Parental Attitudes and Perceptions Related to Their Children's Physical Activity and Eating Patterns

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PARENTAL ATTITUDES AND PERCEPTIONS RELATED TO THEIR
CHILDREN’S PHYSICAL ACTIVITY AND EATING PATTERNS

by

Megan Leatham DuBois

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Health and Human Movement

Approved:

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UTAH STATE UNIVERSITY
Logan, Utah

2010
ABSTRACT

Parental Attitudes and Perceptions Related to Their Children’s Physical Activity and Eating Patterns

by

Megan Leatham DuBois, Master of Science
Utah State University, 2010

Major Professor: Dr. Julie Gast
Department: Health, Physical Education, and Recreation

Children’s physical inactivity and poor eating patterns have received a great deal of attention in our country and worldwide. Studies have been conducted to identify determinates related to children’s physical activity and eating patterns and to identify strategies for promoting positive behaviors. Parental support is a well-accepted determinate of children’s physical activity and eating patterns. However, little qualitative research has been done to determine parental attitudes and perceptions related to this critical role.

First, the study sought to gain a greater understanding of parental perspectives on their children’s physical activity and eating patterns. Second, the study examined parental attitudes and perceptions of their own personal roles related to their children’s physical activity and eating patterns and the possible role of others. Focus groups were conducted with parents who had a child or children in kindergarten through sixth grade in
the Madison School District in Rexburg, Idaho. Grounded theory was used to analyze findings.

The results of the study indicated common elements of parental perceptions of physical activity and positive eating patterns in children. These elements were the same for supportive networks, supportive environments, and individual factors. Of these elements, most participants felt that their role as a parent was the most critical. Although knowing how critical their involvement was, participants continually brought up concerns and barriers associated with their role. The most common concerns addressed by parents were the significant impact of not having enough time and busyness of family schedules.

Findings indicated that these elements should be considered and researched when conducting a needs assessment and planning interventions designed to increase physical activity and improve eating patterns in children. Findings also indicated that parents should play an extremely important role when collecting needs assessment data related to the physical activity and eating patterns of children. Interventions aimed at improving the health of children should be family focused and include strategies for incorporating positive changes into households and must address the demands of families’ schedules. Effective health education strategies may also include facilitating parental involvement in community and school advocacy related to their perceived need for changes.
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   Megan Leatham DuBois
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CHAPTER I

INTRODUCTION

Background of the Problem

The lack of physical activity and poor eating patterns among youth has received a great deal of both national and worldwide attention. Regular physical activity substantially reduces the risk of dying of coronary heart disease, the nation’s leading cause of death, and decreases the risk for stroke, colon cancer, diabetes, and high blood pressure (U.S. Department of Health and Human Services [USDHHS], 1996). In addition, physical activity helps control weight; contributes to healthy bones, muscles, and joints; reduces symptoms of anxiety and depression; and is associated with improved mood and increased sense of well-being (USDHHS, 1996). Regular physical activity is also associated with fewer hospitalizations and physician visits (USDHHS, 2008a).

The Dietary Guidelines for Americans recommends children and adolescents should engage in at least 60 minutes of physical activity on most, preferably all, days of the week (USDHHS & U.S. Department of Agriculture [USDA], 2005). To meet these recommendations physical activity should increase heart rate and rate of respiration for a portion of the 60 minutes on at least five days a week or more (Centers for Disease Control and Prevention [CDC], 2008; USDHHS & USDA, 2005). About two thirds of young people in grades 9-12 do not regularly engage in these recommended levels of physical activity (USDHHS, 2008b). It has also been found that the prevalence of physical activity declines with age (USDHHS, 1996). Activity level is higher among
ninth graders than tenth graders, higher among tenth graders than eleventh graders, and higher among eleventh graders than twelfth graders (CDC, 2008). In 2005, 9.6% of high school students did not participate in any moderate or vigorous physical activity and the prevalence of non-participation is higher among females (11.3%) than males (8%; CDC, 2008; USDHHS, 2008b).

Students are far less active during the school day than in the past. Daily participation in high school physical education classes dropped from 42% in 1991 to 33% in 2005 (USDHHS, 2008b). Fifty-four percent of students in grades 9-12 attend a physical education class at least once a week. However, of these students, 16% reported not engaging in physical activity during the class (CDC, 2008). In addition, 21% of young people in grades 9-12 play video games or use a computer for nonschool-related activities three or more hours a day and 37% view three or more hours of television daily (CDC, 2008).

Eating patterns also have a dramatic effect on the health of young people. Research shows that proper eating patterns can help lower the risk of many chronic diseases, including heart disease, stroke, many cancers, diabetes, and osteoporosis (USDHHS, 2008b). Poor eating patterns may lead to increased risk of diabetes, high blood pressure, asthma, high cholesterol, joint problems and overall poor health status (Mokdad et al., 2003). High levels of blood cholesterol, related to the development of atherosclerosis, the most common cause of heart disease, are found in children with poor eating patterns (Kavey et al., 2003). The Dietary Guidelines for Americans defined a healthy diet for children as one that emphasizes fruits, vegetables, whole grains, low-fat
milk and milk products, lean meats, poultry, beans, fish, eggs, nuts, and is low in saturated fats, trans fats, salt, added sugar and cholesterol (USDHHS & USDA, 2005).

Eighty percent of high school students do not meet the recommendation for at least five fruits and vegetables per day and consumption goes down with age (CDC, 2008). In addition, 33.8% of high school students drink a can, bottle, or glass of soda or pop at least daily and only 14.1% drink milk daily (CDC, 2008). These and similar trends can lead to the further decline of the health status of youth.

Many studies have been conducted to identify determinates related to children’s physical activity and eating patterns and to identify strategies for encouraging and promoting positive behaviors. Parental support of children’s physical activity is a key determinate of physical activity among youth (Davison, 2004; McGuire, Hannan, Neumark-Sztainer, Falkner, & Story, 2002; Wang, Chatzisarantis, Spray, & Biddle, 2002). Research shows that children are more likely to be active when their parents encourage them to be active (McGuire et al., 2002), are active themselves (Moore et al., 1991) and include their children in their own physical activity (Davison, 2004). Children are also more likely to be active when their parents make physical activity equipment available (Dunton, Jamner, & Cooper, 2003), and plan family outings that are physically active (Davison, 2004). Parents also show support for physical activity by enrolling their children in physically active sports or programs and by providing transportation to and from places to be active (Hoefer, McKenzie, Sallis, Marshall, & Conway, 2001).

Parental support is also a major determinate of children’s eating patterns. Children’s knowledge, attitudes, practices, and habits related to food largely come from
the home environment. Research shows that parents play a critical role in the development of children’s eating behaviors, energy intake, and food preferences (Birch & Fisher, 1998). O’Dea (2003) conducted a study with 213 children in grades 2 through 11 to determine major benefits and barriers to healthy eating. Participants reported that parental control over food and the lack of parental support or parental modeling were major barriers to healthful eating (O’Dea, 2003).

Parental support is a well-accepted determinate of children’s physical activity and eating patterns. However, little qualitative research has been done to determine parental attitudes and perceptions related to this role. Most studies only focus on behaviors, weight, and obesity. Little research has focused on parental views regarding their roles related to their children’s physical activity and eating patterns.

**Theoretical Constructs**

Health behavior and education theories provide a firm foundation on which health education research and practice should be built (Glanz, Rimer, & Lewis, 2002). Theories provide structure and organization to research design and practice (McKenzie, Neiger, & Smeltzer, 2005). A methodology for developing theory from qualitative data is known as *grounded theory* (Corbin & Strauss, 2008). This study utilized this theoretical approach. Grounded theory involves utilizing systematic qualitative analysis to generate theory (Charmaz, 2006). With this approach, researchers do not begin with a theory in mind; instead they begin with a topic and allow a theory to develop from the data. Focus groups generate large amounts of qualitative data. By applying grounded theory, these
data can provide valuable insights into a particular area. Insights may be discovered that can be used to generate theory, plan future research and improve children’s health.

**Purpose of the Study**

The purpose of this study was two fold. First, the study sought to gain a greater understanding of parental attitudes and perceptions of their children’s physical activity and eating patterns. Second, the study examined parental attitudes and perceptions of their own personal roles related to their children’s physical activity and eating patterns and the possible role of others. Grounded theory was used to analyze findings.

Parents who had a child or children in Kindergarten through sixth grade in the Madison School District in Rexburg, Idaho, were recruited to participate in focus groups. The following list was used to guide the focus group discussion and serve as research questions of the study.

1. Explore parental perceptions of their children’s physical activity and factors that impact these behaviors.
2. Explore parental perceptions of their children’s eating patterns and factors that impact these patterns.
3. Explore parental attitudes and perceptions of the possible role they play in their children’s physical activity level.
4. Explore parental attitudes and perceptions of the possible role they play in their children’s eating patterns.
5. Explore parental perceptions of the possible people and factors that impact
their children’s physical activity level.

6. Explore parental perceptions of the possible people and factors that impact their children’s eating patterns.

7. Explore parental attitudes and perceptions of family meal times.

8. Explore parental attitudes and perceptions related to screen time and the impacts on physical activity and eating patterns.

**Limitations**

The limitations of this study were as follows.

1. Participants are not selected through a random-sampling process.

2. Participants will all be from the same community and thus may limit generalizability to other parents in other settings.

**Delimitations**

The delimitations of this study are as follows.

1. Participants will all be English speaking.

2. Participants will all live in Madison County and have children that attend Madison School District in Rexburg, ID.

3. Participants will all be parents of children grades Kindergarten through 6th grade.
Assumptions

1. Participants will respond honestly.
2. For the purpose of this study, the discussion guide is valid and reliable.

Definitions of Terms

*Exercise:* Physical activity that is planned or structured. It involves repetitive bodily movement done to improve or maintain one or more of the components of physical fitness—cardiorespiratory endurance (aerobic fitness), muscular strength, muscular endurance, flexibility, and body composition.

*Inactivity:* Not engaging in any regular pattern of physical activity beyond daily functioning.

*Physical Activity:* Any bodily movement produced by skeletal muscles that result in an expenditure of energy.

Household physical activity included (but were not limited to) activities such as sweeping floors, scrubbing, washing windows, and raking the lawn.

Leisure-time physical activity was exercise, sports, recreation, or hobbies that were not associated with activities as part of one’s regular job duties, household, or transportation.

Moderate-intensity physical activity referred to a level of effort in which a person should experience some increase in breathing or heart rate.

Vigorous-intensity physical activity may be intense enough to represent a substantial challenge to an individual and refers to a level of effort in which a person
should experience a large increase in breathing or heart rate (conversation is difficult or broken).

*Regular physical activity:* A pattern of physical activity is regular if activities were performed most days of the week, preferably daily; 5 or more days of the week if moderate-intensity activities (in bouts of at least 10 minutes for a total of at least 30 minutes per day); or 3 or more days of the week if vigorous-intensity activities (for at least 20-60 minutes per session).

**Summary**

This chapter provides the framework to support the purpose and process of this study. Also included are the limitations, delimitations, assumptions, and definitions of terms. Empirical evidence from published research will be presented in the next chapter to further support the value and need for this study. The methodology of the study will be discussed in Chapter III.
CHAPTER II
REVIEW OF THE LITERATURE

Introduction

The literature review will provide an overview of current and past literature regarding physical activity and nutritional recommendations and trends in children, as well as parental perspectives on their children’s physical activity and eating patterns. The lack of qualitative health research conducted among parents regarding their perceptions and attitudes related to the physical activity and eating patterns of their children will also be discussed. The literature reviewed will support the rationale for this research project.

Physical Activity

National Recommendations

The USDHHS (2008a) recommended that children and adolescents aged 6 to 17 engage in 60 minutes or more of physical activity daily. These guidelines focus on three types of activity: aerobic, muscle-strengthening, and bone-strengthening (USDHHS, 2008a). Most of the 60 or more minutes a day should be moderate or vigorous in intensity and should be vigorous at least 3 days a week. Examples of aerobic activities are running, hopping, skipping, jumping rope, swimming, dancing, and bicycling (USDHHS, 2008a). Muscle-strengthening activities, such as playing on playground equipment, climbing trees, and playing tug-of-war, should be included on at least 3 days a week and bone-strengthening, such as running, jump rope, and basketball should also
be included in physical activity 3 days a week (USDHHS, 2008a). To meet recommendations, the physical activity should increase heart rate and rate of respiration for a portion of the 60 minutes on at least 5 days a week or more (CDC, 2008; USDHHS & USDA, 2005). In addition, Healthy People 2010 (USDHHS, 2000) outlined numerous national health objectives for children and adolescents targeted at increasing levels of physical activity and reducing sedentary activities. These included the following.

1. Increase the proportion of adolescents who engage in moderate physical activity for at least 30 minutes on 5 or more of the previous 7 days.

2. Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion.

3. Increase the proportion of children and adolescents who view television 2 or fewer hours per day.

4. Increase the proportion of trips made by walking.

5. Increase the proportion of trips made by bicycling.

6. Increase the proportion of the Nation’s public and private schools that require daily physical education for all students.

7. Increase the proportion of adolescents who participate in daily physical education.

8. Increase the proportion of adolescents who spend at least 50 percent of school physical education class time being physically active.

9. Increase the proportion of the Nation’s public and private schools that provide
access to their physical activity spaces and facilities for all persons outside of normal school hours (that is, before and after the school day, on weekends, and during summer and other vacations).

10. Increase the proportion of middle, junior high, and senior high schools that provide comprehensive school health education to prevent health problems in the following areas: unintentional injury; violence; suicide; tobacco use and addiction; alcohol or other drug use; unintended pregnancy, HIV/AIDS, and STD infection; unhealthy dietary patterns; inadequate physical activity; and environmental health.

In 2006, the Healthy People 2010 Midcourse Review indicated that no physical activity objectives had been met (USDHHS, 2006). However, gains were made among students in grades 9 through 12 for objectives addressing physical activity during physical education class and television viewing time. Objectives related to moderate and vigorous physical activity among students in grades 9 through 12 and participation in daily physical education in schools moved away from targets set by Healthy People 2010 (USDHHS, 2006).

Benefits of Physical Activity

The benefits of physical activity have been widely examined and accepted. Scientific evidence supporting the benefits of physical activity started to accumulate in the second half of the century (USDHHS, 1996). Research on the benefits of physical activity continues to evolve. The Surgeon General is considered America’s chief health educator and provides the best scientific information available on how to reduce the risk of illness and improve health. The Office of the Surgeon General released its first report
addressing physical activity in 1996. This report was developed out of a consensus among epidemiologists, experts in exercise science, and health professionals. Collaborating offices included: CDC; President’s Council on Physical Fitness and Sports (PCPFS); Office of Public Health and Science; the National Institutes of Health (NIH); American Alliance for Health, Physical Education, Recreation, and Dance; the American College of Sports Medicine; and the American Heart Association. This report summarized all existing literature related to the benefits of physical activity, is considered to be a leading source of information, and is referenced in most of the literature discussing the benefits of physical activity. For the purpose of this literature review, the Surgeon General was found to be the leading expert on the benefits of physical activity and was the primary source of most all literature reviewed.

According to the Surgeon General, physical activity reduced the risk of premature death, coronary heart disease, stroke, hypertension, colon and breast cancers, and Type 2 diabetes (American Cancer Society [ACS], 2007; American Heart Association [AHA], 2009; Mokdad et al., 2003; USDHHS, 1996; USDHHS, 2008a). Physical activity also prevents weight gain, contributes to weight loss, improves cardiorespiratory and muscular fitness, prevents falls, and reduces depression (Mokdad et al., 2003; USDHHS, 1996; USDHHS, 2008a). Regular physical activity in childhood and adolescence improves muscular strength and cardiorespiratory endurance, helps build healthy muscles and bones, helps create a favorable body composition, and reduces anxiety and depression (USDHHS, 1996; USDHHS, 2008a).

In addition to the well known benefits previously discussed, there were many
additional benefits of physical activity identified by youth themselves. Field, Diego, and Sanders (2001) administered a questionnaire to 89 high school seniors to assess benefits of physical activity. Physical activity behaviors, relationships with parents and peers, depressive tendencies, sports involvement, drug use, and academic performance were accessed. They completed a 181-item Likert questionnaire on behavioral and psychological aspects of adolescent life. Based on their responses, the group was split into high- and low-exercise groups. Quality relationships with parents were defined by addressing the following: general acceptance from parents, frequency of personal conversations, doing things together, showing and receiving physical affection from parents, and family support. Overall, the adolescents in the high-exercise group reported higher quality relationships with parents, less depression, lower level of drug use, engagement in sports more hours per week, and higher grade point averages (Field et al., 2001).

Another study conducted 38 focus groups with students in grades 2 through 11 from 34 randomly selected schools (O’Dea, 2003). There were a total of 213 students that participated. The major benefits of physical activity that were reported by students were social benefits, psychological enhancement, physical sensation, sports performance, cognitive benefits, and coping strategy (O’Dea, 2003). Students identified fun and enjoyment, socializing with friends, enjoyment of team work and team identity, development of life skills, and parental approval as social benefits of physical activity. In addition, they reported achievement, pride, self-esteem, confidence, enhanced mood, discipline, sense of balance in life, guilt reduction, enjoyment of challenges and goals,
excitement, and adrenaline rush as psychological benefits of physical activity. Students reported feeling refreshed and “cleansed,” enjoying sensation of movement and creation of energy as a result of physical activity. In addition, they reported physical activity as a way to reduce fatigue, increase sensation of well-being, strength, and fitness, and enhance sleep patterns (O’Dea, 2003).

Students also described sports performance benefits such as skill development, improved coordination, agility, flexibility and reflexes, improved fitness and strength. They reported cognitive benefits as well, such as having a clear mind, enhanced concentration and brain function. Coping strategies were also a reported benefit. They reported that physical activity helped with stress relief, relaxation, was a distraction from worries, and gave them a mental break from the pressures of school. They reported that physical activity was also an outlet for aggression, frustration, and anger (O’Dea, 2003).

Research clearly demonstrates that there are many physical, mental, emotional and social benefits of engaging in physical activity. These benefits are both immediate and long-term. However, the current trends in physical activity show that many children are not receiving these benefits.

**Current Trends-Physical Activity**

The Youth Risk Behavior Surveillance System (YRBSS) monitors health-risk behaviors among youth. The YRBSS included a national school-based Youth Risk Behavior Survey (YRBS) conducted by the CDC and state, territorial, tribal, and a local YRBS conducted by state and local agencies. The national YRBS is conducted every 2 years, in the spring, among students in the ninth to twelfth grades. The most recent
YRBS was administered in 2007; 14,103 questionnaires were completed by students from 157 schools (CDC, 2008).

The 2007 survey found that 65.3% of students nationwide did not meet current recommendations for physical activity and 24.9% of students did not participate in 60 minutes of any kind of physical activity on any of the 7 previous days of the survey (CDC, 2008). Overall, the prevalence of meeting physical activity recommendations is higher among males (43.7%) than females (25.6%; CDC, 2008). The YRBS data show that there has been no significant change in the prevalence of meeting recommendations for physical activity nationwide from 2005 to 2007 (CDC, 2008). Information on meeting physical activity recommendations was not a part of the YRBS prior to 2005.

Idaho conducts a state YRBS every 2 years. According to the 2007 survey, 53.2% of students in Idaho did not meet current recommendations for physical activity (CDC, 2008). Similar to national trends, the prevalence of meeting physical activity recommendations, among Idaho students, was also higher among males (57.3%) than females (35.7%; CDC, 2008).

Additional research shows similar trends in physical activity and the lack of meeting recommendations. A study conducted in San Diego County found that 55% of the participating adolescents did not meet physical activity recommendations (Sanchez et al., 2007). Adolescents aged 11 to 15 were recruited to examine patterns of physical activity. Participants were recruited through their primary care provider. Forty-five medical clinics from San Diego County participated. This sample was ethnically representative of adolescents in this area; 3.4% Asian/Pacific Islander, 6.6% African
American, .7% Native/American Indian, 13.1% Hispanic, 57.9% non-Hispanic/White, and 18.3% multiethnic or other. Four hundred and seventy-one girls and 407 boys participated ($n = 878$). Physical activity was measured with the computer science and applications accelerometer. This accelerometer is worn on a belt around the waist and quantifies activity time and rate. Participants wore the accelerometer on an average of 8.3 days; 96% of participants wore it 5 or more days. Results found that 55% of the adolescents did not meet the recommendation of being physically active for 60 minutes per day. More boys (59%) than girls (33.6%) did meet recommendations (Sanchez et al., 2007). These findings are consistent with the YRBS data.

In addition, the CDC (2003) conducted a national survey examining children’s physical activity levels and found that 61.5% of children did not participate in organized physical activity during nonschool hours and 22.6% did not engage in any free-time physical activity. This study was conducted among 9-13 year old children and their parents. Telephone surveys were completed with 3,120 child/parent participants (CDC, 2003).

Another study showed that 19% of youth reported engaging in no form of vigorous physical activity on 3 or more days per week (Dowda, Ainsworth, Addy, Saunders, & Riner, 2001). This study was conducted with a group of 2,791 youth between the ages of 8 and 16 enrolled in the Third National Health and Nutrition Examination Survey (NHNES). Only 61.5% of youth participated on one or more sports team or engaged in one or more exercise program of any kind. Vigorous activity was defined as played or exercised enough to make them sweat or breathe hard. More males
than females reported vigorous activity and participation on sports teams or in exercise programs.

The research clearly showed that a large number of children and adolescents are not meeting the national recommendations for physical activity and therefore are not experiencing the benefits of physical activity. More males than females seem to meet recommendations.

**Current Trends-Decline with Age**

When examining the physical activity level of children, research shows that it declines with age. Aaron, Storti, Robertson, Driska, and LaPorte (2002) conducted a 4-year longitudinal study of teens in a suburban school district near Pittsburgh, Pennsylvania. This study examined the pattern of change overtime in the physical activity habits of adolescence. Participants were 12 years old when the study began and 15 years old at the conclusion of the study. The final sample consisted of 410 boys and 372 girls. Participants had to fill out questionnaires for 4 consecutive years, only those who participated all 4 years were included in the final sample. These questionnaires examined past year participation in leisure time and competitive physical activities. Participants indicated which activities they had participated in on at least 10 occasions over the past year. The questionnaires included 26 common recreational and leisure activities; the participant could also add their own activities if they were not already listed. Participants were also asked how frequently and for how long they had participated in each activity.

