ABSTRACT

WITMER, LARISSA KATHRYN. Adolescent Girls’ Perceptions of Physical Activity and Health. (Under the direction of Jason Bocarro.)

The purpose of this study was to examine middle school females' perceptions of physical activity, eating, and physical health. This research considers several key issues, including high obesity rates, girls' lack of physical activity, the decrease in physical activity during adolescence, and teenagers' failure to meet nutritional guidelines. A qualitative approach was selected to gain a deeper understanding of the significance girls place on these health behaviors and some of the factors that go into their decisions about leisure time activity and eating. Four focus groups were conducted in central North Carolina with a total of 28 girls in sixth through eighth grades. Data were analyzed with ATLAS.ti 5.2. Four themes emerged from the analysis: perceptions of health, social norms, family, and enjoyment. Recommendations are given for ways to encourage healthy diets and PA participation in adolescent girls.
Adolescent Girls’ Perceptions of Physical Activity and Health

by
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A thesis submitted to the Graduate Faculty of
North Carolina State University
in partial fulfillment of the
requirements for the Degree of
Master of Science

Parks, Recreation, and Tourism Management

Raleigh, North Carolina

2009

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Larissa Kathryn Witmer was born and raised in Greencastle, PA, a small rural community in southern central Pennsylvania. Her mother, Deborah, and father, Donald, are also the parents of Larissa’s two older siblings, Robert and Alisha. She graduated from Greencastle-Antrim High School in 2003 and obtained her B.S. in Recreation, Park and Tourism Management from The Pennsylvania State University in 2006. Always having wanted to live at the beach, Larissa then interned with the Family Circle Cup professional tennis tournament in Charleston, SC, before moving to Myrtle Beach, SC, to work as a conference center director/event planner. Despite no initial plans to continue her education, Larissa decided she was interested in research (and needed more of a challenge than event planning offered) and elected to pursue her M.S. in Parks, Recreation, and Tourism Management at North Carolina State University.
ACKNOWLEDGEMENTS

I would like to first of all thank my committee for allowing me to conduct the research I wanted to do and supporting me throughout the process. I would also like to express how lucky I was to work with Marla Mondora, Tonya Blake, and Emmy Domozych, my liaisons at the middle schools, who welcomed me into their schools and made conducting my focus groups so easy. Timia Thompson, Weijia Wang, and Judy Peel, thank you very much for taking notes during my focus groups. Also, my family, who have actually read a large portion of this document, and Sasha (my cat) who sat with me every day while I was writing and repeatedly made me laugh by walking and napping on top my stacks of articles. Finally, a big thank you to Ben for all your help and insight.
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CHAPTER 1: INTRODUCTION

Childhood obesity and overweight is a critical societal problem. The 2003-2004 National Health and Nutrition Examination Survey (NHANES) reported that the prevalence of overweight in the United States has more than doubled over the past 30 years (Centers for Disease Control, 2007). At that time, 17.4% of 12- to 19-year olds were overweight and 34.3% were at risk for overweight (Ogden, Carroll, Curtin, McDowell, Taback & Flegal, 2006). The Centers for Disease Control (CDC) recently reported similar numbers among high school students from their 2007 Youth Risk Behavior Surveillance (YRBS; CDC, 2008). Thirteen percent of high school students are obese and 15.8% are overweight (CDC, 2008). Kvaavik, Tell, and Klepp (2003) demonstrated the serious implications of childhood obesity by stating that the probability of obesity extending into adulthood at age 4 is 20%, and by adolescence that probability raises to 80%. Obesity is a significant concern because of its association with a number of chronic diseases such as hypertension, type 2 diabetes, coronary heart disease, stroke, osteoarthritis and sleep apnea (Zapata, Bryant, McDermott, & Hefelfinger, 2008).

The CDC (2009) states, “Overweight and obesity are both labels for ranges of weight that are greater than what is generally considered healthy for a given height” (n.p.). This is determined by the calculation of body mass index (BMI), or an estimate of body fat using a formula including someone’s weight and height. An imbalance of energy, which generally
happens when someone consumes more energy (calories) than he or she burns off through daily activity and exercise, is a main contributor to obesity. Consequently, nutrition and physical activity (PA) both play a vital role in maintaining a healthy weight and preventing obesity.

Physical Activity

The current recommendation from the CDC is that children get at least 60 minutes of PA, defined as any activity that makes them breathe hard and increases their heart rate, per day on five or more days a week. Overall, 65.3% of high school students are not meeting these guidelines, and only 25.6% of high school females are getting sufficient PA (CDC, 2008). Moreover, 24.9% of students (31.8% of females) did not report achieving 60 minutes of PA on any of the past seven days. In North Carolina, only 55% of middle school students and 49.1% of girls met the PA recommendations in 2007 (NC Healthy Schools, 2008). Findings from these reports are in line with previous research that has consistently demonstrated the decrease of PA during the teen years (Fairclough & Stratton, 2005; Trost, Pate, Sallis, Freedson, Taylor, Dowda, et al., 2002; Sallis, Prochaska, & Taylor, 2000).

A review by Sallis, Prochaska and Taylor (2000) revealed that adolescent PA is consistently associated with:

- Sex (male), ethnicity (white), age (inverse), perceived activity competence,
- intentions, depression (inverse), previous physical activity, community sports,
- sensation seeking, sedentary after school and on weekends (inverse) parent support,
support from others, sibling physical activity, direct help from parents, and opportunities to exercise. (p. 963)

Other studies have investigated clusters of characteristics that may be associated with obesity. Boone-Heinonen, Gordon-Larsen, and Adair (2008) reported that students in grades 7 to 12 who were active in multiple school sports and clubs and characterized by high PA were less likely to be obese, despite unremarkable diets. In contrast, obesity in females who appeared to be “average” in terms of diet and activity may represent the average lifestyle of Americans and its positive energy balance. Jago, Anderson, Baranowski, and Watson (2005) examined adolescent patterns of PA in terms of day, time of day, and gender. They determined that girls spent more time in personal care while boys spent more time watching TV or other electronic-based activities and playing sports. Additionally, adolescents spent considerably more time overall sitting, engaged in TV/electronics, and doing chores on weekend days compared to weekdays. Zabinski, Norman, Sallis, Calfas, and Patrick (2007) found that more sedentary behavior was associated with less PA and lower fruit and vegetable intake in 11- to 15-year olds.

**Nutrition**

Percentages of youth meeting dietary intake recommendations are smaller than those meeting recommendations for PA (Sanchez, Norman, Sallis, Calfas, Cella, & Patrick, 2007; Zapata et al., 2008). The 2007 YRBS reported that while 25.6% of female high school students met recommended levels of PA, only 19.9% met recommendations for fruit and
vegetable intake (CDC, 2008). High fat and soda intake and low milk, fruit and vegetable intake are particularly problematic (Sanchez et al.; Zapata et al.). The finding that approximately 40% of girls and 25% of boys begin dieting in adolescence (Nicholls & Viner, 2005) is significant in demonstrating how dramatically body image concerns increase among children reach their teenage years. Nicholls and Viner also noted that 6 to 12% of adolescents choose to eat vegetarian diets. This is an example of how youth may control their eating behaviors as a mechanism to assert independence from their families. This can also be the case with eating disorders. These diets are often nutritionally deficient, which is problematic since adolescence is a time of critical anatomical growth.

The CDC’s recommendation for daily fruit and vegetable intake is five servings per day (CDC, 2008). The 2007 YRBS highlighted that in the seven days before they were surveyed, 78.6% of high school students had not met this recommendation. The survey found that more boys are consuming sufficient fruits and vegetables (22.9%) than girls (19.9%). Driskell, Dyment, Mauriello, Castle, and Sherman (2008) found that fruit and vegetable consumption also decreases with age, similarly to PA, in their nationwide survey of children and adolescents in grades 4 through 12. They found that while over half of elementary students reported eating fruits and vegetables these numbers dropped considerably by middle school. Interestingly, the CDC (2008) reported that African American high school students were more likely to meet the fruit and vegetable guidelines (24.9%) than Hispanic (24.0%) and Caucasian (18.8%) students of both sexes.
Physical Health

Low self-confidence and body image problems are illustrated by the 29.3% of high school girls who describe themselves as overweight despite 9.6% actually being obese and 15.8% of high school students nationwide being overweight (CDC, 2008). Anecdotally, this is an interesting shift from the 2005 YRBS, where the percentages for females were 38% and 10%, respectively (CDC, 2006). Further, 60.3% of females reported that they were trying to lose weight (CDC, 2008). These issues often develop in late elementary or middle school as children go through puberty and their bodies begin to change. Females gain approximately 31 pounds during adolescence (Nicholls & Viner, 2005), which can be awkward and troubling. Incidentally, this coincides with the decrease in PA, which is often attributed to shifting priorities that come with increased independence, school work, and social pressure. Furthermore, Adams et al. (2000) found that female teens with higher socio-economic status (SES) were more likely to be trying to lose weight than females of a lower SES. Moreover, they reported that both personal and family/peer concern about weight was greater in seventh graders than in fourth graders, and seventh grade students also described themselves as being more overweight as did fourth graders.

Significance

Given the high rates of obesity and physical activity combined with low percentages of youth meeting dietary guidelines, adolescent health is a major concern. While quantitative studies have established the significance of this problem, relatively few
qualitative studies have been done to address some of the reasons behind it. Various studies have investigated PA and eating behaviors separately in adolescents, though the two topics have rarely been researched together. A number of focus group studies have been done on children’s and adolescents’ attitudes toward food choice and healthy eating (see Chapman & Maclean, 1993; Croll, Neumark-Sztainer, & Story, 2001; Neumark-Sztainer, Story, Perry, & Casey, 1999). Several other qualitative studies have examined adolescents’ perceptions of PA (Brooks & Magnusson, 2007; Dwyer et al., 2006; Evans, 2006; Thomas, Rehman, & Humbert, 2005; Ries et al., 2008; Whitehead & Biddle, 2008). However, only a few have considered physical activity and diet or health behaviors in general with the same group (e.g., O’Dea, 2003) and this is often in the case of research focusing on a specific population, such as obese African American children (Davis & Davis, 2008), African-American girls and their parents (Gordon-Larsen, Griffiths, Bentley, Ward, Kelsey, Shields et al., 2004; Thompson, Baranowski, Cullen, Rittenberry, Baranowski, Taylor, et al., 2003), or obese teenagers after an intervention (Daley, Copeland, Wright, & Wales, 2008). A small amount of research has been done on adolescent perceptions of mental health (Armstrong, Hill, & Secker, 2000; Johansson, Brunnber, & Eriksson, 2007), a subject that can also emerge in discussions on physical health. Clearly however, qualitative research studying PA, eating and health together in teenage girls is lacking.
Purpose

The purpose of this research was to explore adolescent girls’ attitudes toward physical activity (PA), eating, and physical health. Both physical inactivity and poor nutrition play essential roles in childhood obesity so it is necessary to consider both when looking for solutions. Specifically, this study investigated influences on health behaviors (PA and diet) and perceptions of exercise and sport, eating nutritious foods, and physical health. These topics were explored through a series of four focus groups conducted in two middle schools with sixth, seventh and eighth grade girls in central North Carolina.

This research was conducted from a social-psychological perspective with an emphasis on middle school girls’ motivations and social influences. The social environment is a strong force in adolescents’ decisions and consequently an important factor in their health behaviors. The interview guide was designed with these ideas in mind and probes were asked in an effort to understand why girls were motivated to do some of the things they discussed. This research topic stemmed from my own personal interest in health, PA, and nutrition. I began this project curious to see how girls felt about both of these things and if parallels possibly existed between attitudes toward the two. I was primarily concerned with how girls develop attitudes about health and health behaviors and how they are motivated or unmotivated to engage in PA or eat healthily, as well as how they perceive health and the value they place upon it.
CHAPTER 2: LITERATURE REVIEW

Introduction

While adolescence is the time of many physical, social and cognitive changes and developments (Muuss, 1996), it is also a time of declining of PA (Fairclough & Stratton, 2005; Nader, Bradley, Houts, McRitchie, & O’Brien, 2008; Trost et al., 2002) and declining general and health-related life satisfaction (Goldbeck, Schmitz, Beiser, Herschbach, & Henrich, 2007). Interestingly, Goldbeck et al. noted that “girls’ satisfaction with leisure time/hobbies decreased between the ages of 11 and 16” (p. 976). They also reported that satisfaction with friends was consistently high though satisfaction with family relations decreased. While this is logical given that adolescents become increasingly autonomous from their parents and more reliant on their peers (Steinberg & Monahan, 2007), it is important to consider potential relationships between factors such as the decline in PA, the decline in life satisfaction, decreased satisfaction with family, and increased peer influence. Valuable information can be gained from assessing attitudes towards healthy lifestyles right at the point they begin to change, which is what this research sought to do.

However, PA is only part of the equation. Physical inactivity and poor diet can each individually contribute to obesity, but it is a combination of the two that help to produce optimal physical health. For example, milk consumption and PA are both important for building strong bones which is especially critical during the teen years (Zapata et al., 2008). PA and dietary intake are often associated with each other – for example, active students
have been found to eat healthier diets than students who are not active (Alfano, Klesges, Murray, Beech, & McClanahan, 2002) – though adolescent PA and nutrition have been researched more independently than together.

Relatively few studies have examined these two factors within the same sample, and parks and recreation literature tends to focus exclusively on PA. Henderson and Bialeschki (2005) emphasized the need for collaboration between recreation and parks and disciplines such as public health and epidemiology. Popkin, Duffey, and Gordon-Larsen (2003) also stressed the importance of transcending fields to better understand environment-health relationships.

Adolescence

The renowned psychologist G. Stanley Hall asserted that “adolescence is inherently a time of ‘storm and stress’ when all young people go through some degree of emotional and behavioral upheaval before establishing more stable equilibrium in adulthood” (Arnett, 2006, p. 186). While this concept is still debated many modern definitions are less harsh, simply describing it as the stage in between childhood and adulthood (Muuss, 1996). Muuss expanded on this idea with the statement that “adolescence is generally understood as a prolonged transition period between childhood and adulthood that prepares the young person for occupation, marriage, and mature social roles” (p. 366). It is well understood that adolescence is a time of many changes and evolving roles. While it can be quite stressful as Hall theorized, these years can also be joyful and enlightening. However, with this change in
roles and attitudes comes a shift in priorities and social pressures which can directly affect one’s health behaviors.

Interestingly, females are generally less influenced by their peers than males (Steinberg & Monahan, 2007). Steinberg and Monahan reported, “although girls may be more concerned than boys about their relations with others... this concern apparently does not translate into greater behavioral conformity” (p. 1540). Peer influence intensifies for both genders during adolescence, though resistance to peer influence increases between ages 14 to 18. “Increased orientation to peers in early adolescence may be a correlate of adolescents’ developing emotional autonomy from parents and that, during this time period, adolescents’ dependence is not replaced by independence but by dependence on peers” (p. 1539; Steinberg, 1990, c.f. Steinberg & Monahan).

Social Cognitive Theory

This study was not designed around a specific theory. In retrospect, the results were congruent with Albert Bandura’s Social Cognitive Theory (SCT). Social Cognitive Theory emphasizes principles of social learning and the interactions among the person, their behavior, and their environment (Muuss, 1996). It demonstrates how one’s decisions can be affected by others and the environment. Reinforcements are a key part of SCT. Vicarious reinforcement, for example, is the act of observing a behavior in someone else (the model) and the consequences of that behavior. An individual applies this information to his or her
life and considers how similar actions may have similar outcomes, whether positive or negative.

Vicarious reinforcement in adolescence is often learned from observing peers and the media. Since teens are strongly influenced by their peers, they are constantly learning from and imitating each others’ actions. This process may lead to risky or potentially dangerous decisions (e.g., if a friend tries drugs without any negative repercussions, an individual may be more likely to experiment with drugs herself). This theory helps explain why adolescents can be easily caught up in trends and are often concerned with what others are doing. They see a certain item or behavior being rewarded (positive reinforcement) and perceive that they should also have these things (e.g., brands of clothing; the latest cell phone or iPod) or behave in these ways (e.g., dressing in a particular way; playing sports). On the other hand, if negative reinforcement is observed, such as a peer being teased for being overweight, this condition is avoided if at all possible. Reinforcements also contribute to teenagers’ self-efficacy and self-esteem, which further affect individuals’ decisions on whether or not to engage in a particular behavior. These principles from the SCT provide helpful insight on how adolescents make decisions about their health.

Physical Activity

Numerous studies have been conducted to assess children’s levels of PA and to discover some of the correlates of PA or inactivity. However, the majority of the research is
quantitative, primarily measurements from accelerometers or pedometers and survey data. Little exploratory research has been done to understand why females do not participate in leisure-time PA or why pre-teens and adolescents become less active as they age (Thompson, Rehman, & Humbert, 2005).

The prevalence of obesity is alarming despite its association with several chronic conditions and health problems. Obesity is often found in patients with hypertension, type 2 diabetes, heart disease, stroke, osteoarthritis and sleep apnea (Zapata et al., 2008). Hallal, Victoria, Azevedo and Wells (2006) emphasized the longitudinal benefits of adolescent PA for adult health. In the long-term, PA appears to improve bone health and reduce incidence of some cancers. Short-term benefits include increased bone mass, higher levels of good cholesterol (HDL) and cardiorespiratory fitness as a reduction in body fat occurs (Hallal et al.). However, adolescents may not necessarily recognize the significance of PA in prevention of these ailments. Zapata et al. surveyed sixth to eighth grade students about perceived benefits of regular PA. Interestingly, weight control was the most common response, over preventing heart problems and improving mood. Similarly, Tergerson and King (2002) reported “the most commonly reported benefit of exercising among females was ‘to stay in shape,’” whereas among males it was ‘to become strong’ (p. 374). Flintoff and Scraton’s (2001) interviews with 15-year-old females revealed that a general sense of well-being was a widely perceived benefit of PA, as well as weight loss, fitness, and social interaction.
In addition to the physical benefits, adolescent self-esteem and mental health also increase with PA (Hallal et al., 2006). However, evidence is inconclusive as to whether there is a negative relationship between obesity and self-esteem (Klacynski, Goold, & Mudry, 2004), just as there is not definitive research on obesity’s effect on PA (Sallis et al., 2000). While Klacynski et al. did not detect a significant effect of obesity on overall self-esteem, they found that body-specific self-esteem decreased with BMI in a survey of undergraduate university students. In a study of overweight and obese boys and girls (age 8-12 years), Shoup, Gattshall, Dandamudi and Estabrooks (2008) found that obese children reported significantly lower psychosocial, physical and total quality of life than overweight children. They also noted that less PA was correlated with lower quality of life. Additionally, Schutz and Paxton (2007) found that maintaining a healthy weight and body image is related to better quality of life and fewer depressive symptoms in adolescent females. Furthermore, a one-year longitudinal study demonstrated that children aged 11-14 years old who participated in at least an hour of PA a day reported fewer emotional problems than those who were less active (Wiles et al., 2008). Moreover, Stevens, To, Stevenson, and Lochbaum (2008) reported that elementary children who were more physically active were also more likely to perform better academically, namely in mathematics and reading.

As the SCT indicates, research has proven that members of peer groups exert strong influences and learn from each others’ actions. Mackey and La Greca (2008) researched adolescent girls’ affiliation with peer groups in relation to their weight control behaviors
and found that females who identified being active in sports and athletics (the peer crowd *Jocks*) perceived fewer peer weight norms and were less concerned with their own weight. However, affiliation with this group was also associated with less healthful eating. Croll et al. (2006) found contradictory results in their study of adolescent sport participation, nutrient intake and eating patterns, reporting that teens who engaged in sports had breakfast more frequently and had higher intakes of protein, iron, and zinc than youth who were not involved in sports. Alfano et al. (2002) suggested that a history of sport participation can have beneficial effects into adulthood. They found that “a history of sport participation predicted lower adult body mass index and higher total and sport activity levels” (p. 82). However, the association between PA and improved dietary intake did not persist into adulthood.

Another benefit of PA may be its potential function in the treatment of eating disorders (e.g., binge eating disorder, anorexia nervosa, bulimia nervosa), which affect numerous adolescent girls, (Hallal et al.; Hechler, Beaumont, Marks & Touyz, 2005; Hrabosky, White, Masheb, & Grilo, 2007). Incorporating PA into treatments may be more effective than therapy alone though evidence has not been sufficiently established (Hrabosky et al.). Also of note, obese adolescents participating in an exercise intervention reported feeling better about themselves, happier, and more energetic afterwards in follow up interviews (Daley, Copeland, Wright, & Wales, 2009). The goal of this program was not weight loss, but providing a supportive exercise environment. Many of the youth cited
improving health or fear of future health consequences as their reason for participating and mentioned that it also made them consider their diets. The theme of previous low exercise self efficacy also emerged.

**Gender**

It has been well-documented that girls have higher levels of physical inactivity than boys (Pugliese & Tinsley, 2007; Nader, et al., 2008; Sallis, Prochaska, & Taylor, 2000). Nader et al. reported that 9- to 15-year-old boys spent 18 more minutes per weekday in MVPA than girls, and 13 more minutes on weekend days. They also found that “the estimated age at which girls crossed below the recommended 60 minutes of MVPA per day was approximately 13.1 years for weekday activity, compared with boys at 14.7 years” (p.295).

Females also report less enjoyment from PA and lower physical self-confidence than males (Morgan et al., 2003). Morgan et al. found that boys report more opportunities for outdoor play and joining sport teams than girls. A study of 5- to 13-year-old boys and girls found that boys also spend more time in leisure activities, and the majority of that time is spent playing sports, watching television, and playing computer games (Cherney & London, 2006). Girls, on the other hand, spent most of their leisure time watching television. Jago, Anderson, Baranowski, and Watson’s (2005) study of eighth grade students’ PA patterns revealed similar findings, with boys spending more time in TV/electronics and sports and girls spending more time in personal care.
In considering the explanations for why girls are less active than boys and why activity decreases with age, it is helpful to look at some of the biological and psychological changes than happen during adolescence. Because girls reach puberty at a younger age than boys, it makes sense that their levels of activity decline at an earlier age (Nader et al., 2008). Davison, Werder, Trost, Baker, and Birch (2007) investigated the effects of early maturity on female’s PA and found that “more advanced pubertal development at age 11 was associated with lower psychological well-being at age 13, which predicted lower enjoyment of physical activity at age 13 and in turn lower MVPA” (p. 2391). The lower psychological well-being included “depression, weight-related maturity fears, and low self worth” (p. 2400). These factors, along with increased weight gain (Nicholls & Viner, 2005) and self-consciousness (Davison et al.) play a critical role in these females’ leisure activity choices. However, the small amount of research that has been done on maturity status and PA has found mixed results (Sherar et al., 2008). For example, Sherar et al. found no differences in PA for early and late maturing girls, though this study was cross-sectional and included a wider age range (8 to 18 years).

Several studies have found that girls tend to prefer non-competitive or individual sports over activities with an emphasis on competition (Brooks & Magnusson, 2007; Couturier, Chepko, & Coughlin, 2007; Hill & Cleven, 2005). However, this is also a factor in boys’ sport participation. In their focus group study with 15- and 16-year old boys, Allison et al. (2005) found that some males also felt that competition detracted from the enjoyment
associated with playing sports. Couturier et al. reported that, in a study of middle and high school students, more males (56.6%) than females (43.4%) disagreed that they “don’t like to compete” (n.p.). Booth, Wilkenfeld, Pagnini, Booth, and King (2008) also found that both male and female teenage students felt too much emphasis was placed on competition in school sports, which outweighed enjoyment. Females also believed too much attention was given to boys’ sports.

A number of studies have noted the importance of social interaction as an incentive to participate in PA for girls (Brooks & Magnusson, 2007; Schofield, Mummery, Schofield, & Hopkins, 2007; Thompson, Rehman, & Humbert, 2005; Whitehead & Biddle, 2008), boys (Allison, Dwyer, Goldenberg, Fein, Yoshia, & Boutlier, 2005) and both girls and boys (Tergerson & King, 2002). Brooks and Magnusson reported that active girls do not participate in PA specifically for physical health benefits yet more for emotional well-being and challenge, and not necessarily for competition. Perhaps this is why cheerleading and dance are some of the most popular activities among girls (Barr-Anderson, 2007). Barr-Anderson et al. reported that basketball, cheerleading/dance and swimming are the top three choices for structured PA for sixth grade girls. However, these results may be slightly misleading since middle schools do not always offer structured sports for sixth graders.

