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The Degree Of Peer Influences On Children's Food Choices At Summer Camp

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THE DEGREE OF PEER INFLUENCES ON CHILDREN’S FOOD CHOICES AT SUMMER CAMP

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
Of the Requirements for the Degree
Master of Science
Parks, Recreation, and Tourism Management

by
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May 2012

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ABSTRACT

Research has shown that peers influence each other in social situations. With childhood obesity becoming more prevalent in society, studying the influence peers have on their friends eating behaviors is important. National campaigns and laws have been promoted for the changing of food standards in schools but not recreation programs. Through direct observations of the foods children choose while amongst friends, the degree to which peers influence other children during a mealtime setting at camp is analyzed. When conducting research to test whether peers influenced children’s food choices, noting the societal reasons and atmospheres in which children choose meals with peers was also important. A mixed methods approach using qualitative tools and triangulation was used to assess the social interactions of children during summer camp dining meals. The importance of this study was to assess whether peer influences on food choices exist in summer camp settings.

In order to understand children’s food choices and peer influences, open-ended interviews were conducted with each participant. The audio-recorded interviews were compiled, transcribed and stored in a password-protected document on the researcher’s personal computer. Upon completion of the transcribing process, the researcher coded the data by similar topic and themes. The analysis process was used to explore whether peer influences had taken place during the camp mealtime setting. Within the data, the researcher found that while there was a degree of positive and negative peer influences upon the participants, there was also autonomy in regards to their food choices. Though
peers were the targets of the study, the participants acknowledged that their parents also served as influences. Finally, the data suggested that there is a need for easier access and formal introduction to the mealtime environment so that the participants could fully choose the foods they wanted. Data showed that although peers had both positive and negative influences on eating behaviors, the participants also expressed autonomous thinking concerning their food choices. However, parents also play an active role, as does access to and knowledge about availability of healthy foods.
DEDICATION

This thesis is dedicated to all of those who believed in me throughout this journey and my life choices. Most importantly, I want to dedicate it to the person inside who knew that she could do it all along and with her determination, strength, perseverance, and faith overcame obstacles and succeeded.
ACKNOWLEDGEMENTS

A sincere thank you to all who helped and to my committee who guided me through the research and study for this thesis.
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CHAPTER I

INTRODUCTION

Background

Our culture has become increasingly preoccupied with food and eating (Puhl & Brownell, 2001). The literature examines the approach of health professionals and national campaigns to improve and implement new food standards for school lunch programs. Programs that implement healthy food choices and childhood nutrition campaigns with new food standards should not be confined to only one environment like schools. Parks and recreation centers, after-school programs, and community facilities have become essential resources for helping to provide play and encourage healthy living to youth. Therefore, more research needs to be done to determine the food choices and eating behaviors of children during mealtime in recreational settings such as summer camps.

Problem Statement

Promoting healthier eating patterns amongst children requires a multi-faceted approach targeting not only children, but also their parents, families, and schools (Patrick & Nicklas, 2005). Due to the stated societal influences, children’s consumption of fruits and vegetables can be affected either positively or negatively. Children can significantly influence and be influenced by others, more specifically, peers, to increase their
consumption of fruits and vegetables (Birch, 1980). This possible change in their diets due to peers influence can be wide-ranging and long lasting (Birch, 1980).

For children to have the potential to achieve long-lasting transformations in their eating habits is important to study further. This influence needs to be acted upon by schools, by health and education agencies and by the government as well (Horne, Choate, & Brownell, 2001). However, the proposed study would include approaching eating patterns in recreational settings.

**Significance**

Children’s nutrition has become a major topic in society today. The childhood obesity epidemic has grown to affect nearly 25 million children (Sebelius, 2010). This increase has led to government legislation to be amended to create healthier food choices for children in schools. Parents, teachers, and other authoritative figures continue to struggle with getting children to eat healthy food such as fruits and vegetables. While school lunchrooms have received attention, recreational settings are also places where children are faced with food choices. Past studies have shown significant relationships between children and their peers’ eating habits in social situations, also known as peer modeling. The close contact children have with their peers provides for the imitation of others. When children go to lunch, for example, they observe and make similar choices their friends make (Birch, 1980).

Previous studies have reported that there is a relationship between peer influences and food choices; the next step is to examine the degree to which peer modeling affects
the children in summer camp settings. Birch (1980), examined the influence of peer models’ food selections and eating behaviors on preschoolers’ food preferences in the lunchroom. She concluded that peer modeling does exist in the lunchroom and with food choices among preschoolers. However, research needs to be conducted to gauge the characteristics of the situations in which foods are presented and peer modeling arises. It is possible that influences of peers have changed since the time of Birch’s study (1980), making it an important question to examine. Furthermore, this study incorporates older children (age 10) compared to Birch’s participants (aged 3 through 10). This study was also conducted in a summer camp setting where parental influences are less prevalent. The further studying of the topic when applied, could allow for the greater understanding of peer influences and provide suggestions for healthier food programs for children in camps or other recreation programs in which children model each other.

Recreational settings are often being overlooked as venues in which to encourage nutritional eating programs, but are just as valuable as the school environment. “At a time when childhood obesity is a growing concern…parks and recreation programs present one of the most logical entry points for strong curriculum that focuses on health and nutrition…” (McLaughlin & Pipcock, 2009, p. 16). Over the last two decades, children have lost an average 12 hours of free time a week due to school and homework. Within these 12 hours, eight were lost for outdoor activities and unstructured play (American Camp Association, 2008). According to the American Camp Association (1998), over 10 million children participate in camp every year, yet the health aspects of recreational programs are overlooked. On an average weekday, children spend 118 minutes engaged
in outdoor physical activity, and spend 132 minutes during an average weekend (McLaughlin & Pitcock, 2009). “Regular attendance in high-quality afterschool and summer programs is associated with a range of positive academic and social development outcomes, including improved literacy skills, self-esteem, and leadership” (McLaughlin & Pitcock, 2009, p. 5). Therefore, conducting a study on the nutritional aspects of camp could help further support the benefits that camp and recreational settings provide children.