This study showed that there was a 26% decline in physical activity for the entire
sample during the 4-year period (Aaron et al., 2002). There was a greater percentage of decline in males than females (43% and 26%). However, each year males were still more active than females. There was also a decline in the number of activities they participated in. In year one, the average was 7.05 different activities during the previous year and in year four it had declined to 3.08 activities during the previous year. Eight-five percent of participants reported a decrease in the number of activities. The results of this study showed: (a) there was a decline in the number of physical activities participants were engaging in, and (b) a decline in the time spent engaging in any form of physical activity from the age of 12 to 15 for both males and females (Aaron et al., 2002).

The YRBS also has yielded data that indicates that there is a decline in physical activity with age. The prevalence of meeting recommendations was higher among ninth-grade students (38.1%) than tenth (34.8%), eleventh (34.8%), and twelfth-grade students (29.5%; CDC, 2008). This decline was true with females and males.

In another study, results showed that moderate and high levels of activity decreased significantly between ages 10 and 16 for both males and females (Strauss, Rodzilsky, Burack, & Colin, 2001). For females, time spent engaging in physical activity was 35% higher in preteens compared to teens. The researchers found that before 13 years of age, males and females have similar levels of physical activity. Interestingly, the researchers found after age 13, males (25.3% ± 4.7%) were significantly more physically active than were females (19.0% ± 3.8%).

Research has consistently shown that as children become older they engage in less physical activity. The decline in physical education classes, in public schools, is a
contributing factor to this decline.

**Current Trends-Physical Education**

Physical education in schools can help students meet current recommendations. However, many youth do not have the opportunity to participate in physical education during the school day. According to the most recent national and state YRBS, 69.7% of students nationally and 68% of students in Idaho did not attend physical education classes daily. Attendance in daily physical education classes decreased from 1991 to 1995, but experienced no change from 1995 to 2007 (CDC, 2008). The number of students attending physical education classes on one or more days during the week has also not changed from 1991 to 2007 (CDC, 2008).

Surprisingly, 46% of students nationally and 46.8% of students in Idaho did not attend any physical education classes in an average week while in school (CDC, 2008). The YRBSS found that attendance in physical activity classes is also higher among males than females nationwide. This trend is contributing to physical inactivity among children and adolescents.

**Parents and Physical Activity Behaviors of Youth**

Parental support of children’s physical activity is a key determinant of physical activity among youth (Davison, 2004; McGuire et al., 2002; Wang et al., 2002).

Research shows that children are more likely to be active when their parents encourage them to be active (McGuire et al., 2002), are active themselves (Moore et al., 1991), and include their children in their own physical activity (Davison, 2004). Children are also
more likely to be active when their parents make physical activity equipment available (Dunton et al., 2003), and plan family outings that are physically active (Davison, 2004). Parents also show support for physical activity by enrolling their children in physically active sports or programs and by providing transportation to and from places to be active (Hoefer et al., 2001).

Dwyer and colleagues (2006) conducted a qualitative study with adolescent females from four secondary schools in different regions of Toronto, Canada. Seventy-three females participated in 1 of 7 focus group sessions and were mostly 15- and 16-year-olds in grades 10 and 11. Participants mentioned that parents’ expectations influenced their decision to be or not be physically active. A few said that their parents are role models and that parents’ level of physical activity influences their activity level. Others said that not only do their parents not encourage them but discourage them from engaging in physical activity (Dwyer et al., 2006).

In another study, parental support was also shown to be an important correlate of youth physical activity. Three hundred and eighty students in grades 7 through 12 and their parents participated by completing a parental questionnaire and a youth inventory. The purpose of this study was to test a conceptual model that linked parental physical activity behaviors, parental support for physical activity, children’s physical activity and their self-efficacy related to their own physical activity participation (Trost et al., 2003). The parent questionnaire assessed their physical activity habits, their enjoyment related to physical activity, beliefs regarding the importance of physical activity, and supportive behaviors related to their child’s physical activity behaviors. The inventory, completed
by the child, assessed their physical activity in the previous seven days and confidence in their ability to overcome common barriers to participating in physical activity.

Results showed that parental activity was not directly related to their child’s physical activity level, as the initial model indicated (Trost et al., 2003). Modeling behaviors alone was not a sufficient influence on children. However, results showed that parental support was an important correlate of physical activity for children. Directly, parental support related to their children’s physical activity behaviors and indirectly by encouraging the development of self-efficacy towards physical activity (Trost et al., 2003). This study identified parental support as encouraging their child to do physical activities, doing a physical activity with their child, providing transportation so their child can engage in physical activity, watching their child participate, and telling their child that physical activity is good for his or her health.

Parental modeling of physical activity alone was also found to not boost the child’s self-efficacy; it was instead again the parents’ supportive behaviors that were related to their children’s confidence levels (Trost et al., 2003). These findings indicate that parental support is more critical than parental modeling, although parental participation in physical activity does influence their level of supportiveness. According to this study, parents’ physical activity behaviors, their perceived enjoyment and the perceived importance of physical activity were directly related to the amount of support they offered their children (Trost et al., 2003). These findings further indicate that parental support is needed for children to engage in physical activity and to feel confident about their ability to participate in physical activity.
Anderssen, Wold, and Torsheim (2006), also concluded that parental physical activity and their children’s physical activity is not strongly associated. Social influences, such as parental support, were not included in this study. Utilizing a longitudinal research design, they examined interrelationships in physical activity. Parents and children provided information about their physical activity over an eight year period. There were 557 adolescents that participated; participants were 13 years old at the beginning of the study. The study assessed parental and children’s stability in physical activity over the years and parental physical activity changes as a predictor for changes in their children’s behaviors. Their analysis showed that there was only a weak association between parental behaviors and their children’s behaviors (Anderssen et al., 2006). Parental support was not examined in this study.

Research does not clearly demonstrate that physically active parents will have physically active children or that physically inactive parents will have physically inactive children. However, research does demonstrate that parents do influence and shape the physical activity behaviors of their children by their support of these behaviors. This support may include encouraging their child to do physical activities, enrolling children in physically active sports or programs, doing a physical activity with their child, providing transportation so their child can engage in physical activity, watching their child participate, and providing physical activity equipment (Davison, 2004; Dunton et al., 2003; Hoefer et al., 2001; McGuire et al., 2002; Trost et al., 2003). In addition, parental support also includes telling a child that physical activity is good for his or her health and creating self-efficacy, related to physical activity (Trost et al., 2003).
There is a great deal of research related to physical activity and children. However, very little qualitative research had been done to examine parents’ perceptions and attitudes related to benefits of physical activity, current trends in activity levels, and their parental role in the physical activity level of their children.

**Eating Patterns**

**National Recommendations**

The USDHHS and the USDA (2005) recommend that children and adolescents eat a variety of fruits and vegetables each day and consume whole-grain products. These agencies also recommend that children 2 to 8 years of age consume two cups per day of fat-free or low-fat milk or equivalent milk products and children 9 years of age and older consume three cups per day of fat-free or low-fat milk or equivalent milk products. The USDHHS also recommend that children 2 to 3 years of age keep total fat intake between 30% to 35% of calories and children and adolescents 4 to 18 years of age keep total fat intake between 25% to 35% of calories. Most fats should come from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts, and vegetable oils (USDHHS & USDA, 2005).

Similarly, the AHA recommended that those aged 2 years and older consume a diet that primarily focuses on fruits and vegetables, whole grains, low-fat and non-fat dairy products, beans, fish and lean meats (AHA et al., 2006). The AHA also gave the following advice to parents trying to implement these recommendations: reduce added sugars in drinks and juices, use canola, soybean, corn oil, safflower oil, or other...
unsaturated oils in food preparation, use recommended portion sizes on food labels, use fresh, frozen, and canned vegetables and fruits and serve at every meal, introduce and serve fish, remove skin from poultry before eating, use only lean cuts of meat, limit high-calorie sauces, eat whole-grain breads and cereals instead of refined products, eat more legumes and tofu in place of meat for some entrees, and read food labels and choose high-fiber, low-salt and low-sugar alternatives (AHA et al., 2006; USDHHS & USDA, 2005).

*Healthy People 2010* set national nutrition objectives directly related to children and adolescents (USDHHS, 2000).

1. Reduce the proportion of children and adolescents who are overweight or obese.

2. Increase the proportion of persons aged 2 years and older who consume at least 2 daily servings of fruit.

3. Increase the proportion of persons aged 2 years and older who consume at least three daily servings of vegetables, with at least one-third being dark green or orange vegetables.

4. Increase the proportion of persons aged 2 years and older who consume at least six daily servings of grain products, with at least three being whole grains.

5. Increase the proportion of persons aged 2 years and older who consume less than 10% of calories from saturated fat.

6. Increase the proportion of persons aged 2 years and older who consume no more than 30% of calories from total fat.
7. Increase the proportion of persons aged 2 years and older who consume 2,400 mg or less of sodium daily.

8. Increase the proportion of persons aged 2 years and older who meet dietary recommendations for calcium.

9. Reduce iron deficiency among young children.

10. Increase proportion of children and adolescents aged 6 to 19 years whose intake of meals and snacks at schools contributes to good overall dietary quality.

These objectives serve as national recommendations to be reached by the year 2010. In 2006, the Healthy People 2010 Midcourse Review indicated that no nutritional related objectives had been met (USDHHS, 2006). All objectives related to overweight and obesity had moved away from the target. The reduction of iron deficiency in children aged 1 to 2 years did move towards its target. At the time of the Midcourse Review, data were not available to assess progress of most objectives aimed at encouraging healthful eating patterns (USDHHS, 2006). All objectives are anticipated to have data to assess progress by the end of the decade. It is important to examine the gap between current trends in eating patterns and these current recommendations.

**Benefits of Proper Eating Patterns**

Research shows that proper eating patterns have numerous benefits. Proper eating patterns contribute to overall healthy growth and development, including bone health, skin, and energy levels and decrease the risk for dental caries, eating disorders, constipation, malnutrition, and iron deficiency anemia (USDHHS & USDA, 2005). Proper eating patterns can lower the risk for many chronic disease, including heart
disease, diabetes, some cancers, stroke, and osteoporosis (Kavey et al., 2003; Rosenbloom, Young, Joe, & Winter, 1999; Venkat Narayan et al., 2003; USDHHS & USDA, 2005; USDHHS, 2004, 2008b). Overweight and obesity, influenced by poor eating patterns, are associated with an increased risk of diabetes, high-blood pressure, high cholesterol, asthma, joint problems, and overall poor health status (Freedman, Khan, Dietz, Srinivasan, & Berenson, 2001; Kavey et al., 2003; Mokdad et al., 2003). Research also shows that hunger and food insufficiency in children is associated with poor behavior and academic functioning (Alaimo, Olson, & Frongillo, 2001; Kleinman et al., 1998).

**Current Trends**

Although research indicates the many benefits of proper eating patterns, current trends show that most children are not meeting recommendations. Negative trends among infants and toddlers show that children begin not meeting recommendations at a very young age. A study was conducted in 2002, using a national random sample of 3,022 infants and toddlers age 4 to 24 months. Parental telephone interviews and 24-hour dietary recalls were used to describe food consumption patterns. This study found that by 4 to 6 months, 11% of infants had consumed some type of sweetened beverages (Fox, Pac, Devaney, & Jankowski, 2004). Sweetened beverages had been consumed by 28% of the 12- to 14-month-old children, 37% of the 15- to 18-month-old children, and 44% of the 19- to 24-month-old children (Fox et al., 2004). This study also found that in the transition from milk-based diets to more adult foods, vegetable and fruit consumption declined. Deep-yellow vegetables are consumed by 39% of children at 7 to 8 months and...
by only 13% at 19 to 24 months, and French fries became the most commonly consumed vegetable by this age (Fox et al., 2004). Similarly, fruit consumption also declines. One third of 19- to 24-month old children consume no fruit. In contrast, 60% consume baked desserts, 20% consume candy, and 44% consume sweetened beverages on an average day (Fox et al., 2004).

Over time, significant negative trends have been seen in older children’s eating patterns (French, Story, & Jeffery, 2001). These trends include a reduction in regular breakfast consumption, an increase in consumption of foods prepared away from home, a significant increase in portion sizes, an increase in the percentage of total calories from snacks, an increase in consumption of fried and nutrient-poor foods, and increase in consumption of sweetened beverages. In addition, dairy product consumption has decreased, there is a shift away from high-fiber foods and all fruit and vegetable consumption has declined, except consumption of potatoes (Cavadini, Siega-Riz, & Popkin, 2000; French et al., 2001; Nielsen, Siega-Riz, & Popkin, 2002; Siega-Riz, Popkin, & Carson, 1998). Fried potatoes currently make up a significant portion of the vegetable intake of children (Cavadini et al., 2000). Sugar consumption has also increased, especially in preschool children (Kranz, Smicklas-Wright, Siega-Riz, & Mitchell, 2005). This shift in eating patterns has resulted in micronutrients intakes below recommended values for many important nutrients, such as calcium and potassium, during adolescence (Ervin, Wang, Wright, Kennedy-Stephenson, & Division of Health and Nutrition Examination Surveys, 2004; Wright, Wang, Kennedy-Stephenson, Ervin, & Division of Health and Nutrition Examination Surveys, 2003).
According to the most recent national YRBS (CDC, 2008), only 21.4% of students ate five or more fruits and vegetables per day, 14.1% had drunk three or more glasses of milk, and 33.8% drank a can, bottle, or glass of soda pop at least one time per day (CDC, 2008). Overall, males (22.9%) consumed more fruits and vegetables than did females (19.9%) and the prevalence of having drunk three or more glasses per day of milk were also higher among males (19.4%) than females (8.8%). Males (38.6%) also consumed more soda pop than did females (29.0%; CDC, 2008).

The YRBS (CDC, 2008) also showed that 11th and 12th graders consume fewer fruits and vegetables than do 9th and 10th graders. In addition, 11th and 12th graders also have a lower prevalence of having drunk three or more glasses per day of milk. There does not appear to be an increase in the consumption of soda pop for males from the 9th (39.5%) to 12th (29.2%) grades and there was a decline in prevalence for females from the 9th (31.5%) to 11th (26.5%) grades. Consumption of fruits, vegetables and milk has decreased in the past 8 years. In 1999, 23.9% of students nationally ate five or more fruits and vegetables per day and 18% drank three or more glasses a day (CDC, 2008).

The Idaho YRBS (CDC, 2008) reported that 17.4% of Idaho students taking the survey in 2007 reported eating five or more fruits and vegetables per day and 23.2% reported drinking a can, bottle, or glass of soda pop at least one time per day (CDC, 2008). These current trends demonstrate that most children are not meeting nutritional recommendations and, therefore, are not receiving the benefits of proper eating patterns.

Another trend that has impacted negative eating patterns among children is the popularity of eating out. Children and adults are consuming more and more of their daily
calories from fast-food or full-service restaurants. According to the USDA, food intake surveys, the proportion of daily caloric intake from food eaten away from home has increased from 18% in the 1970s to 32% in the 1990s and reached over 40% in 2000 (Kant & Graubard, 2004; Stewart, Blisard, & Jolliffe, 2006). The National Health Interview Surveys (NHIS) and the National Health and Nutrition Examination Survey showed that in 1999-2000 more Americans ate out and ate out more frequently than in 1987 and 1992 (Kant & Graubard, 2004). These surveys did not include respondents under the age of 18. However, since adults control household behaviors, these data may indicate an increase in the frequency of eating out for children as well. The National Restaurant Association (NRA) conducted surveys about individual meal consumption in 1981, 1985, 1991, 1996, and 2000. These surveys asked one member of each household to recall the number of commercially prepared meals eaten by all members of their household aged 8 years and older. There was a 17% increase in the reported number of commercially prepared meals from 1985 to 2000 (Kant & Graubard, 2004). The NRA found that the age group that consumed the most commercially prepared meals was the under 18 years of age group. This may be because of meals served at school.

Another study, including a convenient sample of 107 parents with an 8- to 10-year-old child in their home, found that one quarter of parents reported purchasing fast food for the family meal at least once per week; a similar percentage reported purchasing take-out food as frequently (Fulkerson, Story, Neumark-Sztainer, & Rydell, 2008). Almost half of the parents reported taking the family to a full-service restaurant at least once a week for a family meal. This increase in eating out has a negative impact on
children’s eating patterns. The USDA states that, on average, foods from full-service or fast-food restaurants tend to be more calorie dense and nutritionally poorer than food prepared at home (Kant & Graubard, 2004; Stewart et al., 2006).

Although the literature demonstrated an increase in eating out and its impact on eating patterns, there was very little information on parental and children’s attitudes and perceptions on eating out, the perceived benefits and disadvantages of eating out, and the circumstances surrounding this trend.

**Parents and Eating Patterns of Youth**

Parental support is a major determinate of children’s eating patterns. Children’s knowledge, attitudes, practices, and habits related to food largely come from the home environment. Research shows that parents play a critical role in the development of children’s eating patterns, energy intake, and food preferences (Birch & Fisher, 1998; Gillman et al., 2000). However, a large proportion of the literature examining parents and the dietary patterns of youth is related to obesity and weight loss specifically and not proper eating patterns generally.

Research demonstrates the benefits of families eating meals together at home. One such study examined the associations between the frequency of eating dinner with family and the measures of a proper diet. This study was conducted among 8,677 girls and 7,525 boys, aged 9 to 14, who were the children of participants in the Nurses’ Health Study II (Gillman et al., 2000). Data were collected using a self-administered survey and included food frequency questionnaires. Forty percent of participants reported eating dinner with members of their family on most days and 43% reported eating dinner with
their family every day. More 9 year olds reported having dinner with their families than did 14 year olds.

Results indicated that eating family dinner was associated with healthy dietary intake patterns, including more fruits and vegetables, less fried food and soda, less saturated and trans fat, more fiber and micronutrients from food (Gillman et al., 2000). There were no differences in red meat or snack food consumption. In this study, ready made dinners, such as frozen dinners and microwave meals were not considered eating family dinners. According to Gillman and colleagues, another potential explanation for their results may be that children who eat family dinner more frequently have healthier eating habits in general and the difference is not directly related to eating family dinner. However, results remained the same after adjustments were made for variables that may reflect a healthier home in general (i.e., body mass, physical activity, television viewing, smoking, household income and presence of two parents in the home).

Another study, conducted by Neumark-Sztainer, Hannan, Story, Croll, and Perry (2003) found similar results. Their study included 4,746 middle and high school students that participated in the Project Eating Among Teens (EAT). Results showed that frequency of family meals was positively associated with intake of fruits, vegetables, grains and calcium-rich foods and negatively associated with soft drink consumption (Neumark-Sztainer et al., 2003). Clearly there are nutritional benefits of family meals.

There appear to also be psychosocial benefits of family meals and a positive mealtime environment, especially for teens. A study conducted among overweight teens found that making family meals a priority and having a positive mealtime environment
were positively associated with psychological well-being and were inversely associated with depression and unhealthy weight-control behaviors among participants (Fulkerson, Strauss, Neumark-Sztainer, Story, & Boutelle, 2007). The sample for this study was drawn from 31 schools in the mid-west and included 1,351 7th- through 12th-grade students. Participants completed a school-based survey that measured depressed mood, self-esteem, family connectedness, priority of mealtimes, and positive mealtime environments, among other weight related measures. These results indicate that there are numerous benefits of eating meals as families.

Additional research discusses the frequency of family meals spent together and parental perceptions of this time spent with their families. One study was conducted in Minnesota, with parents of 8- to 10-year-old children, to examine parental perceptions of their family’s mealtime environments. Surveys were completed by 107 parents; 86% of participants were mothers. The mean age of participants was 43.5, 86% were college graduates, 96% were white, and only 33.6% were working full-time. More than 75% reported that all or most of their family ate the evening meal together at least five nights per week (Fulkerson et al., 2008). A similar percentage reported that at least one parent was present at each evening meal. Only 4.7% of parents reported conflict with children over dinner every day; however, 35.5% of parents reported conflict on some days (Fulkerson et al., 2008).

Parents most frequently reported that they enjoyed family meals because of family togetherness and conversation. Twenty-three percent reported that good home-cooked and nutritious balanced meals were a benefit of family meals together. Parents
reported desired changes in the following areas: assistance with meal planning, food preparation, and clean-up; spending more time at meals; help with children’s food pickiness; new recipes and meal ideas; and decreasing conflict during meals (Fulkerson et al., 2008).

In addition to mealtimes, research indicates other ways that parents influence the eating patterns of their children. O’Dea (2003) conducted a study with 213 children in grades 2 through 11 to determine major benefits and barriers to healthy eating patterns. Participants reported that parental control over food and the lack of parental support or parental modeling were major barriers to healthful eating (O’Dea, 2003).

Parental food choices impact their children’s dietary choices and habits. Findings from the Framingham Children’s Study suggested that parents who display high levels of disinhibited eating, coupled with high dietary restraint, may foster the development of unhealthy eating habits in their children (Hood et al., 2000). Findings show that unhealthy eating behaviors modeled by parents can lead to unhealthy habits in children (Falciglia, Pabst, Couch, & Goody, 2004; Hood et al., 2000; Larson, Story, Wall, & Neumark-Sztainer, 2006; O’Dea, 2003).

Studies indicate that parental intake of fruits, vegetables, and dairy foods impact children and adolescent consumption of these foods (Cullen et al., 2001; Fisher, Mitchell, Smiciklas-Wright, & Birch, 2002; Hanson, Neumark-Sztainer, Eisenberg, Story, & Wall, 2004; Johnson, Parley, & Wang, 2001; Longbottom, Wrieden, & Pinet, 2002). In one such study, Hanson and colleagues (2004) examined associations between parental report of fruit, vegetable, and dairy intake and their children’s intakes of the same foods. The
study sample included 902 adolescents and their parent or guardian. Adolescents completed a survey and food frequency questionnaire at school and parents were interviewed by telephone. Significant associations were found for girls’ intakes of fruits and vegetables. However, parent intakes were unrelated to fruit and vegetable intake for boys. A strong association was also found for dairy foods for both boys and girls (Hanson et al., 2004). Hanson and colleagues observed that the gender differences may have been a result of the large proportion of parent respondents that were female.

Studies also indicate that the availability of fruits, vegetables and dairy foods in the home greatly impact children and adolescent consumption of these foods (Baranowski, Cullen, & Baranowski, 1999; Cullen et al., 2001; Hanson et al., 2004; Kratt, Reynolds, & Shewchuk, 2000; Neumark-Sztainer, Wall, Perry, & Story, 2003). One study, including 4,746 adolescents, found that when examining fruit and vegetable intake, home availability was the strongest correlate (Neumark-Sztainer, Wall, et al., 2003). Similar findings are consistently reported.