When asked about preferences for physical education (PE) curricula, middle and high school girls favored dance and fitness activities and generally a “less competitive, more fitness oriented curriculum” (n.p.), while boys favored team and individual sports (Couturier et al.,
In a similar study of PE activity preferences among ninth grade students, girls selected basketball, volleyball, swimming, contemporary dance, and softball/baseball as their top five choices while boys chose basketball, football, bowling, softball/baseball, and weight training (Hill & Cleven, 2005). Despite girls’ general preference for non-competitive activities, it is interesting that both boys and girls selected basketball and softball/baseball. Given that these survey questions were within the context of PE however, answers may have been different had participants been asked to simply name their favorite activities. Additionally, since this study was conducted in southern California, regional differences in activity popularity may exist in the general population.

**Ethnicity**

Much of the literature on barriers to PA has focused on gender, socio-economic status or race/ethnicity. African American and Hispanic students have lower levels of moderate to vigorous physical activity than whites (Gordon-Larsen, McMurray, & Popkin, 2000). The CDC (2006) reported that 22.6% of African American female high school students were at risk for becoming overweight. European American youth also reported higher physical self-perception, more enjoyment of PA, and less activity barriers than Mexican Americans (Morgan et al., 2003). Grieser and colleagues (2008) also found that African American and Hispanic middle school girls experienced less enjoyment of physical activity than Caucasian girls. They also noted that Hispanic children feel less supported by boys and their families for PA. Overall, children and teens are not getting enough moderate to
vigorous PA (MVPA) though the concern is more significant for females, minorities, and those at risk for overweight and obesity. Interestingly, Gordon-Larsen et al. (2000) concluded that sedentary behaviors can be attributed to socio-demographic factors while PA is associated more with environmental factors.

**Social influences**

*Family support.* Friends and family play an important role in many behaviors and choices. Teens in particular are often strongly influenced by their peers as they gain independence from their families, though familial support and encouragement are still quite important. Lack of a supportive social network can be a barrier to PA though modeling active behaviors, and facilitating activities (e.g., providing transportation) can have a strong positive impact. Children’s health behaviors are heavily socialized through their families. For example, Pugliese and Tinsley’s (2007) study found that parental encouragement and instrumental behaviors were critical to PA participation and were consistently significant through childhood and adolescence.

As emphasized by the SCT, modeling and positive reinforcements are quite important in encouraging initial PA engagement and in remaining involved. On the contrary, children and teens who lack role models for PA or who have received negative reinforcements for PA (e.g., a bad experience playing a sport) may lack the self-efficacy to start a sport or engage in new activities. Beets, Vogel, Forlaw, Pitetti, and Cardinal, (2006) surveyed fifth- through eighth-grade students about their PA and perceived social support...
and also noted the significance of peer support for both genders and discussed the association of maturational status with support behaviors. Namely, parental praising, participating in activity with the child, transporting, and watching behaviors were associated with more mature children, who may be more likely to play sports. Frenn et al. (2005) also found that support from family and friends were significant predictors of PA for females.

Anderson, Funk, Elliott and Smith (2003) studied parental support and extracurricular activity participation in children age 9 to 11 years, they found that perceived parental support was related to increased extracurricular involvement, including non-sport activities such as music and volunteering. Girls reported participating in more activities ($M = 3.72$) than boys ($M = 2.85$). Girls also felt somewhat less pressure to participate, though no significant differences were found in parental support for sport participation. Findings also indicated that “parental support tended to be positively related to children’s enjoyment in all three types of extracurricular activities... [Though] perceived pressure was negatively related to the enjoyment of sports” (pp. 248-249). Similarly, Beets et al. (2005) found that in general, boys appeared to receive more support, prospectively because they participated in more sports than girls.

Incidentally, a survey of parents’ perceptions of health-related curricular issues in elementary schools revealed that they perceived healthy eating topics to be more critical than PA topics discussed in health education classes (Murnan, Price, Telljohann, Dake, & Boardley, 2006). On a similar note, Serdula et al. (1999) reported that in a survey of adults,
people were more likely to change their diet rather than their exercise behavior when they are trying to lose weight. This reinforces the need for parents to consider both parts of the energy balance equation and encourage their children to be active.

*Peer support.* The increase in peer influence during adolescence comes with heightened pressure to act according to gender-specific stereotypes (de Bruyn & Cillessen, 2008). Again, this can be tied back to the SCT. Vicarious reinforcement can be especially influential when learning about gender roles and expectations. Teens and pre-teens, who are large media consumers, are subject to countless messages on how someone of one’s gender should act. These messages, along with observations of peers, demonstrate what constitutes acceptable behavior for girls and boys and what does not. de Bruyn and Cillessen reported that “boys will increasingly stick to male leisure activities emphasizing competition and independence and girls to female leisure activities emphasizing nurturance and beauty” (p. 451). Cherney and London (2006) had somewhat mixed results in their study of how leisure preferences vary with age and gender. “For girls, preferences for television shows became more feminine with age, but preferences for toys, computer games, and sports become less feminine” (p. 717). Evans’ (2006) assertion that adolescent girls are pressured to be feminine while conveying that they are athletic and sporty may shed light on their leisure decisions and how they change as females progress through their teenage years. Interestingly, while Steinberg and Monahan (2007) reported that adolescent boys are more susceptible to peer influence than girls, Trinh, Rhodes, and Ryan (2008)
noted that when it comes to PA participation, girls are more strongly influenced by their peers than boys. Moreover, they found that “approval from friends was the key correlate of PA for girls” (p. 83).

Schofield et al. (2007) investigated the relationship between adolescent female friend pairs and PA. Friendship reciprocity is an important indicator of PA for teen girls, perhaps because reciprocal friends are more likely to spend time doing activities together. Girls with active friends were found to be more active as well when they listed each other as friends (Schofield et al.). The SCT may shed light on these findings by illustrating the relationships between one’s environment and their behaviors (e.g., if a girl’s friends all play sports, she is likely to play as well and may identify similar benefits from the activity).

Grieser et al. (2008) discussed that while African American girls reported less overall enjoyment of PA than Caucasian girls they also enjoyed PE classes more, despite higher BMIs. The authors hypothesize that PE classes provide a venue for social interaction and fun with friends, an element that may resonate with many students but specifically this population. It is noteworthy to add that Grieser and colleagues found that African American, Hispanic and Caucasian girls all reported similar levels of perceived support for PA from other girls in their school.

Dwyer et al. (2006) found that peer influence, lack of social support, parental constraints, self-efficacy, lack of time and school demands were all considerable barriers to PA participation for adolescent girls. Girls may perceive more positive reinforcements from
parents, peers, and teachers for excelling in school or engaging in other non-sport related activities. They may have received negative reinforcements during past experiences with PA, such as being teased or performing poorly, deterring future participation. They may also believe that it is not feminine to be active, that girls must have a certain body type to play sports, or that they should maintain their appearance while exercising. These pressures may seem too overwhelming to overcome, resulting in an avoidance of PA altogether. Robbins, Pender, and Kazanis (2003) surveyed girls age 11 to 14 about barriers to PA and found that the top two barriers were self consciousness (“I am self-conscious about my looks when I exercise”) and motivation (“I am not motivated to be active”). Other deterrents included not having anyone to be active with, lack of time, bad weather, and PA being hard. Interestingly, Sherar et al. (2008) found that lack of motivation/laziness emerged and became more frequent as a reason not to engage in PA in seventh to tenth grade females. Participants also reported barriers such as lack of time, out-of-school work, and school. In Kimm et al.’s (2006) study of sedentary adolescent girls, the most frequently cited barriers were lack of time, lack of interest, and being too tired.

Conflicting results exist in research suggesting obesity may be a factor in PA participation. A review of correlates of PA in children and adolescents implied that body image, self-esteem, and attitudes toward sweating were not associated with PA and that associations with self-efficacy and perceived competence were inconclusive (Sallis et al., 2000). A study of adult PA demonstrated that normal weight individuals participated in
significantly more PA than overweight individuals, who participated in significantly more PA than obese individuals (Blanchard et al., 2005). Incidentally, focus groups with obese African American women revealed that they specifically did not like perspiring during PA (Thomas, Moseley, Stallings, Nichols-English, & Wagner, 2008). On the other hand, obese white women in the study did not mention this as a barrier to PA, though they did desire support from others who were also obese.

*Environmental influences*

Gordon-Larsen et al. (2000) documented that middle and high school students living in areas with high crime rates had significantly lower rates of PA, though a review of literature of correlates of PA by Sallis et al. (2000) determined that neighborhood safety was unrelated to activity level. However, interviews with urban adolescent girls revealed that safety was a critical factor in determining recreational facility use (Ries et al., 2008). Sallis et al. found time outdoors to be significantly and consistently associated with PA. Cleland and colleagues’ (2008) research on children’s time spent outdoors and PA also “suggested that older elementary school-aged children who spent more time outdoors, tended to be more active and had a lower prevalence of overweight than children spending less time outdoors” (p. 1691). Unfortunately, children who live in high crime areas may not be able to spend time outdoors or in neighborhood parks.

Ries et al. (2008) interviewed urban adolescents about their use of recreational facilities. They expressed that parks are primarily optimal for younger children, especially
smaller parks with limited space featuring limited options, such as having only playground equipment and not athletic courts. Maintenance and functional amenities (e.g., bathrooms and water fountains) were also important. Options were critical for indoor facility use as well, as participants seemed to associate more options with more opportunities for PA. Proximity to home, the presence of other adolescents, and safety were also factors in selecting or avoiding a facility. In their study of low-income and African-American neighborhoods, Floyd et al. (2009) found that formal organized activity and a higher number of recreational facilities were both associated with higher MVPA for girls.

The school environment also plays a large role in affording opportunities for students to be active. However, variation exists on how much schools take advantage of opportunities to successfully incorporate activity that is appealing to all students. Gidlow, Cochrane, Davey and Smith reported that “physical activity as accelerometer counts per minute were lower in school versus out of school overall, especially in secondary school pupils” in the UK (p. 1411). Young et al. (2007) investigated PA opportunities at 36 middle schools in the United States. They found that “across sixth, seventh, and eighth grades, 75%, 86%, and 78% of schools, respectively, reported including on physical activity and/or fitness topics in the health education curriculum” (p. 44). Additionally, 83% of the schools had interscholastic sports and 69% had intramural sports, though “on average, 24 (~5% of the population) girls attended programs per school” (p. 45).
Lack of physical ability or confidence may be a considerable deterrent to activity participation, especially in school PE where students may be more self-conscious when performing in front of more highly skilled peers. Evans’ (2006) interviews with teenage girls and revealed “fear of inadequacy is a major factor in limiting girls’ enjoyment of, and therefore participation in, sport within the school” (p. 557). Fairclough and Stratton (2005) noted that middle and high school students with higher physical aptitude appear to participate in MVPA in physical education (PE) classes for a slightly higher percentage of class time (approximately 5%) than their less-skilled peers. A study of adolescents in the UK found that 15-year-old females were critical of and disappointed with their PE programs, namely in the lack of choice of activities, lack of skill building instruction, and boys’ domination of co-ed activities (Flintoff & Scraton, 2001).

Nutrition

There are many excuses for eating unhealthy foods. Many people do not like the taste of nutritious foods, and fast food is cheap and easily accessible (O’Dea, 2003; Popkin et al., 2005). Teenagers have cited their parents being busy as a reason for eating fast food (Neumark-Sztainer, Story, Perry, & Casey, 1999), and their own lives are often quite busy as well. Cost of food is also critical to both adults and adolescents, with both groups ranking it as the second most influential factor in food selection, after taste (Popkin et al.). Neumark-Sztainer and colleagues also reported that frequency of dining out appeared to increase with grade level in adolescents, which they attributed to increased independence, increased
mobility, and busier schedules. Fast food and prepackaged foods also save time but often compromise nutrition. Popkin et al. discussed that fast food meals often have unnecessarily large portion sizes and high energy densities. Research has also found an association between eating away from home (at restaurants or fast food establishments) and a decrease in macro- and micro-nutrient intake and diet quality, as well as increases in energy density and total energy intake (French, Story, Neumark-Sztainer, Fulkerson, & Hannan, 2001; Popkin et al.). Two additional studies found that women with patterns of eating out had higher intakes of energy, total fat, saturated fat, cholesterol and sodium (French, Harnack, & Jeffery, 2000; Haines, Hungerford, Popkin, & Guilkey, 1992). These patterns were also associated with younger age, higher BMI, lower income, and non-white ethnicity (French et al., 2000; Haines et al.). Furthermore, French et al. (2001) noted that adolescents’ frequency of eating at fast food restaurants was inversely associated with their own as well as peer concerns about health eating.

Along with the increased popularity of dining out, fruit and vegetable consumption has decreased and energy-dense, nutrient-deficient snacks have become more prevalent (Popkin et al.). “Overall, the greatest increases have been in the consumption of salty snacks, sweetened soft drinks, pizza, Mexican food, French fries, and cheeseburgers,” reported Popkin et al. (p. 604). French et al. (2001) found similar results, noting that while some fast food restaurants may offer healthier selections, adolescents tend to chose soft drinks, cheeseburgers, French fries and pizza over fruits, vegetables or milk. Stevenson,
Doherty, Barnett, Muldoon, and Trew (2007) also acknowledged the trend of diets high in fat, sugar and salt. It is extremely important that children and teenagers get sufficient nutrients, especially calcium, for proper growth and bone development (Zapata et al., 2008). Unfortunately, their diets are often full of less healthy foods that allow little room for more nutritionally dense choices, at times compromising necessary vitamins and minerals. However, unhealthy foods are frequently used as positive reinforcements, setting the stage for children to later associate them with gratification and pleasure.

O’Dea (2003) discussed healthy foods and junk food with focus groups comprised of children age seven to seventeen. One recurrent theme was the connection between healthy eating and increased physical performance. Benefits such as weight control and appearance were “moderately important” to the students. Results suggest the combination of a healthy diet and PA is advantageous to school work by providing stress relief, better sleep and improved concentration (O’Dea). This study exemplifies that several of the benefits and motivations to engage in PA are parallel to those for eating healthy foods.

While many motivations are common across teenagers, some individuals are more inclined to eat healthy foods than others. Stevenson et al. (2007) reported that teens who described themselves as healthy eaters possessed a few notable attributes. First, they generally expressed an interest in either sports or cooking (Stevenson et al.). More importantly, they perceived control over their own food choices and eating habits, were self-motivated to eat healthily, and elected to do so independently (Stevenson et al.). Other
study participants not claiming to be healthy eaters acknowledged doubt in their abilities to eat healthily without guidance, which “may well lead to a self-fulfilling cycle of self-depreciation and a failure to evolve personal responsibility for healthy eating” (Stevenson et al., p. 426). Larson et al. (2007) found that young adults who prepare their own food at home ate fast food less frequently and were more likely to meet dietary objectives. Study participants cited lack of cooking skills, money to buy food and time as considerable barriers to preparing one’s own meals. Further, Neumark-Sztainer et al. (2007) found that 40% of overweight adolescent girls demonstrated disordered eating behaviors (e.g. binge eating, extreme weight control behaviors), reiterating the importance of self efficacy and personal control in making healthful choices.

Gender

Zullig, Ubbes, Pyle, and Valois (2006) summarized one of the biggest gender differences in adolescents by noting “males believe they need to increase their energy intake to gain weight (most likely muscle mass) for greater social acceptance and self-esteem for the same reasons females engage in extreme dieting practices to manage weight” (p. 90). This reiterates the learned social roles and expected body shapes for both genders, as illustrated by the SCT and the concept of vicarious reinforcement. Pirouznia (2001) found that seventh and eighth grade females demonstrated greater nutrition knowledge than males, though there was a correlation between nutrition knowledge and food choices for both males and females. Interestingly, Nemet, Perez, Reges, and Eliakim
found that even in kindergarteners females had higher nutrition knowledge and preference scores than males. In their longitudinal study of extreme weight change behaviors among adolescents, McCabe and Ricciardelli (2006) reported that girls are more likely than boys to “have an obsession with food, demonstrate bulimic behaviors and engage in excessive levels of exercise in order to lose weight” (p. 431). They also noted that girls are more likely to use diet pills or laxatives to lose weight. Boys, on the other hand, are more likely to have a dietary pattern high in fat and sugar, according to McNaughton, Ball, Mishra, and Crawford’s (2008) study of Australian adolescents eating patterns. The authors noted that this diet was also associated with “higher intakes of energy and higher energy-adjusted intakes of saturated fat, total sugars, and lower energy-adjusted intakes of protein, fiber, folate, iron, and potassium” (p. 367), while diets higher in vegetables were associated with increased intakes of these and other nutrients (e.g., polyunsaturated fat, beta carotene, vitamin C, calcium, and zinc). Pirouznia concluded, “female adolescents are more selective in their food choices than males” (p. 131), given their increased nutrition knowledge and higher prevalence of food obsession and extreme weight loss behaviors (McCabe & Riccardelli). However, despite girls’ knowledge of nutrition, they are at greater risk for nutritional deficiency due to detrimental dietary habits like starvation and other extreme methods of weight control (Zapata et al., 2008).

Nystrom, Schmitz, Perry, Lytle, and Neumark-Sztainer (2005) reported that seventh grade girls generally consumed more fruits and vegetables per day than boys. However, a
survey of high school students demonstrated relatively similar percentages of meeting fruit and vegetable recommendations in females (21.3%) and males (24.7%) (Lowry, Lee, McKenna, Galuska, & Kann, 2008). Lowry et al. also found that students were more likely to eat sufficient fruits and vegetables when they also ate a reduced calorie or fat diet, engaged in regular PA, and limited TV viewing. In Nystrom’s study, overweight adolescents ate less fruits and vegetables than those who perceived their weight to be about right. Boys with weight-related goals consumed more fruits and vegetables than those who were not concerned about their weight, though actually engaging in weight-related behaviors (e.g. vomiting, using diet pills, and skipping meals) was positively associated with fruit and vegetable intake in girls, but not boys. This could possibly be attributed to “the idea that many girls feel a societal pressure to say that they are trying to lose weight, even when they are not actively engaging in any weight-loss behaviors” (p. 207; Nichter, Ritenbaugh, Nichter, Vuckovic, & Aicken, 1999, c.f. Nystrom et al.).

**Ethnicity**

Popkin et al. (2005) noted that “total caloric intake is increasing among all race, age, gender and socioeconomic groups” (p. 604) which is particularly problematic in combination with a deficiency in PA. However, Mackey and LaGreca (2007) found that African American adolescents ate less healthy diets than both Caucasians and Hispanics, even after controlling for school socioeconomic status. Lower support for healthy eating and higher fat intake were also associated with lower income in African-American and Hispanic middle
school students (Frenn et al., 2005). Less interest in changing lifestyle habits and fewer friend role models for low-fat eating also predicted higher levels of fat consumption in this population (Frenn et al.). These ideas are clearly reflected in the SCT. A lack of personal interest and motivation (the person element in triadic reciprocal determinism) affect one’s actions (the behavior element). Meanwhile, the social environment and lack of models for healthful eating affect one’s behavior and potentially their own feelings on the value and importance of eating healthily.

*Social influences*

*Family support.* Families can have either a positive or negative effect on adolescent eating habits. The home food environment exerts a significant influence on childhood and adolescent diets. If nutritious foods are continually made available and appealing (e.g., preparing vegetables so they taste good) it is easier for teens to adopt these behaviors. However, research has found that discrepancies exist between girls’ reports and parental perceptions of their daughters’ diets (Thompson, Baranowski, Cullen, Rittenberry, Baranowski, Taylor et al., 2003). Interviews conducted with eight- to ten-year old African American girls at risk for obesity and their caregivers found that both groups expressed concern for weight control and body image (Thompson et al.). These concerns, as well as modeling eating behaviors, can be passed easily from parents to children. Keery, Eisenberg, Boutelle, Newmark-Sztainer, and Story (2006) surveyed adolescents and their mothers about weight control behaviors. 60% of girls reported that their mother dieted, while 75%
of mothers reported having dieted within the past year. While maternal dieting and child dieting were not significantly related, it was evidenced that the correlation between child reports of maternal dieting and child weight concerns and use of weight control behaviors was significant, once again demonstrating the significance of modeling. Religion, culture, and vegetarianism are other dietary influences that are often rooted in family eating habits.

Chapman and MacLean (1993) noted that adolescents associate eating unhealthy foods with time spent with their peers, while time with family is characterized generally by more healthy foods. Further, Croll, Neumark-Szatiner, and Story (2001) commented that adolescent focus group participants “discussed unhealthy foods in terms of what they perceive that they or others think they should be eating or how healthy eating may be important to others, such as their family or friends, but not to them” (p. 195). They also remarked that some unhealthy foods seemed to be situation-specific, such as eating a hot dog at a baseball game, and healthy foods were not always socially acceptable, such as eating vegetables when everyone else is eating chips. The SCT can help explain these trends, as models and reinforcements for particular behaviors are also situation-specific. The consequences of not obeying these unwritten rules may be worse or more challenging than simply conforming to the standards set by others.

**Peer support.** Adolescents, in particular, are highly influenced by what their peers are doing (Muuss, 1996). It may not be “cool” to eat healthy foods. Social activities often encourage indulgent eating, and energy-dense foods have come to be recognized as treats,
reinforcing the rewarding nature of their consumption (Popkin et al., 2005; Stevenson et al., 2007). Overall, teens are frequently too preoccupied with other issues to concern themselves with proper food choices (Stevenson et al.). While adolescents have sufficient knowledge of nutrition and healthy foods, “eating behavior is more often reported as determined by physical factors inherent in the food, and psychological factors inherent in the individual (Stevenson et al., p. 422). The positive reinforcement of the physiological response to eating a rich, energy-dense food may outweigh any praise or good feelings about oneself that results from eating healthy foods.

Friends can be supportive of healthy eating but they can also be a considerable barrier, especially for teenagers. Negative influences of adolescent female friendships, such as having friends who were concerned about their weight and perceived advantages of being thin, can also lead to disordered eating and body dissatisfaction (Schutz & Paxton, 2007). Schutz and Paxton found that negative friendships and poor social skills could lead to body image problems and disordered eating. Additionally, girls with body dissatisfaction and disordered eating were more likely to experience friend alienation and are at risk for developing depressive symptoms (Schutz & Paxton). Healthy, positive friendships play an important role in healthy eating and preventing depression. Unfortunately, many teen girls are preoccupied with being skinny and this concern spreads to their friends. The SCT also helps to illustrate how being in an environment where others are especially concerned with something can affect an individual’s own thoughts and behaviors. For example, girls who
eat without regard for which foods may make them fat may be criticized by their friends (a negative reinforcement) and may develop an unhealthy attitude toward food.

Hutchinson and Rapee (2007) investigated Australian seventh grade females’ social networks in relation to body image and eating problems. Simply put, girls who dieted were likely to be friends with other girls who dieted. Clique members also had similar levels of weight control behaviors and binge eating, noting that “an individual girl’s dieting and extreme weight loss behavior use could be predicted from her friends’ respective diet and extreme weight loss behavior scores” (p. 1557). Extreme weight loss behaviors include appetite suppressants, crash dieting, diuretics, fasting, laxatives, and vomiting. Remarkably, friend groups did not have the same body image concerns, perhaps since this is a more covert psychological variable. The authors also discovered that girls who did not identify with a group of friends had higher BMI, body image concern, use of extreme weight loss behaviors, and lower self esteem. Reinforcing these findings, Mackey and La Greca (2008) reported that girls who did not identify as belonging to a particular peer group engaged in more weight control behaviors than other girls in their study of adolescent peer crowd affiliation.

Croll, Neumark-Sztainer, and Story (2001) conducted focus groups to discuss the meaning of healthy eating with adolescents and found them to be quite knowledgeable about nutrition. However, they generally fail to apply this knowledge to their food choices, citing lack of time, limited availability of healthy foods in schools, and a lack of concern
about healthy eating as reasons. Another focus group study on food choices conveyed the same message that teens are primarily concerned with taste, time, availability, and social acceptability rather than nutrition content (Neumark-Sztainer, Story, Perry, & Casey, 1999).

Environmental Influences

As mentioned earlier, family and the home food environment play an important role in how children become familiar with certain foods and learn to associate with particular occasions or emotions. For example, sweets and other indulgent treats are frequently used as rewards. Not all families have equal access to fresh produce or affordable, healthy foods (CITE). The proximity of grocery stores and restaurants to one’s home can have a substantial impact on the foods families eat and the frequency with which they dine out. Families who live further away from grocery stores or do not have easy transportation to purchase groceries may be less inclined to eat fresh fruits and vegetables and may be more likely to buy pre-packaged, processed foods with a longer shelf life. These foods often have higher sodium, fat, and calorie content than fresh produce. Similar to how people living in certain communities have fewer opportunities for PA, neighborhood disparities in food access can directly affect the nutritional quality of foods families consume.

