screening tool within a paper survey that includes demographic questions, a request for contact information, and elements of consent rather than the formal informed consent document. I am proposing to make the survey primarily available to parents at parent-teacher conferences at schools in a district in central Iowa. Alternately, parents that do not attend conferences may have access to the paper or electronic version through contact with the school principal or myself. No study materials will be put in to the hands of children. The participant script was modified to account for these changes.

CHANGES TO INFORMED CONSENT DOCUMENT:
ORIGINAL: I was going to interview participants 3 times and supplement with text messages and photographs.
MODIFICATION: I am now proposing a single interview with no text message and photograph supplementation. This reduction in interviews changed the compensation plan. Additionally, I am proposing to use elements of consent within the survey rather than the formal informed consent document.
CHANGES TO INTERVIEW QUESTIONS:
ORIGINAL: I first proposed to do a 3 interview process with text and photos to supplement the data collection as described below.
MODIFICATION: I am now proposing only one interview therefore I had to adjust the interview questions. I also added an interview summary sheet for my personal processing of the interviews.

CHANGES TO DEBRIEFING STATEMENTS:
ORIGINAL: I did not submit a debriefing statement in the original version.
MODIFICATION: I have created a document that will guide interaction with participants and peers post data collection.

- Attach a copy of all revised materials or documents with all changes clearly marked.
- Attach a final, "clean" copy of all revised materials or documents for inclusion in the file and the addition of an IRB approval stamp.

1.f. Explain the rationale for each proposed change:

RATIONALE: Each of these changes were inspired by recommendations from my committee to improve the rigor of the study.

If you have any questions or feedback, please contact the IRB office at IRB@iastate.edu or 515-294-4566.
ADDENDUM
IRB ID 13-288
PI: Jacy Downey
IRB & PI Communication

1. How will you contact persons who are referred via snowball sampling? What materials will be used for this contact? The revised recruitment letter currently references returning the survey to locations around the school, which will only be applicable to those who receive the survey in a school setting.

Participants that I am referred to from snowball sampling will come from parents that have filled out the survey or have been interviewed. I am adding my contact information to the survey on the last page with instructions to tear off this page and keep it if a need to contact me arises. Participants that are reached through snowball sampling will undergo the informed consent process.

2. Participants are asked to put their name and contact information on the survey instruments, which creates confidentiality concerns since the surveys will be left in drop boxes at the school. Please describe your procedures for maintaining confidentiality of this information, such as when names/contact information will be removed from the surveys and replaced with codes, how surveys will be handled confidentially during the time they are at the school, etc.

Surveys will be available to parents at parent-teacher conferences. Parents will have an opportunity to deposit the completed forms with the teachers they are meeting with or at the office. Per conversation with the principals, the forms will be placed in a collection box and held for me. I will remove participants names & contact information after contacting them about the interviews. The names will be replaced with a code and names will be removed before inputting the data into SPSS. The surveys that contain confidential information will be destroyed at this time.

3. The letter for "Instructions for Reviewer" references "8 participant interviews". Can you clarify what this means, since you plan to interview up to 25 persons?

I apologize. My committee increased the number of interviews from 8 to 10-20. I must have neglected to change this.

[received by email from PI on 11/4/13 –rb]

IRB Reviewer Notes:

The PI confirmed by email that the following process is agreeable.

The surveys that are completed at the conferences will not be left with the teachers, but will be returned by the participant to the secretary's office and placed in the box for the PI. The secretary will be present so that the surveys are not left unsecured. At the end of the night of conferences, the PI will pick them up.

The surveys that are sent home to those that were not at the conferences will also be returned to the school personally and placed in the box for the PI that is held in the secretary's office. The PI will pick those up daily so they do not stay unsecured at the school.
The PI noted that each secretary sits at the office during the entire conference periods. As a result of the recent school tragedies, the Indianola School District has a new security protocol so that all visitors have to stop in the office first before going to their child's conference. Each secretary sits at her desk and checks visitors in.

[received by email 11/5/13 --rb]
Dear Parents,

My name is Jacy Downey. I am a mother of three children in the Indianola school district and a volunteer on the Indianola School Wellness Committee. I am also a PhD student at Iowa State University and am completing a research study as a partial requirement of my program. My study was designed to further the understanding of how parents influence their children's eating, physical activity, and screen-time behaviors.