Hanson and colleagues (2004), in the study discussed above, also examined associations between parental report of household food availability and adolescent intakes of fruits, vegetables and dairy foods. They found that there was a strong association between home availability and fruit, vegetable, and dairy consumption among participants. Similarly, other qualitative studies have shown that children and adolescents perceive that the availability of fruits, vegetables, and dairy foods influence their intakes of these foods (Auld et al., 2002; Neumark-Sztainer, Story, Perry, & Casey, 1999; Neumark-Sztainer, Wall, et al., 2003; O’Dea, 2003). In addition, home
environments where high-fat foods are readily available also negatively impact children’s overall diet quality (Slawson et al., 2007). Findings also suggested that a family environment with a high level of dietary restraint practices may have a negative effect on the ability of children to self-regulate their diet, especially among females (Birch, Fisher, & Davison, 2003; Hood et al., 2000; Johnson & Birch, 1994).

Research clearly demonstrated that parents played a critical role in their children’s eating patterns. Key parental influences included prioritizing family meals together, supporting and modeling positive nutritional behaviors, and making nutritious foods available in the home. However, more research is needed on parental attitudes towards meal times and their perception of the benefits and barriers to proper eating patterns within households. Additionally, more research is needed focusing on parents and children’s attitudes, perceptions and eating patterns generally and not solely focused on weight loss. While parental attitudes and family meal times are critical to children’s nutritional health, recent researchers have also found that screen time can also play a pivotal role in the health of young people.

**Screen Time: Physical Activity and Eating Patterns**

Time spent watching television, on the computer, and playing video games has a negative impact on the amount of time youth engage in physical activity and the amount of high-fat foods they consume while watching. Video and television viewing, time on the computer, time spent playing video games, and time on hand-held devices are combined in the term screen time. Most of the literature related to screen time, examines
associations between screen time, body fat and body mass index (BMI). For the purpose of this literature review, BMI and body fat are not being examined. However, it is critical to still discuss screen time and the relationship with physical activity and eating patterns.

According to the YRBS, 35.4% of students nationwide report watching television 3 or more hours per day and 24.9% of students report playing video games or using a computer for non-school related work for 3 or more hours per day (CDC, 2008). The prevalence of students that watched 3 or more hours per day decreased from 42.8% in 1999 to 35.4% in 2007 and the prevalence of students that used a computer 3 or more hours per day did not change from 2003 to 2005 but did increase from 21.1% in 2005 to 24.9% 2007 (CDC, 2008).

Research has found that children in the highest-television watching (4 or more hours) group are also in the highest BMI group and have the highest percent body fat, when compared with children that watch less (2 hours or less) television (Anderson, Crespo, Bartlett, Cheskin, & Pratt, 1998; Dennison, Erb, & Jenkins, 2002; Proctor et al., 2003; Robinson, 1999). However, another study found that there was not a significant association between television viewing, BMI and percent body fat in children (Robinson et al., 1993).

Several studies have found that screen time and obesity rates in children and adults are independent of physical activity (Hanley et al., 2000; Hernandez et al., 1999; Salmon, Bauman, Crawford, Timperio, & Owen, 2000). One study of children aged 8 through 12 in a clinical obesity treatment program, showed that reducing sedentary
behaviors, such as screen time, was as effective in reducing measures of obesity as increasing physical activity (Epstein, Paluch, Gordy, & Dorn, 2000). However, although screen time and physical activity may be independent factors with examining overweight and obesity, screen time is a risk factor for physical inactivity (Epstein et al., 2000; Proctor et al., 2003; Salmon et al., 2000; Salmon, Owen, Crawford, Bauman, & Sallis, 2003).

Screen time is also associated with poor eating patterns, although the relation between screen time and dietary factors is complex. There has not been a great deal of research conducted that resulted in a clear correlation between the two behaviors (Proctor et al., 2003). It is difficult to control for these factors. Some studies indicate that high weekly viewing hours are correlated with higher caloric intake (Andersen, Crespo, Bartlet, Cheskin, & Pratt, 1998; Proctor et al., 2003; Taras, Sallis, Patterson, Nader, & Nelson, 1989). In addition, studies have also shown that food advertising affects children’s snack choices and consumption (Borzekowski & Robinson, 2001; Taras et al., 1989). Among children, the number of hours being spent in front of a screen is influencing the current trend of not meeting physical activity and nutritional recommendations.

**Summary**

The many benefits of physical activity and proper eating patterns have been well established and supported by research. In addition, there are clear recommendations related to activity level and nutrition that can be followed to receive these benefits. Yet,
current trends in inactivity, poor eating patterns, and obesity show that children are not meeting recommendations and therefore not getting the benefits. Parents have a significant role in their children’s behaviors and greatly impact their ability to engage in physical activity and eat properly. Yet, very little research has been done to examine parental perceptions and attitudes related to this role. Most of the research with parents, related to physical activity and eating patterns, focuses on weight and obesity. The methodology that was used for this study is presented in Chapter III.
CHAPTER III

METHODOLOGY

Overview

Previous chapters have provided a foundation for the purpose and need for the study. This chapter will provide an overview of the research design, sampling methods, instrumentation, pilot testing, data collection, and analysis. Information regarding the advantages and limitations of focus groups will also be discussed.

Research Design

Focus group interviews were used to collect data for the study. Focus group interviews are a form of qualitative research. Qualitative research involves an interpretive, naturalistic approach. It seeks to examine things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2005). Focus group interviews are used to gather information about the feelings, opinions, insights, perceptions, beliefs, misconceptions, and attitudes of a group of people concerning a topic or idea (McKenzie et al., 2005). Focus groups have five characteristics or features. A focus group must consist of (a) people, who (b) possess certain characteristics, (c) provide qualitative data, (d) in a focused discussion, (e) to help understand a topic of interest (Krueger & Casey, 2009). In this study, a single-category focus group research design was used (Krueger & Casey, 2009).
There are numerous advantages of focus groups. Focus groups provide the opportunity to clarify questions and explore unanticipated issues that may arise. This can provide more in-depth and rich data in the respondents’ own words, compared to quantitative methods (Kreuger & Casey, 2009; Stewart & Shamdasani, 1990). In addition, group settings help individuals to feel more relaxed and less inhibited about the discussion of the topic. Kreuger and Casey suggest that this group setting presents a more natural environment than a traditional interview because this format allows participants to influence and be influenced by others in the group.

However, there are some limitations to this method. Focus groups are not easy to conduct and more difficult for researchers to control. For example, results of the study may be impacted by a poor moderator or an opinionated participant. In addition, participants may portray themselves as rational, thoughtful, and reflective when discussing behaviors, which may not always be truthful (Kreuger & Casey, 2009). This concern is true with all methods that involve questions and answers. A critical limitation of focus groups is that most focus group members are volunteers and from a specific population. This limits the ability to generalize findings (Stewart & Shamdasani, 1990). The intent of these focus groups were not to generalize, but to understand and determine a range of responses and provide insight into how participants perceive the topic (Kreuger & Casey, 2009).

**Focus Group Size and Number**

A focus group can range in size from 4-12 participants; 5-10 participants are typical (Kreuger & Casey, 2009; McKenzie et al., 2005). Krueger and Casey recommend
five to eight participants per focus group. Smaller groups are best when the purpose is to understand an issue and when participants have a lot of experience and or passion for the topic, as was the case in the focus groups for this study. Therefore, a focus group size of six to eight participants was used for this study. More than six to eight participates were recruited for each focus group, to ensure six to eight participants showed up to the focus groups.

According to Krueger and Casey (2009), the accepted rule of thumb is to plan for three or four focus groups. After conducting these first focus groups, a researcher must determine if the point has been met where a range of ideas have been heard and no new information is being heard. If new information is still being expressed, more focus groups will need to be conducted. For the purpose of this study, four focus groups were planned and conducted. After the forth focus group, it was determined that a range of ideas had been heard and no new information was being gathered.

**Sample Selection**

Twenty-nine parents who had a child or children in grades Kindergarten through sixth grade were recruited for this study. To obtain the volunteer sample, recruitment was done through the Madison School District in Rexburg, Idaho, and their various programs, such as Project Love, Language, and Literacy and after-school programs. Word of mouth was also used for recruitment.

A phone call was made or an email was sent to each participant to confirm interest in participating. Preferred contact information, time preference and availability were obtained. During this initial contact, participants were made aware of when and
where their focus group would be held, based on their availability and preference, and the importance of their attendance and participation. The day before the focus group, each participant received a reminder phone call or email. As incentives, refreshments were provided before the focus groups, child care was provided during the group, and each participant was entered in a drawing for a $100 gift card.

Instrumentation

A discussion guide (see Appendix A) was developed for the focus groups. This guide set a clear agenda for the moderator to follow throughout the focus groups (Stewart & Shamdasani, 1990). The guide was formed using the research questions for the study, as recommended by Stewart and Shamdasani. The guide contains questions that seek to identify thoughts, perceptions, and experiences without directly asking participants about individual situations. Effective focus group questions evoke conversation, are easy to say, use words that participants would use when discussing the issue, are clear, short, and open-ended (Krueger & Casey, 2009).

Typically, a discussion guide is approximately 12 questions for a 2-hour focus group (Krueger & Casey, 2009). In addition to setting an agenda for the moderator, the discussion guide should help participants think about the topic and allow them to have the freedom to give the amount of information they are comfortable with. The discussion guide should also encourage discussion among the group and invite spontaneous comments about the topic that may not be directly related to research questions. The questions for the discussion guide were developed using the following five categories:
opening questions, introductory questions, transition questions, key questions, and ending questions (Krueger & Casey, 2009). This format allowed the moderator to move from general to more topic-specific questions and allowed effective utilization of time (Stewart & Shamdasani, 1990). The discussion guide for this study consisted of 11 open-ended questions. The discussion guide also included additional questions that required participants to create two mindmaps. Mindmapping is a technique that allows participants to write down as many thoughts, feelings, and associations, related to a topic, as they can in a short amount of time (Bystedt, Lynn, & Potts, 2003). This technique is effective when the issue is personal or complex; it provides participants with individual think time. Participants were asked to create two mindmaps during the focus groups, one related to things that impact their child(ren)’s physical activity and one related to things that impact their child(ren)’s eating patterns. These mindmaps were created and discussed separately. The group worked on one, then the other, and then debriefed them individually. Participants were first asked to put the specific topic in a circle centered on a paper. A sample mindmap was created beforehand and was shown to participants as an example on an unrelated topic. Participants were encouraged to write down everything that they could think of related to the assigned topics. Participants were encouraged to make connections between branches of their map, to include both positive and negative thoughts, and to think about which branches on their maps held greatest significance to them. Colored pencils and markers were provided. This technique was used to engage participants and generate discussion.

A questionnaire (see Appendix B) was developed for this study to gather
demographic information. This questionnaire was administered just prior to the start of the focus group.

**Pilot-Testing Procedures**

A pilot test was conducted to determine the effectiveness of the discussion guide and to assess if the guide was an appropriate length for a 2-hour focus group. In addition, the pilot test gave the moderator an opportunity to refine her interviewing skills, prior to conducting the focus groups. The pilot test participants were recruited from a different community than the study participants. There were four participants in the pilot test from the Salt Lake City, Utah, area. These participants were all woman, three of the women had at least one child in the desired age range for the study and one woman had a child in preschool, slightly younger than the desired age range. Three of the participants had three children each and one woman had two children. The women’s ages ranged from 28 to 36, two worked outside of the home and two did not. All four pilot participants were white. Two had college degrees and two had attended some college.

These pilot group participants were recruited by word of mouth. They received an initial phone call to confirm interest and to notify them of the time and location of the pilot focus group. An additional phone call was made the day of the pilot to remind participants of the focus group. A letter of information (see Appendix C) was given to each participant prior to collecting pilot data.

Approval for pilot testing and study procedures were obtained from the Utah State University Institutional Review Board (IRB) prior to moving forward with this study (see
Appendix D). Results of the pilot test indicated that the discussion guide questions were effective and easily understood by participants. Results also indicated that pilot participants responded well to being asked to create mindmaps and that these maps aided in the pilot group discussion. It was determined that the guide was an appropriate length for a two hour focus group. The pilot test took approximately 1 hour and 15 minutes with only four participants. There were no changes made in the discussion guide as a result of the pilot study.

**Data Collection Procedures**

At the beginning of each focus group, participants were given a Letter of Information (see Appendix C). This letter explained the purpose of the study, potential benefits and risks of the study, and the voluntary nature of the study. The letter also explained that participants could withdraw at any time without consequence and that all responses would be completely confidential. In addition, participants were informed that the focus groups would be audio and videotaped for accuracy purposes.

Focus groups were held on a Saturday morning, Tuesday morning, Tuesday afternoon, and Wednesday evening. Three of the groups were conducted at Burton Elementary and one focus group was conducted at Kennedy Elementary, both in Rexburg, Idaho. Both of these buildings were centrally located and included accommodations for childcare. Each focus group lasted from one to two hours. At the beginning of each focus group, letters of information were handed out and discussed, participants filled out a demographic questionnaire (see Appendix B), and refreshments
and nametags were provided. An opening statement (see Appendix E) was then read welcoming participants, thanking them for their willingness to participate, and explaining the procedures that would follow. In the opening statement, the moderator said that both positive and negative comments were equally welcome and useful. Participants were then asked to engage in a brief activity to get to know one another better. After the opening statement had been read and the activity was complete, the moderator began the focus group interview.

A research assistant was utilized during each group. Her primary role was to monitor the tape and video recorder, as well as any other environmental factors in the room (e.g., lights, heat, etc.). Audio recording was used to allow the researcher to go back and review responses to ensure that all details were captured. Video recording was also used so the researcher could review participants’ body language and other non-verbal forms of communication displayed during the focus group. At the conclusion of the meeting, the moderator asked if participants had any final thoughts to add. At the conclusion of the four focus groups, it was determined that the point had been met where a range of ideas had been heard and no new information was being shared.

Data Analysis

Data analysis for the focus group interviews involved numerous steps. First, an experienced transcriptionist transcribed the audiotapes into a typed format. The researcher then listened to all audiotapes and compared data with the transcribed material to insure accuracy. In addition, the researcher reviewed all video recordings of the
interviews. By reviewing the data numerous times, the researcher became familiar with the data. It was determined that the video recordings did not yield any additional data that were not included in the typed transcripts. The researcher and research assistant had also each taken notes during the interviews. These notes were reviewed by the researcher and it was determined that all information included in the notes had been captured in the typed transcripts.

The data were then analyzed using the Classis Approach, recommended by Krueger and Casey (2009) for those researchers conducting their first qualitative analysis project. This is a systematic, low-technology, approach. It is a visual and concrete process. This process included cutting typed transcripts into individual quotes and then sorting these quotes into themes and categorizing. Four questions were considered during this process: (a) Did the participant answer the question that was asked; (b) Does the comment answer a different question in the focus group; (c) Does the comment say something of importance about the topic; and (d) Is it like something that has been said earlier? Responses were compared and contrasted to determine if there were differences among different groups. The critical differences among participants were identified as mothers versus fathers and mothers that do not work outside of the home versus mothers that do work outside of the home. For each category, the responses of each of these groups were examined and compared to the other group to determine if there were differences among groups. In addition, during analysis, within each category the researcher looked at possible differences in participants’ responses when discussing sons versus daughters.
A written summary was then made of each category, including any differences between groups. This summary included a description of what participants said in response to questions asked. Identified themes are discussed in Chapter IV. The analysis used a grounded theory method to uncover these common themes and consider theoretical conclusions. Results were used to generate two theories to examine children’s physical activity and eating patterns. These theories will be presented in Chapter IV and discussed further in Chapter V.

Validity was established as the data were obtained from the focus group participants. The moderator listened carefully to participants, observed how they answered and sought clarification on areas of ambiguity. Verification checks of responses and opinions were carried out periodically throughout the focus groups. In addition, all participants were asked to verify a summary of comments, generated by the moderator, at the conclusion of each focus group. Following these protocols ensures that results are trustworthy and accurate (Krueger & Casey, 2009).

Reliability was difficult to ascertain as there was only one researcher to code the data. However, the researcher become very familiar with the data and verified written transcripts against the moderator’s notes, research assistant’s notes, and the video and audio recordings of each group.

**Study Participants**

Twenty-nine parents participated in the study (see Table 1). The number of participants for each of the four focus groups varied from five to nine participants.
Table 1

Demographic Information (N=29)

<table>
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Participants’ ages ranged from 29-44 years of age. Of the participants, three were fathers and 26 were mothers and 16 of these reported not working outside the home. Level of education varied: 2 had graduated from high school only, 8 had some college, 17 graduated from college and 2 had a graduate or post-graduate degree. One participant was American Indian/Alaska Native and the rest self-reported as being white. The numbers of children participants had at the time of data collection ranged from two to eight children; with their total children’s ages ranging from three participants that were currently pregnant to one participant that had a child that was 23 years of age. All had at least one child within the set study criteria of kindergarten through sixth grade.

**Summary**

The purpose of this chapter was to discuss the methodology of the study. These procedures included the research design, sampling methods, instrumentation, pilot-testing, data collection, and data analysis. Future chapters will present the results found from and analysis of this study and a discussion of these results.
CHAPTER IV
RESULTS

Introduction

This chapter discusses the data collected for the study. A classic analysis strategy was used to sort, identify themes, categorize, and compare and contrast the data using a grounded theory approach. Nine themes emerged from the data. These themes included: (a) parental roles related to children’s physical activity, (b) other impacts on children’s physical activity, (c) impact of others on children’s physical activity, (d) parental strategies related to their children’s physical activity, (e) parental roles related to children’s eating patterns, (f) other impacts on children’s eating patterns, (g) impact of others on children’s eating patterns, (h) parental strategies related to their children’s eating patterns, and (i) mealtimes. Most of these categories emerged from the discussion guide questions used in the focus group interviews, however the two strategies categories emerged as themes cut across various discussion guide questions.

The analysis revealed a great deal of overlap and consistency among participants’ experiences and responses to questions. Overall, these data indicated common elements of parents’ perceptions of physical activity and positive eating patterns in children. These are depicted in Figures 1 (next page) and 2 (shown and discussed later in this chapter). These elements were discovered by applying a grounded theory approach and allowing theories, past research and researcher insights to develop from the data. The discovered themes utilized to develop these elements will be presented below with supporting data.
Parental Roles Related to Children’s Physical Activity

Most all participants responded that they felt that their role as a parent was critical and perhaps the most critical impact on their children’s physical activity. While discussing ways they impact their children’s physical activity, common themes were parental example, encouraging family activities, and physical activity being a family tradition. Although knowing how critical their involvement was in their children’s physical activity, participants continually brought up the difficulties associated with their role. Common concerns or barriers for parents were parent’s perceptions of safety, time and schedules, their willingness, their energy level, their own attitude about physical activity, and frustration trying to entertain their children. These themes were discussed in

*Figure 1.* Parental perceptions of physical activity in children.
great length within the focus groups and will be described below.

**Parental Example**

Most parents discussed that their example was critical and that their children wanted to do what they saw their parents doing—as illustrated by the following comments:

*Woman 7*: The one I thought of is just me and myself being an example to them. Like if I’m doing physical activity and teaching that to them, my child’s probably more likely to go and do that with me. Physical activity is important to me, so then having them say like, “Okay. Mom does that so—“

*Woman 9*: If my husband just wants to sit and veg on the couch, then my kids just kind of want to do the same thing.

*Woman 16*: I think as a parent if you’re exercising and going to the gym or whatever, it’s by example. You can be good or bad example.

*Man 2*: I think when the parents are out there and doing things and the kids see by example.

**Encouraging Family Activities**

Many participants shared that they thought it was important to encourage family activities that were physically active. The following three statements are typical of many comments related to family activities.

*Woman 8*: I think really just encouraging family activities. We do have a lot. Like the nature park. We can get on roller blades.

*Woman 25*: I have family activities on mine [mindmap], like the things we choose to do as a family, I think, definitely makes a difference on how much they get out.

*Woman 3*: My children really enjoy having their parents do things with them. It’s a matter of spending time with us.
Family Traditions

One group, in particular, brought up the impact of the traditions of your family and how that impacts physical activity. Some parents felt that if a parent played a sport then all the children played that same sport; that physical activity traditions existed in families. The following dialogue illustrates group members’ thoughts.

*Woman 19:* So probably family traditions and kind of what’s expected of the family affects it at times.

*Woman 16:* Yeah. We’re basketball players. My kids have all played basketball. So it’s kind of a tradition.

*Man 1:* Yeah. I see that all the time, with my kids in school. The kids that—even that play baseball, the whole family plays baseball or the whole family plays football. Dad’s still playing.

Parental Views About Safety

Parents acknowledged that some time their concern about safety limited what they allowed their children to do. For this study, parents were more concerned about a child’s physical safety in terms of injury rather than fear of crime, being alone outside, or risk of victimization. This concern was demonstrated in the following comments.

*Man 3:* I’m just overprotective, I think, which I think kind of hinders them. I’m, “Don’t do this.” “No Trampoline. You’ll break your arm.” No this, or that. I’m always way too overprotective, I think.

*Woman 2:* Some of us are just a little more uptight. Like, “No, don’t do that. You’ve got to hold mom’s hand.” Stuff like that. That also has an affect.

Schedule and Time

The schedule of the parent and lack of time was a common barrier to physical activity that was discussed a great deal in all groups. Most participants agreed that, as
parents, they are very busy and at times that has an impact on the amount of physical activity their children engage in. On woman stated, “Time is a huge one.”

Woman 25 commented,

It depends on how busy I am, on how much she will—You know, like if I have to, like occupy her with something. You know? Lots of times I’ll go, “Go, Hannah Montana is on.”

Woman 23 stated,

Our schedule. You know, I work and —of course my husband works and so our schedule plays a part into what they are doing after school. You know, are they coming home and are they flipping on the TV? Well, yeah because mom and dad are gone, and what else are they supposed to do?

Woman 4 also stated,

Sometimes the cost isn’t as precious as the time that it takes. So mom’s in school. The kids are in school. We have church callings. Their dad just got made bishop. Those things, combined. We had a daughter who wanted to do basketball and a son who wanted to do basketball. It was too overwhelming and we had to—it wasn’t even that we didn’t have means available that they could. But, the time, we just couldn’t. The thought of giving up Saturdays, starting in October through the end of February, when it was the only day that everybody could be home, just wasn’t worth doing that. Too hard to give up my time.

Woman 14 said,

A lot falls back onto us, as the moms, because a lot of—you know, we get so busy thinking of things that we need to get done in the day or things that we haven’t done, or things we’d like to do. We just want a break, that we still have to make that extra effort, to make sure our kids are doing what we think is best for them, instead of falling into those habits. And changing our schedules or just making that extra effort, to make sure that they are getting what they need.

Parents discussed that because of their busy schedules and lack of time they were often not very willing to make physical activity a priority or be as supportive of physical activity as they should be. These thoughts are captured in the following statements.