Because children and adolescents spend a large portion of their lives at school, it is important to consider what they are eating while they are there. Middle and high school students have expressed their disdain for healthier options in the cafeteria, such as the unappealing appearance of fruits and vegetables served (Booth et al., 2008; Neumark-
Sztainer et al., 1999). Changes suggested by adolescents include lowering the prices and having a wider variety of healthy choices (Booth et al.). Jaime and Lock (2008) conducted a review of literature on school nutrition policies and guidelines and the effectiveness of interventions. While 34 states in the USA have passed legislation limiting sales of certain foods and beverages in schools, the effectiveness is yet to be determined as little evaluation has been done. The authors did find evidence that nutrition guidelines have had a positive impact in decreasing fat intake and increasing fruit and vegetable consumption. Limited success was reported with restricting access to vending machines. Lowering prices of low-fat snacks and fruits and vegetables is another promising approach. Many of these initiatives and interventions lack widespread implementation and extensive evaluation, their effectiveness is consequently inconclusive.

Kubik, Lytle, and Story (2005) surveyed middle school teachers and parents about the school food environment. Only 31% of teachers and 18% of parents felt that schools gave sufficient attention to student nutrition. The majority believed that more healthy snacks and beverages should be available and that more fruits and vegetables should be included in the school lunch. Though more than half over parents and teachers “believed food habits were established before students entered middle school, 87% of parents and 95% of teachers believed it was important to address eating practices during adolescence” (p. 234). Just over 10% of parents and teachers estimated that students ate nutritious diets. The authors also discussed unhealthy foods being sold as school fundraisers, in vending
machines, and on á la carte lines. A similar study considered parents’ perceptions of health curricula issues in elementary schools (Murnan et al., 2006). Over 60% of parents rated the four following actions as being very important: schools not using food as a reward, students having enough time to eat school meals, school fundraising not selling candy, chips and soft drinks, and school meals including a variety of healthy foods.

Attitudes toward Health and Obesity

In terms of the SCT, people will formulate perceptions of health from a combination of their own personal beliefs and experiences and the social influences around them. Therefore, it is understandable how people learn to stigmatize obesity and develop anti-fat attitudes since these messages and attitudes are already quite prevalent in society. These perceptions are reinforced positively and negatively by personal experiences as well as vicarious learning through observing others, including gaining information about gender expectations and stereotypes. This may help explain some of the differences in how males and females look at health. Benyamini, Leventhal and Leventhal (2000) found that women think more holistically than men when assessing their health status, considering factors such as emotional distress and psychosomatic issues. In a study of Hungarian adolescents, Piko (2007) also noted that adolescents tend to consider a variety of well-being or health behaviors when evaluating their health. Pike found that most adolescents assessed their health as excellent or good, while males scored higher than females on self-perceived fitness. Lower perceptions of health were associated with poor academic performance,
living in a non-intact family, and SES self-assessment. Other significant predictors of self-perceived health were smoking, drug use, diet control, and sports activity.

Crossman, Sullivan and Benin (2006) executed a longitudinal study on the family environment and adolescents’ risk of obesity as young adults. They noted that excessive weight during adolescence; parental obesity and time spent in sedentary activities are important risk factors for female young adult overweight or obesity. Perceived parental care and concern, higher self esteem, and higher parental education are associated with decreased risk. As with physical inactivity, African American race is related to increased risk. The authors also commented that “weight status in adolescence more strongly predicts weight 6 years later for both males and females than the family environment variables” (p. 2262). Another study found that eighth grade students, particularly those who were African American, overweight, or at risk for overweight, frequently underestimated their weight (Morrissey, Whetstone, Cummings, & Owen, 2006). This is especially concerning considering these groups are more prone to obesity.

Gender

Girls are more prone to eating disorders and body dissatisfaction than boys (Mackey & La Greca, 2008; Vincent & McCabe, 2000), and body dissatisfaction is often so pervasive throughout females’ lives that it is considered normative (Hutchinson & Rapee, 2007; Keery et al., 2006). While body image issues are not absent in males, they have been given more attention in the female population. Evans (2006) described girls’ preoccupation with their
bodies as part of their gendered identities and societal pressure to always look good. This is consistent with the SCT and the notion of social learning that females learn from the media and observing others that they should be skinny and attractive. According to Zullig et al. (2006), “Societal pressures often influence females more than males to be concerned about their weight, resulting in a higher prevalence of distorted body image and more stringent weight control goals” (p. 87). Interestingly, Klaczynski et al. (2004) found that “women were more likely than men to believe that they did not have control over their weight and to have internalized cultural messages about the importance of thinness to personal success” (p. 315). Girls are also more likely to overestimate their weight while boys tend to underestimate how much they weigh (Strauss, 1999, c.f. Nystrom et al., 2005). Adams et al. (2000) reported that female fourth and seventh grade students expressed more concern about their weight than males and were also more likely to control their weight. They reported that seventh graders were more likely to describe themselves as overweight than fourth graders, and Hutchinson and Rapee’s (2007) study found that peer group similarities in eating behaviors already exist by grade 7. Finally, Knauss, Paxton, and Alsaker (2008) found that girls reported both higher body shame and surveillance than boys in a study of 14- to 16-year-old Swiss teens. McCabe and Ricciardelli (2006) noted that puberty may be especially difficult for girls because as their bodies develop they move away from the societal ideal female body shape (with an increase in fat body fat and broadening hips)
while boys develop more toward the societal ideal for men (with an increase in muscle definition and widening shoulders).

Evans (2006) asserted that girls are not only subject to male surveillance, but a constant comparison from other girls, evaluating one’s body against others’ physique. Beyond this pressure, she comments:

The presentation of the ideal ‘feminine’ body as not just slim but fit and toned means that exercise and sports participation is acceptable...not only do girls continue to feel pressure to construct and present their bodies in a way which they assume is pleasing to boys, but they also feel that they are being judged in the traditionally masculine domain of sports competency. (p. 557)

This creates a constant struggle for many girls who attempt to maintain their femininity while trying to convey that they are competent athletes, especially if they are not gifted at sports or prefer other activities. However, boys are by no means immune from the desire to impress the opposite sex. Allison et al.’s (2005) focus groups with adolescent boys revealed that some engaged in PA for fitness, strength, and stamina, as well as “to burn calories and feel good about themselves... they wanted to appear healthy and fit to impress girls” (p. 161). Additionally, Vincent and McCabe (2000) found that boys were more likely to make negative comments about each others’ weight than girls. Further, they reported that maternal and peer encouragement were instrumental in predicting binge eating and other
weight loss behaviors in boys, while both parental and peer discussion and encouragement of weight loss were predictors of disordered eating in girls.

Interestingly, despite Davison et al.’s (2007) findings that early maturity in females is associated with depression, weight-related maturity fears, and low self-worth, McCabe and Ricciardelli (2006) reported that BMI, pubertal development, “objective body size and whether or not they are in phase with their peers (as opposed to their feelings about pubertal development), are not predictors of health risk behaviors among adolescent girls” (p. 431), such as exercise dependence and drive for thinness. Though research on maturity status and PA has been inconclusive, (Sherar et al., 2008), Davison et al.’s findings that early maturation is associated with decreased PA levels may provide insight as to why girls who mature earlier are not especially likely to develop exercise dependence. However, McCabe and Ricciardelli found that depression, body dissatisfaction, and body image importance are the most important predictors of extreme weight change attitudes and behaviors and noted the protective role of positive affect and positive feelings about one’s body against these behaviors. As Moses, Banilivy, and Lifshitz (1989) reported, “many adolescent girls in high school are fearful of obesity independently of body weight” (p. 393). While Davison’s and McCabe and Ricciardelli’s studies involved younger adolescents, compared to the high school students in Moses et al.’s study, this suggests that the root of many weight-related issues is psychological. Since depression and increased self-consciousness are associated
with early maturity (Davison et al.), it may be helpful to further explore the effects of reaching puberty at a younger age on adolescent girls’ health.

**Ethnicity**

A number of studies have demonstrated that African Americans and Caucasians have different opinions on appropriate weight. Being overweight is more acceptable to African American adolescent girls than Caucasians (French, Story, Neumark-Sztainer, Downes, Resnick, & Blum, 1997), and African American girls perceive less weight concern from family and peers and also have lower personal weight concern (Adams et al., 2000; Mackey & La Greca, 2008; Thompson, Rafiroiu, & Sargent, 2003). Adams et al. reported that “blacks selected a significantly larger body size than white children for ideal adult and ideal opposite gender body size” (p. 79). Thomas, Moseley, Stallings, Nichols-English, and Wagner (2008) found similar results in their focus groups with obese African American and Caucasian women. Specifically, they acknowledged Black women’s disagreement with the “thin ideal” and personal and familial satisfaction with their weight. Adams and colleagues reported that in a study of fourth and seventh grade students, “Blacks selected a significantly larger body size than white children for ideal adult and ideal opposite gender adult body size” (p. 79). African-Americans and other minority cultures may not have the learned desire and appreciation for thinness that is prevalent among whites. They may also perceive fewer negative reinforcements for being heavy or obese. Because of this, they may place less importance on exercising or eating healthily (the person-to-behavior interaction
in the SCT). Fewer African American students reported they were trying to lose weight than Caucasian students (Adams et al.). Chao et al. (2008) found similar results, stating that white female high school students were more likely to practice weight control than Hispanics, who were in turn more likely than African-Americans. However, Austin et al. (2008) reported few significant differences existed in eating disorder symptoms among high school girls.

Davis and Davis (2008) conducted focus groups with obese African American children age 8 to 11. Results alluded that participants would like to lose weight though they may not have necessary support or intervention from families or schools. The children expressed that they would like to lose weight to escape teasing from peers, wear pretty or fashionable clothes, and to fit in with their peers. While some children mentioned physical activities, the theme of sedentary leisure activities prevailed. The authors noted, “Physical activities were described as those done at school once per week. These activities consisted of running around for about 30 minutes” (p. 161), and PA with family seemed limited. Additionally, the foods children discussed they often had for meals at home, school, and church, such as fried chicken, pizza, French fries, ice cream and cake, were generally high in fat and calories.

A survey of health attitudes and behaviors of African American adolescents age 12 to 17 found that females were more likely to eat a healthy diet (more balanced and less fat) than males, though males were more likely to have exercised within the past week (Lewis-Moss, Paschal, Redmond, Green, & Carmack, 2008). Alarmingly, only 17% of females said it
was extremely likely that they would exercise in the next three months, and 22% said it was extremely unlikely. Only 37% agreed that it was a very good idea to participate in aerobic exercise within the next three months. As far as diet, 34% of females thought it was a very good idea to eat a balanced diet. Also concerning was the 55% of boys and girls who reported not eating breakfast. These statistics convey a need to address these attitudes and behaviors in a way that resonates with specifically with this population.

Perceptions of weight

In a focus group study on perceptions of overweight and obesity, adolescents primarily acknowledged the negative outcomes of overweight in a psycho-social context but also recognized detrimental effects on physical health (Booth et al., 2008). Included in these negative outcomes were teasing, social exclusion, inability to participate in certain activities, and long-term health problems. Participants in an interview study of obese adults in Australia revealed that they “had experience stigma and discrimination as children... social isolation, being bullied or teased, and deliberate exclusion from recreational activities” (Thomas, Hyde, Karunaratne, Herbert, & Komesaroff, 2008; p. 323). They also mentioned mental health concerns such as low self-esteem, eating disorders, depression, and difficulties forming and maintaining relationships. Focus group discussions with overweight African-American children (age 9-13) and their parents had similar findings (Burnet et al., 2007). Child participants informed researchers that their overweight peers were “teased, depressed, socially isolated, and perceived as greedy and lazy” (p. 178). Klaczynski et al.
also discussed some of the stereotypes associated with obesity and mentioned that beliefs about its causes and correlates (such as that obesity is the result of a lack of self-control) may lead to stigmatization and discrimination. They added that “The Western emphasis on individualism suggests youths will view their peers’ weight and, indeed, their own weight as outcomes of personal efforts and failures to achieve the ‘thin ideal’” (p. 308).

Booth et al. (2008) reported that adolescents felt “people their age were concerned about being slim rather than a healthy weight” (p. 250). They referred to a “right size” and agreed that just because someone is skinny does not mean they are healthy. The parents of obese children in Burnet et al. (2007)’s study made similar comments, mentioning that some people are simply different sizes than others. However, participants also discussed health risks associated with both obesity and excessive thinness. Beyond appearance, teenagers in Booth et al.’s focus groups shared criteria to determine whether someone is a healthy weight, including energy levels, participation in and enjoyment of PA, eating habits, self esteem and motivation. They felt that the easy accessibility of energy-dense food was the primary barrier to achieving and maintaining a healthy weight though also mentioned environmental influences, such as lack of opportunities and facilities for PA and advertising and media.

Evans and colleagues surveyed California adolescents about perceptions of their peers’ health norms and the priority they place on preventive measures (Evans, Gilpin, Farkas, Shenassa, & Pierce, 1995). Eighty-five percent of teens perceived weight control to
be the most important issue to girls, over health behaviors such as avoiding drugs, not drinking and driving, and maintaining fitness. They placed the least importance on healthful eating, with only 8.5% reporting that it concerned their peers a lot. Interestingly, nearly 80% of the 12- to 13-year-olds “already thought that girls their own age cared a lot about controlling their weight” (p.1066). Detmar et al. (2006) conducted focus groups with 8- to 18-year-old children about health-related quality of life and found that they had similar health priorities. For adolescents of all ages, social functioning (e.g., relationships with peers) was the most important component of health-related quality of life, over physical and cognitive functioning.

Neumark-Sztainer, Story, Perry and Casey (1999) reported that in focus group discussions, adolescent boys often referenced eating certain foods in order to change their appearance did so to get taller or more muscular, or to gain or lose weight. Girls, however, only discussed it in terms of weight. These responses are similar to the reasons given by adolescents for engaging in PA (Tergerson & King, 2002) and are again consistent with the learned gender roles and ideal body types as illustrated by the SCT. In another focus group study, Croll, Neumark-Sztainer, and Story (2001) noted that “adolescent boys tended to focus more on energy and appetite when describing healthy eating, whereas girls tended to focus more on appearance as a motivator for healthy eating” (p. 196).
Eating disorders

The National Eating Disorders Screening Initiative suggested that nearly 15% of high school girls in the United States potentially have eating disorders, and more than 25% of girls demonstrate disordered eating behaviors (Austin et al., 2008). No noteworthy ethnic differences emerged among girls. In line with these statistics, Ackard, Fulkerson, and Neumark-Sztainer (2007) also found that alarmingly high numbers of middle and high school students demonstrate behaviors symptomatic of eating disorders despite lower numbers of clinical diagnoses. Similarly, Hoek and Van Hoeken (2003) reported that subclinical disorders are likely to be twice as prevalent as clinically diagnosed disorders.

Moses et al. (1989)’s study of high school girls’ perceptions of weight, dieting and nutrition illustrates how prevalent disordered eating and body image may be. In a sample of underweight, normal weight and overweight students, approximately half of the underweight girls were “extremely fearful” of being overweight and over a third were “preoccupied with body fat” (p. 393). Moreover, 20% of these girls were dieting, though just slightly over half (54%) of the overweight girls were on a diet. Normal weight and overweight girls had more realistic expectations of appropriate weight for height than underweight girls, though girls of all weights were equally fearful of obesity. Nutrition knowledge and weight control behaviors were also similar across girls of all weight statuses.

Nilsson, Abrahamsson, Torbiornsson, and Hägglöf (2007) interviewed recovered anorexics about their perspectives on why they initially developed eating disorders. The
most commonly cited factors were intrinsic, specifically high personal demands and perfection. This parallels other research stating that perfectionism has been associated with the development of eating disturbances and dieting behavior (Fairburn, Cooper, Doll, & Welch, 1999; Steiner, et al., 2003). Nilsson et al. also reported that themes such as dieting/body dissatisfaction, low self esteem, developmental crisis (e.g. growing up), family problems or demands, and socio-cultural matters (e.g. bullying, societal ideals, sports) emerged from their interviews.

Mental health

Johansson, Brunnberg, and Eriksson (2007) conducted interviews and focus groups with 13- and 16-year-old Swedish children. While they did not specifically address physical health, the conversations touched on a number of relevant topics, specifically from the older girls who were more insightful and had a better grasp of the concept of mental health. This group felt that family was the most important factor in mental health, which reinforces the support other researchers have found for family’s influence on PA and nutrition. In terms of negative emotions, they mentioned feeling tired and having little energy. They also said that not eating could be a result of negative emotions. Finally, they noted that both boys and girls could feel dissatisfied with their bodies, though “the girls are more concerned about their looks than boys, even though boys think about their muscles and hair” (p. 198). Boys agreed with the assessment that girls are more concerned about their appearance, also commenting that girls were nicer, calmer, more responsible and more mature than
boys. Overall, girls conveyed more of a negative affect than boys. The 13-year-olds did not seem to understand the concept as well, which the authors attribute to cognitive development and the still-developing ability to think about things beyond oneself.

Armstrong, Hill, and Secker (2000) also researched the meaning of mental health to adolescents. Like Johansson et al. (2007), they conducted both interviews and focus groups, though their participants were age 12 to 14 year olds from Scotland. One key difference in technique, however, was that Armstrong et al. asked the adolescents about their own experiences while Johansson et al. did not. While boys sometimes talked about sports achievements that made them feel good about themselves, it was more important for girls to feel good about their bodies. One participant said, “If you were physically fit you’d feel better about yourself instead of being fat” (p. 65). Family and other supportive adults were again mentioned as a key contributor to mental health, responsible for making younger people feel physically and emotionally safe. The participants mentioned that some people eat or sleep when they are upset. The authors indicated that some of the younger participants seemed confused about “mental health,” describing it in terms of diet and exercise or the absence of disease. Most importantly perhaps, both studies on mental health emphasized the significance of friends and family to adolescents.

Summary

Adolescence is a critical period of change and development. Girls face unique obstacles as their bodies are changing both physically and psychologically and these
changes often impact their health behaviors and general well-being. Females are at risk for developing a number of unhealthy habits during adolescence. In general, their levels of PA decrease and they more likely than boys to develop disordered eating and body image problems. Clearly, social interaction is an extremely important part of life for teens. Family remains a significant factor, often in supporting roles such as providing transportation or buying nutritious foods, though peers become increasingly influential and can have a strong impact on PA and diet behaviors. Because of their increased independence, new social roles, and shifting priorities, it is important to understand how girls perceive health and its significance in their lives.

The SCT helps to explain the important role of peers and social norms in the lives of adolescences. Concepts of social learning suggest that teenagers learn through vicarious reinforcement, or observing others, both in person and through the media, and witnessing the consequences of their actions, as well as through their own experiences and the positive and negative reinforcements they receive. Because adolescents do not readily see the negative outcomes of unhealthy behaviors they may be relatively unconcerned with them. However, they do see negative reinforcements for being overweight and consequently are willing to take action to lose weight or avoid becoming obese. The same system of reinforcements applies to PA and eating behaviors as well.
CHAPTER 3: METHODS

Purpose

The purpose of this research was to explore adolescent girls’ perceptions of physical activity (PA), eating, and physical health. It sought to gain further insight on how middle school girls understand health and how they interpret the importance of health behaviors such as PA and diet. Specifically, this study investigated influences on health behaviors (PA and diet) and perceptions of exercise and sport, eating nutritious foods, and physical health. These topics were explored through a series of focus groups conducted in two middle schools with sixth, seventh and eighth grade girls in central North Carolina.

Study Design

Four focus groups with a total of 28 sixth to eighth grade females were conducted in the fall of 2008. Two focus groups were conducted at each of two middle schools in central North Carolina, Main Street Middle School (MSMS) and Davidson Middle School (DMS). This study was approved by the North Carolina State University Institutional Review Board and the Wake County Public School’s Research Review Board. Participant ages ranged from 11 to 14 years (M = 12.18).

Qualitative research methods were selected to gain a deeper understanding of what adolescent girls think about PA and health. While various studies have examined these topics, there is a lack of literature regarding opinions on PA, eating behaviors and their association with physical health within the same sample. This was the rationale behind
gathering general information from the members of the population of interest rather than conduct a survey that could be generalized to a larger population. Qualitative methods are often used in exploratory research to gain an understanding of the meanings participants attach to certain topics or experiences (Henderson, 2006). This methodology allows participants to give rich descriptions free of constraints of a pre-imposed theoretical framework and may shed light on areas that researchers may not have considered (Veal, 2006). Moreover, the moderator can ask for clarity on ambiguous subjects. Barriball and White (1994) summarized the benefits of semi-structured interviews, noting that “they are well suited for the exploration of the perceptions and opinions of respondents regarding complex and sometimes sensitive issues and enable probing for more information and clarification of answers” (p. 330).

Krueger (1988) noted that one major advantage of focus groups is their social nature. Adolescent girls are socially oriented so this structure is likely to appeal to them. This structure also allows to the researcher to observe interactions and non-verbal cues within the group, which may be of interest (Veal, 2006). Engaging in conversation with their peers may be more comfortable than talking about potentially sensitive issues one-on-one with a stranger. Overlien, Aronsson and Hydén (2005) reported that focus groups are an appropriate method for discussing high-involvement topics, such as one’s body, with female adolescents. Participants may support each other when talking about sensitive issues and invoke deeper conversation (Overlien et al.). Additionally, if a participant does not wish to
comment on certain topic, he or she is not under as much pressure to do so. Other advantages of focus groups include low cost and the ability to involve several people in a relatively short period of time.

A preliminary meeting was held at MSMS with the vice principal and the sixth grade guidance counselor to discuss the logistics of implementing the focus groups. The counselor recommended that students should be separated by grade, stating that the sixth grade students may be intimidated in a group with older girls. She felt that it would not be a problem to mix seventh and eighth grade girls since developmentally they were more on the same level. Prior to the focus groups at DMS, a meeting was held with their assistant principal who agreed with this approach. During both of these meetings, the focus group moderator visited the rooms in which the focus groups would be held. Various issues were discussed, such as the best time periods, how participants would be recruited and whether snacks would be permitted.

Participants

At MSMS, the guidance counselor and vice principal selected and contacted girls they thought would be interested in talking about PA and health in a group setting. It was requested that they avoid any girls who may have or be at risk for an eating disorder or otherwise have issues discussing their eating or exercise habits. Otherwise, priority was placed on girls who were not involved in any sports, since one of the research objectives was to explore why girls were not engaging in PA. It was agreed that six to ten participants
would be an ideal target, keeping in line with standard guidelines for focus groups (Henderson, 2006; Veal, 2006) and allowing for the possibility that some of the girls may not show up. The same requests were made at DMS, though the assistant principal was not able to recruit enough interested girls that did not play sports. The guidance counselor at MSMS and the assistant principal at DMS distributed parental consent forms and collected the completed ones. At DMS, the assistant principal instructed participants to list any sports in which they were involved on their parental consent forms in an attempt to screen out girls who were already actively engaged in PA. Communications via email in the days leading up to the focus groups ensured that enough forms had been returned to hold the sessions.

Procedure

The primary researcher, a Caucasian female, served as the moderator for the focus groups. She had previous experience in working with adolescent girls and in interviewing, which was advantageous in establishing rapport with participants. A female assistant was also present at each session to take notes and help the moderator with setting up the room and snacks. Whenever possible, assistants closer in age to the study participants were recruited to help in order to enhance participants’ comfort. The same assistant, an African-American doctoral student in Parks, Recreation and Tourism Management (PRTM), attended both groups at MSMS. This student was not available to help at the DMS focus groups. A graduate student in PRTM assisted with the eighth grade group, and a female faculty member assisted with the seventh grade group at DMS. Healthier snacks (e.g., fruit,
fruit juice, raw vegetables, crackers) were served at every focus group. Focus groups lasted between 75 and 90 minutes and each was recorded with two digital recorders.