I am kindly asking for you to complete the attached survey and place it in one of the many drop boxes that have been placed throughout the school. Alternately, you can return your survey to me by dropping it off at the school office. It is anticipated that this survey will take approximately 5 minutes to complete. At the beginning of the survey you will find information that discusses your rights and responsibilities as a participant in this study as well as the procedures of the study. Please show that you understand by checking each box. You will then be asked to respond to 21 questions. I understand that you may have more than one child living at home, however please answer the survey questions as if you are referring to your elementary age child(ren). By circling the category that best describes the typical patterns in your household—not the desired patterns—you are providing very valuable information. The questions at the end of the study will be demographic in nature. These questions are asked so that I can consider how the information learned from this study may be influenced by the diverse backgrounds of the participants. All information will remain confidential.

It is possible that a small number of you may be invited to participate in an interview, therefore you will also be asked to provide your contact information. Please note that you will not be contacted except in reference to this study and your information will not be shared. In closing, it is important to me that you understand that I am deeply grateful to you for completing this survey. The information obtained from this study will not only help me to complete my program requirements but will also inform the development of important wellness initiatives at your children's school.

Jacy Downey
Iowa State University
515-480-2932
jdowney@iastate.edu
Please check each of the boxes to express that you understand what is being asked of you.

☐ I am aware that I am being asked to participate in a research study

☐ I am aware that the purpose of this research is to increase the understanding of how parents influence children’s eating, physical activity and screen behaviors.

☐ I am aware that my participation in this study is voluntary and that I can skip any questions I do not wish to answer, refuse to participate, or leave the study at any time without penalty.

☐ I am aware that it is possible that I may experience discomfort as a result of disclosing information.

☐ I am aware that there is no direct benefit to me for participating in this study, however the information learned from this study may eventually benefit parents and children.

☐ I am aware that my identity will be kept confidential to the extent permitted by applicable laws and regulations.

☐ I am aware that my participation in this study may be limited to this survey or that I may be invited to participate in an interview which could last up to 2 hours. If I am interviewed, I may also be contacted for feedback.

☐ I am aware that if I have questions about the study or in the event of a research-related injury, I have the right to contact the researcher (Jacy Downey @ 515-480-2932 or her advisor, Dr. Clinton Gudmunson @ 515-294-8439), the Institutional Review Board (515-294-4566), or the Director of the Iowa State University Office for Responsible Research (515-294-3115).
Instructions: For each category, please circle the description that best fits your elementary-aged child or your family. It is important to indicate the most common or typical pattern and not what you would like to happen. Please read carefully.