Man 3: I think I sold mine down, by not actually getting off my rear and going out
and teaching them to be better and stuff.

*Woman 5:* That was my biggest thing is me. What affects them? Me. My attitude when they ask me. So they’ll say, “What’s there to do?” and it’s whether or not I want to do anything with them or I want them out of my hair.

*Man 3:* I’m not going to support driving back and forth. I didn’t want her to be in dance because I knew I’d have to pick them up.

*Woman 1:* Prioritizing and saying, “Well, I need to do laundry, but I guess I could do it tonight,” or something. You know? But taking time out of what I want to do and be willing to do that [go outside with them]. I think that makes a huge difference.

Another discussion related to schedules and time was the parents’ energy levels and how this impacted their children. Parents expressed the difficulty in having the energy to both be physically active with their children and do all the necessary things to facilitate their children’s physical activity. To illustrate this lack of energy, women from various groups made the following comments.

*Woman 18:* Well, when I get home from work, I’m tired. And when your daughter says, “Let’s go to Porter Park,” and you’re like, “I don’t wanna.” You know, when you really should, but part of me is saying, “No, I don’t want to.”

*Woman 17:* It’s hard to keep that energy level up.

*Woman 24:* If you have a health problem and you’re tired, you really just don’t want to get out and help them. Then that makes a difference.

**Attitude about Physical Activity**

There were also various comments on parental attitude and how that really rubbed off on their children. Demonstrated in the following comments.

*Woman 22:* I think attitude is a big part of it too. As parents, we kind of teach them, that it’s fun to be physical. A part of that is on our shoulders, to make sure that they’re doing that, and having a positive attitude about it.
Man 3: An example for me, being in a bad mood or I don’t want to, it passes on. I just got off work and I need my time.

**Frustration with Bored Children**

Many parents expressed their frustration with how often their children report being bored. Most felt that this was very different than when they were children. Many commented that when they were children they were able to entertain themselves and come up with things to do. Participants expressed discouragement and said they felt like they were always trying to entertain their children and it could be exhausting to always hear from their children that they were bored. A few parents also said that when children are bored it is sometimes easy to just point them to the television, instead of finding them something more physical to do.

Woman 2 said,

Like instantly having all these activities and all these games. When you’re tired, you don’t...It’s hard to come up with. I don’t want to have to think of all these things for you to do, to be—So that’s frustrating. But there’s so many things that are so easy. Like watching a movie and you’re tired. You know all these fun entertaining things that aren’t active. It’s easier to not think about what to do and to just sit and be entertained.

Similarly, Woman 14 said,

It seems like kids get bored more. It almost seems like there are just times, when you almost have to direct them step-by-step. “You’re not bored. You have toys. You’re not bored. You’ve got neighbors kids. You’re not bored. There are things to do.”

Common themes identified by parents, while discussing ways they impact their children’s physical activity were their own examples of being physical active or inactive, by encouraging family activities, and physical activity being a family tradition. The
common concerns or barriers discussed were parent’s perceptions of safety, time and schedules, their willingness, their energy level, their own attitude about physical activity, and frustration trying to entertain their kids. These concerns and barriers were consistent when comparing demographic differences, such as moms versus dads and moms working outside of the home versus moms that do not work outside of the home. These different groups gave different examples of responsibilities that impacted their time, schedules, willingness, and energy level. However, how these factors impacted their children’s physical activity remained constant among groups. A variety of additional impacts on children’s physical activity were discussed by participants, other than their own parental impact.

**Impacts on Children’s Physical Activity**

Participants discussed in great length the many things, other than their parental role, that impact their children’s physical activity. The most common themes were the school system, health concerns, safety concerns, skill level and confidence of their children, personality of children, weather, expenses, community resources, sports and competitiveness, and screen time. Positive and negative impacts were discussed by participants. Below each of these themes will be described. A much-discussed topic was the public school system.

**School**

Both positive and negative impacts related to school were discussed in length by participants related to their children’s physical activity level. The most common themes
discussed were Physical Education (P.E.), academic pressure and homework. Parents expressed concerns about how little P.E. time their children get and the increased amount of homework required. One participant said “They are loading them up [with homework].” Woman 20 said, reflecting on the amount of homework her son had.

Gees, two or three years from now, really physical education should become a greater impact in the school because our children aren’t going to have that time to be physically active after school because they’ll be needing to do homework.

Woman 26 made a similar comment,

They’re gone to school all day. And then they come home and they have all that homework to do. You know? Then you’ve got dinner. I mean, it just seems like there’s no time. If they’ve taken P.E. out of the school system, and then they’re really not [having any time to be physically active]. There’s no time for them just to go outside and have fun, and have unstructured run-around play time.

Woman 20 commented,

The children are really becoming awesome readers. They really have put an emphasis on that [in our school district]. But I think, that in my opinion, they both can help each other. We can be great readers, but there’s also evidence now that shows that physical activity can help stimulate brain activity. So that’s helpful.

Similarly, another woman (Woman 4) said,

I don’t think they do as much physical activity, because the math and reading and the scores at school are pushed so much, that they don’t have time to get involved in fun, physical activity that’s not really competitive sports.

Regarding cuts in P.E., one woman said,

There’s going to be more budget cuts this coming year. P.E. is one of those things that’s not a—as much as they encourage kids to not be couch potatoes and then want to make sure that we don’t have obese kids, that’s one of the first things they cut. I see that decreasing over the next few years.

As demonstrated in the following comments, participants repeatedly commented that the lack of P.E. and increased academic demands were a change from when they
attended school.

*Woman 25:* Well, when we were younger, we had P.E. every day. There was a
P.E. time everyday. I don’t know if the schools just, at some point, you know,
funding or whatever. But I remember we always had to play every sport.

*Man 1:* I had P.E. everyday, when I was a kid. And its’ not nearly as much as it
used to be.

*Woman 26:* I think that’s a big problem, because there’s just no time for them to
go be kids and do the running around that we all did. Because we had P.E. We
had P.E. and the run-around time.

Some participants also brought up various opportunities that some schools
provide such as after-school programs and running programs to encourage and facilitate
time for physical activity. The Pacers program is a running program held during recess
and lunch that was brought up in every group. Parents agreed that their kids enjoyed it
and that they were glad it was encouraged at the schools. However, some parents were
unaware of these programs and said one or both of them had not been implemented in
their children’s schools. Additional impacts discussed were health concerns, safety
concerns, skill level and confidence of their children, personality of children, weather,
expenses, community resources, sports and competitiveness, and screen time.

**Health Concerns**

Numerous parents briefly mentioned health concerns of their children that
prevented them from being as active as other children. Health conditions that were
mentioned were a heart condition and asthma. These specific parents commented on how
their children are not able to be as physically active as some other children. However,
health was not mentioned by most parents. More parents mentioned sleep and how
important they felt like it was for their children to get adequate sleep or they were unable and unwilling to be physically active. The importance of sleep is described in the following comments by participants.

Woman 7: How they feel. It is for my little boy. There’s some days that he’s just plain tired and it’s like some days, he can run for miles. And other days, it’s like, “I’m tired.” You know, a lot of those are school days.

Woman 24: I have one boy that just seems to really need his sleep or he doesn’t do well.

Woman 10: I think that sleep is a big part of whether or not someone will be active and whether or not they will eat. If kids aren’t getting enough sleep, then they’re tired and they don’t want to get out and move around. They would rather sit on the couch and play video games or do whatever they’re going to do, that doesn’t cause them to exert any physical activity.

Safety Concerns

Parents brought up safety concerns as an impact of their children’s physical activity. Most parents felt that they lived in a safe community and that they felt comfortable allowing their children to play outside. A few parents that had lived in bigger cities stated that living in a smaller town had a positive impact on their children’s activity level. However, physical safety related to physical activity was expressed by several parents. Issues of concern included ditches, busy streets, inattentive drivers, and similar safety issues. All safety concerns mentioned related to the amount of time their children could spend outdoors playing. Although physical activity was never defined as playing outside, most all participants, when discussing impacts of physical activity, discussed the impacts on their children playing outside. It was apparent that most parents translated playing outside as being physically active. The following comments illustrate
the impact of living in a smaller town.

*Woman 12:* I consider Rexburg so safe that I don’t know where my kids are. I’m like. “Go play.” But we do have boundaries of where they can go. I think, living in a town like this, my kids have a lot more freedom than they did in the neighborhood where we lived in Arizona.

*Woman 21:* We lived in a much larger town before we moved back here. The first thing that we noticed, when we moved back here, was that people spend a lot more time outside. The kids especially, spend a lot more time outside. And even the grownups. You see people jogging. I mean, it’s a safer environment here and so it kind of lends itself more to that.

**Skill Level and Confidence**

A few parents passionately discussed the impact that skill level and confidence had on their children’s ability to be active. Illustrated in the following conversation.

*Woman 10:* I think that physical activity can have a relationship to their abilities. I have one son that is very clumsy and he won’t go out and play when people want to play like team games, or get involved on a sports team. Because he doesn’t want other people to see that he throws the ball like a girl. He doesn’t want other people to know that he really struggles with that.

*Woman 13:* Yeah. I had that too. What if you don’t make the team?

*Woman 12:* Yeah. Or my son would never get picked. They wouldn’t want him to be on their football—like at lunch. I’m like everyone should get to play. There’s nothing we can do. We can’t go out there and tell the boys to be nice. It’s heartbreaking. So we go out and practice a little in the backyard, but some kids just aren’t going to have…you know?

There were numerous similar conversations throughout all the groups. Many parents expressed concern about their child’s self-esteem, related to being physically active.

Other comments included,

*Woman 2:* I put self-esteem. I have some children that don’t participate in as many active things because they don’t feel comfortable. They don’t feel good. They don’t feel coordinated. Maybe school things have come too easy for them and they tried sports and it wasn’t that way. In fact, I have a little boy and he was
5. He played T-ball for a year, or something and soccer and I tried to get him exposed to some different things and he goes, “I’m going to throw sports in the garbage.” He didn’t feel good. He didn’t feel coordinated. That’s influenced the whole rest of his life. He’s 13 now and he’s just—He’s just not really, not willing to try.

*Woman 26:* Yeah. He’s my third. So he’s got 2 older sisters and a younger sister. He is very much not a physical thing, which holds him back. Even for Scouts. When he participated in a Scouting activity, he couldn’t make the basket, like the other boys. Then he just didn’t want to do it anymore. They turned it into a huge competition. He just didn’t even want to be involved. He just—so now I’m afraid that he’s just going to, you know, become even less active. If it’s going to always be this huge competition, then he’s going to be the one that can’t do it. Just because that’s not what he likes to go outside and do.

Interestingly, when parents discussed skill level, confidence and self-esteem related to their children’s physical activity they discussed only their sons. It appears that according to parents these issues are of greater concern for their sons than their daughters and have a greater impact on their sons’ physical activity level.

**Personality of Children, Their Likes and Dislikes**

There was a great deal of discussion around children’s personalities and how that impacts the amount of physical activity they engage in. Parents discussed that children have various interests. Some children want to engage in physical activity and some kids would rather do something else. Some parents said that it seemed natural for their kids to be active and they wanted to go outside and play whenever they could, or wanted to try various activities that were physical. Other parents said that most of their children’s interests were non-physical. Many parents used reading as an example. One parent said, “Books. Reading is a big one for us. I have to push my daughter out the door.” Other examples parents gave of nonphysical interests of their children were art and music.
Many expressed that their children just did not want to be involved in physical activity, especially if it involved a sport or team. Many parents commented that their different children often had very different activity levels because of their various interests. Parents did not bring up gender differences related to children’s personalities or likes and dislikes. However, again when discussing children that did not enjoy physical activity, sports were again the only example given and sons were again the focus of most related comments by participants.

**Sports and Competitiveness**

Sports and competitiveness was a passionate issue that was discussed in each group. Participants said that children’s involvement in sports seemed very different that when they were children. In terms of how sports and competitiveness impacts physical activity, parents discussed two very different ways. Many said organized sports were a positive impact and that there were so many opportunities for their children to be involved and stay active all year long. One woman said, “They have so many opportunities for school sports here, my kids have been really active in that. Because there’s so many activities here, that they offer, the school sports. They definitely do way more than I did.” Many discussed how much their children enjoyed sports and how good it was for them.

In contrast, many parents expressed real concerns related to the competitive and exclusive nature of sports teams. Parents said that organized sports were very limiting and if a child doesn’t make a team then that really impacts how they feel about themselves and physical activity. The following comments show the concerns parents
discussed related to sports and competitiveness.

*Woman 26:* Sports wasn’t such a big thing, as far as the teams and things like that. Everybody was just involved in being physical, whether you were good or not. But now it just seems like there’s this huge competitive….

*Man 2:* Yeah. Before, you played games, but it wasn’t—You know, I was playing, we played chase, or we’d play basketball, but we also played knights and cowboys and Indians.

*Woman 17:* ….It’s more competitive. They have city leagues and then competitive leagues. Even before you’re in junior high, you’re ready to compete for your school.

*Woman 25:* They know they’ll never make like the team. So they stop playing.

*Man 2:* It seems like, today, there’s a lot more organized play than free play. So you don’t go out and shoot hopes. You’ve got this organized—You’re on the traveling team, or you’re on the rec team, for these sports. But I think what happens is—they start out at even a pretty early age, and of course, it’s open to everybody. But, as everyone starts playing in these organized teams, it becomes apparent very quickly, probably who has the talent and who doesn’t have the talent. And that talent rises and the rest just sort of drop off. Then. ‘I’m not good at that sport.’ So then it’s like, ‘But I’m really good at Pac Man,’ and so they stop playing. You know, the competition and the organization, on one hand is good. I think it selects and the others fall out. And then it’s like, ‘Well, I’m not a basketball player anymore.’

Parent expressed that they feel that most of the time physical activity means sports, so if their children are not involved in sports they do not have many opportunities to be physically active. They also discussed that if their children do not like sports, then they do not like anything that is physically active.

Of parents that had children involved in sports, most agreed that with so many teams to be a part of that you really have to be careful not to over-schedule or put too much pressure on children. One parent said, ‘I’ve been accused of putting my kids into too many sports. You know, that’s how their schedules are. So they’re very active.'
They’ve got something almost every day. We have pressure that we should be doing something.”

**Weather**

Weather was repeatedly mentioned as impacting children’s physical activity. The geographical area where focus groups were conducted does have long winters and most years the area does receive a large amount of snow. Comments were consistently similar. Parents reported that their children were less physically active in the winter and that Rexburg has a very long winter season. Participants did not elaborate a great deal about this impact, but noted numerous times how great of an impact it was. All participants seemed to just understand this impact and the fact that the weather could not be changed, and therefore did not spend a lot of time discussing. Some mentioned being involved with winter sports, such as skiing, but this was not a common theme among participants.

**Expenses**

Most parents reported that cost had an impact on the amount of physical activity their children engaged in. Expenses related to being on an organized team, cost of equipment, and cost of certain activities, such as skiing and swimming. This impact is clearly demonstrated by the comments below.

*Woman 12:* My husband’s a full-time student and I’m not working. So even something, “Oh, it’s only $25 a month,” I’m like, “Uh, I don’t have $25 a month. I don’t have $10.” So that is an issue.

*Woman 16:* And even the money, it is expensive. I’m probably working, so my kids can play sports.

*Man 1:* Cost. Like sports programs, you want to get them in. It’s pretty
expensive. Like we only let our daughters do one at a time. Right now, the
daughter that does Ballroom Dancing, she wants to join the Ballroom Dancing at
the fancy place, and we just can’t afford it. You know? Along with cost too, you
have to have equipment for them to play and use.

*Woman 10:* Money is an issue because you have to come up with the equipment.
If you want to go to the golf course, then you have to pay. Or skiing, then you
have to pay.

*Woman 5:* The availability of what activity they wanted, and the money to partici-
participate. There’s a lot of good things and a lot of sports activities. But, with 6
kids, I can’t necessarily go out and $45 here, and $50 there and all of the sudden,
I’ve got $300 worth of activities. That’s not in my budget.

**Community Resources**

Parents discussed some of the community planning concerns and built
environments in Rexburg and how these impact their children’s physical activity. One
participant mentioned that the community had started to be better at creating walking
trails and bike paths. However, she also presented the question, “How willing is our
community to dedicate those hard-earned and very limited funds, sometimes to those
activities.” In contrast another parent commented on how many communities have more
bike paths and walking paths, compared to their community and how they could do much
better in that area. Numerous parents discussed the lack of a recreation center in Rexburg
and the impacts of the city of Rexburg and the school district not having a collaborative
relationship. There were various discussions on the new high school and opportunities
that could have been taken advantage of. This potential for collaboration between
community entities was illustrated by the following comments.

*Woman 11:* Logan High School and the city of Logan came together and built a
swimming pool/Rec Center next door to Logan High School. We have plenty of
room at the new high school. The city should build the swimming pool attached
to that, so that the kids could have a swim team. I think the community members could definitely, you know, go to the School Board and go to the City Council, and say “What do we need to do to get this to happen?” You know, how can we get the city and the school district to work together?

*Woman 10*: And I don’t even think the city of Rexburg needs to have, you know, a big recreation center. It just needs to have a cement hole in the ground that works as a swimming pool. I’m serious. It doesn’t need to be fancy.

*Woman 19*: So I’m not happy with no rec center.

It appears there has been a lot of discussion about a recreation center in this community and this issue was brought up frequently and most participants felt that their community could really use a recreation center. They felt that their community really lacked needed facilities that could promote more physical activity by community members.

**Screen Time**

Many participants felt that screen time impacted the amount of physical activity their children engaged in. Participants commented that the impact of screen time has significantly changed since they were children. As illustrative below, many commented that there were very few channels on TV and they did not have a computer or the internet in their homes growing up.

*Woman 5*: So my 13 year old comes home and the first thing he does is plop in front of the computer. But we’ve password-blocked it now, so he’ll end up in front of the TV instead, most of the time. But we try to get him out and active, rather than letting them plop.

*Woman 26*: There’s too much to do indoors. They don’t…We used to go outside and –Everything we did was outside. So riding bikes, playing whatever—chasing games, night games. There was not all the access to TV and video games and all that, that we have now. So there’s just —my kids don’t find reasons to go outside and play.
Woman 18: Well and with video games, all these virtual worlds. When we were kids, we had to create those worlds, and it was usually outside.

Woman 7: When I was a kid, cartoons were only on Saturday morning. Like you only had a certain time and then they were off. My little boy, it’s like he comes home from school there’s a channel, he can turn on, to automatically watch TV; or there’s the video game to play. That’s what he would opt to do versus play and do.

As illustrated by the following comments, participants also felt that, although considered screen time, the Wii was a positive way for their children to engage in physical activity, especially during the winter months.

Woman 25: Wii Sports is good. They can work up a sweat, depending on what they’re playing.

Woman 21: I think the Wii has been great. Because no matter what my son is playing, he’s bouncing up and down.

Woman 4: You can work up a sweat, if that is your best alternative for winter.

Most participants discussed the need to restrict screen time and that they had found the need in their households to set clear limits and establish rules related to screen time.

Woman 20 stated,

I think we have a challenge to get our kids – I know—I’m kind of skewed because I am a Physical Educator, so I try and get my kids out there as much as I can. But it is. It’s hard with the media. And so we have to set strong boundaries to the media. We only allow the Wii and the DS on the weekends, at certain times, and they can’t have it. So little things like that help.

Woman 14 said,

We almost had to make it almost just a reward for our oldest, because that’s how he is. He zones in and that’s all that matters. It’s just right at the front of his brain.

Similar comments,

Woman 12: I think you just have to time limit. At least my kids, would never
internally say okay I’m done. They just would never—you know? So you just have to like set those limits.

*Woman 9*: Every kid’s different and he’s a little bit more obsessive, I guess. So we just ended up having to take away—He had a Game Cube and we just took it away. Even though he was limited in his time, that’s all he would think about. He wasn’t venturing out to see what else he could do.

As previously discussed in the parental roles section, parents commented on how easy it was to utilize screen time to occupy their children so they could rest or accomplish tasks. *Woman 25* stated,

So, it depends on, you know, how busy I am, and if I have a lot to do. Then you know, I’ll be—I won’t pay attention to how much time she spends in front of the TV.

Participants discussed many things, other than their parental role, that impact their children’s physical activity. The most common themes were the school system, health concerns, safety concerns, skill level, confidence, and self-esteem of their children, personality of children, weather, expenses, community resources, sports and competitiveness, and screen time. These impacts were both positive and negative, however most impacts that were discussed were things that had a negative impact on their children and were things parents appeared to be concerned about.

**Impact of Others on Children’s Physical Activity**

The impacts of others on their children’s physical activity were discussed with appreciation and frustration. Participants discussed how great it was when others encouraged physical activity and got their children excited about being physical active, so the message was not always just coming from their parents. Parents also reported being
frustrated with some other people that had a negative impact on their children’s physical activity level because parents had less control over these outside forces.

People that participants commonly discussed were older siblings, grandparents, extended family, neighbors, friends, friends’ parents, principals and teachers.

**Siblings**

The impacts of siblings were discussed in various ways. Participants discussed that siblings give children someone to play with so they are more likely to engage in something physically active and also a parent doesn’t always have to be present outside if the sibling is older and responsible. Woman 4 stated,

Christian, who is four, now that there’s older brothers and sisters, probably spends more time outside than any of them did at 4 because I can say, “Watch Christian” and he can go out with the big kids. I do think that makes a difference. As the kids get older, the younger ones probably have more activity than the older ones did when they were that same age, because mom can keep working and they can go outside and be responsible for him.

In addition, parents discussed that there may be a negative impact in the sense that if a parent is busy with another sibling, they may not have the time to play with the child. Woman 1 said, “You’re only one parent, so you can’t divide yourself. So the other kids in the family have an impact on each other.” Another way siblings impact each other, that was very briefly mentioned, was that younger kids may want to be like their older siblings, do what they do. So this may have a positive or negative impact on activity level.

**Grandparents and Extended Family**

Many participants briefly mentioned that their children had grandparents and
extended family members that lived close by and that their example good or bad
influenced their children. Participants mentioned that often it was these extended family
members that would invite their children to do physically active things. Woman 4 said,
“Grandpa lives behind our house and he likes to go on bike rides, so he’ll invite the kids
to bike with him when he goes on this bike rides.”

**Friends, Friends’ Parents, and Neighbors**

Friends were brought up frequently while discussing people that impact children’s
physical activity. Similar to what most participants said, one woman simply stated this,
about why friends are impactful, “Because they want to do what their friends are doing.”
In response to this comment, another parent said, “My kids definitely have the friends
that will play outside and the friends that will go inside on the computer.” One woman
also mentioned that the parents of her children’s friends also impacted her children
because of activities her children were doing with this other family.