Participants completed assent forms at the beginning of each focus group. They were also instructed to make name cards for identification. A variety of markers and either plain stickers or cardstock were available and several of the girls put considerable effort into creating their name tags. Next, an icebreaker was done, designed to get everyone thinking about health and comfortable with the group. The icebreaker was adapted from an element of a focus group study with adolescent girls by Brooks and Magnusson (2007), who used magazine images of youth participating in PA or sport from teen magazines as a point of conversation. Given the influence of media and magazines on young females (Turner et al., 2008), this mechanism seemed to be something the girls would receive well. For this study, the activity was done as an icebreaker and information stated by participants was not included in any data analysis. Magazines were spread across the table and participants were directed to look through them and find a picture that reminded them of health in one way or another. Magazines were all borrowed from the schools’ media centers to ensure they would be age-appropriate and without controversial content. After allowing five to ten minutes to get snacks and look through the magazines, everyone showed their picture to the group and shared their name and something about themselves, generally a hobby. The focus group assistant and moderator then introduced themselves and provided some ground rules for the remainder of the focus group.
One of the primary concerns associated with focus groups is the potential for one or two participants to dominate the conversation (Henderson, 2006). While inevitably some girls were more talkative than others, the moderator consciously attempted to involve everyone without forcing girls into a discussion with which they were not comfortable. Participants were encouraged to ask questions at any time, which they often did. These questions ranged from what sports the moderator and assistant enjoyed to more serious inquiries about eating disorders, cutting, and other behavioral concerns. Additional issues that emerged were everyone’s desire to talk at once and the group getting sidetracked. These problems were addressed immediately when they occurred and in general were kept to a minimum. The focus groups at MSMS lasted between an hour and fifteen minutes to an hour and a half, while the DMS focus groups lasted approximately one hour each.

The first two focus groups were conducted at MSMS, after school in the school’s media center. MSMS has an activity bus that was available to take the girls home after the focus group. Because there was approximately a two hour time frame between the end of school and the time the activity bus left, the pace of the MSMS groups was more relaxed than at DMS. The first of the MSMS sessions was held with sixth grade girls. The guidance counselor had nine girls who had returned consent forms but only six were present. The participants in the second focus group at MSMS were all seventh and eighth grade females. See Table 1 for participant characteristics.
The final two focus groups were held on the same day in a conference room at DMS. The assistant principal preferred the focus groups were conducted during the day so participants would not need to worry about getting rides home from school. She worked with a health teacher who agreed to let students miss her class to participate in the focus groups. Because of these schedule limitations, the sessions were conducted back to back with the first one early in the morning and the second held mid-morning. Also, because students were taken out of single-grade classes, the older group only consisted of eighth grade students. They were permitted to miss part of their following classes if necessary, though some students were concerned about missing class or wanted to go to lunch. The DMS sessions were held under more time pressure and consequently more effort was taken to stay focused and proceed through the entire set of questions in the allotted time.

A semi-structured interview procedure was used. This technique allows for flexibility in the conversation and the opportunity to follow up on specific comments of interest. It also gives participants the freedom to discuss relevant subjects the researcher had not considered previously. The questions on the interview guide were approved by the researcher’s thesis committee. The interview guide (see Appendix A) was informally adhered to in every focus group and allowed for follow up whenever another topic of interest was introduced. The moderator transcribed each session verbatim shortly after it was conducted, adding notes about individual participant characteristics and the group as a whole. All participants’ names were then changed to pseudonyms.
Data Analysis

After transcription, data were entered into ATLAS.ti 5.2 and open coded to identify concepts. Next, axial coding was done to organize the concepts into categories. Many of the open codes overlapped several categories. ATLAS.ti was used to create documents that included all the quotes affiliated with a particular category. Constant comparison was used to compare these documents to the focus group transcripts to assess the prevalence of a theme across groups. A list of themes was derived, and these themes were then collapsed into four broader themes. Meetings were held with committee members throughout the process to discuss coding and development and organization of themes.

The researchers received a considerable amount of positive feedback from the participants and liaisons at the schools, the vice principal and counselor at MSMS and the assistant principal at DMS. Many of the girls asked when this was going to be done again and seemed disappointed when they were told it was a one-time occurrence.
Table 1
*Characteristics of Participants*

<table>
<thead>
<tr>
<th>Name</th>
<th>Grade</th>
<th>Age</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Sandra</td>
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<td>12</td>
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<td>Chanique</td>
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<td>12</td>
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</tr>
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</tr>
<tr>
<td>Dana</td>
<td>6</td>
<td>11</td>
<td>African-American</td>
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<tr>
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<td></td>
<td></td>
</tr>
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<tr>
<td>Bianca</td>
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</tr>
<tr>
<td>Trista</td>
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<td>African-American</td>
</tr>
<tr>
<td>Porsche</td>
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<td>Carmen</td>
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<tr>
<td><strong>Davidson Middle School Sixth Grade Group</strong></td>
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<tr>
<td>Diandra</td>
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</table>
CHAPTER 4: RESULTS

Four themes emerged from the data analysis: 1) perceptions of health; 2) social norms; 3) family; and 4) enjoyment. The girls’ preferences for and attitudes toward physical activity (PA) and nutrition were interwoven throughout these themes. Concepts characteristic of adolescence such as shifting priorities and increasing levels of peer influence were also prevalent in the focus group discussions as well as a general fear of obesity. Girls thought about health primarily in a physical sense, in terms of PA and diet. Health was something they might think about from time to time, but for the majority of the girls it was not that high of a priority. While some of the younger girls spoke often of their families, the increasing value of peer relationships with maturity was evident in many aspects of their lives. Girls generally discussed family in relation to intentional activities, such as vacations or family gatherings, or in a supervisory role, such as facilitating health behaviors (e.g., having fruit available, sport registration). A number of social norms were implied, including conceptualizations of femininity, acceptable eating behaviors, and common leisure activities. Enjoyment was a critical factor in dictating both PA and eating behaviors. Overall, their appearance (or being skinny) and enjoyment of the immediate benefits of exercise or eating healthy foods were more important and more than long term health benefits from these behaviors.
Perceptions of Health

Definition of health

Most girls defined health as exercising or staying active, eating healthy foods, and generally taking care of yourself. Other participants added that health meant staying in shape, getting enough sleep, having sweets in moderation, and personal hygiene. Girls’ perceptions and health behaviors were often impacted by personal experiences, word of mouth, and the media. They felt that some girls were more concerned with health than others, especially those who were preoccupied with being skinny. Girls discussed skipping meals as a weight loss mechanism, and while they recognized that you need to eat food to have energy for the things you want to do, sometimes it was more important to be thin.

Older girls felt that health was becoming more significant as they became increasingly self-conscious and independent. The sixth grade girls at Main Street Middle School (MSMS) derived their definitions partially from topics they discussed in health class at school:

TONYA: I think it’s taking care of yourself. Because you have to exercise and eat healthy foods... And get enough sleep. Because at Main Street, on Mondays, and Wednesdays in gym class, we have P.E. but we also have health, so you learn about different things... with health and it’s kind of fun.

EMMA: Yeah, the last thing we learned in P.E. was about asthma.

TONYA: Yeah, we learned about, um, sun. About, sun... rays.
Porsche, a seventh grader at MSMS, provided more specific recommendations, “to eat organized but also to jog, and run and to eat a lot of salads,” expressing that she was not concerned enough to do those things. One participant mentioned during the icebreaker that having fun is a part of fitness, though in general girls did not consider mental or emotional health in their definitions. This could be a result of the context of the focus group and its emphasis on PA and nutrition. However, Diandra, an African-American eighth grade student from Davidson Middle School (DMS), stressed the importance of being yourself:

I think being healthy is not like, trying to make yourself be like other people. You know, like some models how they super are skinny, if you’re just healthy and you’re proud of yourself and you do the right thing that’s, like, a healthy lifestyle. If you just eat right and basically exercise and stuff.

The seventh and eighth grade group at MSMS believed that girls were primarily concerned with health to avoid getting fat and being teased:

Moderator: Why do you think girls are concerned with being healthy?

TRISTA: So they won’t get picked on.

[agreement]

ELIZABETH: ‘Cause girls think that if they’re, like, fat, they’ll get picked on a lot more.

BIANCA: It is true though.

BIANCA: ‘Cause I have, like, overweight friends and they tell me they get picked on at school for no reason, just ‘cause they’re overweight.
Similarly, Mercedes’ (an African-American sixth grader from DMS) immediate reaction was that fat is not healthy and can lead to future medical problems. Her comment also implied that some people, particularly in minority cultures, may be more accepting of a variety of body shapes:

Moderator: What does health mean to you?

MERCEDES: It means a lot ‘cause you don’t want to grow up fat!

[laughter]

MERCEDES: Thick is good but you don’t want to, like, overweight is... you might have health problems and stuff.

Other girls also spoke about future consequences of poor health habits. Many had first-hand experience with certain diseases and affected family members. In some cases, this influenced them to change their own behavior. They nearly always spoke of changing dietary habits and not physical activity (PA). One girl mentioned that she was trying to help her father lose weight by exercising with him, but overall, it was apparent that girls perceived poor diets to cause medical problems. On the other hand, Aisha (sixth grade, DMS) felt that exercise was important, but not necessarily in terms of disease prevention. While some girls thought of relatives who were affected by poor dietary habits, she did not see the same effects on her peers:

Well, really, I don’t think that eating healthy really matters but I think that eating healthy is good for you but exercising and taking care of yourself is better because I
know this one girl who’s like, really, really skinny. She’s, like, a lot skinnier than me and she doesn’t get fat at all.

Similarly to Mercedes’ comment, Tonya mentioned getting fat as well, while she and other girls also talked about more specific conditions:

TONYA (sixth grade, MSMS): Well, if you don’t eat healthy, the effects are gonna play on you, and it will start showing on you. And, not in a bad way, but you will get fat. Or bigger than you’re supposed to be.

...

DIANDRA (eighth grade, DMS): Um, eating bad at a young age, it can catch up to you and especially if it runs in your family. Either some people might have diabetes, or high blood pressure or anything like that. So I think it’s good to learn from it now so when you get older you don’t have to take a lot of medication or have any bad heart problems. So you kind of like understand... you don’t really, like, cut, like just stop eating fast food but like, don’t eat it as much and also, eat healthy. You know, like instead of having chips you can grab, like, a fruit or something like that.

KRISTIN: I think about, like, eating the wrong things because it, like, runs in my family, like being overweight and stuff, so... but like, exercise, I don’t really think about anything because I get, like, a lot of exercise, especially with being on teams for school and stuff.

...
TONYA (sixth grade, MSMS): Because my grandfather, he ate a lot of sugar – he ate it plain, with, like, cubes...and he, everybody kept on warning him and he never listened and later in life, around like, 60, he got diabetes.

Significance of health

Participants agreed that some girls are more concerned with health than others. They explained that some girls think that skinny equals healthy or they may be willing to sacrifice feeling well to look good. Much of the discussion on this topic revolved around stories about peers who skipped meals or starved themselves and suspicion of eating disorders. Other girls, however, simply did not care about health regardless of their size. Jacklyn (sixth grade, DMS) felt that most girls thought health was annoying because they would prefer to eat junk food, though others disagreed. Many participants also talked about someone they knew who could eat whatever they wanted but not gain any weight. They often attributed this to a high metabolism but warned of future repercussions:

DIANDRA (eighth grade, DMS): I have a friend, she’s... like, she’s small. Not small but, like, skinny, and she eats, like, it’s ridiculous. We went to the fair and she had like a fried Twinkie, Snickers bar... she had a foot-long... I was like, uuhh, you don’t need a foot-long so I had half of it. Like, when she gets older, she’s gonna look like a Oompha Loompha. She eats all the time. Like she could eat a whole box of Twinkies. KRISTIN: Like, when I was little I used to like, eat and eat and eat and not gain anything... but now... I probably would.
MEGHAN (eighth grade, DMS): Yeah, if you have like, a high metabolism or whatever, then like, you know, it’s a lot easier ‘cause all my friends, like, they don’t really do a lot of sports or anything like that and they stay, like, really skinny. Like, my brother’s friend, he eats, like, potato chips for dinner. Like his parents don’t really care or anything and he’s like, a stick. So like, he must have, like, a really, really high metabolism. He doesn’t really do anything but he just stays skinny.

In addition to metabolism, the girls discussed that some people are just naturally bigger than others. Essentially, they felt that some factors, such as genetics, were out of an individual’s control but implied there was an element of responsibility to take care of yourself and your body regardless. In the case of overweight children for example, the girls expressed that parents should be supportive and encouraging of weight control behaviors. Emma, a Caucasian sixth grade student from MSMS, explained how not everyone in her family is built the same way:

Yeah, my sister, she’s like, naturally skinny and she’s like, really small bones. So when I was little, I thought I would be skinnier than her, but... but now I realize I have my dad’s build, and he has big bones. My mom has small bones. It’s kinda like... ‘cause she eats a lot, but she’s still active too...
Diandra (eighth grade, DMS) cautioned that a healthy lifestyle does not guarantee good health. She also mentioned that she would like to learn more about hereditary factors in school:

Like, hereditary. Uh, just going over it, like they say it can be, but I would like to know, how is it, kinda... you know, like some people may have a healthy diet and then later when they get older they might have a heart problem or something like that... And like, I don’t understand, how can it affect someone and someone who probably doesn’t do the right things, it doesn’t affect them.

The older girls expressed that they became more concerned with health as they matured and became more self-conscious. For example, Diandra (eighth grade, DMS) explained how girls begin to think more about their futures as they progress through the middle school years:

I did not care in sixth grade. Like sixth grade, fresh out of elementary... you get in eighth grade, you start thinking more about high school, college... ‘cause even in high school it’ll be like, you get a job, and you get a car, so like, you gotta stay healthy. Especially in college ‘cause you’re more, like, independent ‘cause you don’t have Mom and Dad there so you gotta know what to do. So you go to college, you’re kinda on your own. So it kinda helps you, being younger and understanding... sixth grade, you still got the same habits as elementary and once you get older you learn from it.
Some girls spoke of families whose diets they deemed to be unusually healthy. One girl mentioned that her family tried to eat organic foods whenever they could, but the other girls in this group did not feel that eating organic food was a priority. Another participant described in detail how her family’s primary source of meat is the animals for which they hunt.

_Eating disorders_

While none of the girls explicitly admitted to having an eating disorder, two hinted at disordered eating behavior in the past. One vaguely discussed being preoccupied with exercising to balance food she had eaten over the past summer, adding that school work prevents her from being as active as she might like. Another explained that before reaching puberty she ate lots of biscuits and hamburgers in attempt to grow without gaining weight. Porsche, an eighth grade African-American student at MSMS, described seeing an old picture of herself that motivated her to make some changes:

PORSCHE: ‘Cause sometimes I used to be like, I’m too fat so I’m not gonna eat today.

So I just stopped eating.

...

PORSCHE: I was really, really fat. I was big, ugh... at my house, there’s a lot of steps.

There’s a LOT of them.

[laughter]
PORSCHE: So I ran up and down the steps. And like, it’s like three rows of steps and it’s like five steps up each row... oh my lord. And we stay on the third floor, I was like, ooohhh. By the time I get to my house my legs be sore so bad. But that’s how. And um, start eating salads.

Energy balance

Most girls seemed to understand that you need food in order to have energy for the things you wanted to do yet they understood that girls were often motivated to lose weight by starving themselves. However, they also emphasized how you need to exercise in order to work off the food you ate. Some girls mentioned bulimia or excessive exercise though they seemed to be most aware of peers who skipped meals. Again, the idea that skinny does not mean healthy arose though metabolism came into play as a confounding factor. The eighth graders at MSMS discussed how someone can appear too skinny but does not necessarily have an eating disorder:

BIANCA: ‘Cause you don’t have to be really skinny to be healthy. Some skinny people are very unhealthy.

ELIZABETH: Yeah.

CARMEN: Like, my friend Mary, she’s like, tiny. She’s like, 89 pounds.

CARMEN: And she’s tiny. And she’s not, like, healthy. She’s really skinny. Like, she’s not, like... People can tell that she’s not healthy because she’s so skinny.
MOLLY: And she said that she can’t lift over, like, 50 pounds ‘cause she like, she has not enough muscle.

BIANCA: Wooow... that is sad. That is sad. Some anorexic people... I don’t like anorexic people.

MOLLY: She’s not anorexic but she’s like really, really skinny.

CARMEN: She eats. She eats a lot...

MOLLY: She eats a lot but she doesn’t gain weight.

BIANCA: She got a high metabolism.

Just as the girls acknowledged that a poor diet could lead to disease, they also recognized that not eating sufficiently could have detrimental consequences. Oftentimes this knowledge was passed on in the form of stories about something that happened to someone they knew of, as the eighth graders at DMS discussed:

MEGHAN: Yeah, my friend’s sister [has an eating disorder] or whatever and you don’t think about how, like, bad it is but it really is. Like it can affect a lot of things in your future and stuff and it can be very unhealthy... and I think she’s like, really skinny but she started doing all that stuff and it can really, like, give you a lot of health issues.

ALEXIS: Like, I remember my mom had a cousin who was like, she was like anorexic and she couldn’t have any kids.
SAVANNAH: Yeah, you can’t just do that and then decide, oh, I think I’ll eat a whole meal today. Your stomach can’t take it.

Interestingly, the same group (eighth grade, DMS) agreed that it was important for them to negate the food they ate with exercise and how they felt guilty if they ate junk food:

MEGHAN: It’s harder to, like, stay in shape if you’re, if you just, like, if you’re running track and then you come home and you’re eating a bunch of snacks... you feel like, well that was completely pointless. So you especially have to watch what you eat.

KRISTIN: Yeah, it’s really hard, like when you come home from practice and you’re, like, starving but then you like eat, like, a salad, that doesn’t fill me up. So you eat, like, bad stuff, like chips and stuff, and then you feel like, well, that was totally pointless.

Porsche (eighth grade, MSMS) used a story about her cousin to explain why you should balance food intake and exercise:

PORSCHE: Well, my cousin, I’m not picking on her or anything, but she is so fat. She can’t even breathe when she walks up steps. She just like [makes heavy breathing sounds] trying to breathe. And I be like, girl... why?

[laughter]

PORSCHE: And I be like, are you okay? But it’s not funny, but her mama... there’s certain people that’s fat and there’s certain people that’s not fat. My uncle and aunt, they let her just eat anything she want, anytime of the night she can get up like 3
o’clock in the morning just fix her something to eat. No, you don’t do that. You don’t

go back to sleep once you eat you supposed to go do something.

[agreement]

PORSCHE: ...’cause I learned that like, when you eat and go do something, go run or

something, ‘cause if you go back to sleep, all that is building up and it’s goin’ be...

BIANCA: It’s gonna be fat.

PORSCHE: Yes. So, she just be eatin’, I be like, girrrl...

Some of the groups also described the cyclical pattern of energy from eating to exercising

and how different foods affect your body differently:

YESSENIA (sixth grade, DMS): Whenever I play a lot, like for a long time, I get really

hungry and sometimes I’ll feel like having a lot to eat ‘cause I’m so hungry so

whenever I do that I get tired and then I feel like I wanna play again.

...

LINDSAY: Well, like, if I don’t eat a snack before gymnastics, like, I’ll get really hungry

and then for the rest of the time I’ll get really dizzy ‘cause I don’t really have

anything, any energy, so then, yeah.

...

JACKLYN (sixth grade, DMS): Umm, I think that some foods give you energy to do all

the things that you need to do in a day and some make you kind of like Erica said, a
couch potato. Uh, maybe some unhealthy foods, like she said, some of the McDonald’s foods but like, fruits and vegetables would be good.

... 

ALEXIS (eighth grade, DMS): Well you need it to get energy so you can go out and do a sport or like, physical activities to do and like, if you don’t eat you’ll, like, pass out or something so you need to eat and you need to eat healthy food because the unhealthy food will just kind of, like, backfire.

Dietary and exercise choices

A few of the girls discussed how they changed or restricted things in their diet to be healthier. Some had specific reasons, such as to improve sports performance, lower cholesterol, or prevent cavities. While they understood that things like sugar and cholesterol were “bad,” the girls could generally not articulate why or explain their negative impact. Often, it appeared that girls had simply been told by someone that a certain food item (or element, such as sugar) was bad or caused a specific condition, and they accepted this information as factual. For example, Trista attributed her high cholesterol to eating at Bojangles too much:

I think it’s important, so like, ‘cause like, I had a high cholesterol and I used to eat, like, Bojangles all the time... and I used to eat it a lot so I had like, high cholesterol, so I had to stop eating so much fast food.
Sometimes this was the result of a parental influence, such as parents instructing their daughters to restrict something in their diets, or girls noticing a negative habit of their parents and trying to avoid doing the same thing. Brittany and Alexis both felt they should cut back on sugar but did not provide reasons why or how this would benefit them. Tonya, on the other hand, tried to reduce sugar in her diet to prevent cavities:

TONYA (sixth grade, MSMS): I did that because I stopped drinking, or eating, a ton of candy. And now I only eat it when my dad gives me money for it... my mom limits me on things so, like, I only drink sodas when I'm going to a party. Other than that I don’t really think that I eat a lot of sweets because that, because of my cavities. I've gotten two, so ever since then I don’t eat a lot because I don’t want to mess my teeth up any more.

...

BRITTANY (eighth grade, DMS): When I do track in the spring, if I do track in the spring, I have to, like, focus on the sport and cut down on sugar.

Moderator: Why do you cut down on sugar?

BRITTANY: ‘Cause... it’s bad?

Moderator: Did someone tell you that you should cut down on sugar?

BRITTANY: Well, my dad eats, like, doughnuts, like, [giggling] every Friday so I’ll have to, like, force myself not to...

...
ALEXIS (eighth grade, DMS): Yeah, in sixth grade I’m like... now, I’m like, really concerned... like about eating... like my parents – all my family says, well, a lot of them, says I eat a lot of sugar but like, they told me that in sixth grade. But I didn’t really care in sixth grade. I didn’t think I ate a lot but now my grandma’s saying if I stop I’ll have like, withdrawal symptoms.

[laughter]

ALEXIS: Yeah, I mean, I don’t think I eat a whole lot, but I try to like, stop eating it so much, but in sixth grade I did not care like at all, but now I don’t think I eat as much as I did in sixth grade because I try to cut back on it.

Savannah (eighth grade, DMS), a dedicated swimmer, recognized that protein and carbohydrates were important for energy:

I have to eat, like, protein and carbs before [swim practice]. Otherwise I don’t make it the whole way through practice. And then when I get home my mom always has, like, meat for me to eat.

The girls also mentioned some other factors that influenced their decisions to eat certain foods. Some girls thought about their weight or as mentioned earlier, not eating so much that they negated any positive effects of their workouts. The sixth graders at DMS explicitly mentioned that you could look at a nutrition label or think about the food pyramid to determine how healthy a food is:

JACKLYN: Um, well, I either think about how good it tastes and how healthy it is.
Moderator: Okay. How do you decide if a food is healthy or not?

JACKLYN: Um, well, I guess you could look on the little packet thingy.

Moderator: On the label?

JACKLYN: Yeah.

Moderator: Do you guys look at those a lot?

ERICA: Yeah.

[agreement]

Moderator: So, the rest of you, do you have any way to decide what makes a food healthy?

MERCEDES: The food pyramid.

Moderator: Do you think about the food pyramid when you’re making food choices?

MERCEDES: Not really.

[laughter]

SHANA: I think whether it’s like, a fruit or a vegetable.

MERCEDES: If you’re allergic to some food.

LINDSAY: ...think about fat, like how much saturated fat is in a certain food.

A lot of girls learned about health through word of mouth. This information comes from family members, peers, teachers, and other sources, including the internet, television, and movies. They noticed that models were very skinny and commented that a lot of girls think they should aspire to that standard as well. There is a considerable possibility that
somewhere along the line children and adults alike are receiving conflicting stories or misinformation about their health. Dana (sixth grade, MSMS) explained that she is scared of bugs as a result of something she saw online, and Mercedes (sixth grade, DMS) learned about bulimia from a movie:

DANA: I’m afraid of bugs, only just because, um, my mom got this, like, three bites right here...so we had to clean up the backyard and when I came back in she had these three bugs, or these bites on her arm or something. So when she was looking through the computer to see what it could have been, one of them said it could have been, might have been skin cancer or something. It kind of looked the same but it wasn’t.

...  

MERCEDES: Or when they like, I saw in this movie that when they eat or something they put a toothbrush down their throat and it’ll make them throw up.

While some girls changed their diets or PA behaviors with the intent of improving their health it seemed the majority of girls did so in order to lose weight or stay in shape. This, in combination with generally negative attitudes toward obesity, presents the notion of a common fear of being fat. However, girls had generally positive attitudes about food and freely discussed their preferences. Otherwise, girls perceived health to be important in preventing future disease, though this was not necessarily an immediate concern of theirs. They discussed metabolism, particular in relation to girls who could eat as much as they
wanted and not gain weight, and genetic factors (e.g., some people’s bodies were naturally bigger than others). Diet seemed to be a stronger contributor to disease and obesity rather than a lack of PA.