<table>
<thead>
<tr>
<th>1. Breakfast Patterns</th>
<th>My child rarely eats breakfast <strong>and</strong> we don’t typically eat together as a family.</th>
<th>My child does not regularly eat breakfast <strong>but</strong> we eat together as a family on most days of the week.</th>
<th>My child eats breakfast on most days <strong>but</strong> we don’t typically eat together as a family.</th>
<th>My child eats breakfast on most days <strong>and</strong> we typically eat together as a family.</th>
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<tr>
<td>2. Family Eating</td>
<td>Our family regularly eats fast food <strong>and</strong> we eat while watching TV.</td>
<td>Our family regularly eats fast food <strong>but</strong> we rarely eat while watching TV.</td>
<td>Our family rarely eats fast food <strong>and</strong> we eat while watching TV.</td>
<td>Our family rarely eats fast food <strong>but</strong> we rarely eat while watching TV.</td>
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<tr>
<td>3. Food Choices</td>
<td>Our family uses prepackaged foods frequently <strong>and</strong> we usually do not eat fruits and vegetables with meals (or as snacks).</td>
<td>Our family uses prepackaged foods frequently <strong>but</strong> we regularly consume fruits and vegetables with meals (and as snacks).</td>
<td>Our family eats mostly freshly prepared meals <strong>and</strong> we usually do not eat fruits or vegetables with meals (or as snacks).</td>
<td>Our family eats mostly freshly prepared meals <strong>but</strong> we regularly consume fruits or vegetables with meals (or as snacks).</td>
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<tr>
<td>4. Beverage Choices</td>
<td>Our child frequently drinks soda pop or other sweetened drinks, <strong>and</strong> rarely drinks low fat milk with meals or at snacks.</td>
<td>Our child frequently drinks soda pop or other sweetened drinks, <strong>but</strong> rarely drinks low fat milk with meals or at snacks.</td>
<td>Our child rarely drinks soda pop or other sweetened drinks, <strong>but</strong> rarely drinks low fat milk with meals or at snacks.</td>
<td>Our child rarely drinks soda pop or other sweetened drinks, <strong>and</strong> frequently drinks low fat milk with meals or at snacks.</td>
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<td>5. Restriction and Reward</td>
<td>I don’t monitor my child’s snack food consumption <strong>and</strong> snack</td>
<td>I don’t monitor my child’s snack food consumption <strong>but</strong> snack</td>
<td>I monitor my child’s snack food consumption <strong>but</strong> snack</td>
<td>I monitor my child’s snack food consumption <strong>and</strong> snack</td>
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<td>My child watches television or plays on the computer (or with video games) for more than 4 hours each day.</td>
<td>My child watches little television but plays on the computer or with video games for 2-4 hours each day.</td>
<td>My child rarely monitors the amount of TV. My child watches and my child has access to a TV in his/her bedroom.</td>
<td>My child participates in almost no physical activity during his/her free time and is not enrolled in any organized sports or activities with a</td>
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<td>foods such as candy are frequently used as a reward for good behavior.</td>
<td>foods such as candy are not used as a reward for good behavior.</td>
<td>I monitor the amount of TV my child watches but my child has access to a TV in his/her bedroom.</td>
<td>My child participates in some physical activity a few days a week (2-3 days) in his/her free time but does not typically participate in</td>
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<tr>
<td>foods such as candy are not used as a reward for good behavior.</td>
<td>foods such as candy are not used as a reward for good behavior.</td>
<td>I rarely monitor the amount of TV my child watches but my child does not have access to a TV in his/her bedroom.</td>
<td>My child does not participate in physical activity in his/her free time but does participate in some organized sports or</td>
<td></td>
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<tr>
<td>foods such as candy are not used as a reward for good behavior.</td>
<td>foods such as candy are not used as a reward for good behavior.</td>
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<td>My child regularly participates (i.e. on most days) in physical activity in his/her free time and also participates in sports or</td>
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<td>My child watches television or plays on the computer (or with video games) for more than 2 hours each day.</td>
<td>My child watches television or plays on the computer (or with video games) less than 2 hours each day.</td>
<td>I monitor the amount of TV my child watches and my child does not have access to a TV in his/her bedroom.</td>
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<td>Coach or leader.</td>
<td>Any organized sports or activities with a coach or leader.</td>
<td>Activities with a coach or leader a few days a week (2-3 days).</td>
<td>Activities with a coach or leader.</td>
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<td><strong>10. Family Routine</strong></td>
<td>Our family does not have a daily routine or schedule for our child's bedtime <strong>and</strong> our child gets less than 12 hours of sleep each night.</td>
<td>Our family does not have a daily routine or schedule for our child's bedtime <strong>but</strong> our child typically gets at least 12 hours of sleep each night.</td>
<td>Our family follows a daily routine or schedule for our child's bedtime <strong>and</strong> our child typically gets at least 12 hours of sleep each night.</td>
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</table>

11. Identity of person taking the survey

1 = Mother  
2 = Father  
3 = Other (please list) _____________

12. Age of person taking the survey

1 = 18-25  
2 = 26-39  
3 = 40-49  
4 = 50-59  
5 = 60-69  
6 = more than 70  

13. Current marital status of person taking the survey

1 = Single, never married,  
2 = Married,  
3 = Married/Separated,  
4 = Divorced,  
5 = Cohabiting,  
6 = Widowed,  
7 = Not cohabiting but in a committed relationship

14. Number of children living in the home

1 = 1
222

15. Age of children (please list)

16. Highest achieved educational level of person taking the survey

1 = Less than High School,
2 = High School,
3 = Some college or vocational training
4 = Associates,
5 = Bachelors,
6 = Masters,
7= Advanced Degree (JD, Ph.D, PsyD, etc.)

17. Current work situation of person taking the survey

1 = Working now, employed by someone else,
2 = Self-employed,
3 = Temporarily laid off,
4 = Unemployed, looking for work,
5 = Full-time homemaker,
6 = Retired,
7 = Permanently disabled, unable to work,
8 = Student, not working,
9 = Other (please specify)__________________

18. Total household income level

1 = less than 20,000
2 = 20,000-49,999
3 = 50,000-79,999
4 = 80,000-109,999
5 = 110,000-139,999
6 = 140,000-169,999
7 = 170,000-199,999
8 = more than 200,000

19. Race/ethnicity of person taking the survey

1 = European American,
2 = African American,
3 = Hispanic,
4 = Asian American,
5 = Other,
6 = Multi-Ethnic

20. Name of person taking the survey (You will not be contacted except in reference to this study.)

21. Phone number and/or email address of person taking the survey
PLEASE TEAR OFF HERE AND KEEP FOR YOUR RECORDS

You may have more than one child in elementary school, however please fill out only one survey per household. There are drop boxes available tonight during conferences in each of the classrooms as well as one at the exit of the school. If you choose to fill out this survey and return it at a different time, you may return it to the school office. Thank you again for your participation!