Professionals in child development advocate that camp settings help children socially, emotionally, morally, physically, and intellectually (Scales, 2008). Bruce Muchnick, licensed psychologist who works extensively with day and resident camps, states, "Each summer at camp a unique setting is created, a community is constructed that allows participants to get in touch with a sense of life that is larger than one's self. The camp community seeks to satisfy children's basic need for connectedness, affiliation, belonging, acceptance, safety, and feelings of acceptance and appreciation," (as quoted in Scales, 2008, pg.1). Camps provide children the opportunity to explore their independence away from their parents, and make friends with new people in a new environment. Fellow campers and counselors thus fill an important modeling role for children.

Like schools, summer camps are often under a tight budget when it comes to food, yet they are under similar pressure to provide nourishing, nutritional meals those children will eat (USDA, 2011). Meals at camp reflect menus in the school environment,
in which the food provided must be nourishing and nutritional, yet also interest a child’s palate. Thus, it becomes important to assess how peers at summer camp influence eating choices children make while in the new and independent environment afforded by the camp experience.

**Purpose and Research Question**

The purpose of this study is to explore the potential influences of peers on children’s eating behaviors in a summer camp setting. Two questions guided this study.

1. Will peers have an influence on other children’s food choices during the summer camp meal times?

2. Does the camp mealtime environment encourage or discourage influences of peer modeling on eating behaviors?

**Definition of Terms**

*Peer*- a child who is roughly equivalent in development to the observer (Schunk, 1987).

*Model*- an individual whose behaviors, verbalizations, and expressions are attended to by the observer and serve as cues for subsequent modeling (Schunk, 1987).

*Peer modeling*- behavioral change that derives from observing others (Schunk, 1987).

*Recreation Programs*- activities that are typically organized, structured, and adult-supervised or led that provide opportunities for children to develop and grow. Participation in these activities is associated with autonomy and identity development,
positive social relationships, academic success, mental health, and civic engagement (Witt & Caldwell, 2010).

Summer camp—a set of organized activities, taking place during the summer months, designed to meet a specific need or offer children and youth the opportunity to achieve a specific goal (McLaughlin & Pitcock, 2009).

For the purposes of this study, knowledge of and consumption patterns of eating fruits and vegetables, and awareness of how fruits and vegetables affect the body in terms of energy and overall nutritional health define “healthy eating.”
CHAPTER II

REVIEW OF LITERATURE

Childhood Nutrition

Unhealthy eating habits during childhood can create problems for growth and development and lead to poor eating habits during adolescence and adulthood (Johnson & Nicklas, 1999). Numerous health promotion strategies are required to support healthy eating during childhood and adolescence. The approach is to help promote optimal growth and development while also reducing the risk for obesity and chronic disease rates in adulthood (Ernst & Obarzanek, 1994). Not eating the prescribed levels of fruits and vegetables can place children at risk for future development of chronic diseases (Glanz & Rimer, 1995). Properly understanding the influences on children’s fruit and vegetable consumption could enable the development of interventions to promote increased consumption of healthy foods (Cullen, Baranowski, Rittenberry, & Cosart, 2001).

Poor eating habits can not only create risk for obesity and chronic diseases in adulthood, but also further affect children’s concentration, learning, and school performance (Story, Neumark-Sztainer, & French, 2002). Today, children’s unhealthy eating includes a high intake of fast foods and other foods high in fat along with low intake of fruits, vegetables, fiber, and dairy foods (Glanz & Rimer, 1995). Possible causes for poor eating habits could be due to changes in lifestyle, development, social, and environment from childhood to adolescence (Story, Neumark-Sztainer, & French, 2002).
Childhood Obesity

Today, the childhood obesity epidemic has been named a major threat to children’s health (Micic, 2001, p. 1347). Obesity rates have continued to increase for the past four decades in children of all ages, the highest amongst those children ages 6 through 11 (Sebelius, 2010). Almost 25 million children are overweight or obese in society today (Sebelius, 2010). Many experts believe that if childhood obesity continues to increase, the current generation of children will live shorter lives compared to their parents (Clinton Foundation, 2004). This would be the first time in American history for children to not outlive their parent’s generation (Clinton Foundation, 2004). Along with a decrease in life span, other risk factors for children with poor eating habits include hypertension, hypercholesterolemia, and Type 2 diabetes (Nicklas, Webber, Srinivasan, & Berenson, 1988).

To aid in the fight against childhood obesity, the U.S. Department of Agriculture’s Summer Food Service Program provides sponsoring and guidance for meals for summer camps with low-income children participants (USDA, 2011). The mission of the Summer Food Service Program is to provide children with nutritious meals during the months when school is out. During the summer of 2009, more than 2.2 million children participated at almost 35,000 campsites (USDA, 2011). The USDA is hoping there is a continued increase in the number of campsites participating in the program each year (USDA, 2011).
Influences on Eating Behavior

There is an extensive amount of internal and external influence on eating behavior. Internal influences are the individual’s own beliefs, knowledge, and attitudes towards food. Externally, family, peers, the media, and the environment influence individuals, whether it is in the lunchroom or a recreational setting (Birch, 1980; Lowe, Horne, Tapper, & Bowdery, 2004; Patrick & Nicklas, 2005; Dennison & Shepherd, 1995; Story, Neumark-Sztainer, & French, 2002).

Internal Influences

Individual factors identified as having influences on eating behaviors amongst children include their own knowledge, attitudes, and preferences. However, attitudes and preferences are found to be the strongest determinants of healthy eating in children and adolescents (Taylor, Evers, & McKenna, 2005).

Patterns for food acceptance develop early in life with childhood having particular sensitivity for the development of food preferences (Birch, McPhee, Shoba, Steinberg, & Krehbiel, 1987). The concept of food neophobia is that children are reluctant to try new foods and generally have lower intakes of fruit and vegetables (Wardle, Cooke, Gibson, & Sapochnik, 2003). Food neophobia poses a challenge for parents who may label their child as “a picky eater” and give up providing certain foods or promoting a variety of non-sweet and low-fat food (Birch & Fisher, 1998). There is evidence that if children are continually exposed to healthful foods, they will learn to enjoy those foods and alter their food preferences (Schwartz & Puhl, 2003). How parents respond to neophobic behaviors
and present new foods during childhood is important to early food acceptance and preferences (Birch & Fisher, 1998).