**Social Norms**

Social and societal norms dictated many aspects of middle school girls’ lives. They prescribed the correct way to look (skinny), the appropriate forms of communication (cell phone, text, and MySpace), and the right things to eat (e.g., pizza at sleepovers). Girls seemed to struggle with pressure to fulfill these expectations at the same time their bodies and identities were evolving. School was also becoming more demanding. They described pressure to be perfect and how peers could be judgmental and mean. Familial norms existed as well, and these were sometimes in conflict with peer norms. Girls’ interest in boys was growing, and some discussed the disparities in sports for boys compared to girls.

**Leisure time preferences**

Girls’ top choices for leisure time activities, aside from PA, were identical across the focus groups. They enjoyed going to the mall, hanging out with friends, using the computer, and talking and texting on their phones. As Megan (eighth grade, DMS) said, “We like to go, like, to the movies and [the mall] and just kinda like, hang out with our friends, and stuff like that. Like, text and everything like that. And definitely MySpace.” Several girls mentioned enjoying appearance-related activities, such as doing their hair or nails. Trista (eighth grade, MSMS) put it simply: “Most girls like to look nice.” Boys were also gaining their interest:
TONYA (sixth grade, MSMS): We like... we like playing with clothes, and hair, and nail polish. We like experimenting with different things... and a ton of us – not me, not me – I’m not saying anyone here – are getting interested in BOYS.

[laughter]

DANA: My best friend, well, her parents let her go on a, um, like, date, but, um, we have a park in our neighborhood and that’s where she went with her, like, like, “boyfriend.”

[laughter and giggling]

DANA: But that’s it, like Tonya said, they’re more interested in boys.

Drawing, reading, watching television or movies, traveling, and playing with pets were also popular among the girls. Other activities mentioned were singing, hunting, crocheting, knitting, and sewing. Several girls talked about summer camp, and birthday parties and sleepovers were quite important. Many stories emerged from these conversations, usually about something crazy or particularly exciting that happened:

DANA (sixth grade, MSMS): I don’t think you guys should try this, but um, we did it once, but like, um, at camp, well, um, the guys started it but – we were separated then – but um, the guys were, um, it was the last day of camp and they were, um, thinking of what to do and they were so bored so they went around breaking everything and finally somebody took their mattress off their bed and, um, put it on
stairs. They went mattress sliding and it was so fun. The girls went over there too. It was so fun.

EMMA: The camp I went to...like they had two cabins right side by side, and Cabin 3 and 4, and Cabin 4 took Cabin 3’s beds, and they put them on the roof...

The eighth graders at MSMS discussed birthday parties in detail. It was understood that your birthday was your special day where it was all about you. The girls were especially excited about their Sweet 16 parties, which they were already planning:

MODERATOR: What do you do to celebrate your birthdays?

PORSCHE: I go shopping, get my nails done... And I make sure I have my hair did...

[My mom was] like, what you want, a limo to ride you around, get you some’in to eat or do you want the skating rink? I wasn’t thinking, I was like, the skating rink. I want the limo. I wants the limo.

TRISTA: I can’t get a limo ‘cause my mom said if I get one now I can’t get one when I’m 16 so...

BIANCA: I can’t wait ‘til my birthday, when I turn 16... that’s gonna be the biggest party ever...my mom better save that money!

PORSCHE: For my birthday, it’s just me and my mom. We go shopping, and then it’s like, an hour or two, it’ll be... and my mom will have her own cake for me, it’d be a Sponge Bob cake...
PORSCHE: Last year, I remember, I had a Sponge Bob cake... it was my own special cake – lemon – and it had the yellow icing and all a’that. It was my special cake. It was my special day. So I had all that, and I went out to eat... Pizza Inn or Cici’s... and we brought the cake in and all my friends was with me and we just ate and I was like, I’m full, and I wanna go home. And sleep.

[laughter]

TRISTA: Like, on my birthdays, like, it’s all about me...

PORSCHE: Yes...

TRISTA: Like, everything has to be... nice... and need to be how I want it or it’s not gonna be good.

PORSCHE: I just get an attitude like, why do you do that?

BIANCA: I was having my hair done and my cousin went to my party... and I was like, why you late?! It’s my party, not your’s. You be here when I tell you to... I was mad.

Beyond birthdays being your special day, parties and sleepovers usually had several common elements. Pizza and popcorn were the foods of choice. Girls talked, watched movies, and made prank calls to boys. Some of them liked telling scary stories, and they enjoyed simply “acting crazy” with friends or relatives:

TONYA (sixth grade, MSMS): I like hanging out with my cousins. Because we talk, and we dance in my room and we just act all crazy.
AISHA: My biggest sister, usually she’ll likes to play Truth or Dare, so me... so this one time she put everything that’s on our cabinets in one bowl and she asked me, which one do you drink – you can drink this, which was so, uhnnhh – you’ll drink this, you’ll drink out of the toilet, or you’ll drink out of the plant. [pause] I picked the plant, and my sister, she drunk out of the bowl, and my friend, she was crazy enough to drink out of the toilet.

_Shifting priorities_

A few of the girls talked about some of the ways their lives had changed within the past couple years. They discussed increasing pressure from school and thinking about their futures more. Some participants had to give up sports to concentrate on school.

ALEXIS (eighth grade, DMS): Well, because like, you have, now you have school and you have to care about your grades and so you don’t have all the free time... like I don’t have to study and do homework and all that and like, I want to get good grades but... I mean, it would be nice if I could do both, but... Like I still do soccer though, so... I get at least some exercise in there.

Dana (Hispanic, sixth grade, MSMS) explained that she used to think playing sports made you cool, but now she realizes that sometimes you have to concentrate on more important things, like school:

DANA: I think that, some, like some people say that they’re on a soccer team and people think that like, they’re really cool and so usually, like when I was in first
grade, I was like, oh yeah, I was on a soccer team once, but I really wasn’t ‘cause I wanted to be the cool one there. But that was then and finally, I kinda, like, learned that it was just that you were on a soccer team. It doesn’t really matter, because, I mean, like, I think that sports are pretty cool, like I kinda wanna be in a sport but I can’t sometimes because there’s like schoolwork and all that stuff.

Trista (seventh grade, MSMS) indicated that she was becoming more selective with food choices as she got older. She noted, “It seem like every year I eat less and less school foods ‘cause... I used to eat hot dogs in elementary school but I would not eat hot dogs ‘cause they’re nasty…”

The eighth graders at DMS complained about overprotective parents, something that was not mentioned in any of the other groups. This may be indicative of increasing independence and shifting importance from family to peers:

ALEXIS: I think it’s like, a lot about freedom and all... like with that you can be exposed to more, like, movies and magazines and stuff like that. But like, in sixth grade I wasn’t allowed to do any of that, to see any of those movies and now I am... well, I mean, not all of them but more than when I was in sixth grade.

... 

KAMECIA: Yeah, my dad, he’s like, overprotective... if I’m like, going to the mall with one of my friends he’ll be like, when are you coming back? What time are you coming back? How are you getting back? I was like, [big sigh].
**Femininity**

As female adolescents encounter puberty, they may feel more defined (or limited) by their feminine identity. This is evident by girls’ increased interest in appearance- and personal care-based activities, such as playing with make-up and shopping. It is also common for girls to compare themselves with and gossip one another, as several of the girls mentioned. Girls may feel pressure to aspire toward a feminine ideal. Many focus group participants expressed that lots of girls they knew wanted to be skinny. They mentioned models as a source of this desire, though sometimes the girls also commented that models were not a realistic or healthy weight. They also felt that despite this desire to be thin, girls prioritized other things such as their social activities higher than their health:

GWENYTH (a Hispanic sixth grade student from DMS): There’s not that many girls playing sports ‘cause they think it’s not that important. They think it’s more important, the other stuff, not exercising or eating right. They think it’s not that important.

Gwenyth also described appearance-based tension that may exist among girls:

Some of the other girls think that they’re, um, fat and they wanna be like the other girls, the more skinny girls. They think they’re all that and they like, make fun of the other girls and stuff... And then the skinny girls, they don’t think about their health, only like, how they dress and how thin they are.
Savannah (Caucasian, eighth grade, DMS) explained how some girls may be overwhelmed by pressure to have a perfect body, and consequently how this may deter them from sports or working out:

I think when some girls think of exercise the first image that pops into their head is like, the perfect sports girl who’s like, skinny and muscular and goes to the gym everyday... They’re just like, I’ll never be like that...

Other girls further described increasing self-consciousness and peer pressure. The sixth graders at MSMS explicated how these things could cause girls to skip meals or otherwise compromise their health:

DANA: Yeah, ‘cause some people think that they might be, like, ugly or fat, ‘cause like, my best friend, she said that about herself. And I was like, you shouldn’t say that because you have to believe and you, it doesn’t matter what you see, it’s what’s on the inside. And so she... but she is like, she wants to keep herself in shape, so.

EMMA: Yeah, some girls our age think they have to starve themselves to stay thin, but...

TONYA: Because the models that are on TV now...

EMMA: Mm-hmm. My friend, like, one of my friends, think they, like, they have to be super skinny. And they’ll say she has too much fat on herself when she has barely any fat.

DANA: And some people, as I said before, some people want to have boyfriends too.
TONYA: I think that they change their health because of what people think. ‘Cause a lot of girls in my gym class think, a lot of people call them fat, so they believe that they’re fat so they’re like, always skipping breakfasts and lunch so they can be, so they can lose weight, but they get more sicker than the girls who don’t skip meals.

DANA: And sometimes, like, at my old school, these girls got picked on a lot, just for that. And I mean, it doesn’t matter but I mean, she wanted, she did like Tonya said. She wouldn’t eat, like, anything, and people called her, like, they called her bad names and different names and stuff so she wouldn’t eat for like, a really long time.

Kristin (Caucasian, eighth grade, DMS) emphasized how adults may struggle with the reality of what some of these pressures are really like for adolescents:

KRISTIN: Yeah, in sixth grade we just came from elementary school and we’re like, we really don’t care what people think ... like even adults and people that weren’t in middle school and high school say you shouldn’t care about what people think but when you’re actually in this position you really care what people think so you really take it seriously, especially when you’re getting ready to be in high school and stuff.

... 

MEGHAN: ... now I’m like, I gotta be all perfect...like, really self-conscious about ourselves and all this stuff, and like, girls are growing up and peer pressure and all that stuff is like, you know, not with me, but, like, a lot of girls are like that and so we’re a lot more self-conscious about ourselves than we were before.
Alexis and Savannah (Caucasian, eighth grade, DMS) were observant of models though they had a few criticisms:

  ALEXIS: You hear like, a lot about the models. Like not eating healthy at all because they wanna like... I heard this one story about this model who’s like, she seemed really healthy. I mean, she wasn’t fat but she was like, perfectly skinny in my opinion but she wasn’t, like, skinny enough to do... so she would like starve herself and all.

  ...

  SAVANNAH: A lot of the models that are in pictures now, they’re not that skinny. But most of it is just computers now.

Some girls complained about negative aspects of or things they missed out on by being female. This was not a big concern for the majority of the girls yet it is noteworthy to mention. The predominant issue seemed to be a lack of sport options for girls compared to boys.

Carmen (African-American, eighth grade, MSMS) befriended boys to avoid gossip and drama:

  Personally, I have more guy friends than girl friends. Last year and sixth grade... in sixth grade there was a lot of drama so I started hanging out with mostly the guys.

  So this year I have, like, mostly all my friends are guys.

Savannah (eighth grade, DMS) was quite disappointed she could not accompany her male relatives on “manly” hunting trips.
SAVANNAH: When we go down [to South Carolina] for Thanksgiving we eat a lot of, like, birds and stuff... So we send the boys out there to like, hunt and stuff... Well, when they go down to Argentina they end with like a few hundred birds... They go there once a year... mainly they do doves... and they do pheasants and they just came back from Canada so they did geese and ducks up there. And they do Arkansas and South Dakota... I don’t get to go because they call them manly trips... so I don’t get to go. My brother gets to go.

Elizabeth (a Caucasian eighth grader from MSMS) was particularly concerned with masculinity and femininity in terms of strength and athletic performance. She wanted to prove that girls were equally competent athletes but complained that there are many more “boy sports” than “girl sports.” She spoke about these issues on a number of instances:

ELIZABETH: Lots of girls hate how they’re being discriminated against...

MODERATOR: Discriminated against in what manner?

ELIZABETH: Like, in general. They’re... lots of people think that boys are stronger... well, lots of boys think that boys are stronger, and like, that boys are faster and so I think a lot of girls really care about being healthy so they can prove them wrong.

...

ELIZABETH: One of my friends is really fast and he’s, like, totally into track. He got, like, picked for track in sixth grade. But, like, I kind of not the best legs... they’re
like... but I’m actually quite fast considering... but I’m not as fast as he is. I can’t keep up.

...

ELIZABETH: Well, it’s kind of hard to find a good sport for a girl ‘cause most of, um, sports are considered guy sports. So it makes it harder for girls to get into those sports. So if girls like football that makes it a lot harder ‘cause it’s a really guy sport. And so they only have like, tennis, and gymnastics for girls, and maybe soccer... and softball. So, not that much for girls. Way more for guys.

Other girls also discussed “boy sports“ and “girl sports:”

CHANIQUE (sixth grade, MSMS): Uh, well me and my family sometimes go to have a picnic and just play all types of sports. Like all my uncles and stuff, my dad, they all go play football. And me, my mom, and my other little cousin, we go play tennis somewhere.

...

PORSCHE (seventh grade, MSMS): Well, for me, I play in my neighborhood when I be outside and I see the boys playing football, I wanna play. Ain’t no sports for a girl. Well it’s sports that girls can do but girls should still be able to do that so... I be playing football, it be me and my friends that’s in the neighborhood. We be playin’ football. We don’t be tackling so the boys basically be cheatin’ and I be like you all
cheatin’. I play football and basketball but soccer, that’s too much running up and down the field. [laughs] I don’t think I can do that.

Normative eating

Special occasions, whether celebrated with friends or family, were often associated with indulging in foods with low nutritional value. Girls may be more likely to eat out at restaurants for birthdays or on vacations. Certain foods were related to certain occasions or traditions, such as pizza for family night or pie for Thanksgiving. Fast food seemed to be a normal part of life. Girls mentioned it casually yet acknowledged that it was “bad” for you. There was a general consensus that there are “good” and “bad” foods. Fruits, vegetables, and salads were the most frequently cited examples of “good” of healthy foods, while it was less clear what constituted a “bad” food. It was common for less healthy foods to be used as a treat, which may lead to a habitual tendency to resort to these foods for comfort or pleasure. The indulgent, rewarding nature of unhealthy foods or the freedom to eat as much of whatever you want as you please is consequently connected to having fun, and almost becomes a necessary criterion for something to be fun. Since it is important for adolescents to be perceived by their peers as fun, it is therefore essential to provide foods that are fun as well for them to enjoy when visiting each others’ homes and the like. Shana (sixth grade, DMS) mentioned how she always has cookie cake with one of her friends, yet when she is with her other friends they are free to eat whatever they want:
Well, my friend, she’s obsessed with cookie cake. So we always have cookie cake when she comes over. But when I’m with my other friends we kind of just have random things, just like whatever we want.

The social aspect of eating was quite interesting. The girls enjoyed talking about food and what they liked and disliked. It served as a common bond, something they could all discuss. Some shared similar experiences with restricting certain foods or trying to maintain a healthy diet for sports performance, such as the case with some of the eighth graders at DMS. Others liked comparing stories about recipes they or their families had tried. The seventh and eighth grade group at MSMS (predominantly African-American) had a detailed discussion about grandmothers and pie at Thanksgiving:

BIANCA: Oh my god, my grandma made me a… sweet potato pie. Mmm... Oh my god. I did not share. No, I did not share.

[laughter]

PORSCHE: No, my grandma can make the bangin’est, um, banana pudding. Oh my gosh.

TRISTA: My grandma can make the best sweet potato pies ever...

BIANCA: I don’t share mine. I put it in the refrigerator...

TRISTA: And she made chocolate pecan...

PORSCHE: ...’cause last year, my grandma make good sweet potato pies, so she made four. It was all out on the table... everybody was in the living room talking and
laughing and I was like, uh huh, let me get this, and I took it, and took it to the car. I was like, ain’t nobody gonna see this. When we get home my mom was like,’ I’m hungry.’ I was like, ‘you shoulda ate then.’ She was like, ‘what, what that you eating?’ I was like, ‘sweet potato pie. She was like, ‘can I get a…’ I was like, ‘Ma. I don’t share.’

During the conversation about Thanksgiving, one girl spoke about looking forward to the fish her family always had. This was shocking to the other participants who had not expected anyone to eat something other than turkey for this traditional meal. This is just one example of the social norms associated with eating. Savannah (Caucasian, eighth grade, DMS), whose family hunted for the majority of meat they ate, received an even more dramatic reaction from her peers after a detailed account of dove hunting:

SAVANNAH: ...we don’t actually have any deers in our freezer because deer are harder to shoot than doves because doves are in season now but you don’t see the bucks all that much...the doves don’t take up quite as much room ‘cause you can put them in Ziploc bags, like pouches of 20 or so...

[laughter]

Other participant: I’m sorry, it’s just like, you’re like, we got doves!

MEGHAN: It’s just not usual... doves...

Other participant: Well, I’ve never heard of dove hunting before.

SAVANNAH: Doves are actually my favorite, my personal favorite.
This exemplifies how what family perceives to be completely normal and acceptable may clash directly with what peers perceive. As peer influence becomes more significant through early adolescence, youth may be more concerned with appealing to the norms of their peers and adjust their diets (at least in front of their friends) accordingly. As Molly, a Caucasian eighth grade student from MSMS, found out, beets are not high on the list of socially acceptable foods:

MOLLY [on why people don’t eat healthy foods]: Because, like, they don’t wanna be embarrassed, ‘cause, like people will think that it’s like, I don’t know... like, dorky, if... like, people will think, like, like yesterday [sigh] I, uh, brought, um... beets to school.

BIANCA: What are beets?

[laughter]

BIANCA: I’m sorry.

MOLLY: ...and, um...people were like, why do you have that? It’s like...and yeah...

Other participant: Not cool.

Erica (Caucasian, sixth grade, DMS) came up with an imaginary scenario where you might lose friends based upon what you eat. While this situation might be a bit exaggerated, it demonstrates the pressure girls feel to conform to their peers and how they may develop increasing self-consciousness about their food choices. It also implies that girls this age may be quick to judge each other on superficial measures:
Say you’re with a bunch of your friends but they’re like, trying to be, like, lose weight and be prettier in a weird, not-good kind of way and you ate, like, a burger, and they just had, like, salads... you could think that if you’re fat they’re not going to be your friend anymore.

It was clear that peers’ opinions were becoming increasingly influential. The girls’ priorities were shifting away from their families and some of the activities they enjoyed as children and toward their peers and socialization. As this happened, they grew more self-conscious and described pressure to be skinny and appeal to a feminine ideal. Social norms dictated nearly all aspects of life. They prescribed what types of food to eat, when, and with whom. Often, food consumed with friends or family was indulgent and gratifying. Schoolwork and new priorities (e.g., spending time with friends) displaced sports or spending time with family in a number of cases.

Family

Girls’ families played a variety of roles in facilitating or discouraging PA and healthy diets. Girls felt that parents should be accountable for their children’s health and gave examples of how their parents (primarily mothers) tried to incorporate healthy foods into their diet or encouraged them to participate in sports. Some girls also tried to help their parents lose weight. On the contrary, unhealthy or indulgent foods were often central to family activities and gatherings. These activities were usually intentional, such as family night or vacations. Girls also shared stories about foods they enjoyed as part of family
traditions and their parents’ cooking skills. Overall, family influence was secondary to that of peers yet they provided the foundation for healthy (or unhealthy) habits, an influence that was present throughout the middle school years.

**Family leisure activities**

Many girls spoke frequently about their families, though this was often in terms of planned activities, such as family vacations or traditions. Intentional gatherings like family game night or cookouts were fairly common and generally popular among participants. Playing with siblings, shopping, watching movies, or walking the dog emerged as other regularly occurring activities. Some girls enjoyed getting their nails and hair done with their mothers. The sixth graders at MSMS in particular spoke fondly of their families. This could potentially be attributed to the younger girls not having reached the point where they are seeking more autonomy from their families, as some of the older girls described. Families seemed to be very much a part of their lives. The girls liked joking and spending time with them and hearing stories about their past:

AISHA: I like to hang out with my family ‘cause they’re, like, really, really funny and sometimes really crazy. And I like to travel with my mom because she used to be in the Navy so she tells me all kinds of stories. And another thing my aunt said, she told a story about my cousin, I forget which... but his name was Mountain Man. He went hunting and he brought back a turkey... they ate the turkey, and the cut off its feet and hung ‘em on the wall.
TONYA: I like playing with my sister. She’s three. She, she acts way older than she already is. And I like messing with my brother because he gets annoyed, and I like talking to my mom about her childhood. And I like annoying my dad. He doesn’t like it when I talk to him ‘cause that when he was little, and he lived in Africa, they watched a lot of Indian movies, like at my age, and younger, so this year he started watching Indian movies again and so I love annoying him when he’s watching Indian movies and he’s always like, ‘Tonya, be quiet, I’m watching this!’ And I like hanging out with my cousins. Because we talk, and we dance in my room and we just act all crazy.

AISHA: When we was living in our old neighborhood, me and my mom used to always walk around the neighborhood with my dog, and every morning before she went, I used to messed up my hair and put on baggy clothes and, um, and make myself a mess and say, ‘I’m with her.’ I used to love doing that.

DANA: I like it when my dad is sometimes funny – he’s like a brother to me sometimes. And he tells a lot of jokes from work and stuff... and I like doing game night with my family.

Some girls mentioned that they were no longer able to do things with their families they used to do because of school work or conflicting schedules:
ELIZABETH (eighth grade, MSMS): Yeah... it really... it’s like, my family tries to do stuff together as much as possible, but you know, sometimes it can’t happen. But we try to do it as much as possible.

...

EMMA (sixth grade, MSMS): Yeah, I like to run a lot, or Saturday morning at, like, 7:30 before my basketball games, I’d go on a walk with my aunt and her dog, and... but then we kind of quit that because, like, I kinda slept in really late. But I like to just walk around, I don’t know.

DANA: That kinda reminds me because my mom, she goes, gets up and walks our dog, and I really wanted her to wake me up sometimes, really early, so whenever she went on the dog walk that she could bring me along so that I could ride my bike around the neighborhood, but also it was too dark then... And she used to walk the dog early, before we got up. But now she has to walk it after we get up and so I can’t go out with her anymore.

Quite frequently, family activities were intentional and preplanned, such as vacations, weekend trips, or designated family nights to get everyone together. Gatherings often revolved around food, such as cookouts or holiday celebrations. Family night usually meant pizza, and girls spoke of relatives who prepared certain recipes for special events:

SHANA (sixth grade, DMS): We play a lot of board games at my house and we have family night on Thursdays.
YESSENIA: Yeah, that’s what we do too.

SHANA: Like we eat pizza and watch a movie and then we play some board games.

JULIA: My mom tried that once. It didn’t go well.

[laughter]

MODERATOR: Why not, what happened?

JACKLYN: Well, my brother is 16... and my dad is... he likes to dominate games.

...

DIANDRA (eighth grade, DMS): I guess for holidays... well... I’m away from home... so, like, when I go home, I like macaroni a lot so I have macaroni or if they have baked chicken, stuff like that. And, like, our family is great on pastries, so we have all different kinds of pies... my aunt, she makes a Millionaire Pie and it has pineapples and coconut, all kinds of stuff in it. I don’t know how she make it ‘cause it’s not like a regular pie with the crust and the filling and the whipped cream... It is sooo good.

The eighth graders at MSMS discussed some of the things they enjoy doing with family, including the centrality of cookouts and reunions:

ELIZABETH: Like, maybe going out to do something, like going to the park or like, to watch a movie or something, but...

TRISTA: On my mom’s side of the family we have, like, a lot of cookouts.

BIANCA: Mine’s too.
PORSCHE: We have, like, it ain’t even gotta be a special occasion. It be like, a Saturday. Or a Friday. And Grandma’s just like, ‘We want a cookout. Whatch’all want to eat?’ I’m like, ‘I want some hamburger on the grill.’

[laughter]

MOLLY: I go shopping with my family. And hang out.

PORSCHE: We have family reunions.

BIANCA: Every cookout is like a family reunion ‘cause once someone calls someone else, someone has to call someone else to tell them that my grandma’s having a cookout.