If you know of another parent that would be interested in participating in this study, please direct them to me by forwarding my email address, jdowney@iastate.edu.

Questions?

- For further information about the study, contact me at: Jacy Downey (researcher) by phone (515-480-2932) or by e-mail at jdowney@iastate.edu
- Or you may contact my advisor at: Clinton Gudmunson, Ph.D. (major professor) by phone (515-294-8439) or by e-mail cgudmuns@iastate.edu
- If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011.
INFORMED CONSENT DOCUMENT

Title of Study: Iowa Family Health Study
Investigators: Jacy Downey (researcher), Dr. Clinton Gudmunson (major professor)

This is a research study. Please take your time in deciding if you would like to participate. Please feel free to ask questions at any time.

INTRODUCTION
This study is being conducted by a graduate student at Iowa State University as part of the dissertation process, a requirement of a doctoral program. Dr. Clinton Gudmunson is a faculty member in the department of Human Development and Family Studies and will be advising this project.

The purpose of this study is to better understand how parents are successful in their ability to develop and maintain positive eating, physical activity, and sedentary behaviors in their children.

DESCRIPTION OF PROCEDURES
If you agree to participate in this study, participation will involve being interviewed about parenting experiences related to children's eating, physical activity, and sedentary behaviors. The interview will take approximately 1.5 – 2 hours to complete and will involve answering multiple questions. You will also be contacted after the interview has taken place in request of feedback on my interpretation of our discussion. Subsequent interactions will be via phone or email. If you agree to participate, the interviews will be conducted as your schedule allows in a location convenient for you. The interview sessions will be audio-recorded with a digital audio-recorder and then transcribed.

RISKS
While participating in this study you may experience possible discomfort as a result of disclosing information.

BENEFITS
If you decide to participate in this study there will be no direct benefit to you. It is hoped, however, that the information gained in this study will eventually benefit other parents and children.
COSTS AND COMPENSATION
You will not have any costs from participating in this study. You will be offered an honorarium worth $15 for your time spent participating in this study. This will require that we ask for you to sign a receipt of payment form to comply with federal and state tax and accounting regulations.

PARTICIPANT RIGHTS
Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time. You may skip any questions you do not wish to answer and you may stop answering questions at any time. You may decide not to participate in the study or leave the study early for any reason and it will not result in any penalty or loss of benefits to which you are otherwise entitled.

CONFIDENTIALITY
Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy your records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality the following measures will be taken: The subjects will be assigned a code name that will be used on all documents. Any other identifying details obtained in the course of an interview or observation will be altered to protect confidentiality. All data gathered will be kept in a password coded and encrypted computer file. Audio-recordings will be erased following analysis. By signing this consent form, you give us permission to use and share this information, within the limits described above.

QUESTIONS OR PROBLEMS
You are encouraged to ask questions at any time during this study.

- For further information about the study, contact me at: Jacy Downey (researcher) by phone (515-480-2832) or by e-mail at jdowney@iastate.edu
- Or you may contact my advisor at: Clinton Gudmunson, Ph.D. (major professor) by phone (515-294-8439) or by e-mail cgudmuns@iastate.edu
- If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011.
Consent and Authorization Provisions

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document, and that your questions have been satisfactorily answered. You will receive a copy of the written informed consent prior to your participation in the study.

Participant's Name (printed) ________________________________

________________________________________________________________________

Participant's Signature  Date
Research Question 1: How do high-scoring parents manage aspects of the obesigenic environment that threaten their obesity-preventive lifestyles, as related to eating, physical activity, and sedentary behaviors?

Research Question 2: What are the everyday, immediate experiences (reflections, intentions, and strategies) of high-scoring parents in their efforts to positively socialize their children’s eating, physical activity, and sedentary behaviors?