Parents also discussed that neighbor children impacted their children’s physical
activity. If there were children in their neighborhood that their children liked to play with
and were close to their age, then their kids were more likely to want to go play outside
and be active. Similar to comments about friends, parents’ responses were different as to
whether or not neighbors were a positive or negative impact, based on the age of the
children in the neighborhood and their interests. They commented that there were some
neighborhood friends that wanted to be active and some that just wanted their kids to play
computer or video games.
**Principals and Teachers**

In addition, the priorities and examples of principals and teachers were also brought up by many participants. Participants brought up two principals in particular that they felt were good examples of being physically active and encouraged physical activity during recess and supported programs, such as Pacers. One participant also mentioned a particular teacher that had been a positive influence on her children. In addition, numerous participants mentioned how much their children like the P.E. specialist in the district that travels from school to school and teaches the children in P.E.

Participants discussed other people that impacted their children’s physical activity in both positive and negative ways. People that participants commonly discussed were older siblings, grandparents, extended family, neighbors, friends, friends’ parents, principals and teachers. Participants discussed how some people in their children’s lives encouraged them to be physically active, while others were negative influences.

**Parental Strategies Related to Physical Activity**

While discussing roles and impacts related to physical activity many participants shared strategies they use to encourage their children to engage in physical activity. Participants found it useful to hear what other parents were doing and to gain ideas and strategies. These shared strategies were in response to stated impacts such as time, other distractions and weather. Woman 8 stated,

I think it’s good for them, and their mind, to know this is kind of something I’m going to have to do. You just treat it like eating. You just exercise every day. And I think that’s kind of a good healthy family motto. Just do something active everyday, even if it’s a little on-the-job chart. I’m just trying for everyone to kind
of have something active that is their thing.

*Woman 13:* I require of my kids, before they have screen time. They have to have exercise. And I tell them it has to be an hour of aerobic or half-hour of anaerobic. And the only problem is it takes all the fun out of it. I mean, how much fun is it, when your mom says you have to do it?

In response to the concern from parents about the winter months, *Woman 14* said, “It takes more of an effort on our part, before winter even comes, to sit down and come up with ideas and things to do. And make sure you’ve got more things inside your house.”

Participants felt that it was important to find ways to create a norm of physical activity and be prepared with physically active things for your children to do. These strategies were in response to some of the stated impacts such as weather and time constraints.

Overall, these data indicated common elements related to physical activity in children. These elements are depicted in Figure 1 and discussed above. Similar elements were discovered related to positive eating patterns in children. These elements were depicted in Figure 2 and will be presented below with supporting data. These elements were discovered by applying a grounded theory approach and allowing theories and insights to develop from the data.

**Parental Roles Related to Children’s Eating Patterns**

Consistent with physical activity, all participants responded that they felt that their role as a parent was critical and perhaps the most critical impact on their children’s eating patterns. Common themes, while discussing ways they impact their children’ eating patterns were traditions of parents, parental habits, parental examples, buying food,
Supportive Networks:
- Parents
- Siblings
- Friends
- Grandparents

Environments:
- Food Availability--
  - Home
  - School

Individual Factors:
- Food Preferences

Parental Perceptions of Positive Eating Patterns in Children

Positive Eating Patterns

Benefits of Positive Eating Patterns

Figure 2. Parental perceptions of positive eating patterns in children.

preparing food, and skill level associated with cooking. Participants continually brought up the difficulties associated with their roles. Common reported concerns or barriers for parents were moms working outside of the home, time, energy, schedules, parental emotions associated with eating, the impacts of marketing, food prices, knowing what to cook, and understanding correct nutritional guidelines. Each of these themes were identified by participants as components of parents’ roles and will be described below.

Background/Traditions of Parents

Parents repeatedly said that how they grew up and their own traditions, related to eating patterns, had a significant impact on their children’s eating patterns. Illustrated in the following comment from Woman 23.
But like I grew up with kind of an abusive stepdad. So food, because he was really, really heavy; I’ve always been a little bit more on the petite side and so I was timed when I would eat. I was forced to eat things. So I think I’m a little bit more, “Whatever.” Because I am—My kids are not going to be forced. They don’t—I fix one meal for them. If they don’t like it, they don’t have to eat it. But I don’t—They can’t say, “I don’t like that,” if they’ve never tried it. So I make them try it, but I don’t think they have to love everything. I don’t force anything on them, because of the way I was raised with food.

One woman stated, “It just depends on how you were raised, as to whether or not you’re going to open that box, or open the potatoes. You know?” One man also said, “It is a lot, tradition. Potatoes and gravy, and then roast, is every Sunday.”

**Parental Habits and Example**

For many participants, their own habits and examples to their children were identified and discussed as significant impacts on eating patterns. Typical comments included the following.

*Woman 9*: So what I prefer eating; what my husband prefers eating, that’s the kind of food I’m buying.

*Woman 21*: Example is huge, I think. Because they pattern so much of what they do, after what you do.

*Woman 12*: I think I need to watch the example I’m setting, if I’m having seconds and thirds, that maybe isn’t—You know?

*Woman 4*: My husband developed a horrible habit as a child, that now my kids have, which is that they think that they have to eat right before bedtime. It does not matter what time we had dinner or anything else, but they always want a bowl of cereal before they go to bed; or a piece of toast or something. Dad still has that. Dad is still eating his bowl of cereal and they still want their bowl of cereal.

Parents felt that their children’s eating patterns were modeled after their own eating patterns and many expressed a desire to be a better example to their children and to work on some of the habits that currently existed in their households.
Buying and Preparing Food

Another impact that was discussed was a parent’s role of buying and preparing food. Participants discussed this critical role and how their children obviously eat what they buy and prepare. This is illustrated by typical responses such as the following.

*Man 1:* You have a really big role. Because you’re the one that brings it home. You’re the one that provides it for them.

*Woman 4:* I think the mom has the biggest impact on food. Because I do the grocery shopping. I do the preparing. I choose what’s available for their snacks. If I don’t buy it or prepare it, they don’t eat it.

*Woman 1:* Mom makes a huge difference. What you buy. What you make. What you have available.

*Woman 14:* They’re little kids. I mean, that’s not—it’s not their job to go and find the good food. It really comes back to us.

Although, buying and preparing food was discussed as an obvious impact, many parents expressed frustration with this process. It appears that although this role was clear to all participants, they found certain aspects of buying and preparing food challenging.

One challenge discussed by parents, related to buying and preparing food was trying to understand correct nutritional guidelines. This was demonstrated in the following conversation that occurred in one of the groups.

*Woman 22:* I’m confused...Like what’s healthy and what’s not. Because in one magazine, it’ll say, you know, “Give your kids this.” Another one will say, “You know, trans fat is bad.” So I start to wonder.

*Woman 22:* Yeah. What is good stuff for them and what isn’t?

*Woman 26:* And everybody has different ideas. You know, you have to eat all meat, all protein. You know? Everything in moderation. But that is extremely confusing. Because they had that whole period where everything had to be fat-
free. Now they’re saying, “No, you’ve got to have a little bit of fat.”

In addition, skill level and knowing what to cook was also mentioned as a challenge for parents. One woman stated, “For me, it’s what to cook. I have a hard time.” Similarly, another woman said, “Education. You know? Do you know how to make things?” Responses varied related to confidence level in cooking and being able to come up with meal ideas. Some participants expressed confidence in their skill levels related to cooking and their ability to be prepared ahead of time for meals; while others, discussed their lack of confidence related to cooking and especially coming up with meal ideas and planning ahead of time.

**Working Outside of the Home Versus Not**

Many mothers brought up the structure of their household. They discussed how mothers working outside of the home impact the eating patterns of their households. Many used their own mothers as examples and discussed how they have seen a difference in family eating patterns in households with a mother working outside of the home compared to a mother that only works inside of the home. Many comments, similar to the following, were made.

*Woman 4:* I think it makes a difference if the mother, if that’s all she is, is at home being a homemaker. Then perhaps that changes the types of meals that you’re eating, if your mom is a working mom. So I think family environments change what there’s time for. She [speaking of her mom] did the best that she could. But I get to be home with my kids. So that makes a difference, sometimes, on the quality of the meal that’s being prepared and what you have time for. Everyone, it just varies on what they can do. I think everybody tries to do their best.

*Woman 18:* We also had moms that were home and could cook during the day. That’s another hard thing, coming home and trying to find the time to cook.
**Woman 19:** They don’t eat as good of a variety. Maybe it’s because mom doesn’t cook as well as mine cooked for me. Or my mom didn’t have to work either. So, you know, there’s a lot of rushed meals, when I get home, sometimes. That affects it also.

**Woman 10:** I think it depends on if the mother is working or not. My mom was a working mother, and so when she was gone, we had to find what’s there in the house. My mom did a lot of scratch cooking when she was home. But when she wasn’t home, then I was the one who fixed the meals, and I didn’t have those skills back then. But I have skills now and I am a stay-at-home mom. I am conscientious about the meals that my kids eat.

Woman 18 stated her challenge with being a mom who works outside of the home.

When they get home and they’re hungry, they’re going to tend to grab snacky foods and eat a whole bunch of those real quick. My daughter lives on that. Then she’s home a half-hour before me. What do you do?

Many of the woman who worked outside of the home expressed frustration with finding the time to prepare meals and not just resorting to something that is quick and easy. This frustration was also expressed by some mothers who did not work outside the home; however, it seemed to be much more of a concern for those mothers who worked outside of the home. Some mothers displayed less self-efficacy towards improving the nutritional values of meals versus other mothers. Some seemed to feel more in control of their households eating patterns, while others said that less positive eating patterns were just the reality of making schedules work. However, this difference did not appear to be based on whether or not they worked outside of the home.

**Emotions**

In relation to parental roles related to eating patterns, many participants brought up emotions related to eating. The value of parents helping their children see the connection that can exist between eating and emotions was explored. Parents also
discussed the potential negative impact of being too controlling when it came to eating patterns and the potential positive impact of not making food an issue in their households.

Some parents shared approaches they took at their homes with their children. Many typical responses included comments such as the following.

*Woman 8:* It’s interesting, for some of the emotional really stands out to me, with the eating patterns. But getting our kids to realize the tie-in with emotions and food a little bit. I’ve got one child that—she must be so addicted to chocolate, like I am. But she’ll come in, “Do you have any chocolate in this house?” We eat really healthy meals, but we love our desserts too. That’s something I’m trying to work at.

*Woman 9:* Sometimes I think we have to be careful between making it an issue or not. Because I’ve felt like with food, and with my kids. You know? Try not to make too big a deal about it. I’ve never said, “Okay. They have to eat so much of this or so much of that,” at their dinner plates. I just said, “If they eat it, great. If not” I don’t make an issue of it. My kids will kind of go in spurts, between what they like or what they don’t like. But, I was thinking, like with the Halloween candy. We just let our kids just go and not even worry about it. And if they eat it all and get sick, well, then next time—you know? I don’t know. But I think you have to find a balance. Because I think it’s good to be aware also. They need to be aware of what they’re eating. That’s just kind of my feelings on how we’ve done it.

*Woman 8:* But I think about it, as a mother, is how—Is it better just to have an open, “the food is there. Make good choices.” Or this controlling thing. I don’t know. I kind of have gone back and forth.

*Woman 14:* It is hard, because you want to do what’s right and you want to do these good things, but you want to be careful to not crossover that line too and make it the other way for him [speaking of her son]. You know, that they’re so paranoid.

*Woman 8:* And I just love the idea of yes—Just thinking. Like for me, if I’m dieting, I hate that “No this, no that.” I just like, myself, my free agency just getting so tight. I can feel the same thing with my kids, if I’m going, “No that. No Little Debbies. No this.” You know? But just having yes choices. There’s lots of fruit; there’s lots of vegetables; there’s lots of yogurt. We can make a smoothing. You know? Just more positive. Instead of limiting the food. You’re opening it up, so it’s just—You know, same with nutrition and physical. Just think it the positive.
Another parent brought up the concern of always using food as a reward.

*Woman 13:* So we have a problem with reward, using food as a reward. Anytime you tie emotion with food, it’s probably a bad thing because a lot of people eat when they’re depressed.

Parents seemed to be unsure of how to always navigate the emotions related to eating patterns and the best approach to take. Many agreed that there seemed to be a needed balance between being too controlling of eating patterns and yet creating needed parameters for their children and not just letting them eat anything they wanted. Some participants expressed concerns about creating negative emotions and issues for their children related to eating patterns or always connecting food with emotions. This concern was not brought up by any of the fathers.

**Body Image**

Another similar impact that was brought up by mothers was body image. Participants discussed the role parents should play in helping their children develop a positive image of their own bodies and helping children understand the impact of unrealistic media images. This is illustrated in the following comments.

*Woman 17:* Every time I comment on my weight, they hear me. So we do it just as much as they do and the idea of what’s skinny and what’s not and what’s healthy and what is, is so farfetched that our girls think they have to be that, to be healthy. And that’s why they think they’re fat.

*Woman 8:* I think making the girls, especially aware, that the computer—there are computerized images on a lot of the models.

*Woman 8:* Teaching our kids. You know, because they—just self-esteem and eating patterns and all that. If you have a skinny friend versus—you know, a friend who’s a twig versus, you know, normal. And just realizing—I remember Cindy Crawford, even saying, “Boy, if I looked like that in real life, I’d be amazed.” Because they would take her image and make it flawless. But they really do cut
out chunks of bodies and make those models look that way, and it’s not real. I think we need to teach that to our kids too.

This impact was not brought up by all groups; however it was apparent that the groups that did bring it up with very passionate about this impact and their role as parents. Again, this was not an impact that was discussed by fathers. Most mothers used their daughters as examples when discussing the importance of teaching children about body image and media images, although one mother discussed body image in relation to her son.

Within all groups, a great deal of time was spent discussing the parental impacts on children’s eating patterns. Most participants agreed that they had a greater impact on their children than anything else. However, there were many other impacts that were also discussed and appear to also influence children’s eating patterns.

**Impacts on Children’s Eating Patterns**

Participants discussed in great length the many things, other than their parental role, that impact their children’s eating patterns. The most common themes that were consistently brought up were school, eating out, time and schedules, prices, needed convenience, and children’s food preferences. These topics were passionately discussed by most all participants. The impacts of screen time and the media were also discussed. Additional themes that were common were holidays, the time of year, food allergies, and the health of the child. Positive and negative impacts on their children’s eating patterns were discussed by participants. The discussions for each of these themes will be described next.
School

Each group spent a great deal of time discussing the many ways that their children’s eating patterns are impacted by their time and experience at school. Many parents expressed frustration with the lack of healthy food served at school cafeterias. Many comments, similar to the following, were made.

*Woman 10:* That’s probably the most unhealthy meals that they eat. Because I don’t think that a lot of that is scratch cooking and whole grain and natural. I make sure they get a good breakfast and a good supper; in between when they eat at the school.

*Woman 16:* Yeah. It’s frustrating, and they have a lot of things that we wouldn’t choose to feed our kids, like chicken nuggets and tater tots. You know? Not on a regular basis, you wouldn’t give your kids, every day, something like that. That’s what they get at school. It’s frustrating.

*Man 1:* It’s all prepared foods. It’s pretty amazing. Everything is right out of the freezer.

*Woman 20:* We don’t let them have a school lunch all the time, because I’ve noticed that the school lunches are very carbohydrate-based. We let them eat it for a week and I couldn’t believe how lethargic and sluggish he was. But he was telling me, “Mom, I can buy, just this, in the lunch line. I don’t have to buy the school lunch. I can buy this.” And it makes you nervous as a parent. So I don’t think the education, for us to know really what our kids are eating, if we give them money.

Another frustration discussed, at length, by parents was how the school lunch room experience itself has a negative impact on their children. Frustrations included their children only having a certain amount of time to eat and their children choosing not to eat so that they would have more time for recess. *Woman 7* commented,

Well, our kids, at my son’s school, they’re timed. They’re timed. And at a certain time, the teacher comes around and that’s it. They have to go throw their food away. I mean, he had eaten maybe three bites of his food. It was like, “Get out. Your time’s up. Go.” So either they’re inhaling their food or it’s like….I was sick at how much food they just threw away.
In addition, parents expressed frustration with rules that forced kids to try one bite before they left. Woman 22 commented that her daughter reported that other kids just eat off of her tray, so she was not getting to eat what she wanted to off her tray. She said,

I have a daughter who’s saying she’s got people eating off her tray. So the other kids are taking food off her tray, that she would eat, but they’re just taking—you know, helping themselves to it. So then she’s not eating what she would like to eat. You know, even if it’s the green beans. She’s like “Somebody ate my rice today.” I’m like, “What is going on at the school?”

Most parents appeared to be very frustrated with school lunch and felt that they did not have a lot of control over the food options, the rules, or what their children choose to eat. The majority of participants felt that school lunch had a negative impact on their children’s eating patterns. Numerous participants reported that they had no idea what was happening in the lunch room or what their children were eating until they went to the school and had lunch with their children. They expressed surprise and increased concern after experiencing it for themselves. Woman 7 said,

I didn’t know what happened until one day he wanted me to come to school lunch, so I came. All of a sudden, the teacher’s walking around, and he’s like, “Mom, we have to throw our food away.” I’m like, “You have to do what?”” He was like, “We have to throw away the food.” He had eaten maybe three bites of his food.

Similarly, Man 3 said: I ate there. She was over my shoulder, looking at me—I was scared. I was like, “What’s the heck’s going on?” She’s an intimidating lady to me.

**Eating Out**

Typically, participants felt that the popularity of eating out had a negative impact on eating patterns and that eating out was much more common than when they were children. Parents discussed that with busy schedules it was very tempting and easy to
grab fast food. The following conversation was typical.

*Woman 4:* A $5 pizza at Little Caesar’s is definitely tempting. It’s only five-bucks, and cheese cost five bucks. So yeah, if I lived closer to town, then I’d probably eat more $5 pizzas from Little Caesar’s.

*Moderator:* That brings something up. Do you think the trend of eating out has changed?

*Group:* Oh, absolutely.

*Moderator:* Do you find that your families eat out more than maybe you did as a child?

*Woman 7:* Oh yeah. When we were kids, like eating out was usually a treat.

*Woman 4:* Maybe once a month. You got your big family outing.

*Woman 7:* Yeah. Now it’s like every time you go to town, your kids are like, “Where are we eating for lunch?” Do you know what I mean? So I think, when I was a kid anyways, it was like Friday night or something. You got a movie and a pizza, or something, but it wasn’t all the time.

*Woman 4:* And now there’s more Dollar Menus and some of it’s cheaper.

Another similar conversation demonstrates the rationale parents discussed for eating out.

*Woman 25:* Because you can walk in and walk out.

*Woman 22:* Because you can justify it.

*Woman 25:* Yeah.

*Woman 24:* It takes like two minutes for dinner.

*Woman 25:* And you can afford it.

**Time and Schedules**

Another impact brought up by parents was time and busy schedules. These are closely tied to eating out and demonstrated by the above conversation. Parents
continually brought up the busyness of their households and how this impacts eating patterns. Comments similar to these were very common.

*Woman 7:* I think a lot is— it seems life’s busier, so it’s convenience more than like worrying about the health of it. It’s like, “Ok, it’s faster. It’s easier.”

*Woman 4:* Whatever the choice is, you schedule totally affects what you’re going to be having for dinner that night, or what you have time to make.

*Man 2:* Time is a big factor. How long does it take to cook this meal? Getting it, making it quick and eating it quicker. Because we got to get off to the Scouts or Mutual or dance lessons, whatever it might be.

*Woman 14:* Time is a big thing and especially—I mean our kids are little. But as you get older and they get busier and busier. You know, it’s—you find yourself, “Well, let’s just grab a quick dinner.” “Let’s just go do this.” Grabbing whatever you can to fill in the gap for time. So you’re either making a bigger effort, to have your whole day organized, which doesn’t always work, to get in the more nutritious or balanced food that you have, or you’re running out and just grabbing a $5 pizza or whatever will fill in the gaps.

Time and schedules were impacts discussed by all groups and by almost all participants.

**Needed Convenience**

As a result of time and schedules, many participants discussed the quantity of convenient foods, such as frozen meals, consumed within their households and their lack of nutritional quality. Most participants recognized the negative impact these foods had on their children’s eating patterns. Comments similar to the following were common.

*Woman 18:* We have a lot more convenience stuff today, than we did when we were kids.

*Woman 25:* It’s the frozen food, because they pop it in the microwave. It’s done in a minute. Microwave. I think frozen food is a huge problem.

*Woman 2:* I think the world has made it easier for the prepared and prepackaged foods.
Man 2: Everything’s on the go and society has accommodated us. We need quick food and they’ve readily provided it at cheap prices. Yeah, it comes at the loss of probably nutrition and a lot of them are empty calories.

Parents also commented on how much cereal their children eat. They reported that their children like it and it is so easy and quick. Many participants acknowledged however, that cereal may not always be the healthiest choice. Participants responded that these convenient foods are quick, cheap, and can often be an answer to busy lives.

Prices

The price of food was also brought up as a significant impact. Participants reported numerous different ways money impacts eating patterns. The expense of healthier foods was discussed and is illustrated in the following comments.

Woman 19: To buy new, in-season fresh stuff is usually more expensive than frozen pizzas or whatever, a lot of times.

Woman 13: Fruits and vegetables are expensive, so money comes into play there.

Woman 19: With all the coupons, they’re always for the convenient food.

Man 1: The sugar cereals, they’re always on sale.

Woman 5: It’s definitely, definitely cheaper to buy of box of something than it is to buy healthy.

Demonstrating a slightly different perspective Woman 9 stated,

When we have more money, we don’t eat as healthy, because we’re eating out more. We have more junk food and more processed food. So money is like a huge factor in it.

Children’s Food Preferences

Another common theme discussed among participants was their children’s food
preferences and how impactful these preferences were on their eating patterns. They expressed frustrations with some of their children’s preferences and the related difficulties when trying to get their children to eat certain things. Many parents also discussed, within their own household, how different each one of their children’s eating patterns can be. Common comments included,

*Man 3*: Well, my son just eats Frosted Flakes, that’s it.

*Woman 14*: It’s different with different kids. My oldest son, you could put a box of chocolates in front of him and he’d take a bite and be done. It’s not a temptation. He doesn’t care. And I have the other one that still has the box of chocolate and is still reaching for the chocolate chips, behind my back, you know, at the same time.

*Woman 5*: I have one that will eat nothing but carrots with dressing and apples. That’s what she wants. I have another one that, she wants nothing but chips and cheese and sour cream and candy. It’s just like—I can’t get her to eat the fruit.