Food preferences in children are often based by taste or liking (Birch, 1992). Preference for specific food items serves as an indication of both children and adolescents consumption of that food (Skinner, Carruth, Bounds, Ziegler, & Reidy, 2002). The indicator of taste can sometimes lead to poor choices and dislike for vegetables. This is one of the most important predictors of fruit and vegetable consumption by children (Kirby, Baranowski, Reynolds, Taylor, & Binkley, 1995). Personal preferences can also be identified as a barrier in healthy eating for adolescents because of the ease and availability of eating fast food or vending machine snacks (Shepherd et al, 2001).

The level of nutrition knowledge among children and adolescents is low, especially in understanding the connection between food choice, physical activity, and health (Birch, 1992; Pirouznia, 2000; Pirouznia, 2001; Edwards & Hartwell, 2002). A person’s attitudes towards food and health have not been extensively researched (Shepherd et al, 2001).

External Influences

Research has shown that children’s eating patterns are strongly influenced by characteristics of their physical and social environments (Patrick & Nicklas, 2005). With the continued increase in childhood obesity, research has begun to focus on family and social influences on children’s eating patterns. Therefore, interventions and healthy-
living programs aimed at improving children’s nutrition should address the social and physical influences on children’s eating habits (Patrick & Nicklas, 2005). When children watch models eating fruit and vegetables, they are more likely to eat the same foods themselves (Lowe, Horne, Tapper, & Bowdery, 2004). Effective models for children include people and characters from the media, peers, and family members (Lowe, Horne, Tapper, & Bowdery, 2004).

**Parents and Family**

Children’s parents play a direct role in eating patterns through behaviors, attitudes, and feeding styles (Patrick & Nicklas, 2005). Parents are the most influential models in a child’s food-related knowledge, preferences, and consumption (Crokett & Sims, 1995). Children who model their parents eating patterns may be due, in part, to the foods the parents tend to have and eat in the home (Birch & Fisher, 1998). Research shows that there are similarities between parents’ and children’s food acceptance and preferences, intake, and willingness to try new foods (Patrick & Nicklas, 2005). Children are more likely to try unfamiliar foods after they have seen an adult eating it (Harper & Sanders, 1975). Many parents seem to focus on providing food that is convenient and enjoyable rather than making food choices based primarily on health and nutrition as in packaged foods instead of fresh fruits and vegetables (Stratton & Bromley, 1999). Parents tend to assume their child dislikes a particular food after attempts of providing it; therefore, parents stop presenting such foods and instead only serve preferred items (Stratton & Bromley, 1999). Given the child’s preferences, the foods that are preferred
are those higher in sugar, salt, and fat. For example, instead of carrot sticks, the child will request potato chips (Schwartz & Puhl, 2003).

The location of where a family eats can have important effects on children’s food consumption patterns (Patrick & Nicklas, 2005). Neumark-Sztainer, Story, and Casey (1999) found that the frequency of eating meals as a family was positively associated with intake of fruit, vegetables, grains, and calcium-rich foods, and with intake of protein, calcium, iron, folate, fiber, and vitamins A, C, E, and B-6 (p. 931). Today’s parents have longer work hours and thus, many rely on convenience foods for their families. Convenience foods include processed and packaged products, fast food, and restaurant fare.

Parent’s socio-demographic status, cultural and racial influences, and socioeconomic status have been shown to affect the preferences and types of foods eaten by certain groups and also in the availability of foods provided in the household.

*Socio-Demographic Influences*

In addition to time constraints, various other socio-demographic factors influence the dietary quality of children and adolescents including parents’ education level and household income (Patrick & Nicklas, 2005). For example, the level of education a child’s parent has attained reflects more health conscious food choices (North & Emmett, 2003). Adolescents whose parents were more educated had higher intakes of carbohydrates, protein, fiber, folate, vitamin A, and calcium; through their consumption
of vegetables; along with consuming the recommended servings of dairy (Xie, Gilliland, Li, & Rockett, 2003).

Females have also been shown to be very self-conscious of their bodies, and feel inadequate when compared to social influences such as peers and models in the media. Negative body image and lower levels of self-esteem can lead to psychosocial problems (Mathieson, A., & Koller, T. (2006).

Cultural and Racial Influences

Ethnicity differences can play a role in the eating behaviors of adolescents as well. African American and Non-white Hispanic adolescents are closer to their family members than their other race peers are. This decreases the likelihood that said peers would influence them (Tolson & Urberg, 1993). Parents are seen to be the great influencers of non-dominant culture children (Hesse-Biber, Howling, Leavy, & Lovejoy, 2004). They teach their children to have pride in their racial identity, self-esteem, and to ignore opinions of the wider world (Hesse-Biber, Howling, Leavy, & Lovejoy, 2004).

Chatham-Carpenter & DeFrancisco, (1998) suggested that self-esteem exists in a cultural context and varies on an individual basis. Research has found that a solid sense of group identification fosters self-esteem (Striegel-Moore & Smolak, 1996) and that as racial self-esteem increases; personal self-esteem increases (Hughes & Demo, 1989).

Positive body image is linked to child’s positive sense of racial identity. The cultural (African American, Non-White Hispanic, and Asian) family, extended family
and the cultural community are critical players in conveying through their words and actions, a positive sense of racial identity to young girls (Hesse-Biber, Howling, Leavy, & Lovejoy, 2004).

An increased level of cultural identity is passed onto female children by other members of their culture community and by relatives, including parents and guardians (Hesse-Biber, Howling, Leavy, & Lovejoy, 2004). This identity helps to higher the self-esteem of the children and helps them to feel good about themselves and their bodies (Hesse-Biber, Howling, Leavy, & Lovejoy, 2004).

Research conducted by Padilla-Walker and Bean (2009) found that Non-white Hispanic and African American adolescents experience lower negative indirect peer association and higher positive indirect peer association than Caucasian adolescents. A possible explanation for such relation to peer pressure could be related to the groups being of the minority in society today.

**Socioeconomic Influences**

The diets of individuals in lower socioeconomic groups tended to have higher intakes of food such as meat products, full cream milk, fats, sugars, preserves, and cereals. They also had a relatively low intake level of fruits, vegetables, and whole grains (James, Nelson, Ralph, & Leather, 1997).

Due to their lack of nutritional education, lower socioeconomic parents need assistance from programs and interventions to learn how to create an environment where
primarily healthful foods are available. Parents should begin by modeling healthful eating for the whole family (Schwartz & Puhl, 2003).