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Grand Tour Question</th>
<th>Component of adjusted FEM model addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ 2: Probes</td>
<td>You were asked to participate in this interview because you scored highly on the FNPA screening tool. For the sake of this study this qualifies you as a “high-functioning” parent in regards to your children’s eating, PA, &amp; sedentary behaviors. How did you come to be a parent that stresses the importance of positive eating, physical activity, and sedentary behaviors in your children?</td>
<td>Inner circles: Knowledge &amp; Beliefs</td>
</tr>
<tr>
<td></td>
<td>- What are your beliefs in regards to parents’ ability to influence their own and their family’s health practices?</td>
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<td></td>
<td>- What events in your past family, school, or work experiences have shaped you in this way?</td>
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<td></td>
<td>- How do you feel about the role/responsibility of parents in constructing positive health practices and attitudes in their family?</td>
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<td>- Can you tell me about how you feel about parenting specifically for positive eating, PA, &amp; sedentary behaviors?</td>
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<td>- Where does “establishing and maintaining positive health behaviors” fall on your parenting priority list?</td>
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<td>- To what degree would you say that your children are aware of your desire for them to be healthy?</td>
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<td></td>
<td>- How important is it that your children understand that having healthy behaviors is a priority?</td>
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<td></td>
<td>- What is your idea of positive (a) eating, (b) PA, &amp; (c) sedentary behavior in children?</td>
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<td></td>
<td>- How did you become knowledgeable about each of these positive health practices/behaviors?</td>
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<tr>
<td>RQ 2: Describe</td>
<td>Please describe your parenting practices related to eating, physical activity, and sedentary time that help you guide your children’s behaviors? Please include any “tricks” that you use to help your children make healthy eating, PA, &amp; sedentary choices on a daily basis? Let’s start with eating and move to PA and finally sedentary behaviors.</td>
<td>Inner circles: Modeling, Shaping, Accessibility</td>
</tr>
<tr>
<td></td>
<td>- In what circumstances do you &amp; your children discuss healthy (a) eating, (b) PA, &amp; (c) sedentary related issues?</td>
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<td></td>
<td>- What kinds of conversations and behavioral tactics do you utilize to foster an attitude of positive obesity-related behaviors in your children?</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td>Reference</td>
</tr>
<tr>
<td>----------</td>
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<tr>
<td>How do you encourage your children to be physically active? (structured conversations, routines, modeling, restrictions, goal-setting, social reinforcement, improving accessibility)</td>
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<tr>
<td>What does physical activity look like in your family? (exercise together, parent coaching, family sports contests, pedometers, PA charts)</td>
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<tr>
<td>What does meal preparation and mealtime look like? (plan, shop &amp; cook together, keep produce visible and cut up, fruit &amp; veggies chart, sometime/anytime drawers, etc.)</td>
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<tr>
<td>How do you encourage your family to eat healthily? (structured conversations, routines, modeling, restrictions, goal-setting, social reinforcement, monitor accessibility)</td>
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<tr>
<td>How do you shape your children’s time in sedentary behaviors? (structured conversations, routines, modeling, restrictions, goal-setting, social reinforcement, monitor accessibility)</td>
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<tr>
<td>What kinds of things do you think about and plan for each day to keep your children healthy?</td>
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</tbody>
</table>