Children’s food preferences were a common theme and frustration among participants. Parents’ shared that their children’s likes and dislikes related to food dramatically impacted their eating patterns. Parents also discussed how different each child’s eating patterns are, based on their food preferences.

**Screen Time**

The impact screen time has on eating patterns was directly asked, as a part of the discussion guide. For the most part parents did not express that they thought screen time had a large impact. They certainly acknowledged that screen time impacted physical activity and mealtimes, but not directly eating patterns. One parent did say, “If they’re watching TV, they’ll grab something and just sit and eat it—regardless of whether they are hungry.” This however, was not a typical response. Woman 5 said,
Well, I know my oldest son; I physically have to tell him, “It is time for dinner. Turn it off and get up here and eat, or you will lose the privilege for the rest of the week.” Because we will just—He’ll forget about it. He doesn’t seem to need to eat. I don’t know why. It’s not a priority for him. He would rather be in front of it. The others, the minute you tell them, they’re already sitting, planted. But he, so for him, screen time is more important that food.

However, this type of impact appeared to be unique to this mother. Some parents did feel that their children were targets for marketing messages related to unhealthy food.

Woman 1 said,

I remember when my oldest was just learning to talk. One of the very first things he was able to recognize (we didn’t eat out because we were students) was the McDonald’s arches. McDonald’s. How do you even—You know, and its’ one of those things—Where I think one of the things that influences them so much is advertisement. My kids will come to me, after seeing one of those infomercial things, “Oh we have to get this because it’s so wonderful. It’s amazing.” So they’re inundated with so much information, that we almost have to figure out how to sift through it and stuff.

Another woman, Woman 20, stated, “I noticed, television, if we let out kids watch TV on Saturday at all, I noticed how crazy the marketing is with the kids.”

Offering a slightly different perspective, one woman said, “I think it can be good and bad. They have these good campaigns, that can be helpful but then they also have the bad commercials.” Many parents brought up the positive ways they have seen the media play in impacting their children’s eating patterns. Man 2 stated,

We talked about media in a negative sense. But we also have more positive media and more education out there. My daughter, at 7 years old, gets healthy cereal and unhealthy. And “this is healthy for you, and that’s healthy for you.” We’ll actually talk about it. She won’t always do it. But she’s learning, and knows, and sees things. And that’s –I don’t think I ever lectured my mom on healthy or not healthy foods.

Numerous educational media campaigns were mentioned by parents, including *Don’t SuperSize Me* on PBS, *5-A-Day*; and *Got Milk*. Parents suggested that these and
similar campaigns had a positive impact on their children. However, some parents commented that they felt that advertising and the media really influenced parents more than kids. Woman 16 said: “I don’t think commercials have the affect that they used to have. I think commercials used to kind of affect what you ate a little bit. But I don’t see that.”

Holidays and Time of Year

Other common impacts that were discussed were holidays and different times of the year. Parents indicated that during the holidays and during certain times of the year their children eat significantly different. The following comments illustrate this discussed impact.

*Woman 26:* There’s so much that’s food-oriented around holidays. I don’t think it needs to be…just because it’s a holiday, to have more and more and more. They seem to eat a lot more junk around the holidays—because they’re getting it everywhere. They’re getting it at the school parties.

*Woman 3:* You know, in the wintertime, they’ll eat soup. In the summer time, they’ll piece on fruit. My kids will drink a lot more water during the summer than they will during the winter, because they’re outside. They’re playing. They’re hot.

Food Allergies

Some parents also expressed concerns about food allergies or intolerances and how this impacts their children’s eating patterns and the patterns of the entire family. Any food intolerance that existed among any family member appeared to impact the household’s eating patterns. The following statements were common among parents that had experience with this impact.
Woman 1: Allergies is a big factor in our home. Our youngest has an anaphylactic shock allergy to peanuts and he can’t eat egg whites. It makes a huge difference and there’s a huge balancing act between making sure that my other children are still exposed to these foods, without endangering the other one.

Woman 13: I have one son who’s really affected by colors, by artificial colors. I try to teach him to look for colors. He knows which candies don’t have artificial colors.

Woman 3: We don’t eat out as much. I have a food intolerance, and so we don’t eat out just because of that. It’s so hard to find places where we can.

Impact of Others on Children’s Eating Patterns

The impact of others on their children’s eating patterns was discussed with frustration and humor. Some parents reported being frustrated with other people that had a negative impact on their children’s eating patterns because parents had less control over these impacts. However, most participants showed a sense of humor when discussing the negative impact of some individuals. Parents felt that they did not have control over these impacts and that most were not significant enough to greatly impact their children; these impacts were not as great as their own parental impact. In addition, participants also brought up people that had a positive impact by setting a good example for their children, however most impacts of others were discussed in a negative way. Parents identified grandparents, older siblings, friends, and teachers as individuals that impact their children’s eating patterns.

Grandparents

Numerous participants stated that grandparents lived close and had an impact on their children’s eating patterns. Parents who discussed grandparents did so with a great
amount of humor. The following comments illustrate this impact.

Woman 25: Grandparents, for me. Because my –we live close to both our parents. It’s like a “Whatever.” Like they have a sleepover and they get mac and cheese for breakfast. Just because they’re at grandma and grandpa’s. They can do what they want.

Woman 10: I told my kids, when they drive by grandma’s house, it’s like they see the Hansel and Gretel. You know? The gingerbread house. That’s what they see when they drive up.

Woman 4: You just have to know when you go to grandma’s house, and boy, do they look forward to that. Because that’s not what happens at home. So grandma’s is a free-for-all. They get whatever they want at grandma’s house, none of which is healthy. You can’t—you know, if you’re sending them to grandma’s, you gotta love grandma. So that’s the way it is.

Older Siblings

Parents discussed the impact of siblings and especially older siblings. Typical responses were:

Woman 24: The little kids are watching the teenagers.

Woman 2: We had to start a rule around the dinner table that you can’t say, “Yuck.” I don’t care if you don’t like it. But you cannot say “Yuck” or “gross” or “I don’t like that.” Because when the older kids say, “Yuck” then the little kids, who haven’t ever tried it before. They’re 2 or 3 or 4, and they say , “Yuck” and you’re thinking, “Thanks a lot” to your older kids, who have just influenced now, everyone younger than them. Because the older sibling says that’s not good, so it must not be good.

Friends

Friends were also mentioned as other individuals that impact children’s eating patterns. Participants mentioned several ways that friends impact their children. Their children want to eat what their friends eat and if their friends bring certain foods in their lunch then their children seem to trade. Parents said you never seem to know what your
child actually eats out of their lunch and what they eat out of someone else’s. In addition, parents suggested that their kids seem to get an idea of what a “cool” food is from their friends. Parents said their children then want to eat these “cool” foods. These impacts are illustrated in the following comments.

*Woman 20:* My daughter will take her lunch, that you prepared for her, and she’ll do trades with other children. And so you don’t really—the food that you send with them is not really what they’re eating.

*Woman 2:* I think friends and looking cool affects—you know sometimes it’s not cool to have a peanut butter and jam sandwich and an apple in your school lunch. It’s not cool because you don’t have the Pringles or the Ding-Dong or whatever. I don’t know what’s cool. But I definitely think that friends and siblings affect the eating patterns.

Speaking of their younger children, participants shared, that neighbors were their children’s friends and had a significant impact, especially during the summer. The following responses were common.

*Woman 25:* Neighbor’s houses; what they’re eating. You know, what they’ll give them for snacks and stuff.

*Woman 4:* If it’s not at your house, they’ll find it at another house.

*Woman 5:* I’ll call them home for dinner and they’re like, “Oh, we just had snacks.” I’m like, “You can’t eat at their house. Okay? Come home to eat.”

**Teachers**

Participants shared examples of how teachers can be a positive and negative impact. Man 2 said, “The teachers, I guess would be one category. Teachers can have a very positive affect.” Woman 24 shared a similar perspective.

My daughter came home and she told us—you know everything that we’re eating and what was healthy and what was not healthy. I mean, it’s good. She’s like, “I’m not going to have any more soda for the rest of the year.” I’m thinking,
“That’s great,” because soda’s so bad for you.

However, numerous parents also mentioned how the example of a teacher can have a negative impact. One man shared the example of the teacher having a diet coke on their desk.

The impacts of others on their children’s eating patterns were discussed by all participants. Some of these people were suggested to be positive impacts; however examples of negative impacts were shared more often. Parents reported that grandparents, older siblings, friends, and teachers all had an impact on their children’s eating patterns and for the most part these individuals were reported as negative impacts.

**Parental Strategies Related to Eating Patterns**

While discussing roles and impacts related to eating patterns many participants shared strategies they use in their households to impact their children’s eating patterns. Participants found it useful to hear what other parents were doing and to gain ideas and strategies. These shared strategies were in response to stated impacts such as time and children’s food preferences.

One repeated idea among participants was getting children involved in the planning and cooking process, as illustrated by the following comments.

*Woman 10:* I think it’s good to have your kids working with you in the kitchen, gaining skills. You know? When I was younger I was often in charge of meals for the rest of my brothers and sisters. And I just—I didn’t have a lot of skills. But I love to cook now, but I feel like, somewhere along the way, I gained some skills somehow. And I just think if you have your kids working in the kitchen with you, then you’re teaching them. I mean, there’s the fast bag of chips or you can have an apple. You know, that’s fast too. But you can also teach them to make a really good, healthy food. I think if you get your kids working in the
kitchen with you, that they will gain some consciousness about that.

*Woman 23:* I try to—because I work, I try to, on Sundays, sit down with everybody and have them be involved in what we’re having for the week. So they get to be involved in what we’re having for dinner and then I’m trying to incorporate them being more active in—You know, when I come home they’ve got the table set. It’s all out on the counter. Then, “Oh, we have to just do this.” So be more active in, from choosing, to preparing, to eating.

*Woman 1:* One thing that I put on there [the mindmap] is allowing the kids to help me choose the food. Allowing them to help plan the menu; allowing them to, “Okay, you guys can choose pears, peaches, or this other canned fruit, downstairs, to go with our dinner.” Allowing them to choose it, encourages them to eat it and stuff. I think giving them more choices. We’re always more happy if we get to choose something.

Additional common strategies, among participants, were making small positive changes related to eating patterns and framing healthy food in a positive way. This is illustrated by the following dialogue.

*Woman 12:* I think we learn and grow. What we used to always do. When they got home, they got healthy snacks and then sweet snacks. But I decided, you don’t need a sweet snack everyday. They’re like “Where’s my sweet snack? Where’s my sweet snack” after they would eat something healthy. I’m like, Okay. We need to change the wording of this. So now they have a fruit, and then we have another snack.

*Moderator:* Something I kind of heard you say too. Is just the way you frame it. Simply the way you kind of even just framed those healthy treats.

*Woman 12:* Yeah. And I think maybe not making it like you have to eat your vegetables.

Many participants spoke about the small changes they tried to make in their households, as demonstrated by the following comments.

*Woman 14:* Well, that’s one thing. Both, my family and my husbands, I don’t know. We ate whatever. My mom was a big comfort food cooker. We had the candy. We had the chips. We always had whatever, but it wasn’t—I know she never made a conscious effort to make sure we were eating right or whatever. Then my husband’s family was just junk food junkies. I think that’s just one
thing. Like we’ve made the effort to know that we’re at least trying to cook healthy and that we’re making things that hopefully, those will be the things our kids want when they grow up. So they’re at least one step healthier than we were, when we got out of the house. You know, just those little things. I’ll make up our own Ranch, but I’ll use the low fat milk and mayonnaise to mix it. Just little things, like that, that they don’t know the difference. They have no idea. They’ve still got something to dip.

*Woman 12:* I found making some slight changes in—like apples. Unsweetened applesauce. Like we always bought the regular applesauce. And then we tried the unsweetened. It took awhile. My kids were like, “Why does this applesauce taste weird?” Then they eventually just do it. I’m like, my kids can grow up having unsweetened applesauce or having the syrup that has half the sugar, or having—I found a great jelly that’s half the sugar. They add no artificial anything. You know, just little changes of little items you can buy. You know, you can go extreme you get everything no sugar. But just finding little things that—you know, whole-wheat bread or different things, small changes, that they’ll eventually get used to.

Among the most common strategies participants shared were related to having healthy foods readily available. Typical responses are shown below.

*Woman 8:* Just having things available, fruits and dip. I think it’s nice to be prepared. As part of the menu is being prepared, put some healthy snacks that are really good.

*Woman 12:* Fruits and vegetables take more time. It takes much more time to sit and cut up an apple and core it, that it does to open a bag of crackers or whatever. So I think just making that more available.

*Woman 13:* It just dawned on me that kids need healthy food right when they get home, and that’s when they need it. I try to have like hot meals ready, somewhere between 4 and 5. That way, they eat the meal before any other kind of snacking or anything. And then, when they get ready to go to dance, or they get ready to go to volleyball or whatever, they’ve already got nutrition. They’re not starving there and feeling weak there.

*Woman 10:* So if they want something, then what I have to offer them is going to be something good.

Another common strategy among participants was limiting access to certain foods in the home, illustrated by the following comments.
Woman 1: I don’t buy fruit snacks very often, because that’s all my 2-year-old wants. So I’ve decided I don’t want to have them there.

Woman 3: If I make a rule, that in order for us to have junk food, we have to physically make it. Like you whip up a batch of cookies and make it. Because we’re going to be less likely, on our time constraints to do that, so it’s less likely to be there and in their diet. So that’s been something that has been good. Those things just aren’t available to my kids, and my kids don’t ask for them. If they know they’re there. They see them in the cupboard or on a shelf, they’ll be like, “Mom, can we have those Oreos?” No, there aren’t any.

Woman 15: They’re not use to having a lot of junk food around.

Although most participants agreed with the usefulness of limiting options, a concern was brought up regarding the potential harm in limiting certain foods and becoming too controlling. This was discussed previously, as a parental impact and the importance of not creating issues related to eating patterns. One related strategy, discussed by parents, was parental dieting and how to potentially frame that for children. The following conversation illustrates strategies that were shared.

Woman 12: I think it’s important, when we diet—you could say, “you should never diet.” But I’ve dieted. You’re doing different things. You’re doing the low-carb diet. But I’ve tried to make it, when I talk to my kids about it, that I just talk about I’m eating healthy. I don’t say, “I’m trying to lose weight.” I just say, “Mom’s just trying to be healthier. I need more energy.” I just put it in a different light. I think painting it in that light, especially for my daughter.

Woman 14: Just a few years ago, my husband and I, both made this life-changing, “We’re going to the gym.” We’re doing this. We’re doing that. We were trying to not shelter our kids from it. But the same thing. Not be like, “Well, mommy an daddy think they are fat, so we’re going to”—Our oldest son is real stocky and stout and he already is, “I’m the biggest kid in my class.” It’s weird, how quick they do that. We did. We had to frame it that same way. Just, “Why are you going to the gym? Why are you going to Zumba?” We feel better. We’re healthy. We want more energy. We want to be able to run around with you guys. And you do, because they catch onto that, once. You know, you say it once, and they hear it and they think that that’s what they need to do.

The sharing of these strategies appeared to be a very useful and engaging part of
the discussion for many participants. At the conclusion of the all of the groups, participants commented on how much they enjoyed hearing the perspectives of others.

**Mealtimes**

The discussion of mealtimes appeared to be, surprisingly, the most sensitive topic for participants. Most all participants saw the value in having mealtimes together as a family. Common responses from the few respondents that did consistently sit down together at dinner were as follows.

*Man 1:* That is one of the reasons I became a teacher, so that I could be home at meal times.

*Woman 20:* We purposely keep our kids away from doing too many activities because of that. We’ve seen how important dinner is and how important it is to be together as a family.

*Woman 4:* We always eat lunch and dinner together. But breakfast—there’s only one bathroom, so you’re rotating people in and out to prevent injury.

However, these responses were not typical of the entire group. Only four participants said they were consistently able to sit down with their family for dinner most of the time. The questions related to mealtimes where often responded to with guilt. Many participants discussed the importance of mealtimes spent together and said they valued the time, but found it very difficult to do because of scheduling conflicts, specifically having the time to do it and other demands that interfered. Stressful lives were again the main reason given for not spending meal times together. Participants reported that it was very difficult to always make mealtimes together happen, as demonstrated by the following comments.
Woman 25: Yeah. I mean all last year. In fact, I just started making dinner. Like I started making dinners and my boys were like “Wow! You’re making dinner?” The level of stress of my house, you know, those family dinners were just like nothing. You know, we just kind of did what we could, to survive.

Woman 26: We call it Scrounge Night (everyone fends for themselves). My kids only want so many Scrounge Nights a week. If I’m not feeling well, then I have a harder time getting dinner ready. With my older one working, it’s just kind of hard to have the help that I need to get a healthy dinner ready. They don’t want Scrounge Night every night.

Woman 20: And so I’ve noticed that the amount of –if mom’s overscheduled and dad’s overscheduled, getting kids to and fro, it really impacts the amount of time for dinner, and the quality and everything, in my opinion, get kind of packed into that meal. That we don’t sit down and have that family dinner. So the nights that we do, it’s kind of a special thing.

Most participants agreed that time, evening activities, parents’ work schedules, and having older children with more hectic schedules greatly impacted their family mealtimes together.

Summary

The same common themes were consistent among all groups. Overall, parents reported that their own parental impacts were of greatest consequence on the physical activity and eating patterns of their children. Other than parental impacts, one of the most reported impacts was the busyness of life. This was repeatedly shared as highly impacting physical activity and eating patterns. Many frustrations were expressed related to their own roles, the role of others, and the many other additional impacts. Participants shared numerous strategies related to their efforts to impact these things within their households.

During analysis, responses by groups such as mothers versus fathers and mothers
who worked outside of the home versus mothers who only worked in the home were examined and it was determined that there were not any significant variations in responses. There also appeared to be few differences when parents were discussing daughters and sons. The few exceptions were when participants discussed the impacts related to sports and physical activity; participants typically used their sons as examples. In addition, when parents mentioned the importance of discussing body image with their children, they most often used their daughters as examples; although, there was some gender overlap in both conversations.
CHAPTER V
DISCUSSION

Introduction

This chapter will provide conclusions regarding the results of the data analysis presented in the previous chapter. The focus group discussions provided valuable insights into parental attitudes and perceptions related to their children’s physical activity and eating patterns. Each of the research questions used in this study was designed for the purpose of gaining a greater understanding of parental attitudes and perceptions of their children’s physical activity and eating patterns. The study was also designed to examine parental attitudes and perceptions of their own personal roles related to their children’s physical activity and eating patterns and the possible role of others. Past research has indicated the importance of this parental role related to children’s physical activity and eating patterns (Birch & Fisher, 1998; Davison, 2004; Gillman et al., 2000; McGuire et al., 2002; O’Dea, 2003; Wang et al., 2002). However, little qualitative research has been done to determine parental attitudes and perceptions related to this role.

Grounded theory was utilized to generate elements of parental perceptions related to physical activity and positive eating patterns in children. These elements were developed from the categories and themes discovered in response to the research questions studied. The elements of physical activity in children, from a parental perspective, are supportive networks, supportive environments, and individual factors. The elements of positive eating patterns in children, from a parental perspective, are the
same: supportive networks, supportive environments, and a child’s individual factors. These elements are depicted in Figure 1 and Figure 2 in Chapter IV and will be discussed in this chapter. Limitations, implications for health education, as well as implications for further research will also be discussed.

Parental Perceptions of Children’s Physical Activity

Supportive Networks

Parents identified various individuals, or groups of individuals that had a significant impact on their children’s physical activity. Parents, friends, extended family, teachers and principals were all identified as impacting children’s physical activity and are networks that can be either supportive or nonsupportive. According to findings from these data, this support partially determines activity level. A significant finding of this study was that parents were very aware of the importance of their role and identified themselves as the most important supportive network. This is consistent with past research indicating the importance of parental support on children’s physical activity level (Davison, 2004; Dunton et al., 2003; Dwyer et al., 2006; Hoefer et al., 2001; McGuire et al., 2002; Trost et al., 2003; Wang et al., 2002).

Most studies were conducted with children only. Some past studies have included parents, although these studies did not examine attitudes and perceptions related to their parental support of their children’s physical activity. Most studies that included parents were focused on behaviors only and only ask parents to comment on their children’s level of activity and or their own level of physical activity (Anderssen et al., 2006; Bringolf-
Isler et al., 2010; Burdette, Whitaker, & Daniels, 2004; Trost et al., 2003). Since very little qualitative research has been done with parents to exam this role, it is difficult to determine if parents understand the importance of this role and how this impacts behaviors.

These findings indicate that they do understand their role and its importance. Common themes, while discussing ways they impact their children’s physical activity were parental example, encouraging family activities, supporting children in physical activity and physical activity being a family tradition. This is consistent with previous research that demonstrates that parents do influence and shape the physical activity behaviors of their children. This includes encouraging their child to do physical activities (McGuire et al., 2002; Trost et al., 2003), enrolling children in physically active sports or programs (Hoefer et al., 2001), doing a physical activity with their child and planning family outings that are physically active (Davison, 2004), and providing physical activity equipment (Dunton et al., 2003).

However, knowing that their role is important does not necessarily translate to supportive behaviors related to physical activity. Interventions that focus on increasing parental support of physical activity could dramatically decrease inactivity in children. Parents identified numerous barriers and frustrations related to physical activity that may impact the level of support they offer their children. These barriers, discussed below, may increase the likelihood that parents are less supportive of physical activity and may lead to inactivity in children.

Identified barriers were time and schedules. Parents discussed that their families’
busy schedules and lack of time impacted their parental willingness to prioritize physical activity, having the energy to be supportive of physical activity and encouraging their children to be physically active. Time constraints and busy schedules were consistently brought up in all groups as the most common concerns and barriers. An additional concern for parents was money. Some parents appear to associate physical activity with spending money. Time, schedules, and money were concerns that were consistent with another qualitative study with parents (Thompson et al., 2009). In this study, telephone interviews were conducted with 30 parents of 10- to 11-year-old children and commonly reported barriers to engaging in family physical activity were busy lifestyles, bad weather, and lack of access to facilities, transportation and money to support activities (Thompson et al., 2009). Consistent with these findings, another study also reports that money and time are both viewed as significant barriers to family-based physical activity (Brockman et al., 2009). This study was conducted with 113 children, age 10-11, not with their parents. These children reported that they are limited in taking part in family-based physical activity because of their parents’ lack of free time; this finding was consistent among all socioeconomic (SES) groups (Brockman et al., 2009). Those children from low SES groups also reported that cost was a barrier; this finding was not found in higher SES groups. More qualitative studies specifically asking parents to identify barriers for family physical activity are needed to better understand and address these barriers.