Dana (a Hispanic sixth grader from MSMS) explained how sometimes you eat less healthy food on family vacations:

When I go on a trip, I usually get the junky food but when you get there you, have, like, no food to eat in the hotel – well, sometimes we bring back pizza, but, like, I only eat, like, a piece or two because I’ve already eaten a lot of junk food in the car ‘cause we usually get the junk food and then you go out to, like, eat dinners. Um, so, I usually get my favorite Pop-Tarts, which are S’mores, and that’s what I usually throughout the car ride and usually bring, like, a water bottle ‘cause I really don’t like candy.

Some of the girls spoke of taking weekend trips to the beach or to second homes with their families. Jacklyn (sixth grade, DMS) found this boring:
Well, my family owns a farmhouse and we go there on weekends sometimes and stuff a lot which kind of annoys me but, um, so we’re going there for Thanksgiving so we have to go there this weekend to set up for it... We do it every weekend and my dad’s kind of obsessed with it. My dad hunts and stuff which I do not approve of but, um, I just kind of sit in the living room because there’s nothing to do, or go outside and play, or play with the dogs...

... 

MEGHAN (eighth grade, DMS): Sometimes we go to my river house, ‘cause, like, we have a river house that’s like, two hours away. We go down, like, every other weekend.

Hunting was an integral part of Savannah’s (a Caucasian eighth grade student from DMS) family’s life as a leisure activity as well as a source of food. Her family frequently took trips to visit her relatives in South Carolina where they hunted for various animals to eat. The other girls thought this was odd, especially eating doves, though they did not express outright disapproval of hunting as Jacklyn did in the sixth grade group at DMS. Savannah explained that hunting provided her family with the majority of the meat they consumed:

Doves are actually my favorite, my personal favorite. We don’t actually have any deers in our freezer because deer are harder to shoot than doves because doves are in season now but you don’t see the bucks all that much... And then we have all the
doves and the little birds and the ducks that they shoot in there... so we have, like, four shelves of birds...

*Parental influence*

Focus group participants’ parents largely influenced what they ate though sometimes girls would try to help their parents improve their health. Family played an important role in ensuring that healthy foods were available at home. Two girls specifically mentioned that they would eat fruit whenever they had it at home. Mothers were often referenced as trying to incorporate healthy foods into their daughters’ diets or dictating which foods they should eat. This seemed almost exclusively the mothers’ responsibility. Fathers were mentioned once in awhile but generally not in specific terms of trying to promote healthy diets. Girls told stories about their parents experimenting with cooking and occasional failures. Emma (sixth grade, MSMS) talked about breakfast at her house and how her mother taught her a lesson about leaving food out:

*Like, the only times I eat a big breakfast is on Saturday and Sundays when my dad cooks ‘cause he, like, makes omelets and eggs and bacon and all that stuff, like big meals... I normally eat the granola bars, like the Quaker granola bars... like this morning, my mom – I left the crackers open on the table so she made me eat them for breakfast, so... I had Ritz crackers for breakfast this morning.*

Alexis (Caucasian, eighth grade, DMS) expressed uncertainty about her ability to select healthy foods and portions without her parents’ guidance. She felt this was important
information that parents should teach children about, but for the time being she was not confident enough to make these decisions independently:

ALEXIS: Like over the summer I try to get more exercise because I have more time, but then, like, during the school year it’s harder, kind of... and then, like, so... but I try to get it now and then, like, eating healthy. I think like, my parents, kinda, they know how to eat healthy so they like, make my lunches and make my dinner so I think if I eat what they give me I’m fine.

MODERATOR: What if you chose by yourself?

ALEXIS: Oh, I don’t know. They never, like, taught me how to do a lunch myself or... I mean, I know what a balanced diet is, I just don’t know, like, how much I should eat for lunch and what I should eat for dinner kinda, so...I don’t know.

MODERATOR: Is that something you guys are interested in learning about?

ALEXIS: Well, I mean, you need to know it, when you get older and all.

MODERATOR: How do you think you learn about it?

ALEXIS: Like by your parents... and all the classes you take I guess.

...

MODERATOR: Do you think most girls your age are concerned about eating healthy foods? Do you think that is important to them?

ALEXIS: It’s more important for like, their moms to get them to be healthy.
Other girls demonstrated how their mothers tried to encourage nutritious diets, though this was not always the case:

LINDSAY (sixth grade, DMS): If I have, like, a sleepover with one of my friends, we, like, order pizza and my mom, she sometimes makes a salad to go with it.

JACKLYN: Usually my, uh, mom, every time we have dinner or something, she usually like, gives us, um, salad and milk or chocolate milk or something and some vitamins.

CHANIQUE (sixth grade, MSMS): When I’m with my family, we eat, um, a lot of fried stuff and sodas and stuff. When I’m with my friends we eat a lot of candy.

While girls expected parents to guide them toward proper food and health choices, some of them had examples of parents failing at this mission. They felt parents should be accountable for the health of their children. Other girls spoke of trying to help their parents make better diet or exercise decisions:

MOLLY (eighth grade, MSMS): My cousin has a baby, and my cousin is like, fat – like I’m not trying to make fun of her but she’s like, really, really overweight – and like, she doesn’t like, feed her baby enough, like, at all. And like, her baby is, like, um, her legs are this little... and she’s like, two years old. And like, it’s, like, really sad. [pause] And like, my cousin is spending, like, all her money on fast food, on herself and stuff, and now she’s like homeless, and it’s like, really sad, and my aunt won’t, like, help her or anything because she, like, dropped out of college and stuff, and yeah.
CARMEN: It’s mainly the parents’... not fault, but they should realize their child is overweight.

PORSCHE (seventh grade, MSMS): Or skinny, too skinny that they need to eat. ‘Cause my aunt, I just be lookin’ at my aunt like, you know, you need to stop that. ‘Cause when my cousin is too big, when she can’t breathe, that’s a shame. You should be ashamed of yourself. You should say, ‘you need to go run around the block about two times.’ Maybe that’ll help you breathe... You just breathin’ like you about to die, it just like, that is not cute... I be like, girrrl. You need some water...’ I want some juice or soda.‘ Soda?!? You need some water!

Erica and Kate (Caucasian, sixth grade, DMS) both mentioned that they tried to help their parents lose weight. Erica explained that her dad had gained weight after his divorce while Kate added that her parents ate a lot of junk food:

ERICA: ...My dad, I was trying to get him to lose some weight. He let himself go after my parents divorced... Um, I, we got him a bike for Christmas and we, uh, go to this one park that’s like, a few miles from our house and we ride around in. It’s really big.

KATE: I think [eating healthy food is] important too, and like they said, it’s hard too, especially in my household because my mom and my dad... well, my dad is really overweight and my mom is pretty overweight so, um, they have a lot of junk food in the house and I try to get them to exercise and stuff like that but it doesn’t work with my dad. He also lives up in Maryland so...
A few of the sixth graders at MSMS talked about some of the cooking mistakes their parents had made. Sometimes experimenting in the kitchen had positive results, but sometimes it didn’t:

DANA: So, well, I’m a vegetarian... and my dad, he lets us go out for dinner but um, on the other hand, he does just throw things together, like beans and rice, and he does, he makes a stir fry with this stuff inside and sometimes it can be good but sometimes [makes disgusted sound] – and yeah, I had something like that last night, and I didn’t want to hurt his feelings or anything so I was like, ‘mmm, this is really good.’ But, um, but sometimes he has, like, these really good, amazing dinners, but, um, yeah. I mean, one time when you were talking about the chicken, he had a fake turkey or whatever it’s called and he put all these vegetables in it and it was sooo gross.

AISHA: My mom is kinda like that, but she just makes anything from what we got inside the house. Like one time she made something with chicken, macaroni, sauce, uh, and something else and it turned out really good and she don’t know how she did it. She just threw everything in there.

EMMA: Oh, well that’s like what my mom does with... it’s like some, some type of steak that she makes but whenever she makes it she makes it a different way each time ‘cause she doesn’t have an exact recipe but it looks the same but it always tastes different. Like one time, she hated it and she threw it away and like, she made
us not eat it but then sometimes she makes it really weird and sometimes she makes it really, really good.

Like Dana, a few of the girls mentioned special diets. One girl’s sister was vegan, so their family occasionally ate vegan meals. Some parents tried to make healthy food more tolerable by disguising it in something else or presenting it in a creative manner. The girls were suspicious about this but sometimes were pleasantly surprised:

DANA (sixth grade, MSMS): So, like, [my aunt] made this like, really, really good spinach pie or something, I can’t remember. But I thought it was just broccoli, with cheese inside, but it’s actually spinach with cheese inside and once I actually knew that I was like, ew, in my head but really good outside. I was like, oh, yeah.

TONYA: My mom made Italian food with beans… for some reason the beans didn’t even seem like it was in there. It was spaghetti… with Italian but it tasted really good. We ate it for three days straight and finally she got tired of us eating it because that, well, she was tired of buying bread, ‘cause it was so expensive then… so that’s what she does, she makes us try different foods from different places.

Girls enjoyed talking about food they ate with their families and sharing stories about various things they had done. The eighth grade girls seemed to have a greater belief that parents were unnecessarily overprotective and as they got older there were increasing barriers to doing things together as a family. The younger girls described conversing with their parents and engaging in activities with them more frequently. Girls of all ages
expressed that it was harder to spend time with family than in the past due to more schoolwork and likely growing interest in spending time with friends. Their leisure activities typically revolved around friends or doing things alone, though girls liked walking dogs, traveling, and celebrating holidays and special occasions with their families.

Enjoyment

Beyond social norms, enjoyment emerged an important indicator of how adolescents felt about PA and healthy eating behaviors. If they did not like something, whether it was running or broccoli, they avoided it. Fun was a key part of enjoyment. Friends and socialization were essential for PA to be fun while other criteria varied from girl to girl. Food must taste good to be enjoyed but creativity and innovation were also helpful elements, especially when trying to make healthy foods more appealing. Other qualities, such as preparation style, appearance, texture, and smell could make or break the decision to eat a certain food item. Variety was encouraged for both PA and food. Beyond this however, individual differences prevailed.

Physical activity

DMS offered a traditional interscholastic sports program, and therefore sixth graders could not participate in school sports. MSMS, on the other hand, offered only an intramural sports program. Additionally, the girls at DMS elected to participate in the study, which could indicate an increased interest in sports or health. Participants at MSMS were selected
by the vice-principal and guidance counselor. These differences may explain some of the variation in responses though commonalities still existed among the groups.

For some girls, participating in organized sports was too much commitment and pressure to perform to a certain standard. Most of girls in the eighth grade group at DMS participated in school sports and were enthusiastic about doing so. Sixth grade girls at both schools looked forward to school sports despite some of their reservations. Girls at MSMS in both grades criticized the intramural program and expressed a preference for interscholastic sports. Many of the girls overall either currently participated in out of school sports or had participated in the past.

Some girls disliked competition or too much emphasis on performance or ability. This could detract from the fun of the experience. Chanique enjoyed tennis and previously took lessons. However, she disliked being yelled at and held to particular standard. She now prefers to play informally with her parents. Tonya had a negative experience as well, and other girls expressed a general preference for more cooperative or relaxed activities:

CHANIQUE (sixth grade, MSMS): I played once but then I didn’t want to because they started yelling at me. They thought I wasn’t good enough. So I quit.

TONYA: I think that it, that team sports... they’re not that good because sometimes they put people who can’t play that well on a team with a ton of people who can play so it’s kind of embarrassing when everybody’s like, making shots... and you can’t make but maybe, one. ‘Cause I remember when I was playing basketball... Like
for the whole season I only made one shot. And I was so embarrassed, ‘cause everybody on the teams was so good. So I think that if it’s like a sport like swimming I like to be by myself but if it’s like, like, basketball and soccer and everything I like to be with some others.

EMMA: Yeah, and I like basketball, and I play, I played it for like three or four years now and like, I did tennis for, like, a year, and I like swimming but just like the play-in-the-pool kind, not competitive swimming. Like my mom, she’s trying to sign me up but I won’t let her because I know I won’t do it. Like my little sister, she’s all into swimming and stuff.

...

TRISTA (seventh grade, MSMS): Um, personally, sports... it depends what kind of sports it is. ‘Cause at school we have step, and last year we had cheerleading and dance, like stuff like that. And we have like, soccer. Like soccer, I can play it but I don’t know if I wanna play it on the team.

[laughter]

Elizabeth (seventh grade, MSMS) also preferred not to take sports too seriously:

Sometimes sports are just too much of a commitment. Which is why I used to take gymnastic classes, because it was once a week. Not that bad, not too much. Just, like, an hour of gymnastics with the whole group and it wasn’t that bad. But, like, some sports are just totally intense and it gets, like, crazy and scary.
The sixth graders at MSMS mentioned how they enjoyed casual, unstructured PA like just walking around with friends. Interestingly, Tonya commented that this is a good way to lose weight, indicating that she may perceive this is be one of the primary reasons that people exercise:

EMMA: I like running around.

TONYA: I like walking with crazy people.

DANA: I like, like linking arms and walking kinda funky and annoying the guys...

TONYA: We, like, for a field trip, we went on a walking field trip ‘cause since we’re [downtown] we don’t have to walk that far and so we picked partners and we went sightseeing and I picked Miranda – she’s really crazy – and we did a lot of physical activity exercise that day because that we went everywhere. We were walking and running. So I think that sometimes you can take trips around but instead of taking a car or a bus you should walk because that you’re losing more weight.

Several girls brought up that they enjoyed swimming, but more playing around in the pool than swimming laps:

MERCEDES: We went to Maryland, it was me and my best friend and her family and we had a beach house and right behind the beach house was a pool so we went every morning...

Despite some girls’ preference for cooperative activities, an element of competition seemed to make PA more worthwhile and exciting. This may be especially true for
performing arts-type activities, such as dance, gymnastics, or cheerleading where there is a high level of energy expenditure and competition, yet you do not directly face off against or come into contact with other teams. These types of activities offer opportunities to socialize with members in your group, work together as a team, and showcase your abilities to compete for a title or award. There is still pressure to perform well, but it is different from going up against someone on your own or in a contact sport. The seventh grade girls at MSMS explained why they dislike the intramural sports at their school and discussed the value of competition:

BIANCA: But you don’t go against other teams and that’s not fair. What’s the point when you don’t have other teams? That’s a waste of time. Because we see these people almost every day on every team. And like, if you beat them once, you can beat them again.

ELIZABETH: Yeah. It’s not really much a competition. And competition is what drives people to do better. I know for a fact, I have a competitor in, um... academics. He tries to be better than me, but it will never happen.

...

TRISTA: So like, me and a lot of my friends, we in step. We was in step last year but now that step is, uh, cancelled, for the spring or whatever, it’s the hip hop club, so I was thinkin’ about...
PORSCHE: Yeah, the hip hop club, I was thinkin’ about... ‘cause, uh, what’s her face was talkin’ about we go against teams.

Carmen and Molly (eighth grade, MSMS) stressed the importance of having friends on their softball teams:

CARMEN: Well, most of the time it depends on, like, well, if you don’t have friends on your team it’s kind of... worse...

MOLLY: It’s kind of boring, ‘cause, like, you don’t have anybody to talk to when you’re in the dugout.

CARMEN: You’d rather have someone to talk to.

MOLLY: Yeah.

Beyond having someone to talk to, friends on your team could also help you when learning skills, as the sixth graders at MSMS discussed. They suggested that sports organizers or coaches should get girls on a team together frequently so they become comfortable with each other. They felt that this was an added advantage of playing sports at school since you are more likely to know the other people on your team:

AISHA: I haven’t been to a sport in school yet, but I think it would be fun because you, like if you know people that do it you can, like, ask them for help or something.

TONYA: I think sports in school is better than sports out of school because that you can get help because that you can go up to them easier ‘cause you know them. And, um, they’d be glad to help you because you’re all trying to aim for the same thing.
But with sports out of school you don’t really know, know, like understand those people because you don’t see them as often as the people you see at school. Girls in all of the focus groups were able to identify some general benefits of PA, such as fun, fitness, staying healthy, and living longer. The eighth grade girls at DMS who were involved with sports clearly articulated a wide range of benefits of sport participation:

MEGHAN: It’s fun, like at volleyball practices and stuff.
KRISTIN: Yeah, like once you get involved with it you, like, learn to like it more and especially after you get used to playing and you get better at it you enjoy it more.
Other participant: And it builds self confidence.
ALEXIS: And you like it, and it’s good because you get exercise and you get to stay healthy also.
DIANDRA: And with your friends too. I know at cheerleading you probably have a lot of your friends there.
BRITTANY: Yeah.

... 
ALEXIS : Well, you get to have fun, and like, enjoy it. If you don’t like it, then it’s not fun and you get bored.
MEGHAN: Yeah, I think it helps you sleep better ‘cause when you work out during the day you’re a lot more tired and then you want to go to sleep and then you know,
it’s all just good for you. And then if you don’t I’m just, like, laying in bed like, man, I wish I would have done something and I would be exhausted right now.

ALEXIS: I always sleep better when I exercise. Otherwise I just, like, lay there.

Other participant: ...and you feel guilty.

SAVANNAH: And you haven’t done anything to work off any of the food you’ve eaten.

The things girls disliked about PA were quite specific and varied from girl to girl. Several girls mentioned sweating or smelling bad. Some girls felt that boys were likely to cheat during games and they were often allowed to get away with it. Running for long distances or highly competitive games, particularly in physical education classes, were generally unpopular. Several participants had a strong aversion to bugs and consequently did not like to be active outside. The sixth graders at DMS demonstrated how preferences differed within the group as they discussed what they do not like about PA:

YESSENIA: Doing something you don’t like.

HAILEY: Dodgeball.

SHANA: I don’t like running for long distances.

MERCEDES: I don’t like soccer.

LINDSAY: I don’t like smelling bad.

ERICA: I’m not very stretchable.

JACKLYN: I don’t like football.
The girls in each group were asked to provide suggestions on how to make PA for enjoyable, particularly for girls who were not already active. Fun was critical to the success of an activity. While girls recommended that PA should be fun, they sometimes struggled at identifying actual elements that made an activity enjoyable. Friends were generally an important part. Variety was also good so that girls could find a sport they really liked and would not get bored. Some felt that skill development instruction would be valuable, especially for girls who were trying a new sport. One eighth grader mentioned that girls her age felt they were too old to start a new sport now and that if they did, they would be grouped with little kids. The eighth grade girls at DMS outlined some of their ideas:

ALEXIS: I would do, like, where you like, you could set up a bunch of different sports and then they could see which one they like and then get better – like, then you could, like, offer like, programs then for that sport, like to get them better at it.

MEGHAN: Yeah, if they like a sport they might be like, maybe I should try that out in school.

SAVANNAH: ...Like a program where they can go and, like, try all the different sports, like swimming and soccer and volleyball and stuff like that and then, like, if they don’t like it there’s always another sport they can try.

MEGHAN: You keep it consistent so you don’t like... not one day a week... I mean I know that’s more hard stuff but you keep it like, at least three days a week or something, maybe more if you can. So they don’t slack off and stuff.
KRISTIN: I think a lot of kids, or um, girls our age think, um, ‘cause some girls think exercise is all serious, like going to the gym and stuff but, like, if you get involved with sports and you find something that you enjoy doing it’s not... you take it seriously but you don’t think about it as much and it’s not that much of a big deal. ‘Cause once you’re doing something that you actually enjoy, once you’re doing it, you don’t think about, like, hey, I’m exercising, ‘cause you’re having fun.

ALEXIS: And also if they want to try a new sport they think of, like, people who are really, really good at it and they know they’ll never, like, kinda get that good so they, they’re like kinda discouraged a little. That’s what I think anyways.

... ELIZABETH (seventh grade, MSMS): If you put in, like, some of the not-so-boy-ish sports and like, the really girl sports that you almost never see boys doing, and like... and some random fun stuff. And they’ll probably just go along with it.

TRISTA: Like, the exercise but in a fun way.

Focus group participants brought up a variety of trips or outings that had a PA component. This may illustrate girls’ appreciation for activities that are not competitive and allow plenty of opportunities for socialization, just as they had mentioned that they enjoyed walking around with friends. Two girls were especially excited about museums they had been to with active games. Another participant described an overnight school trip she had enjoyed, despite her fear of bugs:
TONYA: It’s really fun. And, for the, it’s just like sleepovers. And the minute that we got there, they didn’t even give us any time to relax or anything. We went on a six-mile hike.

TONYA: And I hadn’t sweat that much in my whole life...and we learned a lot of things about keeping ourselves healthy. Like, they took away, they confiscated all of our junk food that we brought along with us. All of our lollipops and everything.

DANA: Did you get it back?

TONYA: No. They put it in the trash bag in front of us. It was really fun, I think. I don’t go hiking, ‘cause I’m afraid of bugs.

The sixth graders at DMS had a number of ideas of what activities would be enjoyable:

JACKLYN: Take them like, on trips and stuff. You could go to the beach to run a mile or teach them to surf or something.

MERCEDES: You could just take them down to a park ‘cause you don’t have to pay for it or to the pool or something.

HAILEY: Or roller skating.

JACKLYN: Like, adding to the park thing, you could, like, take them to the park and you could look online to see if there’s any games they could play.

MERCEDES: Or you could take them bowling or something.

Finally, several girls liked playing with little kids. Some girls worked at summer camps with children, while others babysat or played with younger relatives or neighbors.
They agreed that spending time with kids was a good way to get lots of exercise. The girls liked being looked up to and acknowledged that they felt special when kids wanted to be with them. They seemed to enjoy this nurturing role as well as having someone around with whom they could play:

KIANA (eighth grade, DMS): Like this summer I got more exercise ‘cause I was working at camp with all the little kids.

Other participant: Yeah you go on and get used to them and then you get so attached to them...

DIANDRA: ... Also when you’re with your cousins and they all go up to you and you kinda feel special...

SAVANNAH: I have little cousins and they love me. Like they won’t leave me alone.

...

ELIZABETH (seventh grade, MSMS): Um, in my neighborhood, we have a lot of little kids. We live in a cul-de-sac and I’m surrounded by little kids. And they all run around like nuts and I have to try to keep up, so it’s really good exercise but they don’t come out all that often so it’s like, inconsistent exercise but it’s really good when I get it. It’s really intense. So it’s kinda weird because otherwise I’m just totally bored outside.
Nutrition

Enjoyment and fun also were considerable factors in determining what girls wanted to eat. Taste was critical, and creativity and presentation were also valued. Actual nutrition content of food seemed secondary in most cases to the pleasure or enjoyment one got from consuming a certain food. Girls expressed a general dissatisfaction for school cafeteria food though there were some redeeming items, most of which were desserts or snacks. Again, the social acceptability of foods may be especially influential here. For example, if a couple girls at the lunch table think the cafeteria food is gross and they choose to get chips and a drink instead of a regular meal, other girls may feel that they’re weird if they eat something different. Girls may also skip meals if they have disordered eating or if the cafeteria does not provide sufficient food they like.

Girls generally liked fruits and salads and wanted more of these items to be available at school, at lunch and in vending machines. However, several also enjoyed the snacks and some of the less healthy foods served at their schools. Similarly to how they felt parents should be accountable for their children’s health, some girls felt it was the school’s responsibility to provide healthy, appealing choices and to prevent students from making too many bad choices. They believed schools offered too many temptations and not enough restriction in some cases, especially for students who were trying to lose weight. The girls were particularly critical of the texture, appearance, and smell of cafeteria foods. Bianca (seventh grade, MSMS) told a story about her hot dog bouncing on the ground, and
other girls shared experiences with finding hairs or fingernails in their food. The seventh and eighth graders at MSMS discussed foods they would like to have in their cafeteria:

TRISTA: Real food.

CARMEN: Something that you know, didn’t come from the freezer.

BIANCA: Chic-fil-a...Pizza Hut...

PORSCHE: I love some pizza... school pizza make me just wanna... uhhh.

ELIZABETH: They have the Red Baron pizzas, those are good though...

TRISTA: Like hamburgers, I’m staring at ‘em like where’s this meat come from? And like, I know it ain’t good hamburgers.

BIANCA: I think it’s soy. I think it’s soy milk... well, the chicken burritos are good with hot sauce, but them bean burritos... nooo, noo.

ELIZABETH: I try to find something that I’ll eat everyday but, uh, mainly I’ll go for chicken nuggets, chicken filet, or a hot dog. Or, like pizza if they have pizza... then I’ll just get the vegetables or fruits... Some of the school food is really nasty, but some of it’s okay.

The sixth graders at DMS were quite complimentary of the school’s warm cookies. Kate admitted that the snacks and desserts were usually better than the regular food and consequently, this is what she would end up eating for lunch:
KATE: I think the school food is... it depends on what it is. Some of it’s bad, and well, some of it’s good, obviously. And the snacks are really good. I usually eat cookies or something unhealthy everyday at lunch.