**RQ 1:** Please describe what makes it easy or hard to establish or maintain positive (a) eating, (b) PA, & (c) sedentary behaviors in your children on a daily basis? Let’s start with eating and move to PA and finally sedentary behaviors.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please describe what might influence your children’s health behaviors that are particular to your home and family environment? (family structure, ethnicity/culture, socioeconomic status, parent educational status)</td>
<td></td>
<td></td>
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<tr>
<td>Please describe what might influence your children’s health behaviors that are particular specific characteristics your children? (age, gender, personality, preferences, competencies)</td>
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</tr>
<tr>
<td>Please describe any developmental stages, critical periods or specific life events in which it was more difficult or less difficult to maintain health as a priority? (toddler pickiness, adolescent defiance, rules at friends’ houses, etc.)</td>
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<tr>
<td>How have your health-related parenting tactics changed as your kids grew older?</td>
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<td>How might, if at all, cultural traditions, holidays, special occasions or seasons affect your health practices?</td>
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<tr>
<td>Please describe what or who else influences you and your children’s eating, PA, &amp; sedentary behaviors?</td>
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<td>Please tell me, if at all, about ways that your children’s school environment influences how you parent in this regard?</td>
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<tr>
<td>Please tell me, if at all, about ways that your children’s daycare influences how you parent in this regard?</td>
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<tr>
<td>Please tell me, if at all, about ways that your children’s extracurricular activities influence how you parent in this regard?</td>
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<tr>
<td>Please tell me, if at all, about ways that your/your partner’s jobs influences how you parent in this regard?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Please tell me, if at all, about ways that your community influences</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Outer ring:**
Family demographics, Child characteristics, Organizational characteristics, Community characteristics, Policies, Media, & Culture
<table>
<thead>
<tr>
<th>your ability to parent in this regard? (neighborhood environment: safety, access to recreational space, access to supermarkets, venues to access healthy foods)</th>
</tr>
</thead>
<tbody>
<tr>
<td>o Please tell me, if at all, about ways that the media or other outside sources (culture, norms, policies) influence your ability to parent in this regard?</td>
</tr>
<tr>
<td>o What other stressors affect your ability to parent for positive nutrition, PA, &amp; sedentary behaviors?</td>
</tr>
<tr>
<td>o Describe the barriers that you face in regards to establishing and maintaining these healthy practices?</td>
</tr>
<tr>
<td>o Describe the types of behaviors or situations you might avoid in order to maintain your children’s positive health behaviors? (fast-food, concession stand, convenience stores, eating out, television or video games during the week, stationary video games, peers' homes, school food, aisles of the grocery store)</td>
</tr>
<tr>
<td>o What do you rely on to help your children have positive eating, PA, &amp; sedentary behaviors?</td>
</tr>
<tr>
<td>o What resources help you?</td>
</tr>
<tr>
<td>o What do you need to help you?</td>
</tr>
</tbody>
</table>
Appendix E

Interview summary sheet

Interview Summary Sheet

<table>
<thead>
<tr>
<th>Site:</th>
<th>Type of Interview:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewers:</td>
<td>With Whom:</td>
</tr>
<tr>
<td>Interview Date:</td>
<td>Code for Interview:</td>
</tr>
</tbody>
</table>

1. Briefly describe the participant and family discussed in this interview.

2. What were the main ideas/themes around related health behaviors & practices that stood out?

3. Describe the interview in 3 words.

4. Summarize the information gathered in target areas:

<table>
<thead>
<tr>
<th>Target area/Information</th>
<th>Health practice/behavior details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family description</td>
<td></td>
</tr>
<tr>
<td>Eating</td>
<td></td>
</tr>
<tr>
<td>Physical activity</td>
<td></td>
</tr>
</tbody>
</table>
4. Anything else identified as salient, interesting or important that is relevant to the research topic?

5. Any ethical issues, dilemmas or situations arise?

6. Any new questions or issues to cover in future interviews?

7. Any questions for my major professor or committee members?
Instructions for reviewer:

Thank you for agreeing to review the preliminary findings of this study. I really appreciate your feedback as I refine the results of this project. Your input will help me to honor the voices of participants, and determine if what I am interpreting resonates with others important to the study. In order to ensure that this research is credible, I need feedback to help make sure that the conclusions I am drawing are on track with what the participants have shared. I welcome as little or as much feedback as you feel comfortable providing. It isn’t necessary to make editorial comments as this is a preliminary draft. With that being said, if something does not make sense please bring it to my attention. Please note that the excerpts that I am providing are a synthesis of the analysis of all participant interviews. You will see quotes as well as interpretive summaries.

Using “track changes” to make comments is an easy way to provide feedback. Please let me know if you need help in getting started. When you have finished with your review, please complete the feedback form and send it to me at jdowney@iastate.edu. I also can be reached at 515.480.2932.

Gratefully,
Jacy Downey

NOTE: The selected excerpt will be included here.
Feedback form

Please check your status as a reviewer:

____ participant
____ peer

Please read the provided excerpt and comment on the following questions:

1. What did I get right?

2. What did I leave out or under-emphasize?

3. What did you disagree with?

4. What would you have described differently?

5. What, specifically, did you connect with?

6. What did not resonate with you?

7. Anything else I should know?

(Adapted from Hardy, 2011).
BIOGRAPHICAL SKETCH

Jacy Cowden Downey was born February 15, 1975 in Knoxville, Iowa. She received a Bachelor of Arts degree from Simpson College in 1997 where she studied biology and chemistry and a Master of Public Health from Des Moines University in 2001. She returned to pursue her doctorate after more than a decade in the healthcare and nonprofit arenas and earned a Ph.D. in Human Development and Family Studies from Iowa State University in 2014.