Participants identified and discussed additional people that had a positive impact and people that had a negative impact. Participants discussed how great it was when
others encouraged physical activity and got their children excited about being physical active, so the message was not always coming only from parents. Frequent responses regarding the impacts of others, were about siblings, grandparents and friends. Past research has found that friends are a significant determinant of physical activity for children (Dwyer et al., 2006; Humbert et al., 2008; Taylor, Legrand, & Newton, 1999). One qualitative study of children in grades 7-12 found that the influence of friends was the most discussed social determinant among all ages; participants discussed that friends had both positive and negative impacts on activity (Humbert et al., 2008). Another study also showed that encouragement from parents, peers, and siblings were significantly associated with being physically active after-school (Hohepa, Scrugg, Schofield, Kolt, & Schaff, 2007). This study, however, was conducted with high school students and found that sibling influence was only a significant factor for junior students and not for senior students. Similarly, another study found that both boys and girls who were physically active reported significantly higher levels of parental support, peer support, and sibling support than their less active counterparts (Davison, 2004). One study found that having older siblings and role modeling by siblings were positively associated with children’s physical activity (Crawford et al., 2010). Little research exists related to the role of grandparents in encouraging physical activity; most grandparent specific research is related only to their role if primary care givers. However, if grandparents are a part of children’s social networks, it would appear that their support and encouragement could also be related to increased physical activity, similar to parents, peers, and siblings.

Parents in this study gave both positive and negative examples of individuals that
impact their children’s physical activity. They discussed that having older siblings, grandparents, extended family, friends, or neighbors facilitated more opportunities for their children to go play outside without parental supervision. Parents consistently discussed that if people in their children’s lives were physically active then their children were positively impacted. If people in their children’s lives were inactive then their children had fewer opportunities to be active because it was all put on the parent.

Parents viewed the impacts of older siblings, grandparents, extended family, friends, and neighbors on their children’s physical activity level as less significant than their own parental impact and the impacts of school and screen time. While discussing the impact of older siblings, grandparents, extended family, friends, and neighbors it became apparent that parents in this study seem to relate going outside with engaging in physical activity. There is research that identifies barriers to outside play, such as availability of parks or other green spaces, safety concerns, and proximity of friends to play with (Babey et al., 2008; Bringolf-Isler et al., 2010; Roemmich et al., 2006). However, most research exploring these concerns does not assess how physically active children actually are while engaging in outdoor play. While there is limited evidence that children are more physically active while outdoors versus indoors (Baranowski, Thompson, DuRant, Baranowski, & Puhl, 1993; Burdette et al., 2004), this research is limited and there is a need for additional research examining how physically active children actually are while playing outdoors.

Supportive Environments

Participants identified environments that impacted their children’s physical
activity. The most common was the school system. This finding was unique. Parents in other studies did not identify the school system as impacting their children’s physical activity. However, this finding may be due to how questions were asked and the objectives of various studies. Most studies involving parents were assessing the home environment and did not include questions related to their children’s school environment. Additional community resources or the lack of community resources were also discussed. Parents felt that if there were more community resources available, such as a recreation center that their children would engage in more physical activity. Since participants live in the same community and attend the same school district, these impacts seemed to be consistent for all children.

By far, impacts related to school were discussed the most. The most common negative impacts were P.E., academic pressure and homework. Many parents expressed frustration with how little P.E. time their children get and the increased amount of homework required. Participants repeatedly commented that the lack of P.E. and increased academic demands were changes from when they were in school. This concern is validated by current data. According to the most recent national and state YRBS, 69.7% of students nationally and 68% of students in Idaho do not attend physical activity classes daily and 46% of students nationally and 46.8% of students in Idaho do not attend any physical education classes in an average week while in school (CDC, 2008). However, nation wide the percentage of districts that required elementary schools to teach physical education increased from 82.6% in 2000 to 93.3% in 2006 (CDC, 2006). According to the School Health Policies and Programs Study, Idaho does require schools
to teach physical education at elementary and middle schools, but not high schools.

Although it is required at the elementary and middle schools level, Idaho does not have specified time requirements for physical education at the elementary, middle school, or high school levels (CDC, 2006). This may account for the low number of students that attend any physical education classes in an average week. In a national study of 814 third-grade students, children averaged only two P.E. lessons per week, each averaging 33 minutes (Nader, 2003). Children accrued only 4.8 very active and 11.9 minutes of moderate to vigorous physical activity per lesson. Lesson length and number of minutes per week were similar for boys and girls; however, boys spend more of this time in very active or moderate to vigorous activity (Nader, 2003). These findings are consistent with the parental frustrations in the current study, related to the lack of physical education time in schools. However, being in a P.E. class does not always equate to being active or meeting national standards for physical activity.

Some participants also brought up various opportunities that some schools provide such as after-school programs and running programs to encourage and facilitate time for physical activity. More research is needed to determine if these programs are actually increasing the amount of physical activity children are engaging in. Research shows that after-school programs have the potential to be important setting for promoting physical activity (Beets, Beighle, Erwin, & Huberty, 2009; Beets, Rooney, Tilley, Beighle, & Webster, 2010; Coleman, Geller, Rosenkranz, & Dzewaltowski, 2008; Matvienko & Ahrabi-Fard, 2010; Pate & O’Neil, 2009). However, there are mixed results on the effects of after-school programs on physical activity (Beets et al., 2009;
Pate & O’Neil, 2009). There is significant variation in the objectives and components of these programs. Program specific research is needed to determine if after-schools programs are effective at increasing physical activity in children. In addition, studies are needed that identify specific program components that promote physical activity. These programs and components could be used to create model programs and results could be used as a rationale to implement similar programs in schools.

In this study, parents from each focus group brought up the lack of a community recreation center and a community swimming pool as impacting their children’s physical activity levels. This concern among parents is consistent with other studies indicating the lack of facilities and access to these facilities as key barriers to physical activity for children (Boehmer, Lovegreen, HaireJoshu, & Brownson, 2006; Humbert et al., 2008; Moore et al., 2010). However, some studies indicate that although having access to recreational facilities is helpful, supports and encourages physical activity in communities, social and individual factors are more important in determining actual physical activity behaviors (Giles-Corti & Donovan, 2002; Maley, Warren, & Devine, 2010). The findings from the present study indicate that advocating for improved facilities in the participants’ community, may be helpful in removing identified barriers. However, focusing on these environment factors alone may not increase physical activity; supportive networks and individual factors may actually be more predictive of physical activity.

Screen time was also discussed as impacting the amount of physical activity children engage in. Participants stated that the impact of screen time has significantly
changed since they were children. This concern is consistent with current screen time
trends. According the YRBS, 35.4% of students nationwide report watching television 3
or more hours per day and 24.9% of students report playing video games or using a
computer for non-school related work for 3 or more hours per day (CDC, 2008). Most
participants discussed the need to restrict screen time and the need in their households to
set clear limits and establish rules related to screen time. This is consistent with other
studies indicating that screen time is a risk factor for physical inactivity (Epstein et al.,
2000; Proctor et al., 2003; Salmon et al., 2000, 2003). Parents shared that their role in
restricting and setting limits could be challenging at times. Any program aimed at
increasing physical activity may also benefit from including family strategies for
reducing screen time.

**Individual Factors**

The third factor, identified by parents, that impacts children’s level of physical
activity is individual factors. These included health concerns, skill level and confidence
of their children, personality of children, and if they enjoyed sports and competitiveness.
The most significant findings, that are interconnected, were parental concerns related to
skill level, confidence, sports, and competitiveness.

When children disengage in physical activity then they do not have the
opportunity to develop skills and receive the many benefits of physical activity. Parents
stated that organized sports were very limiting and if a child does not make a team then
that negatively impacts how they feel about themselves, how they feel about physical
activity, and their willingness to engage in physical activity in the future. These findings
are consistent with other research that indicates that children disliking competition, having a past bad experience or dislike of sports, and feeling inadequate or incompetent were barriers to physical activity (Dwyer et al., 2006; Saxena, Borzekowski, & Rickert, 2002; Sleap & Wormald, 2001; Taylor et al., 1999).

However, many parents stated that organized sports were a positive impact and that there were so many opportunities for their children to be involved and stay active. Parents consistently related physical activity to sports. They discussed that if their children did not like sports, do not want to participate in sports, or feel like they cannot participate in sports, then they do not like or have opportunities to participate in any physical activity, especially at school or with other children.

Recent studies have indicated that there is a positive correlation between regular sport participation and increased physical activity (Hoffman, Kang, Faigenbaum, & Ratamess, 2005). However, participation in youth sports significantly declines among boys and girls during middle school years (Hedstrom & Gould, 2004). Research has suggested numerous possible explanations for this decline, including fewer options for children who are not advanced athletes (Koplan, Liverman, & Kraak, 2005), children wanting to participate in other activities (Allison, Dwyer, & Makin, 1999), increasing distance that children live from schools (Cohen et al., 2006), excessive quantities of homework (Allison et al., 1999), and socioeconomic impacts (Brockman et al., 2009). Body consciousness, especially for female adolescents and overweight children, may be another significant barrier for participation in sports (Allison et al., 1999; Phillips & Hill, 1998). When examining why children want to participate in sports, studies have found
that wanting to win is ranked low. Children say they want to participate to have fun, develop physical competence, be part of a team and enjoy the experience (Weiss & Ferrer-Caja, 2002). These findings are consistent with parental concerns found in the current study and speak to the need to create physical activity opportunities for children that may not have a desire or be able to participate on formal sport teams, especially as children get older (Wechsler, Devereaux, Davis, & Collins, 2000). In addition, children need more opportunities to be apart of a team, learn new skills, and have fun while being physically active, without the emphasis always being on winning and competition.

Additionally, some children may not actually be very physically active while participating on sport teams. For instance, with regard to the frequency of physical activity, some sports, including soccer, basketball, and tennis require extensive physical effort over an extended amount of time, while others, such as baseball and football, have more periods of inactivity (Bergeron, 2007).

Interestingly, when discussing sports, parents spoke of their sons more often than their daughters. This is an interesting finding from the present research. Research shows that boys are significantly more physically active than girls (Aaron et al., 2002; CDC, 2008; Strauss et al., 2001). However, both boys and girls show a decline in physical activity as they get older. One study found that there was a 26% decline in physical activity for a sample of 410 boys and 372 girls during a 4-year period (Aaron et al., 2002). Additional studies also show that level of activity declines with age for both males and females (CDC, 2008; Strauss et al., 2001). However, boys are still more active than girls. These gender differences appear to be even more dramatic after the age of 13.
(Strauss et al., 2001), where boys become significantly more active than girls. These findings should indicate that it is just as important, if not more important to be concerned with the amount of physical activity females are engaging in, especially as they get older. Findings from this study would indicate the importance of future research with parents to examine if parents support and encourage their sons and daughters in different ways and the potential impact on gender differences in physical activity.

Past research has hypothesized that gender differences in activity level may be a result of girls receiving lower levels of support from parents and peers to be physically active. Studies have produced mixed findings. Studies have shown that boys were more likely to receive encouragement from parents to be active than girls (Hoefer et al., 2001; Sallis et al., 1992). However, in these studies no gender differences were found in parents being physically active with their children. In contrast, other studies found there to be no gender differences in exposure to social support for physical activity (Davison, 2004; Trost et al., 1997). However, the studies that found no differences, assessed support in a multidimensional way (e.g., examined the mean level of activity support). Those studies that found differences studied separate dimensions of support (e.g., driving a child to an event, encouraging a child). These differences may be due to how social support for physical activity was measured. Boys and girls may receive support in different ways and perceive this support differently, while overall both receiving support from the parents. One study found that female adolescents reported receiving more emotional and negative support, such as being forced to go outside, for physical activity, while boys reported more tangible types of support, such as getting rides to sporting
activities (Wright, Wilson, Griffin, & Evans, 2008). Interestingly in the Wright and colleagues’ study, boys preferred being more active with their fathers rather than having more opportunities on their own. In contrast, the girls in this study wanted more opportunities to be active in organized sports without parental participation (Wright et al., 2008). Studies have also found that parents offer different types of support for physical activity; mothers provided higher levels of logistic support than fathers, whereas fathers provided higher levels of modeling than mothers. Research has found that adolescent boys and girls reported higher levels of physical activity when at least one of their parents provided a high level of support for activity (Beets, Vogel, Chapman, Pitetti, & Cardinal, 2007; Davison, Cutting, & Birch, 2003).

The impact of children’s personalities on physical activity was also discussed in the present study. Parents discussed the various interests that tend to be sedentary that their children have and how that impacts the amount of physical activity they engage in. Examples of barriers to physical activity, given by parents in the current study, were a strong interest in reading, music and art. This is consistent with other research indicating that children’s preferences for watching television, playing on the computer, toys, games, books, and music related activities are major barriers to engaging in physical activity (O’Dea, 2003).

These elements, discussed above, of children’s physical activity levels were generated using grounded theory and were developed from the categories and themes discovered in response to the research questions of this study. The elements of physical activity in children, from a parental perspective, are supportive networks, supportive
environments, and individual factors. These elements should be considered when designing any intervention or policy to impact children’s activity levels.

**Parental Perceptions of Positive Eating Patterns in Children**

The elements of positive eating patterns in children, from a parental perspective, are the same as physical activity: supportive networks, supportive environments, and a child’s individual factors.

**Supportive Networks**

Similar to physical activity, all participants responded that they felt that their role as a parent was critical and perhaps the most critical impact on their children’s eating patterns. This is an important finding since past research indicates that parents play a critical role in the development of children’s eating behaviors, energy intake, and food preferences (Birch & Fisher, 1998). One study conducted with 213 children in grades 2 through 11 reported that parental control over food and the lack of parental support or parental modeling were major barriers to healthful eating (O’Dea, 2003). Common themes discussed during all focus groups were food traditions of parents, parental habits, and parental examples. This is consistent with other studies indicating that parental food choices impact their children’s dietary choices and habits. Findings from the Framingham Children’s Study suggest that parents who display high levels of disinhibited eating, coupled with high dietary restraint, may foster the development of similar and unhealthy eating habits in their children (Hood et al., 2000). Findings also show that unhealthy eating behaviors modeled by parents can lead to unhealthy habits in
children (Falciglia et al., 2004; Hood et al., 2000; Larson et al., 2006; O’Dea, 2003).

Parents in the present study brought up the importance of teaching children about the connection between emotions and food. Two groups also discussed the critical role of parents in being aware of concerns and issues surrounding body image and dieting, especially in daughters. One study, exploring 5-year old girls’ ideas and beliefs about dieting, found that those girls whose mothers reported current or recent dieting were more than twice as likely to have ideas about dieting themselves. Of the mothers in this study, more than 90% reported recent dieting and reported both health-promoting and health-compromising dieting behaviors (Abramovitz & Birch, 2000). This may indicate that if mothers are engaging in health-compromising dieting behaviors that young girls may be developing their ideas and concepts based on these negative behaviors. These findings are consistent with the concerns mothers in the current study expressed. Another study, with boys and girls between 9 and 14 years of age, found that children who perceive that their mother was frequently trying to lose weight were more likely to become highly concerned with weight (boys) or constant dieters (girls; Field et al., 2001). This is consistent with other studies that indicate children’s perceptions of their mothers’ behaviors were significantly related to their own level of weight concerns and dieting behaviors (Keery, Eisenberg, Boutelle, Neumark-Sztainer, & Story, 2006; Levine, Smolak, Moodey, Shuman, & Hessen, 1994). Consistent with this research, some mothers in the current study discussed the importance of modeling healthy behaviors and framing their own dieting patterns in a positive way for their children. However, in one study of mothers and daughters, researchers found that some daughters did not model
their mothers’ dieting patterns because they did not perceive their mothers’ appearance-related concerns or behaviors as relevant to their own (Ogle & Damhorst, 2000). An unexpected finding in one study was that the child’s perception of the importance of thinness/lack of fatness to the father was more important than their perception of its importance to the mother (Field et al., 2001). None of the fathers in the current study brought up concerns with body image or dieting for themselves or their children. However, the number of fathers in the present study was quite small ($n = 3$).

Additional reported concerns or barriers for parents in the current study were mothers working outside of the home, time, energy, schedules, parental emotions associated with eating, the impacts of marketing, food prices, knowing what to cook, and understanding correct nutritional guidelines. Many of these concerns are consistent with past research. Time scarcity and perceived need for convenience have been identified as contributors to a decline in family meals (Neumark-Sztainer, Hannan, et al., 2003), an increased consumption of fast food and convenience food (Guthrie, Lin, & Frazao, 2002; Jekanowski, Binkley, & Eales, 2001), and a barrier to healthful food choices (Devine, Connors, Sobal, & Bisogni, 2003). Employed mothers, especially, report great feelings of time scarcity (Zukewich, 2003). Additional studies have shown that adults may not have adequate cooking skills, knowledge of how to cook quick and healthy meals or know how to utilize strategies that lend themselves to planning and preparing things ahead of time (Bisogni, Jastran, Shen, & Devine, 2005; Falk, Sobal, Bisogni, Connors, & Devine, 2001; Furst, Connors, Bisogni, Sobal, & Falk, 1996).

Health educators could utilize these insights to better inform program
development. Strategies could be integrated to reduce barriers and increase the likelihood of parental confidence in positively impacting their children’s eating patterns. One qualitative study, with employed mothers, suggested that mothers recognized that convenience food and fast food may not be the most healthful food choice, but these options helped mothers meet their priorities in a time-scarce environment (Jabs et al., 2007).

Strategies that participants shared, related to eating patterns, were getting children involved in the planning and cooking process, making small positive changes related to eating patterns and framing healthy food in a positive way. Other common strategies participants shared were having healthy foods readily available and limiting access to certain foods in the home. Many of these strategies are consistent with past research that has found effective strategies in developing positive eating patterns in children. Studies indicate that the availability of fruits, vegetables and dairy foods in the home greatly impact children’s consumption of these foods (Baranowski et al., 1999; Cullen et al., 2001; Hanson et al., 2004; Kratt et al., 2000; Newmark-Sztainer, Wall, et al., 2003). Similarly, homes where high-fat foods were readily available also negatively impacted children’s overall eating patterns (Slawson et al., 2007). Research has also shown that hands-on experience with food is an engaging and effective strategy to teach healthful eating behaviors (Contento, 2008; Haden, 2006). These findings validate recommendations by parents in the current study regarding involving children in meal planning, food selection, and cooking.

Parents in this study also expressed concern in knowing how controlling they
should be with their children and their eating patterns. This concern is consistent with studies indicating that home environment with a high level of dietary restraint practices may have a negative effect on the ability of children to self-regulate their diet (Birch et al., 2003; Hood et al., 2000; Johnson & Birch, 1994).

Participants responded that there were numerous other people that they perceived impacted their children’s eating patterns. These individuals have the potential to be supportive and their influence may impact children’s physical activity. The most common responses were grandparents, older siblings, friends, neighbors, and teachers. There has been very little research conducted that discusses the impact of grandparents, older siblings, neighbors and teachers. This study is consistent with other studies that indicated that friends have an impact on children’s eating patterns (Cullen et al., 2001; O’Dea, 2003; Story, Neumark-Sztainer, & French, 2002). Peers appear to influence eating patterns in a variety of ways, including food availability at a friend’s home, what children perceive as normal eating patterns among their peer group, and peer modeling of certain eating patterns (Cullen et al., 2001; O’Dea, 2003; Story et al., 2002). However, research indicates that peer influences were not as predictive as parental influences or personal tastes and preferences (Larson et al., 2006; Neumark-Sztainer, Wall, et al., 1999, 2003). Most of the past research related to the influence of peers has been conducted with adolescents and not with elementary school-aged children. A significant finding from the present study is the circle of influence on eating preference and behaviors may be larger than past research has indicated. Similar to physical activity, all participants responded that they felt that their role as a parent was critical and perhaps the most
critical impact on their children’s eating patterns; however there were also additional people that impacted their children’s eating patterns. These findings indicate the importance of supportive individuals and how having these supportive networks predict positive eating patterns in children.

**Supportive Environments**

Parents discussed numerous impacts that were related to the environment their children were in and how these environments impacted eating patterns. One of these impacts was the popularity of eating out. Typically, participants felt that the popularity of eating out had a negative impact on eating patterns and that eating out was much more common than when they were children. This is consistent with other studies indicating that families eat out more than they used to (Kant & Graubard, 2004; Stewart et al., 2006). Parents discussed that with busy schedules it was very tempting and easy to grab fast food. The USDA states that, on average, foods from full-service or fast-food restaurants tend to be more calorie dense and nutritionally poorer than food prepared at home (Kant & Grauard, 2004; Stewart et al., 2006). Studies show that most fast foods have extremely high energy density, consumption leads to excess energy intake and individuals who report eating fast food have higher intakes of fat, saturated fat, sodium, and soft drinks (French, Story, Neumark-Sztainer, Fulkerson, & Hannan, 2001; Paeratakul, Ferdinand, Champagne, Ryan, & Bray, 2003; Prentice & Jebb, 2003). Fast-food consumption is associated with higher intake of total energy and percentage of energy from fat and inversely associated with daily servings of fruits, vegetables, and milk (French, Story, Neumark-Sztainer et al., 2001; Paeratakul et al., 2003). One study
showed that calorie content for out-of-home meals that children consume are 55% higher than in-home meals (Zoumas-Morse, Rock, Sobo, & Neuhouser, 2001). Bowman, Gortmaker, Ebbeling, Pereira, and Ludwig (2004) found that children who ate fast food, compared with those who did not, consumed more total calories, more calories per gram of food, more total fat, more total carbohydrate, more added sugars, more sugar-sweetened beverages, less fiber, less milk, and fewer fruits and non-starchy vegetables. This study included 6212 children and adolescents and found that 30% of the total sample reported consuming fast food (Bowman et al., 2004).

Another environment that was discussed was the experience or lack of experience around the family dinner table. Research has shown that family dinner is associated with healthy dietary intake patterns (Gillman et al., 2000; Neumark-Sztainer, Hannan, et al., 2003) and is positively associated with psychological well-being and inversely associated with depression and unhealthy weight-control behaviors among children (Fulkerson et al., 2007).

The discussion of mealtimes appeared to be a sensitive topic for participants. Most all participants saw the value in having mealtimes together as a family. However, many participants indicated that it was not as common in their households as they would like it to be. Only four participants said they were consistently able to sit down with their family for dinner. This is not consistent with a previous finding that indicated that more than 75% of parents reported that all or most of their family ate the evening meal together at least 5 nights per week (Fulkerson et al., 2008). Fulkerson and colleagues surveyed 107 parents living in Minnesota who had 8- to 10-year-old children. Ninety-six percent
were white, 86% were college graduates, and only 33.6% were moms working full-time, similar demographics to the participants in this study.