Additional factors associated with children’s eating behaviors and the obesity epidemic is the socioeconomic status (SES) of the family. The social, cultural, and economic factors and physical environments they are in (O’Dea, 2003) determine a child’s opportunities for physical activity and healthy eating habits. These barriers influence the child’s access, availability, and uptake of proper nutrition (O’Dea, 2003). As a result, “Overweight and obesity have the greatest impact on the poorest people within communities and have the most significant long-term consequences for one of society’s most vulnerable groups—children,” said Erio Ziglio, Head of the World Health Organization Office for Investment of Health and Development.

Research suggests that an adolescents SES, weight, age and gender can all affect body image and food advice they receive from others such as parents and peers (O’Dea & Caputi, 2001). Children of a low SES status are more likely to be overweight and more resistant to social influences affecting body image while receiving less dietary advice than other children (O’Dea & Caputi, 2001). A low-income family may also be hindered in being able to access or afford healthy food choices, health services, and quality education (Mathieson, A., & Koller, T. (2006).

*Television and Media*

Children ages 8 through 18 spend an average of 7.5 hours a day on TV, computers, video games, cell phones and movies (Institute of Medicine, 2007).
the high amount of media usage, the effects of product marketing on dietary behavior can include influences on food preferences, food purchases, and requests (Institute of Medicine, 2007). The advertising may also affect children’s knowledge and attitudes, and set up for the development of dieting and issues with body image (Taylor, Evers, & McKenna, 2005).

Through the media and product marketing, children today are exposed to over 10,000 advertisements a year for food, 95% of which are for fast foods, candy, sugared cereal and soft drinks (Horgen, Choate & Brownell, 2001). Watching TV has been negatively linked to children’s food consumption behaviors (Coon & Tucker, 2002). Research suggests children whose families watch TV during mealtime consume fewer fruits and vegetables and more pizza, snack foods, and sodas than children in families where TV-watching is not allowed at mealtime (Coon & Tucker, 2002). Some researchers think that the differences in food consumption patterns of the TV-viewing patterns during mealtime may be the result of advertising (Coon & Tucker, 2002).

The most heavily advertised product during children’s television programming is food, specifically food with high levels of sugar and fat (Coon & Tucker, 2002). One study showed that during 12 hours of Saturday morning children’s television, 225 commercials were broadcast. Of these 225 commercials, 71% advertised for food products and 80% marketed foods that had low nutritional value (Cotugna, 1988, p. 126). Advertisements for sugar-laden foods such as cookies, candy, gum, popcorn, and snacks represented 1/3 of all the food advertisements during that program (Coon & Tucker,
The most advertised food products such as chips and candy are the most over-consumed foods, whereas the less advertised foods such as fruits and vegetables tend to be rarely or under-consumed (Gallo, 1998, p. 776). TV viewing can be both positively and negatively associated with children’s requests for and consumption of advertised foods and parents’ willingness to purchase the requested foods (Young, Haskell, & McGoldrick, 2010).

Distributors purposely place cereal boxes at child eye level because they know that children can recognize brands of cereal and request them. It is then the parents’ decision of whether or not to purchase the item (Schwartz & Puhl, 2003). While children are being taught about nutrition in class and programs, it is near impossible for the short time spent studying nutrition to compete with vending machines and children’s high levels of exposure to advertisements (Schwartz & Puhl, 2003).

**Availability and Settings**

Food availability is one of the most influential factors in choosing food as reported by children (Story, Neumark-Sztainer, & French, 2002). In the physical environment, children are more likely to eat foods that are readily available and easily accessible such as cut up apples or individually packaged granola bars (Patrick & Nicklas, 2005). Children also tend to eat greater quantities when large portions are served (Patrick & Nicklas, 2005). Generally, children choose to eat foods that they are served most often, and tend to prefer readily available foods within the home (Birch, 1980). Portion sizes at restaurants and fast food places have grown significantly in the past few
years; one dish is now two to five times bigger and creates for the over-consumption of fat, chemicals, and other unhealthy products (Ogden, Carroll, Curtin, Lamb, & Flegal, 2010). While schools should be a priority for intervention efforts since children and adolescents spend the majority of their time there, healthy lifestyle efforts should also target other community settings that have impacts on the eating behaviors of youth (Story, Neumark-Sztainer, & French, 2002). More opportunities should be created for healthful eating in convenience stores, fast food restaurants, and other community places for children (Story, Neumark-Sztainer, & French, 2002).

Mealtime at school accounts for more than half (52%) of children’s out-of-home eating, while the other percentages represent either mealtimes with family in or out of the home or in other built environments like restaurants and fast food places (Steinburg, 1996). The school food environment has such a large impact on children’s dietary quality since children consume the largest portion of their total daily calories at school (Story, Neumark-Sztainer, & French, 2002). More than 31 million children participate in the National School Lunch Program and 11 million participate in the National School Breakfast Program, which means proper nutrition in school is essential (Sebelius, 2010). Characteristics of the social environment and mealtime structure are important factors related to children’s eating patterns. The mealtime environment in schools can influence healthy eating through food availability, nutritional policies, health curricula, and both teacher and peer modeling (Taylor, Evers, & McKenna, 2005). While many schools are still failing to provide and support healthy eating environments, peer modeling has been
found to increase acceptance of health food choices and this in turn creates an important opportunity for schools to utilize (Taylor, Evers, & McKenna, 2005).

Recreational and camp settings provide valuable environments for children during the times school is not in session. According to Scales (2008), “Camp is one of the few institutions where young people can experience and satisfy their need for physical activity, creative expression, and true participation in a community environment. “Most schools don’t satisfy all these needs” (p. 1). Camps provide activities that foster healthy development for children while allowing children to interact with positive role models both in fellow campers and with trained camp counselors (Scales, 2008). Children learn how to work together, take responsibility, gain self-confidence, and become independent (Scales, 2008).

The American Camp Association contends that camp participants learn self-identity, self-worth, self-esteem, leadership, and self-respect through the interactions with other campers and within activities (American Camp Association, 2008). Michael Popkin, the founder of Active Parenting stated in partnership with the American Camp Association, “The building blocks of self-esteem are belonging, learning, and contributing. Camps offer unique opportunities for children to succeed in these three vital areas and even beyond home and school,” (Scales, 2008, p. 2).