MERCEDES: Oh, I love their cookies [at school]...Some are baked ‘cause they be hot... they’re warm when you eat them.

This group also appreciated the school’s vending machines though some girls acknowledged the lack of healthy options. Gatorade was regarded as a healthy and favorable choice:

SHANA: At my old school I tried to eat lunch on a Friday once but I didn’t know that was cooks pick the food day so they had a bunch of leftover stuff that they kind of put together and I couldn’t really tell what it was... some kind of pizza thing with like, mushrooms, and, uh...

...

ERICA: I like this cafeteria... because it has a vending machine and a drink machine.

Other participant: I love them.

Other participant: They’re wonderful.

JACKLYN: They’re very unhealthy.

LINDSAY: There are, like, chips, and these things, they’re really good... like Twinkies, but they’re chocolate...

LINDSAY: Um, and the drink machines, like, have Gatorade.
JACKLYN: I think vending machines, they had some okay to eat once in awhile foods but some of them... I think one of them is like, fat fries or something like that...

[laughter]

Other participant: Hot fries.

Other participant: They good.

Other participant: They don’t taste that good.

JACKLYN: They drink machine has good stuff like Gatorade...

Some of the sixth graders at MSMS were more critical of their school’s food policies. They indicated that students had too much freedom and too many opportunities to make unhealthy choices:

TONYA: And that’s a negative thing about what they do in schools, like, I don’t think that if you’re trying to lose weight that you should have some temptations a lot because there’s a lot of vending machines...

...

DANA: In the cafeteria, they kind of need... they kinda need to limit... to cut down on like, either how many snacks you get or they might wanna get rid of all the snacks they have in the food line and then you get more from the vending machine and then they also need to cut down on how much fat they’re giving to the kids ‘cause like... kids buy, like, three hot dogs and they eat them all or some people just waste the food.
TONYA: Yeah, that’s what we did at my old school... Like we [could] get our lunch, a cookie, and like a juice or anything but we can’t get, like, chips, a juice, a drink... like we can here.

The girls’ food preferences were about as diverse as their likes and dislikes of PA. As mentioned earlier, fruits and salads were generally popular. Vegetables had mixed results – certain ones were okay prepared in certain ways. Specific foods were again associated with special occasions, such as going to the fair or the mall. These were usually more indulgent foods, reinforcing the idea that in order to have fun you should be enjoying food as well. Additionally, the girls at MSMS noted that when they were rewarded at school for good behavior, they had treats like ice cream and candy. While it was fairly common for girls express a vague interest in eating healthy foods, it was not as important as taste, or their enjoyment of the food:

ELIZABETH (seventh grade, MSMS): I try to eat healthy food but you know, occasionally you gotta have some fast food. It’s fast food!

... 

MEGHAN (eighth grade, DMS): I really like fruits, like bananas and grapes and stuff like that. And apples. Whenever we have them I try to eat them.

ALEXIS: I like fruits... and vegetables, I don’t know, they’re not really my thing. But I like fruits... and I like Caesar salads a lot. And then I like cheeseburgers. I know they’re not the best thing to eat but I love them.
TRISTA (seventh grade, MSMS): At the fair they have chocolate covered strawberries on the stick...oh my gosh.

PORSCHE: They have ‘em at the mall too... big juicy ones.

ELIZABETH: Strawberries and chocolate just go together.

PORSCHE: I want one.

ELIZABETH: They’re so good.

BIANCA: I like soft pretzels but they’re not healthy. Soft pretzels with butter...

TRISTA: Oh yeah, especially them cinnamon ones...

[agreement]

ELIZABETH: I don’t like salt.

Other participant: Neither do I.

Other participant: Like on pretzels I can’t stand it. I have to pick it off.

Other participant: It’s really gross.

ALEXIS (eighth grade, DMS): Oh, but when we go down to the beach – we go down there a lot – my uncle, he’s like a gourmet cook, he’s like a really good cook, like, he used to work in a restaurant... he makes really good fish. So we have fish a lot when we go down there. Well, not a whole lot but I love his fish. He makes it really good. And then for snacks I like, like, almonds and pumpkin seeds.
ELIZABETH (seventh grade, MSMS): I’m not a fan of milk. Like, I know I should drink more, but I’m not a big fan of it, unless it’s like, chocolate milk. ‘Cause milk just tastes weird to me and I’m just not a big fan.

PORSCHE: Oh, I don’t drink milk at all.

[agreement]

TRISTA: I love milk.

PORSCHE: I don’t even eat cereal.

Since several girls disliked the taste of milk and adolescence is a period of critical bone development, they could be missing out on important nutrients. When asked if they were concerned about getting enough calcium, these girls felt that they consumed a sufficient amount through other dairy products:

BIANCA: I drink milk sometimes.

PORSCHE: I’ll be thinkin’ about cheese. I eat cheese.

ELIZABETH: Like, I like dairy I just don’t like the milk. And I have, like vitamins that will help ‘cause I’m not very good with calcium...

Pizza was one of the more commonly mentioned foods across focus groups. Girls mentioned eating pizza on virtually any occasion, including sleepovers, family night, on vacation, and at school. This versatile food requires minimal effort from parents and is well-received by most teens and pre-teens. Despite its day-to-day prevalence in teenagers’
diets, pizza somehow maintained a celebratory feel. It was a simple, appeasing solution for sleepovers or other gatherings and is perhaps one of the few foods that everyone can agree upon. Tonya (African-American, sixth grade, MSMS) detailed her pizza preferences:

TONYA: My mom and dad, over the summer, we ate a ton of pizza, so one day we were ordering pizza from Pizza Hut and they made us not get our usual, and the thing was, we had to get the Supreme pizza and the thing was it has peppers, and onions, and all kinds of vegetables. And they put, like, four pepperonis on it. And so when we ate that I started missing my junk pizza. You gotta love pepperoni pizza. That’s the ultimate pizza of all time.

Diandra, an African-American eighth grade student from DMS, enjoyed eating healthy foods. She described it as though it were almost a game:

DIANDRA: As far as eating healthy, some people is like, ‘I need to eat healthy,’ but for me, I guess it just flows because I’m a real fruit addict... and vegetable... so when I go out, when I eat out, I’ll have like either tilapia or tuna and then I’ll have a lot of vegetables and then after instead of eating like cookies I’ll have a big plate of fruit. It doesn’t really bother me. It’s kind of fun, I don’t know... so...

Girls agreed that preparation was a key component of food’s appeal. This may be more important with foods that are inherently less enjoyable, such as vegetables. Vegetables could be disguised or seasoned to make them more pleasant. Many girls liked experimenting with cooking and expressed an interest in learning more about it. For
example, Erica described how she made a healthier brownie recipe by using dark chocolate and Splenda. The girls liked sampling new foods and suggested that simply offering a variety of different foods to try might be a good way to encourage girls to eat healthier. The girls discussed some of their own food preparation experiences and preferences:

ELIZABETH (seventh grade, MSMS): Well, it kinda depends on, like, how you prepare the food... ‘Cause if it smells bad or looks bad, you’re not gonna want to eat it.

[agreement]

TRISTA: I always smell my food before I eat it.

...

On the topic of broccoli:

Other participant: I like it with cheese.

DANA: This sounds kind of weird but I like it with pudding.

[laughter]

DANA: It sounds really gross but it’s good...

AISHA: I like broccoli, rice and cheese.

EMMA: Yeah, it’s good together. I just don’t like when broccoli’s cooked, it’s like, I can’t eat it plain. I have to put, like, this garlic powder on it to give it a little bit more flavor.
AISHA: I don’t like spinach because the smell and it tastes kind of funny to me. So every time I cover my nose and I try to let go of my nose the smell is still in your mouth.

...

TONYA (sixth grade, MSMS): We had spaghetti the other night and I made it, and I made it a different way than you’re supposed to because I actually put the sauce in the spaghetti with chicken parmesan right next to it. It actually tasted really good. But I can’t even remember what I did to make it like that.

Several girls discussed ways you could disguise food or even deceive people into eating vegetables or other healthy foods. These items could either be incorporated into another food or simply arranged in an innovative manner. This creativity was appreciated and it seemed that the girls perceived (or at least projected) the less tasty food to be more enjoyable because of it:

SHANA (sixth grade, DMS): My mom, she got this cookbook where it teaches her how to make, like, brownies and ice cream and stuff but you make it with vegetables... I don’t know how that’s possible but...

JACKLYN: You could use some, like, dark chocolate because it’s better than regular and put it over strawberries or something.

...
TONYA (sixth grade, MSMS): And what my mom does is she tricks us a lot. Like she says, ‘Tonya, we’re going to McDonald’s after school today.’ But the real McDonald’s is like, we go up to Food Lion and we buy potatoes, or just frozen French fries – but the thing is, we don’t fry them. We keep them in the oven. And like, for our burgers, what they really are is chicken, chicken sandwiches. And like, one night we were just about to step out of the house to buy Bojangle’s, which is one of my favorite fast food restaurants, but she said no, instead we’re gonna have fried fish, fried chicken and French fries but all of it was so healthy. There was no oil in it at all.

EMMA: One of my birthdays, I wanted cupcakes for dinner and so my mom and my sister, they found these April Fool’s dinners and so they took meatloaf and put it in a cupcake thing. Then they made dyed, they put food coloring in the mashed potatoes and then they put, like, a candle in mine. And I thought, I wouldn’t eat it ‘cause it was burnt and then I tasted it. It was really good though.

DANA: Or you could do... this might sound crazy in a way, but, like you could put like, mashed potatoes and then a little piece of ceramic wrap on it and then put banana on it and then pieces of fruits and vegetables around the banana. And then, like, they could eat it separately. They don’t have to eat it all the same...

TONYA: I think that, because I was reading in Seventeen magazine that the girls, that people like food with color so they should put the colors of the rainbow, like green broccoli and red tomatoes. That’s what my mom does to us because sometimes we
don’t eat vegetables for a long period of time so she just makes us colorful stuff and we eat it.

Enjoyment was an imperative factor in girls’ decisions on whether or not eat healthy foods or participate in PA. While some girls enjoyed cooperative activities (e.g., dance, cheerleading) and others preferred competitive sports (e.g., volleyball, soccer), one dominant commonality was that they appreciated opportunities to be active with friends, which made PA more fun. Girls recommended less structured PA as well, such as going on walking trips, bowling, and skating. These activities, of course, also provide a venue for socialization. Food should be enjoyable as well, as taste, texture, appearance, and smell were all important qualities. Less appealing foods, such as vegetables, could sometimes be disguised or hidden in other foods to make them more pleasant. Since social activities were such a key component of the girls’ lives, enjoyable foods contributed to the fun and girls were likely to indulge with their friends and family.

Summary

Girls felt that health behaviors were important in preventing future disease, but only a few gave examples on how they had made adjustments in their lifestyle to prevent future disease. They generally defined health as exercising and eating healthy foods and made little mention of mental health. Their attitudes toward fat were negative and they expressed that girls were willing to go to great lengths to avoid being fat. Despite their fear of obesity, girls enjoyed food and often indulged in their favorites. However, some felt the
need to negate this food with exercise. Shifting priorities and increased demands from school meant more time on personal care and socializing and less time with family and sports. Family activities were frequently intentional (e.g., family night, vacations), and girls felt parents should be responsible for promoting a healthy lifestyle for their children. Social norms dictated much of the girls’ behavior, from their leisure time behavior to the food they ate and the ideal body type to which they aspired. Along with these norms, enjoyment was a deciding factor in girls’ desire to engage in PA or eat healthy foods. Fun was inherent in enjoyment. Fun PA often meant friends were involved and it was in line with an individual’s preferences (e.g., cooperative instead of competitive). Less healthy, indulgent foods were frequently associated with fun activities, such as parties, and had a desirable taste. If healthy foods tasted good (and consequently were more enjoyable, such as fruits), or could be disguised in another food or a creative presentation, girls were more likely to perceive them as enjoyable.
CHAPTER 5: DISCUSSION

The purpose of this study was to gain a deeper understanding of middle school girls’ perceptions of physical activity (PA), nutrition, and physical health. Four themes emerged from focus group discussions: perceptions and significance of health, family, social norms, and enjoyment. Perspectives of health behaviors were intertwined in all of these themes, and it was apparent that attitudes toward PA, eating, and health in general were all affected largely by the same factors. Adolescence brings about many physical and emotional changes, with which come a dramatic shift in priorities, increased peer influence, and heightened self-consciousness. Girls were generally fearful of becoming fat, pressured to live up to a flawless feminine ideal, and primarily concerned with their social activities and relations. Health was important predominantly in terms of losing or maintaining weight. Girls acknowledged that PA and a healthy diet were valuable in preventing future disease though this did not necessarily affect their immediate behaviors. Each girl had individual preferences for PA and foods and her own criteria for what made these things enjoyable or worth doing, though enjoyment was imperative for the girls as a whole. Food was often used as a reward, and indulgent foods were often central to celebratory events. All of these factors contribute to how middle school girls perceive health and its connection to the other aspects of their lives.

The Social Cognitive Theory (SCT) was applied to the results of this study to further explain how and why adolescents make the decisions they do regarding their health. The
triadic reciprocal determinism model illustrates how the individual, her behavior, and her environment are all interrelated and affect each other in reciprocal ways. This demonstrates how teenagers and pre-teens are strongly influenced by their peers and their social environments. Adolescents learn through negative and positive reinforcements they receive personally as well as those they observe through observing others (the process of vicarious reinforcement). They learn about social norms and gender expectations through watching their peers and via messages from the media, and this knowledge directly affects their health behaviors.

Perceptions of Health

Girls’ definitions of health were generally restricted to topics that were discussed in the focus group conversations, such as PA and healthy eating. Previous qualitative studies on adolescents’ perceived meaning of mental health (Armstrong, Hill, & Secker, 2000; Johansson, Brunnberg, & Eriksson, 2007) concluded that health was somewhat of an abstract concept to younger adolescents, particularly mental health. It is likely that middle school girls have yet to develop a full understanding of the various facets of health. In fact, girls drew upon topics they learned about in health class, personal experiences, and a variety of information they had encountered through peers, family, and miscellaneous media outlets to formulate definitions of health. A number of studies have concluded that women get much of their health information from the media (Moyer, Vishnu, & Sonnad, 2001; Savoie, Kanzanjian, & Brunger, 1999; Turner, Vader, & Walters, 2008) and may
receive conflicting messages. This is consistent with the SCT, which demonstrates how people learn from others around them and the media and then apply their findings to their own lives. If messages from different sources are in conflict, adolescents will analyze the reinforcements received by the models in each case. For example, students are continually told that they need to be active and eat proper, balanced diets yet they may not observe any benefits from doing so. On the other hand, students see their peers being inactive and eating unhealthy foods without negative consequences, so they see no reason not to imitate these behaviors.

As previously mentioned, health was important to focus group participants mainly in terms of weight control. This mirrors findings from other research that size and weight are more important to girls than actual health (Booth, Wilkenfeld, Pagnini, Booth, & King, 2008) and that weight control is considered a higher priority for adolescents than other health prevention behaviors such as healthful eating and avoiding drugs and alcohol (Evans, Gilpin, Farkas, Shenassa, & Pierce, 1995). These attitudes again relate back to the SCT, since female adolescents are constantly reminded of the “correct” body shape and how having it will be advantageous in many aspects of life. They frequently see models (both their peers and in the media) who are skinny and beautiful and reap all sorts of benefits, such as success in their careers and interpersonal relationships. They may associate this ideal body shape and skinniness with dieting or exercise, but not specifically with healthy eating or enjoyable PA. In fact, they may accept that being healthy is a constant, miserable struggle of restricting
calories and putting in hours at the gym. Focus group participants’ attitudes toward obesity were negative, consistent with previous research (Burnet et al., 2007; Klaczynski, Goold, & Mudry, 2004; Moses, Banilivy, & Lifshitz, 1989; Stevenson, Doherty, Barnett, Muldoon, & Trew, 2007). Teenagers witness overweight peers getting teased, or perhaps they have personally been made fun of for athletic incompetence. This negative reinforcement is much more immediate and socially damaging than the intangible status of being “unhealthy” or the potential of acquiring a future disease. On the contrary, adolescents generally enjoy eating unhealthy foods and do not always experience negative repercussions, however fearful they are of them. Again, the immediate consequences come into play. The positive reinforcement from friends who also enjoy the same foods and the gratification of consuming an energy-dense food may be greater than the prospect of gaining weight somewhere down the line.

Social Norms

Despite the decline in PA during adolescence, girls reported enjoying PA in the right settings, similar to the findings of Flintoff and Scraton (2001). Therefore, this decline should not be attributed to a dislike for PA but instead to shifting attitudes and a reprioritization of activities that no longer leaves sufficient room to be active in acceptable ways (e.g., with friends). The female adolescent norms of spending more time on personal appearance and with friends have direct consequences on PA. This shift in priorities with a new emphasis on socialization and personal care activities has also been revealed by a number of other
studies (de Bruyn & Cillessen, 2008; Jago, Anderson, Baranowski, & Watson, 2005; Whitehead & Biddle, 2008). The concept of reciprocal determinism in the SCT explains that what is going on in a girl’s environment impacts her behavior and well as her own priorities and motivations. Girls may elect to participate in sports because that is what their friends are doing, or they may drop out because they do not have friends on their team. As girls see their friends spending more time on their appearance and socializing, they do not want to be left out, so they may quit sports to devote more time to these pursuits. School pressures also increase with age, so teenagers may be forced to study during the time they formerly would have been active. Additionally, by this age girls who are not already active in sports may feel they have missed out on learning necessary skills and that it is too late now to catch up (Thompson et al.). More value is placed on performance and ability, which may mean that girls are likely to drop out of sports they played casually but in which they were not particularly talented as well as less likely to start new sports.

The SCT illustrates how everyone learns from each other. In the case of adolescents, they are particularly influenced by peer norms. Gender roles become increasingly important during adolescence as teens learn about what peers perceive to be acceptable behavior for one’s gender by observing each other as well as other models, such as adults and people in the media. As many teenagers become attracted to the opposite sex, it becomes more important to convey one’s femininity or masculinity. Other research has also reiterated participants’ notion of femininity, including the “thin ideal” and their consciousness of
measuring up to this standard (Evans, 2006; Thompson, Rehman, & Humbert, 2005; Whitehead & Biddle). Gender issues also emerged in conversations about opportunities to participate in sports or PA. Focus group participants perceived that they had fewer opportunities to engage in PA than boys, similar to the findings of Morgan et al., 2003 and Thompson et al., that too much attention was given to boys’ sports (Booth, Wilkenfeld, Pagnini, Booth, and King, 2008), and that co-educational activities were dominated by boys (Flintoff & Scraton, 2001).

Similarly, girls also adjusted their eating behaviors for various social reasons. To enhance their femininity, they wanted to be skinny, which sometimes required dieting or restricting certain foods. In other cases, a girl may question her food choices if all of her friends are eating differently. For example, a girl whose friends are all self-conscious about their bodies and weight may transfer their concerns on to her, as well as their dieting behaviors. On the other hand, a normative indulgence was also present. When girls celebrated special occasions with friends or family, they nearly always did so with unhealthy foods. If a girl were to resist these temptations, she may be questioned or ridiculed. In a society where it is generally socially acceptable to eat unhealthily, the physical and social environment are often in conflict with an individual’s desires to eat nutritious foods.

Family

Families were primarily important in providing a foundation for healthy (or unhealthy) lifestyles. Parents play a vital role in encouraging and modeling PA throughout
adolescence (Pugliese & Tinsley, 2007). While familial influence becomes secondary to peer influence in early adolescence (Steinberg & Monahan, 2007), parents can have a large impact on how active their child is and how healthily he or she eats. Facilitative behaviors, such as finding opportunities for activity, providing transportation and registration fees, and purchasing equipment are a major way that parents can encourage activity. Supportive behaviors, such as attending games or practicing skills may also be appreciated by adolescents without being too intrusive or embarrassing. Several girls in the focus groups mentioned enjoying participating in physical activities with their relatives, particularly walking the family dog together.

Families were sometimes a negative influence, lacking models for healthy eating and PA. Focus group participants spoke of their desire to help overweight parents exercise or eat more healthily. They explained difficulties of eating nutritiously when there was a lot of junk food at home. They also described situations and gatherings where unhealthy foods and sedentary activities prevailed. As their children get older, parents may try to bring the family together by offering indulgent foods or activities such as going out to eat or going to the movies. These things, which are popular with teenagers, fulfill the teen’s desire for a gratifying meal or activity and the parents’ desire for the family to spend time together. Additionally, relatives from older generations may have different ideas and conceptualizations for what constitutes a healthy lifestyle. They may encourage children
and teenagers to eat rich, energy-dense foods or spoil them with candy and other treats. Families are often at the root of problems that arise from using food as a reward.

The SCT demonstrates the significance of families as models. While their influence may decrease during adolescence, individuals have been observing and learning from their parents and siblings their entire lives. Even if teenagers rebel from their families, their influence remains present via modeling and the foundation they provide for healthy lifestyles. Children notice their parents dieting or associating food with particular emotions. They witness the negative reinforcements of an overweight parent struggling to make it up a flight of stairs. A girl may notice that her fit, attractive mother always gets compliments on her appearance and has many friends. She may also become aware of her mother’s constant struggle to stay in shape. Despite the prevailing influence of friends, parents still exert an impact on how their children perceive health and how they formulate ideas about eating and PA.

*Enjoyment*

Interestingly, disguising both PA and healthy foods seemed to make them much more enjoyable. Girls liked PA that was disguised as an opportunity to be social with friends, perhaps because they primarily enjoyed socializing and secondarily enjoyed the activity itself. In some cases girls expressed that without friends around, a sport they liked playing with friends was no longer worth playing. As Whitehead and Biddle (2008) also found that friends were an imperative component of enjoyment: “The thought of being active without
friends or peers however, was extremely threatening to these girls and many simply would not entertain the idea of being active in such as environment” (p. 253). Likewise, Trinh, Rhodes, and Ryan (2008) reported that “approval from friends was the key correlate of PA for girls” (p. 83). Perhaps girls frequently start playing sports because several of their friends are playing too and they do not want to be left out. Adolescents may use sports or other activities to define themselves, especially in the middle school years while they are developing their identities. They may be more attached to the stigma associated with being involved in a particular activity than actually engaging in the activity. Considering many girls’ decisions to participate in sports may be extrinsically motivated, it helps explain why so many teenage girls eventually drop out of sports.

Focus group participants were similarly interested in finding ways to disguise healthy, less-pleasant tasting foods as something more appeasing. Because children and teenagers in general avoid eating foods that they do not like, it is not unusual for them to be picky eaters or make changes to improve the taste. The girls seemed relatively willing to eat vegetables and other healthier foods when they were prepared to their particular specifications, such as broccoli with cheese sauce. They perceived a variety of benefits of eating these healthy foods, yet it was only worth reaping the benefits if the food tasted alright. In terms of the SCT, any advantages of eating a given healthy food (e.g., plain vegetables) were more negatively than positively reinforced if the taste was not good. Girls’ motivations to eat foods they considered healthy were most commonly appearance-
related, such as to lose or maintain weight. As in the case of PA, this is an extrinsic factor related directly to what is acceptable in one’s peer group. Rather than intrinsic motivations, such as the result of feeling good about oneself, many adolescents are extrinsically motivated to do what is dictated by their peers rather than what they may truly prefer to do. In the SCT, this is demonstrated by the effect of the environment on both the individual and his or her behavior.

Moreover, it is harder to maintain a behavior when it is not intrinsically motivated. Girls may have every intention to exercise to be with friends or eat nutritious foods to lose weight, but if these behaviors do not make them feel good about themselves or if they are more negatively than positively reinforced (e.g., the girl does not enjoy the activity; the food is not appetizing) it is unlikely they will continue. Similarly, a long term goal of good health is quite ambiguous for teenagers who are somewhat unlikely to change a behavior when they do not see an immediate, positive benefit from doing so. In addition, adolescents may feel conflicting pressures, such as eating healthily to lose weight versus eating unhealthy to be like everyone else and receiving an instant sensation of gratification and pleasure. In the end, they are more likely to act on whichever alternative will result in the greater positive reinforcement, as they perceive it. These perceptions, combined with individual motivations, vary greatly from person to person. The process of disguising healthy things simply serves as a mechanism to make the returns more enjoyable. Potentially, at some point it can even help convert an extrinsic to an intrinsic motivation as people realize
that PA and healthy eating actually do contribute to overall well-being and vitality. Disguising can be a valuable way to make health-enhancing behaviors more fun and increase the likelihood of someone maintaining them for a longer period of time.