In the current study, questions related to mealtimes where often responded to with guilt. Many participants discussed the importance of mealtimes spent together and said they enjoyed the time together when it did happen. But they reported that it was very difficult to do because of scheduling conflicts, specifically having the time to do it and other demands that interfered. Stressful lives were again the main reason given for not spending meal times together. Most participants agreed that time, evening activities, parents’ work schedules and having older children with more hectic schedules greatly impacted their family mealtimes together. Most respondents indicated that they wished that more of their mealtimes were spent together as a family.

One possible explanation for this inconsistency in findings may be how parents interpret this question. When responding to previous questions, during the focus group discussions, numerous participants talked about preparing meals, the timing of meals, comments made by children during the meals, and so forth. These responses may indicate the parents are having more mealtimes with their families than they indicated while responding to this specific question. In addition, for most groups this was the last question asked and participants may have been experiencing some exhaustion related to responding. Future research should better define family mealtime.

An additional environment that was discussed that may be predictive of eating patterns is the school lunch environment. Parents discussed concerns with the lack of healthy food served at school cafeterias and the impact of the cafeteria environment.
There is very little research examining the cafeteria environment and if it impacts the eating patterns of children. However, there is literature about the National School Lunch Program (NSLP) and the effects on children’s diets. The literature does indicate some challenges and benefits associated with the program. In 2005, 88% of nonparticipants in the NSLP exceeded the upper limit of the recommended intake level for sodium, whereas 95% of NSLP participants exceeded the limit (Gordon, Crepinsek, Nogales, & Condon, 2007a). Results from national studies show that only about one third of schools offered and served lunches that met the current regulation based on the 2000 Dietary Guidelines for fat and saturated fat (Ralston, Newman, Clauson, Guthrie, & Buzby, 2008). The 2005 dietary guidelines are a more relaxed standard, so more schools may now meet the recommendation. However, this does not indicate an improvement in nutritional value.

When examining nonparticipants and participants of the NSLP, it was found that mean intake of fat, saturated fat, and calories at lunch was not significantly different among participants and nonparticipants and the total intake of calories over 24 hours was not significantly different among participants and non-participants (Gordon et al., 2007a). Consistent findings have also shown that NSLP participants consume more milk and vegetables at lunch and fewer sweets, sweetened beverages, and snack foods than nonparticipants (Gleason & Suiter, 2001; Gordon et al., 2007a). However, one study suggests that the difference in vegetable consumption may be due to higher consumption of french fries and other potato-based foods (Gordon, Crepinsek, Nogales, & Condon, 2007b). Participants also consume more fruit and 100% fruit juice at lunch than nonparticipants (Gleason & Suitor, 2001). Studies also show that participants had higher
intakes of calcium, magnesium, zinc, and fiber (Gleason & Suitor, 2003).

Although, NSLP participants may in fact have some nutritional advantages over those students that do not eat school lunch, there is not evidence that NSLP participants are meeting nutritional recommendations any more than nonparticipants. As discussed in Chapter II, most children are not meeting recommendations. Since children consume between 19-50% of their total calories at school, findings from this study, indicating parents’ concerns with the school lunch program should be considered. Any comprehensive program striving to improve eating patterns in children should involve the school lunch programs, more parents should be informed about what their children are eating at school and parents should advocate for positive changes in their school’s lunch program.

Related concerns expressed by parents in the current study were children eating very quickly during school lunch, either because they had limited time or wanted more recess time, and how much food was wasted in school lunch rooms. These concerns are consistent with other findings. Studies have found that actual consumption time for students purchasing school lunch is significantly impacted by wait time in the school lunch line (Bergman, Buergel, Joseph, & Sanchez, 2000; Buergel, Bergman, Knutson, & Lindass, 2002). In addition, several studies have shown that children are distracted from eating, anticipating playground activities, and wanting to spend more time at recess versus eating (Buergel et al., 2002; Getlinger, Laughlin, Bell, Akre, & Arjmandi, 1996; Stone, 2009). Most of these findings are based on observational studies and anecdotal evidence. One study found this is particularly true as students get older (fifth graders
versus first graders) and for boys (Buergel et al., 2002). Additionally, having recess after lunch has been shown to increase food waste (Bergman, Buergel, Femrite, & Englund, 2003; Getlinger et al., 1996; Stone, 2009). In these studies, food waste was decreased when recess was positioned before lunch. These findings could be utilized by school districts to consider modifications to the school lunch environment and the timing of recess. Findings could also be used by parents to advocate for such modifications.

Parents, in the current study, discussed impacts that were related to the environment their children were in and how these environments impacted eating patterns. These included eating out, lack of family meal time and the school lunch experience. Eating out and the lack of family meal time are again impacts related to time and schedules. This is again a significant finding because time and busy schedules is a consistent trend in the results. Not having enough time and busy schedules are a barrier for physical activity, eating patterns, and mealtimes. It is clear that any program trying to impact physical activity or the eating patterns of children would have to address family schedules and consider time constraints.

**Individual Factors**

The final element of eating patterns, according to the parents in this study, is individual factors such as food and taste preferences of the child. This is consistent with past research that indicates that taste preferences are an important factor in predicting children’s eating patterns (Cullen et al., 2001; Larson et al., 2006; Neumark-Sztainer, Wall, et al., 2003; O’Dea, 2003). When planning any intervention aimed at improving children’s eating patterns, children’s personal preferences would have to be considered.
However, past research has found that taste preferences can be modified. Various studies have shown that early exposure and repeated exposure to fruits and vegetables can alter children’s food preferences and increase consumption of these foods (Cooke et al., 2003; Skinner, Carruth, Bounds, Ziegler, & Reidy, 2002; Wardle, Cooke, et al., 2003; Wardle, Herrera, Cooke, & Gibson, 2003). In one study of 564 mothers of preschool children, early introduction to fruit and vegetables was associated with a higher frequency of consumption of these foods in 2 to 6 year olds (Cooke et al., 2003). Another study, conducted in London with 72 children 5 to 7 years of age, demonstrated that both liking and consumption of a target vegetable significantly increased when children were repeatedly exposed to the vegetable (Wardle, Herrera, et al., 2003). Similarly, in another study, 156 children and their parents were put into one of three treatment groups: exposure, information, and control. Parents in the exposure group were asked to offer their child a taste of a target vegetable everyday for 14 days; rewards were not offered (Wardle, Cooke, et al., 2003). Those in the information group were informed about vegetable and fruit consumption recommendations and given suggestions for increasing their children’s consumptions of these foods. Outcomes that were examined were possible increases in liking, ranking of vegetable compared to other vegetables, and consumption. Only children in the exposure group showed significant increases across all three outcomes (Wardle, Cooke, et al., 2003). Providing nutrition information only had very little impact, although children in the information and control groups did show a slight increase in either their liking or consumption of the target vegetable (Wardle, Cooke et al., 2003). These findings indicate that early and repeated exposure to foods
can transform dislikes into likes and increase consumption of fruits and vegetables in children. These findings should be considered and included when planning any intervention aimed at improving children’s eating patterns.

Grounded theory was utilized to generate the elements, discussed above, of physical activity and positive eating patterns in children. These elements were developed from the categories and themes discovered. The elements of promoting physical activity in children, from a parental perspective, are a supportive network, supportive environments, and individual factors. The elements of promoting positive eating patterns in children, from a parental perspective, are the same: a supportive network, supportive environments, and a child’s individual factors. These elements should each be considered when health educators are planning strategies to increase physical activity and improve eating patterns in children.

Limitations

Although a great deal of invaluable information was obtained through these focus group discussions, this study has some limitations. First, these results may not be generalizable to other parents in other settings, since all participants were from the same community. The sample was demographically very similar and differing ethnic backgrounds and genders were not well represented. In addition, since parents volunteered to participate in the focus group discussion, they may have had strong feelings about their children’s physical activity and eating patterns. Also, some participants may have been influenced by an opinionated or dominant member of the
group. In addition, participants may have portrayed themselves as rational, thoughtful, and reflective when discussing behaviors, which may not necessarily be truthful (Krueger & Casey, 2009). However, the intent of these focus groups was not to generalize, but to understand a range of responses and provide insight into how participants perceive the topic (Krueger & Casey, 2009). Lastly, two of the focus groups (n = 8 and n = 9) seemed too large in numbers to adequately explore a topic that participants were so passionate about. It was critical for parents to be finished in the two hours and it appeared that some issues could have been explored in more detail if there were fewer participants within the two groups.

**Implications for Health Education**

Through the use of grounded theory it was found that most parents believe that it is important for their children to be physically active and have positive eating patterns. In addition, the majority of parents felt that they played a critical role in this process. In addition to the importance of this parental role, there were additional elements that were identified as impacting physical activity and positive eating patterns in children. These elements were a supportive network, supportive environments, and individual factors. The elements of positive eating patterns in children are the same: a supportive network, supportive environments, and a child’s individual factors. These elements should each be carefully considered and researched when conducting a community needs assessment and planning any intervention designed to increase physical activity and improve eating patterns in children.
Findings indicate that parents should play an extremely important role when collecting needs assessment data related to the physical activity and eating patterns of children. Interventions aimed at improving the health of children should be family focused and should include strategies for incorporating small and positive changes into households. Health educators should consider parents a vital partner when conducting research, collecting data, or planning programs focused on children’s physical activity and eating patterns. Findings indicated that an effective intervention for parents may be focused on reducing identified barriers, versus increasing knowledge or awareness related to physical activity and eating patterns. Time and busyness were repeated themes and all health education interventions should address these concerns and incorporate strategies to help parents manage these barriers. These findings also indicate that any program aimed at increasing physical activity may also benefit from including family strategies for reducing screen time. In addition, these findings indicate the need to include interventions focused on skill-building for both parents and children. For example, an effective strategy may be helping parents gain confidence in their ability to modify their children’s food preferences.

There are various model programs that have demonstrated effective ways to modify children’s food consumption. One such program is Food Dudes. Food Dudes is a school-based intervention designed for use in elementary schools and has shown to be effective in increasing children’s consumption of fruits and vegetables (Horne et al., 2004, 2009; Lowe, Horne, Tapper, Bowdery, & Egerton, 2004). This type of model program, as well as similar research based programs, could be introduced into more
school districts by health educators and parents. Various programs could be utilized and
developed to address concerns and offer strategies to help parents overcome barriers.

Some participants shared strategies that they have found helpful. The sharing of
these strategies appeared to be a very useful and engaging part of the discussion for many
participants. At the conclusion of all of the groups, participants commented on how
much they enjoyed hearing the perspectives of other parents. These findings indicate that
providing opportunities for parents to discuss their roles and share concerns, barriers and
ideas related to their children’s physical activity and eating patterns may be an effective
strategy used to improve children’s health.

As demonstrated in the element of supportive environments, findings indicate that
parents see needs within their community and schools. Effective health education
strategies may be to facilitate parental involvement in community and school advocacy
related to their perceived need for changes. Examples are advocating for school P.E. and
recess, healthier school lunch menus and lunch room policies, community bike paths,
recreation centers, low-cost physical activity options, and neighborhood parks. These
findings are important because parents could have an impact on school-based and
community policies, by getting involved in their schools and expressing their concerns.
Majority of parents expressed concerns and frustrations with their community and
schools, however very few indicated actual involvement in advocating change.

Results from this study also indicate that it is important for health educators and
parents to consider that not all children like sports and competition or have the skills and
confidence necessary to participate in certain sports. In addition, participation on certain
types of sports team may not always result in being physically active. Physical activity opportunities that are nonsport related should be included in school and community programs. Parents should be encouraged to support activities that are not competitive in nature, promote skill development, are enjoyable for children, and facilitate higher levels of actual physical activity. While planning any intervention, it would be important to consider the interests of various children and find creative ways to encourage physical activity among children that do not enjoy physical activity or have limited time due to other interests such as reading, art, and music.

Utilizing grounded theory allowed the researcher to better understand participants’ perceptions and identify parental concerns and barriers that could potentially be incorporated and addressed in health education programming. Results indicate that parents can and should be utilized by health educators, as a way to impact children’s health and as partners to make positive changes within communities. In addition, while designing programs to increase physical activity and positive eating patterns among children it would be useful to consider including extended family, peers and teachers in planning and implementation. The identified elements; supportive networks, supportive environments, and individual factors should each be critical components of any comprehensive approach to improving the health of children.

**Implications for Further Research**

The findings indicate areas for future research. More qualitative research is needed to determine attitudes and perceptions of parents from other demographic areas
and ethnic backgrounds, related to children’s physical activity and eating patterns. In addition, focus groups with more fathers or father only groups could be conducted to determine if there are significant differences in the feelings and insights of mothers and fathers. Much of the past research conducted related to parental dieting and the impacts on children was conducted among mothers and their children; more research needs to be conducted with fathers and with larger sample sizes. Past findings indicate the importance of educating both mothers and fathers about body image, dieting, their own perceptions and behaviors related to weight, and how this impacts their children. More research could also be conducted to determine potential differences in parental support of sons versus daughters.

In addition, more focus groups could be conducted with various different family structures, such as single parent homes, culturally diverse families, families living close to extended family, and so forth. Research needs to be conducted to further examine the role of peers and extended family on the activity levels and eating patterns of children. It would be especially interesting to study the eating patterns of children who live near extended family compared to those that do not and examine how parents approach their children eating in friends and neighbors homes. Additional research could be conducted to determine if older siblings, grandparents, extended family, neighbors, and peers recognize the impact they have on children’s physical activity levels and eating patterns and their attitudes towards this role.

Findings from this study also indicate a need to more closely examine how parents define physical activity and if that has an impact on their children’s physical
activity. If some parents define physical activity as mostly being on a sports team and activities that involve competition and their child does not enjoy sports or competition, this may have a significant impact on how aware and supportive parents are of other physical activities and how encouraging they are of these other activities. In addition, more research is needed to determine how physically active children actually are while playing outside, participating in after-school programs and various sports. Future research should also better define family mealtime and examine family experience around the dinner table.

Finally, focus groups could be conducted to ascertain information on the type of programming and resources parents would like to have access to in their community and their level of willingness to engage in advocacy for these programs and resources.

**Summary**

Parents in this study shared their views, insights, concerns, frustrations, and strategies related to their children’s physical activity and eating patterns. Participants expressed the importance of their own parental role and the many other impacts that exist within and outside of their households. Parents shared that these impacts and experiences were often very unique and differed from child to child. Some impacts were things parents felt they had control over and many impacts parents felt were beyond their control. These findings are useful as there has been very little qualitative research done to examine parental perceptions and attitudes related to their critical role in their children’s physical activity and eating patterns. Qualitative research provides in depth
and rich data that can guide the development, implementation, and evaluation of effective health education and promotion programs. Conducting this type of research creates a deeper understanding of the concerns and needs of a particular target population, thus allowing the creation of more relevant interventions.
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APPENDICES
Appendix A

Discussion Guide
DISCUSSION GUIDE

I. Opening Questions:
   - Letter of Information
   - Questionnaire
   - Read Opening Statement

II. Introductory Questions:
   - Do you feel that your children are more active, less active, or about the same as you were as a child?
   - Do you think that your children eat about the same or eat differently now compared to how you ate as a child?

III. Transition Questions:
   - Show example of Mindmapping.
   - Please create a mind map: Things that impact your child(ren)’s physical activity.
   - Please create a mind map: Things that impact your child(ren)’s eating patterns (defined as what, when, where, why, how much, and how often they eat and with whom they eat)?
   - Discuss each mind map with group for common themes.

IV. Key Questions:
   - What impacts your children’s physical activity level?
   - What role, if any, do you think you, as a parent, play in your child(ren)’s physical activity level?
   - Who else impacts your child(ren)’s physical activity level?
   - What impacts your child(ren)’s eating patterns?
   - What role, if any, do you think you, as a parent, play in your child(ren)’s eating patterns?
   - Who else impacts your child(ren)’s eating patterns?
   - What impacts the amount of time your family spends together at meal times?
   - What impact do you think screen time (defined as time spent in front of the television, computer, video games, or using hand held devices) has on your child(ren)’s physical activity level?
   - What impact do you think screen time has on your child(ren)’s eating patterns?

V. Ending Questions:
   - Summary question: Is there anything else anyone would like to add?
   - Participants state their final position
   - Brief overview- summarize what has been discussed
   - Is there anything you would like to add that may have been missed?
Appendix B

Demographic Questionnaire
DEMOGRAPHIC QUESTIONNAIRE

1) Age: ___________________________

2) Gender: _________________________

3) Occupation:______________________

4) Level of Education:
   a. Some high school or less
   b. High school graduate
   c. Some college
   d. College graduate
   e. Post-college graduate

5) Race:
   a. American Indian/Alaska Native
   b. Asian
   c. Black or African American
   d. Native Hawaiian or Other Pacific Islander
   e. White
   f. Other:__________________________

6) Ethnicity:
   a. Hispanic/Latino
   b. Not Hispanic/Latino

7) How many children do you have?
   ________________________________

8) Ages of your children?
   ________________________________
Appendix C

Letter of Information
LETTER OF INFORMATION
Parental Attitudes & Perceptions Related to their Children’s
Physical Activity & Eating Patterns

Purpose: Dr. Julie Gast, Associate Professor, and Megan DuBois, graduate student in the Department of Health, Physical Education and Recreation at Utah State University are conducting a research study to find out more about parental attitudes and perceptions related to their children’s physical activity and eating patterns. You have been asked to take part because you are a parent of a child or children in grades Kindergarten through 6th grade. There will be approximately 6 to 8 participants in this group. There will be approximately 24-32 total participants in this research.

Procedures: If you agree to participate in this research study, you will be asked to attend a group interview that will last approximately two hours. During the interview, you will be asked to comment about different things that may impact your children’s eating patterns and physical activity. The interview session will be video and audio taped.

Risks: There are minimal risks to being involved in this study. These risks may include embarrassment concerning sharing information about parenting behaviors and self-disclosure concerning health habits in a group format. Be aware that we will not identify you in any interview transcripts, research presentations or reports and aliases will be used for all data analyses, presentations, and final reports.

Benefits: There may or may not be any direct benefit to you from these procedures. The investigators, however, may gain a greater understanding of parental attitudes and perceptions of their children’s physical activity and eating patterns and how parental attitudes and perception of their own physical activity and eating patterns are perceived to relate to their children’s behaviors. By gaining a greater understanding of parental roles related to children’s physical activity and eating patterns, more effective programming can be provided to improve the health of children.

Explanation and Offer to Answer Questions: Megan DuBois has explained this research study to you and answered your questions. If you have other questions or research-related problems, you may reach Dr. Gast at (435) 797-1490 or Julie.gast@usu.edu.

Compensation: If you choose to participate, you will be entered into a drawing to win a $100 gift card to a local grocery store.
LETTER OF INFORMATION
Parental Attitudes & Perceptions Related to their Children’s
Physical Activity & Eating Patterns

Voluntary nature of participation and right to withdrawal without consequences:
Participation in this research is entirely voluntary. You may refuse to participate or withdraw at
any time without consequence or loss of benefits.

Confidentiality: Research records will be kept confidential, consistent with federal and state
regulations. The interviews will be video and audio tape recorded in order to observe body
language and group dynamics. These data will assist the researchers in writing the final thesis.
The audio and video tapes will be kept for three years on a password-protected computer and/or
in a locked cabinet in a locked office. After this time period, they will be destroyed. A list of
participant names will also be securely stored during the study to allow for interview scheduling
and awarding of the gift certificate after the drawing. When all interviews and the drawing are
completed, the list of participant names will be destroyed. To protect your privacy, your name
will not be associated with any other study documents or digital files and will not be included in
any study report. Only Dr. Gast and Megan DuBois will have access to the data.

IRB approval statement: The Institutional Review Board for the protection of human
participants at USU has approved this research study. If you have any pertinent questions or
concerns about your rights or a research-related injury, you may contact the IRB Administrator at
(435) 797-0567 or email irb@usu.edu. If you have a concern or complaint about the research and
you would like to contact someone other than the research team, you may contact the IRB
Administrator to obtain information or to offer input.

Investigator statement: “I certify that the research study has been explained to the individual,
by me or my research staff, and that the individual understands the nature and purpose, the
possible risks and benefits associated with taking part in this research study. Any questions that
have been raised have been answered.”

Julie Gast
Principal Investigator
(435) 797-1490
Julie.gast@usu.edu

Megan DuBois
Graduate Student
(801) 244-3162
mjleatham@yahoo.com
Appendix D

IRB Approval Letter
MEMORANDUM

TO: Julie Gast
    Megan DuBois

FROM: Kim Corbin-Lewis, IRB Chair
      True M. Fox, IRB Administrator

SUBJECT: Parental Attitudes & Perceptions Related to Their Children's Physical Activity
     and Eating Patterns

Your proposal has been reviewed by the Institutional Review Board and is approved under
exemption #2.

X There is no more than minimal risk to the subjects.
    There is greater than minimal risk to the subjects.

This approval applies only to the proposal currently on file. Any change in the
methods/objectives of the research affecting human subjects must be approved by the IRB prior
to implementation. Injuries or any unanticipated problems involving risk to subjects or to others must
be reported immediately to the IRB Office (797-1821).

The research activities listed below are exempt based on the Department of Health and Human
Services (DHHS) regulations for the protection of human research subjects, 45 CFR Part 46, as
amended to include provisions of the Federal Policy for the Protection of Human Subjects, June 18,

Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey
procedures, interview procedures or observation of public behavior, unless: (a) information obtained
is recorded in such a manner that human subjects can be identified, directly or through the identifiers
linked to the subjects; and (b) any disclosure of human subjects' responses outside the research could
reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects'
financial standing, employability, or reputation.
Appendix E

Opening Statement
Thank you for being here tonight. We are going to be discussing a topic that concerns you all - physical activity and eating patterns of children. Before we begin our discussion, I have a few requests. First, we will be video and tape recording our session in order to refer back to your comments when writing our report. If anyone is uncomfortable with this please say so, and of course feel free to leave. We will not mention your name in the report. During our discussion, please try to speak clearly and loud enough so that you can be heard. Please be considerate of each other and let one person speak at a time. I will try to make sure that everyone gets a turn to speak. Finally, please say exactly what you think. Don’t worry about what I think or what your neighbor thinks. We are here to exchange thoughts and opinions and have an enjoyable time doing it. Negative comments are as helpful as positive ones. As a part of our discussion, I will also be asking you to do some simple mindmapping. A mindmap is a way for you to write down as many thoughts, feelings, and associations as you can in a short amount of time. I will give you a specific topic and walk you through the process. I hope that the discussion that takes place will be beneficial to all of you. Please relax and enjoy yourselves. Let’s begin by introducing ourselves.