While there is literature based upon the important psychological benefits camp and recreational settings have on children, further research needs to be conducted to determine the link between camps and nutrition. However, observing through the study if
the unique environment that camps offer for children’s self-development and autonomy through activities with peers and the absence of parental supervision could foster freedom at mealtime and their food choices could yield answers to the link of camps and nutrition.

**Peers**

While the literature supports that parents provide the strongest influence on children’s health beliefs and behaviors, they are not the only people children choose to model for eating behaviors (Lau, Quadrel, & Hartman, 1990). What a peer eats can also influence children and adolescents eating preferences and patterns. A peer denotes a child who is roughly equivalent in development to the observer (Schunk, 1987, p. 150). A model is an individual whose behaviors, verbalizations, and expressions are learned by the observer and serve as cues for subsequent modeling (Schunk, 1987, p. 150). Together, peer modeling refers to the behavioral change that derives from observing others depending in part on perceived similarity between model and observer (Schunk, 1987, p. 151). Observers evaluate themselves through the comparisons with others, and the most accurate are those comparisons with models that are similar in ability or characteristic (Schunk, 1987, p. 151).

Peer modeling has been shown to be the strongest predictor of children’s willingness to try new foods (Hendy & Raudenbush, 2000). Acceptance by peers plays the central role in predicting a child’s eating (Oliver & Thelen, 1996). Studies have found that peer pressure is significantly related to age in some degree (Kaplan, 1998). Children make efforts to please their friends, classmates, playmates, and to be accepted and part of
a group (Birch & Fisher, 1998). Children ages 7 to 9 showed a relatively low amount of conformity to peer pressure, while children ages 10 to 13 showed the most (Kaplan, 1996). During early adolescence (ages 10 to 13), involvement with peers and the attraction of peer identification increases. The cause of this increase is for children to feel the reassurance of having friends available for advice, and who can understand and sympathize with them (Mostow et al., 2002). The influence of peers and conformity to group norms are often considered the biggest concerns during the early adolescent years (ages 10 to 13) (Steinburg, 1996). Peers create the norms for behavior, especially if whether the behavior is acceptable to the peer group.

During the years of expanding peer relationships to occupy a central role in their lives, early adolescents often begin to replace their parents and family as their main source of advice, socializing, and entertainment (Corsaro & Eder, 1990). Adolescents spend the most amount of time with friends, and eating is an important form of socialization and recreation (Story, Neumark-Sztainer, & French, 2002). According to Story, Neumark-Sztainer, & French (2002), “Since adolescents seek peer approval and social identity, it is assumed that peer influence and group conformity are important determinants in food acceptability and selection” (p. s45).

Research has found that girls are more resistant to peer pressure than boys (Berndt, 1979; Steinberg & Silverberg, 1986; Steinberg & Monahan, 2007). However, girls could consider their peers in their food choice, leading them to choose healthier foods than unhealthy foods if valued by their peers (Walet, 2009).
Theoretical Framework

Conceptual models and theories provide in-depth explanations and understanding of key processes that affect both internal and external influences on health behaviors (Glanz, & Rimer, 1995).

Extensive psychological literature establishes that observational learning, or “peer modeling” can have powerful effects on behavior. The effects of observational learning can have the strongest influence on altering behaviors when the model is perceived to be similar to the observer (Bandura, 1977). Models are also key influencers on the observer’s behavior when they are of similar age or slightly older than the observer (Brody & Stoneman, 1981), in situations when the model’s behavior is rewarded (Bandura, 1977), or when the models behavior is repeated.

Social cognitive theory (SCT) provides a useful theoretical framework for understanding and describing the multiple influences that have an impact on food behaviors in children and early adolescents (Baranowski, Perry, & Parcel, 1997). SCT is explained as the interaction between personal factors, environmental influences, and behavior (Story, Neumark-Sztainer, & French, 2002). Glanz & Rimer (1995) state, “Key concepts of SCT are self-efficacy (self-confidence to change behavior), observational learning (modeling), reciprocal determinism (bidirectional influences), behavioral capability (knowledge and skills to change behavior), expectations (beliefs about likely results of action), functional meanings (personal meaning attached to behavior), and
reinforcement (responses to a person’s behavior that increase or decrease the chances of recurrence),” pg. 37.

In Bronfenbrenner’s (1979) ecological perspective, children and early adolescent eating behavior is viewed as being a function of multiple levels of influence (p. 22-45). The three levels of influence are individual, social and physical environment, and society (Story, Neumark-Sztainer, & French, 2002). Individual or intrapersonal influences include psychosocial factors such as attitudes, beliefs, knowledge, self-efficacy, taste, and food preferences (Story, Neumark-Sztainer, & French, 2002). Social or interpersonal environmental influences include family, friends, and peer networks (Story, Neumark-Sztainer, & French, 2002). Interpersonal influences can affect eating behaviors through modeling, reinforcement, social support, and perceived norms (Story, Neumark-Sztainer, & French, 2002). Physical and community settings such as camps and schools provide for the environmental influences on behavior (Story, Neumark-Sztainer, & French, 2002). Societal influences are a more distal influence on the behavior and consist of the mainstream media, advertising and government policies (Story, Neumark-Sztainer, & French, 2002).

Social learning theory is derived from the work of Bandura, who proposed that social learning occurs through stages of imitation, including close contact, imitation of superiors, and role model behavior (Bandura, 1977). The SLT model consists of three parts: observing, imitating, and reinforcements (Bandura, 1977). Social learning suggests a combination of environmental, or social, and psychological factors influence behavior.
(Bandura, 1977). SLT outlines three requirements for learning and modeling behavior. These include retention of the observation, reproduction or ability to reproduce the behavior, and a person’s motivation to adopt the behavior (Bandura, 1977).

**Summary**

Studying environments of mealtime activity for children could lend information for helping children to have the potential to achieve long-lasting transformations in their eating habits. With recreational settings often being overlooked for healthier food programs, and having been found to be as valuable as the school environment, it is important to study whether there is a link in children’s eating choices at summer camp based on their peers. The purpose of this study is to explore how peers influence food choices among early adolescents, aged 10 in a summer camp setting.
CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to explore if peers influence food choices among early adolescents, aged 10 in a summer camp setting. The study was a qualitative exploration of whether peers influence each other regarding eating choices at summer camp.