**Implications**

*Families*

In terms of health behaviors, families are primarily important in adolescence to facilitate healthy lifestyles and to set examples. Parents can help their children identify opportunities for PA and healthy foods that they enjoy. They can encourage daughters to do active things with their friends and provide options that are more fun and attractive than spending hours in front of the computer or TV. Parents should also be aware of the effect they have as models on their daughters. They may inadvertently be giving positive or negative reinforcements that impact behavior. For example, a father who excelled at baseball may be very supportive of his daughter playing softball but rather nonchalant about her participation in dance classes.

Girls who do not like playing competitive sports may enjoy playing casually with their families. There are no peers around to make judgments and no pressure to keep score or play by the rules. Eventually, this could spark interest in playing a sport more seriously, but either way it provides an opportunity for families to spend time together and be active. Parents can also encourage PA by organizing gatherings for girls and their friends that are
focused on some sort of active activity. For example, instead of watching a movie during a sleepover, girls could go to a swimming pool or a skating rink.

Parents can also do a number of things to help instill a positive body image in their daughters. Akos and Levitt (2002) suggested that activities like bike riding or roller-blading allow girls to experience the strength of their bodies without the stress of incompetence. They also recommended that purchasing new clothes or getting a haircut may help adolescents feel good about their bodies. Promoting self-esteem and physical self-efficacy are important in maintaining a healthy body image. Parents can help girls pick clothes that fit well and look good on their bodies. Additionally, parents should consider their own attitudes and health-related behaviors. If girls see parents constantly counting calories or fat grams, skipping meals, or complaining about their weight, they may pick up these habits as well. Parental encouragement of weight loss may be dangerous too, and it could lead to disordered eating (Vincent & McCabe, 2000). A better strategy is to model appropriate behaviors and encourage healthy lifestyles for the goal of fitness and overall health rather than weight loss in itself. Parents can make this easier for their daughters by keeping plenty of healthy food around, making a conscious effort to not criticize their bodies, and supporting participation in enjoyable physical activities.

Schools and Communities

Since children and adolescents spend so much time in school, it is critical for schools to provide a physical and social environment that is conducive to and supportive of health,
PA, and nutritious eating. This environment should provide the foundation for building self-efficacy for health behaviors, making them natural and intuitive. As a result of this research, the following recommendations are provided as three steps to creating a more active and healthy student population: 1) provide a variety of opportunities for PA as well as sport participation; 2) offer many nutritious, appealing, and affordable options in the school cafeteria, and 3) create pertinent health education and family and consumer sciences curricula. Community organizations, such as parks and recreation agencies, can also provide programs that make being healthy easier and more fun on similar principles. These recommendations are outlined in terms of schools but can easily be adapted for other agencies’ use.

*Creating opportunities for physical activity.* Since middle school girls have vastly different preferences for what types of activity they like to do, the level of intensity, and the degree of competition, along with being in varying stages of physical and emotional development, there is no set formula for what will consistently constitute a successful PA program. However, other than simply offering a variety of structured and unstructured as well as competitive and non-competitive opportunities, one commonality seems constant across the majority of pre-teen and teenage girls. They place high priority on fun and their social activities, and in order for them to be interested in PA, there must be a strong social element, a finding that has been revealed repeatedly in research (Brooks & Magnusson, 2007; Schofield, Mummery, Schofield and Hopkins, 2007; Thompson, Rehman, & Humbert,
2005; Trinh et al., 2008; Whitehead & Biddle, 2008). Girls should have time to get to know each other on teams and participate in non-sport activities together. Sports and other organized PA groups (e.g., dance teams, cheerleading) also offer valuable opportunities to teach about nutrition and the effects of certain nutrients on growth, muscle development, and athletic performance. Having regular team dinners, for example, would bring the girls together for socialization and learning about nutrition in a fun way. Foods could be intentionally selected based on their content of athletic performance-enhancing nutrients. Coaches are in a unique position where they can impact the success and bonding of team members by encouraging them to get to know each other, as well as teach girls about nutrition in a way to which they may be more receptive than in a classroom setting.

Many girls prefer non-competitive or less structured activities (Brooks & Magnusson, 2007; Couturier, Chepko, & Coughlin, 2007; Hill & Cleven, 2005), and for them, perhaps a socially-oriented group which convenes to do active things may be a more effective approach. This could be in the form of a walking club, or an outing group which could do things like bowling, swimming, hiking, or skating. These activities are predominantly social yet are not sedentary and can result in quite a bit of PA. Girls who feel their athletic skills are inadequate to play sports or who dislike sweating may prefer these types of activities. Others may like classes that teach exercises like yoga or Pilates that once they are learned, girls can practice these things at home on their own without feeling as though they are being judged by their peers or an instructor. As girls mature, their leisure preferences
become more influenced by gender stereotypes and they are increasingly interested in beauty and nurturance activities (de Bruyn & Cillessen, 2008), such as spending time with younger children, which was mentioned several times during the focus group discussions. It may be beneficial to create opportunities for girls to supervise a children’s program or camp and encourage them to be active with the children. Finally, it is critical to provide ways for girls who are overweight or insecure about their bodies to participate in PA and create environments in which they feel welcome and comfortable.

Creating opportunities for nutritious eating. The focus group participants had much to say about their school cafeterias and vending machines. They would like to see an increased amount of healthy, attractive options, including fresh fruits and salads, recommendations that matched those of adolescents in Booth et al.’s (2008) study. Since a food’s attributes (e.g., appearance, smell, and texture) were critical in decisions whether or not to eat it (Croll et al., 2006; Stevenson et al., 2007), cafeterias should make every possible effort to offer fresh, quality products and fruits and vegetables that are prepared in a way that appeals to middle school students (e.g., fruits not bruised, vegetables not mushy). Price must also be factored into the appeal of healthy foods. Since students often have limited lunch money and more healthy choices frequently cost more, it simply may not be an option for them. Finally, because this age group is so strongly influenced by their peers, the school cafeteria is a key place where normative behaviors are formulated and adopted. If schools offer sufficient healthy choices that students like it will become more
socially acceptable to eat healthy food. Moreover, if students get used to eating healthy foods at school, they may be more likely to make better choices outside of school.

School vending machines and snack bars are frequently the source of sugary or salty snacks high in fat and calories. One option is to limit access to vending machines. Keeping them closed during lunch helps to promote students filling up on more nutritious alternatives instead of using lunch money to purchase candy bars, chips and sodas. A second option is to provide a substantial selection of healthy choices in both food and drink vending machines. There are some advantages to keeping machines open all day, especially when students are able to get something nutritious from them. Teenagers who do not have time to eat breakfast in the morning can pick up something (e.g., a bottle of milk; fruit) once they arrive at school, or those who participate in after-school sports or activities can get a snack in the afternoon to keep energy levels up. However, the key is to provide healthy selections that are appealing to adolescents so they will voluntarily choose these over something less nutritious.

Building knowledge about health behaviors. Teaching health and prevention measures to adolescents who have not had direct personal experience with health problems may be difficult, since they are typically more concerned with the immediate present rather than long term effects of their actions. According to the SCT, the lack of a model affected by poor health in one’s environment would relate back to a lack of interest in changing one’s behavior. Additionally, adolescents are still developing the cognitive
ability to think about the future and beyond their selves. In this study, focus group participants who had a relative affected by a particular disease often mentioned that they tried to adjust their diet to prevent disease as well (e.g., reducing sugar to prevent diabetes). Real life examples of teenagers affected by certain conditions (e.g., a similarly-aged student with type 2 diabetes) and other guest speakers may useful in demonstrating that being young does not make you immune from developing health problems. However, it is imperative to present these topics in a way that does not promote the “fear of fat.” Students should be reminded that while numerous severe conditions can result from obesity, it is similarly risky to be dangerously underweight.

Home economics or family and consumer sciences courses are a promising venue for adolescents to sample new foods that are not usually served in their homes or in the school cafeteria or to experiment with different preparations. Focus group participants expressed an interest in both learning how to cook and in preparing creative foods. Since foods prepared at home are generally healthier than those prepared away from home (Larson, Perry, Story, & Neumark-Sztainer, 2006) cooking is an important skill to hone. Girls may appreciate the opportunity to socialize while cooking with friends or learning to prepare foods they could serve at parties. If adolescents are taught to prepare healthier foods that taste good or present them in a fun way they may be more likely to integrate these foods into their diets more frequently. Girls were also interested in making traditionally unhealthy
recipes (e.g., brownies) better for you. Incorporating nutrition facts into cooking lessons may be a less boring way to learn about healthy eating.

Additionally, Stevenson et al. (2007) found that adolescents who reported enjoying sports and/or cooking seemed to have a better understanding of energy balance than to their peers. Other research (Alfano, Klesges, Murray, Beech, & McClanahan, 2002; Croll et al., 2006) has also found that adolescents who participate in sports have improved nutrient intake compared to those who do not play sports. These findings may indicate that involvement in organized physical activities may promote increased consciousness of one’s diet and the necessity of eating foods that will provide the energy needed for optimal athletic performance. Moreover, research has shown that adults may feel nutrition behaviors are more essential to health or weight loss than PA (Murnan, Price, Telljohann, Dake, & Boardley, 2006; Serdula et al., 1999), while both are critical to health and disease prevention. This reiterates the value of looking at and teaching health from a holistic perspective rather than analyzing separate parts (like PA and nutrition) individually.

Society

A number of societal issues also emerged from this study. These do not impact just one community or region but are prevalent across the nation and much of the world. Two seemingly contradictory concepts are particularly alarming – girls’ preoccupation with being skinny and the issue of using unhealthy food as a reward. Both are societal problems and can have detrimental future outcomes. As Stevenson et al. (2007) reported, barriers to
healthy eating “would appear to result from the conflicting pressures towards eating unhealthily and against obesity which result in a focus on weight, rather than health, as the motivating factor in dietary choice” (p. 428).

In various media outlets, a major source of vicarious reinforcement, girls see other females who are skinny, feminine, attractive, and successful, who either diet constantly or eat unhealthily with no apparent consequence. They see females who are repeatedly rewarded for their appearance and develop the idea that beauty is the key to success. There are many contradictions in this conceptualization of the ideal woman. She is skinny yet muscular, feminine yet strong, and cares about her appearance yet can eat whatever she pleases. This is virtually impossible, and society is setting girls up for failure and depression by letting them aspire to standard. Beyond large scale changes, such as a widespread rejection of the traditional feminine ideal and acceptance of more realistic body shapes and sizes, girls should be consistently reminded that healthy comes in a variety of sizes and that being too skinny is extremely unhealthy. They should be encouraged to participate in activities that make them feel good about themselves outside of their appearance. While focus group participants stated that “it’s what on the inside that counts,” it may be a different story in trying to get girls to fully believe this. However, building self-confidence is critical. Adolescence is an excellent opportunity to build leisure skills that can be continued into adulthood. These activities or hobbies can serve as a coping mechanism in times of stress, which incidentally, is a time when people are likely to overeat. This relates back to a
learned behavior that food can be used as a reward or to make you feel better. Many parents and teachers use candy or treats to reward good behavior or to cheer up a child when he or she is upset (Stevenson et al.). Feeling better is consequently associated with these sugary or fatty foods, and so as adults people often resort to food to make them feel better. Leisure activities and particularly PA can help in resisting these patterns by providing another outlet for stress and generally improving mood and self-confidence.

There are a variety of other ways to approach these concerns as well. While little research has been conducted exclusively on normative eating behaviors, a number of studies have touched on the social norm of unhealthy eating among teenagers, especially when with their peers (Chapman & MacLean, 1993; Croll, Neumark-Sztainer, & Story, 2001). Instead of offering food as a reward, other incentives should be used when possible, or healthier foods substituted. Food should still be enjoyable and adolescents should be encouraged to maintain healthy attitudes toward food and enjoy treats in moderation. In the case of special occasions, where unhealthy foods prevail, healthier alternatives should be offered (e.g., homemade pizza instead of ordering out), or healthy foods that girls like, such as fruit, could replace traditional snacks like chips and pretzels. Using food as a reward also leads to dichotomizing food into categories of “good foods” and “bad foods” and a generally negative attitude toward food. This categorization can be misguided (e.g., “carbohydrates are bad”) and may result in unnecessary restriction and binging. A better
approach would entail developing an understanding of the properties of foods that make them more or less healthy and how to balance a variety of foods in your diet.

Girls are faced with another conflict of interest in trying to attain the ideal body shape. As Evans (2006) found, girls are pressured to convey that they are feminine and pretty as well as competent athletes with fit, toned bodies. In addressing girls’ preoccupation with being skinny and fear of becoming fat, it has been proven that knowledge of healthy eating and actual body size are unrelated to these (Moses et al., 1989). Therefore, educational programs, at least as they have been implemented in the past, are largely ineffective at combating these problems. Perhaps other elements, such as information on the average sizes of women and teenage girls, what body type men actually prefer, and how models’ bodies are unrealistic and both electronically and physically manipulated, would have more of an impact with this population. It may help to have guest speakers who are willing to share their stories about past eating disorders and the negative effects on their lives. To heighten understanding and empathy for people of all sizes, it may also be helpful to have someone who used to be obese share some of her struggles and how she was motivated to make changes in her life.

The preoccupation with perfection and having a perfect body is especially dangerous. Females are more susceptible than males to societal messages about the importance of being thin and its positive effect on personal success (Klacznynski et al., 2004; Zullig, Ubbes, Pyle, & Valois, 2006). Adolescents, who already have a heightened
consciousness of their bodies as they go through puberty, may set expectations for their bodies too high and have unrealistic criteria for how they should look. Not only does this set girls up for failure when they are unable to achieve their goals, but perfectionist tendencies and drive for thinness are often associated with disordered eating and clinically diagnosed eating disorders (Fairburn, Cooper, Doll, & Welch, 1999; Nilsson, Abrahamsson, Torbiornsson, & Hägglöf, 2007; Steiner et al., 2003).

Strengths and Limitations

This study makes a number of valuable contributions. While previous qualitative research has investigated how adolescents feel about PA, nutrition, and health independently, no studies have examined the relationships among all three together within the same sample of middle school girls. A greater understanding of this population is critical in explaining why girls’ PA declines at this age, why their nutrition intake is inadequate, and why obesity is still a major concern. Quantitative studies have uncovered important information, such as how much activity and nutrients teenagers are getting, how important they perceive PA and healthy eating to be, and some of the barriers to engaging in PA and eating healthfully. However, qualitative research can help explain why. This research provides rich data addressing some of these additional questions. It includes opinions from ethnically diverse girls in sixth, seventh, and eighth grade in two different middle schools. Some of these girls were involved in school sports and some were not, so a wide range of
opinions were presented. Another strength is the focus group methodology. Since middle school girls are innately social, this technique provided a socially-oriented gathering where they could build off of each others’ thoughts and discuss shared experiences.

The SCT was used to demonstrate that there are many parallels between the influences on PA and those on eating behaviors. The concept of triadic reciprocal determinism illustrates how the individual, her behavior, and her environment all have reciprocal effects on one another. Reinforcements, both personal and vicarious, are critical factors in social learning. Adolescents are constantly observing each other and learning from their peers’ successes and mistakes. This is likely why the social consequences of being overweight seem more significant to teenagers than the risk of future health problems. They also learn from the adults around them and the media. Adolescents learn which foods, sports or other forms of PA, and body shapes are acceptable among their peers. While different individuals will perceive reinforcements in different ways, the process is similar for everyone. Social norms are very influential for middle school students and they affect different health behaviors in comparable ways.

Along these lines, the concept of disguising both PA and food emerged in this study. It appears that enjoyment is so critical to adolescents’ decisions to do something considered healthy for them that considerable alterations had to be made for them to willingly participate. Physical activities could be disguised as social gatherings, and vegetables could be hidden in a tastier dish to disguise their presence. In terms of PA, this may indicate that
some girls simply may not enjoy challenging physical exertion or the level of competition involved in many sports. They may like being active, but they are not willing to endure physical discomfort, being embarrassed, or yelled at in front of their peers. Not all girls have the athletic ability to perform well in sports, so it is necessary to provide other opportunities for less competitive or difficult PA. As far eating behaviors, teenagers may not have had the exposure to fruits and vegetables as children, or their parents may not have strictly encouraged their consumption. If healthy foods are introduced at an early age, children may not become so averse to them. There is also a sense of entitlement and rebellion among adolescents, who seem to feel they should only do and eat what they like. This could hint at another societal issue, or simply be part of maturation and growing up.

Despite its numerous strengths, this research had several noteworthy limitations. As in any focus group study, conversations may be dominated by a few participants and minority opinions may be repressed. Particularly with adolescent participants, a girl whose opinion was not in line with the majority may have been hesitant to speak up for fear of singling herself out and coming off as weird. There also could have been sensitive topics such as body image and eating disorders that girls did not feel comfortable discussing in front of their peers. Additionally, sometimes people tend to overlook the most obvious things that are so engrained into their daily lives. For example, a girl whose family is vegetarian may not think about this when discussing food choices because she has been eating this was for years, or an older girl may not mention the main reason she wants to be
skinny is to impress boys because this has been part of her thought process for some time now.

One significant difference in the participants existed due to scheduling and administrative issues. At Main Street Middle School (MSMS), the girls were selected from the entire grade and invited to participate in the study by the assistant principal and guidance counselor. The two focus groups were conducted after school and were consequently less limited by time. At Davidson Middle School, the vice principal felt it would be better to conduct the focus groups during school time and received permission from a health teacher for students to miss that class. Because of this, only sixth and eighth grade students could participate (as opposed to the mixed group of both seventh and eighth graders at MSMS) and the length of each focus group was limited to the allotted class time. Moreover, the participants from DMS were self-selected. Many of these girls participated in sports (in-school and/or out-of-school) and may have been more interested in health and PA than the girls at MSMS. It was requested that participants at both schools were girls who were not regularly engaging in PA, but this was not possible at DMS. Further, it is worth mentioning that MSMS offered only intramural sports while DMS had a traditional, interscholastic sports program. Girls’ individual experience with their school’s program may largely have affected their attitudes toward PA.

Another factor is that the data were collected at the beginning of the school year. The sixth graders were still adapting to the transition from elementary to middle school,
and had the data been collected later in the year, they may have more strongly reflected attitudes of their older peers. Similarly, the eighth graders’ perspectives may have shifted over the course of the year as they prepared to enter high school. Further research could provide insight on how girls’ attitudes change throughout middle school. Since teenagers eventually become less influenced by their peers in late adolescence, it would be interesting to repeat this study with high school and college students. It would also be valuable to conduct focus groups with boys to better understand how they perceive health, PA, and nutrition.

Additionally, it would be advantageous to investigate how girls actually learn about health and the value they place on information from different sources (e.g., school, peers, parents, magazines, and the internet). This knowledge would help communicate factual information and dispel myths. Other research could consider intrinsic versus extrinsic motivation for PA and healthy eating or adolescents’ understanding of the connections between physical and mental health. A survey of school sports coaches’ nutrition knowledge and willingness to teach their teams about health behaviors could assess the opportunity for coaches to relay nutrition and health information to students. Finally, a content analysis on popular teen magazines or websites could examine some of the health-related messages teenagers are receiving through these popular forms of media.

This research has demonstrated that many of the same factors affect perceptions toward PA, healthy eating, and health in general. These factors include peers and social
norms, family, enjoyment, and the significance they place on these things. The adolescent peer group is of utmost importance for middle school students and this must be factored into strategies to promote health behaviors. Teenagers face a number of competing pressures (e.g., being thin versus indulging in unhealthy foods, being feminine versus being athletic) in addition to increased independence, self-consciousness, and demands from school. It may be difficult to find a balance between preventing both obesity and eating disorders. Other issues that should be addressed include girls’ fear of fat, using food as a reward, increasing opportunities for cooperative, enjoyable PA, and working toward the acceptance of a wider range of body shapes.
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differences in weight concern among third, fifth, eighth, and eleventh graders.


APPENDIX A: INTERVIEW GUIDE

1. Tell me about what girls your age like to do in their free time.
   a. Who do they like spending time with in their free time?
   b. What are some things you like to do with friends?
   c. What are some things you like to do with family?
   d. What are things you like to do by yourself?

2. What does health mean to you? Give examples if possible.
   a. Is health important to some girls your age more than others? Can you give examples?
   b. When girls like you make decisions about eating or exercising, what kinds of things do they think about?

3. What are your opinions about physical activity, like playing sports or exercising?
   a. What do you think about participating in sports at school or out of school?
   b. What are some benefits of exercise or physical activity? What things do you dislike about exercise?
   c. If I were creating a program to get girls your age to exercise more or be healthier, what advice would you give me?

4. What role does eating play in your social activities?
a. When girls your age participate in social activities with friends or family, what kinds of food do they eat?

Do you think these foods are different from what they would eat during a normal day? Why do you think this is?

b. Describe what girls your age think about eating healthy foods. Is it important? Give examples.
APPENDIX B: PARENTAL CONSENT FORM

Parental Consent Form – [School Name] Focus Groups

I understand that my child has been asked to participate in a study of middle school students’ views of physical activity and health.

I understand that Dr. Michael Kanters, Dr. Jason Bocarro, Miss Larissa Witmer or Miss Timia Thompson will interview my child in a group setting with 6-10 children that will last between 45-60 minutes. They will ask my child about his/her involvement with physical activity and sports. My child has the right to refuse to answer any questions, and will not be penalized in any way for not answering.

I understand that if I do not give permission for my child to participate, he/she will not be penalized in any way. I understand that this study will not benefit my child directly. However, I know that the opinions he/she provides will be used to help improve services offered by the school, and will benefit children using services in the future.

This research study has been reviewed and approved by the Institutional Review Board for the Use of Human Subjects in Research. For research-related problems or questions regarding subjects’ rights, the Institutional Review Board may be contacted through Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514), or Joe Rabiega, IRB Coordinator, Box 7514, NCSU Campus (919/515-7515).

I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to allow my child to participate in this study. I know that if I have any questions or concerns, I am free to call Dr. Michael Katers at 513-0279 or Dr. Jason Bocarro at 513-8025.

I have been given a copy of this consent form.

__________________________ ____________________
Signature of parent/legal guardian Date

__________________________
Dr. Michael Katers Date
Hi! The Parks, Recreation and Tourism Management Department at NC State University are currently conducting research on physical activity and sports in middle schools. We are currently interviewing some children to learn more about middle school sport programs and how these programs can help children. Moore Square Middle School has agreed to let us do this work.

We want to make sure this study accurately shows what children think of physical activity and health. Therefore, we would like to interview 6-10 children as part of a focus group to understand their opinions about physical activity and health. However, we cannot do this unless we have your permission, and your child’s permission.

If you decide not to let your child participate in this focus group, that is no problem. Your child will not be penalized in any way. If you decide to let your child participate, let us explain what will happen in the focus group. We will schedule the focus group on a day and time convenient for your child. With your child’s permission, we will tape record the interview (to help us remember what we talked about, and so we can best understand your child’s comments). No one will listen to that tape except for the four of us. After we are done with the project, we will erase the tape. If any child who is part of the focus group does not want the interview tape recorded, we will not record it. Your child will not be mentioned by name in our project report. Anything he/she says will be kept absolutely in confidence.

Thank you for your time and assistance. If you decide to let your child participate in this focus group, please fill out the attached form and send it back to the school with your child. If you have any questions, please feel free to call Dr. Michael Kanters at 513-0279 or Dr. Jason Bocarro at 513-8025.

Sincerely,

Dr. Michael Kanters
APPENDIX D: ASSENT FORM

Assent Form- Children Focus Groups

I understand that I am being asked to participate in a study of middle school students’ views of physical activity and health.

I understand that Dr. Michael Kanters, Dr. Jason Bocarro, Miss Larissa Witmer or Miss Timia Thompson will interview me in a group setting with 6-10 children that will last between 45-60 minutes.
I understand that I have the right to refuse to answer any questions asked. Although this study will provide no direct benefit to me, I know the results may help to improve programs offered by Moore Square Middle School. All my answers that I give will be secret and my real name will not be used.

This research study has been reviewed and approved by the Institutional Review Board for the Use of Human Subjects in Research. For research-related problems or questions regarding subjects’ rights, the Institutional Review Board may be contacted through Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514), or Joe Rabiega, IRB Coordinator, Box 7514, NCSU Campus (919/515-7515).

I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. If I have other questions or concerns about this study, I am free to call Dr. Michael Kanters at 513-0279 or Dr. Jason Bocarro at 513-8025.

____________________________________  __________________
Signature of participant                  Date