Data collection incorporated a variety of techniques including interviews, observations, journaling, and a supplemental self-report questionnaire of children’s nutrition knowledge and perceptions of personal behavior.

The following sections describe the methodology for testing the proposed hypotheses, including (a) data collection site, (b) selection of participants, (c) consent, (d) procedures, (e) data collection, (f) reliability and validity, and (h) data analysis.

Data Collection Site

Data were collected from campers enrolled at Camp Bob, a weeklong, overnight camp in Flat Rock, North Carolina. Founded in 1998, Camp Bob is a traditional summer camp that strives to educate, motivate and empower campers to succeed (Kanuga Conferences, 2011). Camp Bob serves children who might not have the opportunity to attend summer camp due to family finances (Kanuga Conferences, 2011). Churches and organizations sponsor children in their city to attend camp each summer by paying the
campers fees (Kanuga Conferences, 2011). The Youth Learning Institute, a program of Clemson University, offers the Camp Bob experience to low-income boys and girls, aged 10 from three local area schools. In 2009, more than 1,000 children and nearly 170 adult volunteers from 18 cities in 7 states and Washington, D.C., attended Camp Bob. They came thanks to sponsorship from 22 churches and organizations (Kanuga Conferences, 2011). Racial demographics of the campers during an average summer are 40% Hispanic, 40% African American, and 20% Caucasian/other. Due to the children being from low-income households, every camper qualifies for a 100% paid scholarship to attend.

Camp Bob was chosen as the study site due to the access of its affiliation with Clemson University and because of the participant demographics, and structures of both the camp and mealtime environment.

Camp Structure

At the beginning of camp, the camp director assigned campers to cabins based on gender. Depending upon the number of campers for the weeklong session, each cabin included, on average, 10 campers with two head counselors, a junior counselor, and a volunteer. Campers participated in five different leisure activities every day (Kanuga Conferences, 2011). Camp Bob provides 21 activities taught and supervised by camp counselors. These activities include swimming, canoeing, archery, adventure hikes, and rock wall climbing (Kanuga Conferences, 2011). Campers also participate in a number of required activities with their cabin group such as board games and talent shows during camp allotted cabin activity time twice a day (Kanuga
Researchers Role at Camp

The researcher volunteered at the camp as a volunteer camp counselor to assist the counselors for one week. The researcher was with the campers at every hour of the day in assisting the head and junior counselors with the female campers in the designated cabin; helping with activities, conducting games and adventure hikes, and administering the rules of the cabin and camp.

The researcher intended that such role would prove to be beneficial not only to the camp for help but also to the study’s validity due to the possibility of complete immersion.

Mealtime Structure

The campers sat at mealtime with their respective cabins. There are 8 children at a table and about 100 total children in the dining hall at a given meal. Participants chose to sit where there was an open seat and since each participant had a previous relationship with their fellow cabin peers prior to camp, this resulted in sitting next to a friend.

All meals (breakfast, lunch, and dinner) were served “family-style.” The pre-set meals were placed on the tables along with juice as a beverage. If the food portion originally set on the table runs out, a child (e.g., “hopper”) from the table is designated to get more for the entire table. Side options that are available but not placed on the table include milk, a salad bar, and fresh fruit. If the children want either of those options, they
are to get it themselves. The camp also offered a vegetarian option for those who did not eat meat. If a child would like the vegetarian option, they were to indicate their preference at the beginning of the camp session. This was to insure that for the child’s meals throughout the week, both the cooks and counselor knew which options were for that child.

Snack time was two hours after lunch and between activities. The counselors in charge of the daily activities were to bring the kids to the outside gym area. The kids would then be divided based upon cabin and would be given their pre-packaged snack to eat out on the concrete gym slab. Snacks consisted of fun size bags of Sun Chips, Oreos, Animal Crackers and Nature Valley peanut butter and chocolate chip granola bars. The usual fresh fruit options of oranges, green and red apples, and bananas or milk in the cafeteria during mealtime were not brought out or available for the kids to choose from.

Participants

Participants for the study consisted of the 10-year-old girls in the researchers’ cabin for the one-week session. While the overall camp participant size was about 100-110, only the cabin group was included in the in-depth study with direct interaction during activity time and within the camp dining setting.

Consent

Because participants for this study are children under the age of 18, informed consent had to be obtained from parents or guardians of the study participants. During the
registration process, parents or a family member signed a waiver that permitted the camp to take pictures and provide activities for the children.

For the observation process of the data collection, passive consent was waived according to Internal Review Board (IRB) at Clemson University (see Appendix A). However, parental and participant permission was required from the 10 interviewed participants. To gain the consent needed, a letter was given to the children’s families for signatures when the children were dropped off for camp (see Appendix B). The researcher was able to meet the parents, answer any questions they had, and provide reassurance that the study was not to be intrusive upon their child’s camp experience.

Camp Bob accommodates campers and their families who are English and Spanish speaking by providing both the camp registration and waiver forms in English and Spanish. The consent forms for the study were also offered in both languages (see Appendix C). The researcher worked with the Clemson IRB to ensure all proper permission was received. Both language versions of the camp waiver and study waiver forms were included during the IRB submission process.

Data Collection

Data collection incorporated a variety of techniques including interviews with the participants, researcher observations, researcher journaling, and supplemental self-report participant survey data of nutrition knowledge and perceptions of personal behavior. The data collection began with lunch mealtime observations on the first day of camp,
Monday, and concluded with the last set of observations during lunch on Friday. A table of data collection procedures is provided in Appendix E.

The arrangement of the researcher as counselor provided an opportunity for direct observation and full immersion into the camp lives of the study participants. The researcher’s intent was to observe the awareness of the influence the campers have on each other, if any. The researcher documented observations of the campers and their peers during mealtime and camp organized activities throughout the day to gauge the peer influence at each setting through journaling. Observations of eating behaviors and influences of the greater camp population were also documented.

*Interviews*

The first sets of interviews were conducted on the first day of camp after the children settled into their cabins, during the camp-allotted afternoon downtime. The researcher interviewed all 10 participants individually throughout the week until all the children in the cabin had been interviewed. Additional interviews were conducted throughout the week with participants to collect more information. Interviews took place privately either inside or outside of the cabin and lasted approximately ten to thirty minutes. Upon completion, the participant returned to the cabin with the other children.

The researcher followed an established interview guide (see Appendix G) to ask the cabin participants about their eating choices and behaviors, whether they feel their peers influence their eating choices, and how they view themselves during mealtime. In the interviews, the participants spoke about their favorite foods, eating habits at home,
school, and at camp, their peers, and their parents. Comments by participants about their peers included encouragement to try new foods, and negative comments about their self-image. Participants indicated that their parents were active introducing, preparing and serving, and encouraging the consumption of fruits and vegetables. Interview data also showed that parents were the primary influencer with food choices and also encouraged the children to think independently and not be influenced by their peers.

Each interview was audio recorded and transcribed for analysis.

Journaling

The researcher kept a journal for every day at camp in which she recorded observations of the participants at mealtimes, interactions and conversations between campers and counselors that were pertinent to the study, and informal interviews conducted by the researcher with participants. The journaling was open-ended and the guideline of questions was created by the researcher previous to camp to serve as an observational tool within qualitative research (see Appendix H). Entries detailed the friendships within the cabin, conversations between participants during activities or within downtime about their food choices and friendships, and a log of when interviews and questionnaires were conducted. The research found within the journal entries supported the categories that had emerged previously from interview data.

This form of observation took place every day of the weeklong period in which the participants attended camp. The observations within the dining room and at each mealtime setting (breakfast, lunch, and dinner) were also collected each day.
Direct Observation

During mealtime, the researcher-documented observations of the campers present based on a created observations outline guide by the researcher prior to camp (see Appendix I). The completed guides listed all the meal options at the meal, including vegetarian, beverage, and salad bar options. The researcher used the guides to detail what each participant had eaten during the meal including any instances of getting up from the table to get fresh fruit, milk or salad bar option.

Next, the researcher observed the portion control of the table. The children could not receive a second portion until the starting amount was all gone. Observing which food option (meat, fruits, vegetables, and bread) was being eaten the most and also noted any time the hopper went to get more servings for the table and listed which food this was.

With the outlined guide, the researcher illustrated where each participant sat during the mealtime in relation to the other participants, counselors, and researcher. Furthermore, the researcher used the guide to state if those sitting next to each other had known each other previously to camp or were friends. Counselor and peer influence upon the children’s food was analyzed through observing the children’s food choices at the table when seated next to one of the models.

The researcher detailed conversations that took place during the meal, including any references to the food that they were currently eating or wanted to get from the options bar. The guides helped to illustrate the relationships of the participants during the
mealtime and show which foods each child was eating or choosing to get from the options bar. Whether the child consumed a certain food group that previously stated they did not care for during the interview process based upon the models choices was noted.

Creating a qualitative summary of all the variables allowed for more data comparisons of the children’s consumption of foods that are healthier than others offered and how similar or different to the entire camps mealtime choices were to the researcher’s cabin participants.

Questionnaire

Additional data collected were by means of a questionnaire that all 10 of the participants completed at the beginning of each camp session. The purpose of collecting the questionnaire was to have a descriptive self-report from each camper to supplement the qualitative data collected by the researcher.

The PACE questionnaire (Sallis, 2001) was a self-administered survey in which participants were asked about their eating behaviors and selected the answers they felt were closest to their life outside of camp, within their household, with peers or at school. (Appendix F). Other participant profile information included was age of the camper, prior friendships with other campers, food preferences, and a brief personality assessment. The PACE questioned what types of food the children personally like, the food choices of their parents, and food environments with parents and friends (e.g., in front of the TV, at the dining room table, eating out) (Sallis, 2001).
Overall, the questionnaire served as a quantitative measure of previously established and everyday lifestyle choices of the participants and was used to compare statements made within the interviews and observations at mealtime to illustrate if the same choices were also evident at the camp.

Reliability and Validity

Reliability and validity of the data was established through triangulation of the data with multiple data sources employed. Of triangulation, Patton (2001) states, “Triangulation strengthens a study by combining methods. This can mean using several kinds of methods or data, using both qualitative and quantitative approaches” (p.247). Using triangulation for the methods was important because it is “a validity procedure where researchers search for convergence among multiple and different sources of information to form themes or categories in a study” (Creswell & Miller, 2000, p. 126). “Therefore, reliability, validity and triangulation, if they are to be relevant research concepts, particularly from a qualitative point of view, have to be redefined as we have seen in order to reflect the multiple ways of establishing truth” (Golafshani, 2003, p. 604).

By studying the participants from the camp counselor role, the immersion allowed for valuable insight. With the researcher being a counselor, this provided the opportunity for the participants to be honest and un-bias to the study and their peers and interact with natural behavior. Being immersed with the participants, helps to yield a better data collection set than a study in which the children were not familiar with the researcher and
a specific behavior change was subsequently an effect. Using triangulation with the study approaches helped in determining if through the multiple data collection methods there is a consistency in peer and camper observations about their food choices throughout the week. Determining through the data collected and questions asked, if the stated hypothesis about a relationship between children and peer influence at mealtime is true and can confirm the hypothesis and objectives of the study could help in determining validity.

However, when being immersed in the daily lives of the participants, the researcher found that there might have been issues with social desirability. Neeley and Cronley (2004) found that self-report questioning methods might increase the potential for social desirability bias as the participant seeks to manage the researcher’s impression of him or her. The social desirability became evident when the participants were asked or questioned about eating and were more likely to answer in the favorable way of the researcher. There were interview data collected in which when asked about their favorite foods, the participants began by stating fruits and vegetables. In follow-up interviews, there was more data to support the notion of social desirability when asking about fruits and vegetables and eating patterns.

**Data Analysis**

Data were transcribed verbatim and entered into the researcher’s personal computer after the camp session was over. A total of 22 interviews were conducted; 10 individual and 12 additional interviews throughout the week with one or more
participants for more qualitative data. Once the audio-recorded interviews were transcribed, they were stored on the researchers’ password-protected personal computer. In the researchers coding format, each participant received a corresponding number as an identifier for coding the questionnaires and interviews.

The researcher then entered the journal observations that were collected during each meal at the camp (13 mealtime observations). Upon analysis of the guides (Appendix I), the observations showed that there were times in which a participant would say one thing during an interview and do another at mealtime. Such an example would be a participant stating that she enjoyed eating fruits and vegetables but was not observed eating any at mealtime. These instances were noted in the computer document and addressed with the possible issue of the participant’s social desirability. Since the observations were done in hard copy form in a notebook, the data were not entered into the computer file, but securely stored in the researcher’s binder that was kept at the researchers personal residence.

The PACE questionnaire was coded using the coding instructions as recommended by Sallis (2001). Each participant completed the questionnaire once, with 10 questionnaires collected. The quantitative data that were collected via the survey were inputted into an excel document saved onto the researchers’ personal computer. To find the frequency, means, and standard deviations of the PACE questionnaire data, the researcher used the statistical software SAS version 9.1.3. The researcher inputted the participant’s survey answers manually into the software. Upon reviewing of the data, the questions and analyzed results from the survey were entered by the researcher into the
participant-specific data source categorical document with the interview and observational data and were saved onto the researcher’s personal computer.

The researcher and two committee members independently coded the document by data source and reconvened to discuss the various categories and themes each found. After the categories and themes were determined and separated out, the researcher then inputted the interview data, observations, and tables from the questionnaire, for each category into a document as outline to present the results.

The main categories that emerged from the data were collected initially through the interview process and then further examined by layering the mealtime observation and PACE questionnaire data to elaborate the categories with additional themes. The layering of the data from the three methods used in the data collection process into the one document and was able to determine if and how the observations and questionnaire data supported or did not support the interview themes.

Once coding was complete, participants received a pseudonym as their identifier for the final report. No real participant names were used. The codes and individual participant data source document were stored on the researchers’ password-protected personal computer.

Issues with Social Desirability

A possible issue that could have arisen during the data collection was the Hawthorne Effect. The Hawthorne Effect occurs when a participant feels that they are
being studied and know the answer in which the researcher is wanting and will change their behavior to match the desired behavior (Olson, Verley, Santos, & Salas, 1994). On the PACE questionnaire, the participants could have answered the questions purposely in the way that they felt the researcher was searching for. However, the questionnaire was conducted on the Tuesday of camp. The researcher chose to conduct the questionnaires early on in the week to prevent any Hawthorne Effect with the participants’ answers since interviews had taken place before the questionnaires were dispersed.
CHAPTER IV

RESULTS

Introduction

The purpose of this study was to explore the degree of peer influence on children’s food choices at summer camp. The two questions that the study explored were (1) whether peers would have an influence on other children’s food choices during summer camp meal times and (2) whether the camp mealtime environment encourages or discourages influences of peer modeling on eating behaviors.

In this chapter, the sample is described and the findings are presented. A description of the participants is given followed by the categories and themes that emerged from the data. The outlines of the results are presented in four categories: parental support, friend support, participant independence, and availability/access. The further breakdown of each category involved three to four themes that were prevalent and how the participants stated each influenced or did not influence them concerning their food choices.

Description of Participants

For the week of data collection, 10 girls participated in the study (see Table 1 for demographic profile of participants). Participants were 10 years old and consisted of two Spanish-American and eight African American girls. Some of the girls were friends before camp due to their involvement in extracurricular activities or attending the same public elementary school.
Table 1: Name, Age, Race/Ethnicity and Body Type of participants.

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Race/Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maria</td>
<td>10</td>
<td>African American</td>
</tr>
<tr>
<td>Rachel</td>
<td>10</td>
<td>African American</td>
</tr>
<tr>
<td>Lauren</td>
<td>10</td>
<td>African American</td>
</tr>
<tr>
<td>Shania</td>
<td>10</td>
<td>African American</td>
</tr>
<tr>
<td>Courtney</td>
<td>10</td>
<td>African American</td>
</tr>
<tr>
<td>Meredith</td>
<td>10</td>
<td>African American</td>
</tr>
<tr>
<td>Jennifer</td>
<td>10</td>
<td>African American</td>
</tr>
<tr>
<td>Emily</td>
<td>10</td>
<td>African American</td>
</tr>
<tr>
<td>Ashley</td>
<td>10</td>
<td>Non-White Hispanic</td>
</tr>
<tr>
<td>Olivia</td>
<td>10</td>
<td>Non-White Hispanic</td>
</tr>
</tbody>
</table>

The superscripts are those participants who knew each other before camp.

Participants Knowledge of Healthy Foods

According to the data, participants had an established knowledge of fruits and vegetables upon entering camp. When asked during interviews what foods they felt were healthy, all spoke about fruits and vegetables. Meredith (age 10) said that when she thinks of eating healthy, she thinks about fruits and vegetables, “I like eating them [fruits and vegetables] because they got a lot of vitamins in it…that’s what we learned in school.” Rachel (age 10) went on to say that she ate fruits and vegetables often “…because sometimes you have need to put some healthy stuff in your body, and you get it from eating the fruits and vegetables.” Another participant, Ashley (age 10) explained, “Fruits and vegetables are good for your body, and if you don’t like them, you should eat them anyways.” It seems that the participants learned about what constitutes a healthy food like fruits and vegetables through school nutrition education programs and used the acquired knowledge to guide their food choices on a daily basis.
Foods described by the participants as being unhealthy or “junk food” was those that society has also dubbed unhealthy and should be consumed in limited quantities. When asked to give an example of what she considered “junk food,” Emily (age 10), said, “Sugary or greasy things, donuts, candy, French fries, soda or stuff like that…they [parents] don’t let me eat a lot of those foods cause they are not healthy.” Emily said that when she thinks of gaining weight that she thinks of chips and soda. After swimming and canoeing activity one day, a few girls from the cabin had to go to the restroom so the whole cabin stopped at the nearby conference center. While waiting, two of the girls, Ashley and Jennifer remarked about the ‘junk food’ inside saying that the honey buns on the rack and soda in the machine were bad for you. Three other girls (Maria, Lauren, and Courtney) heard the remark and all nodded or agreed aloud about the description of the foods.

Results from the PACE questionnaire supported the campers interview responses concerning the benefits of fruits and vegetables. Participants ranked higher in very important and extremely important to the questions regarding the positive benefits of fruits and vegetables (see Table 2 for the descriptive statistics for the PACE questionnaire). For example, “I would feel healthier if I ate fruits and vegetables” and “I would be doing something good for my body if I ate fruits and vegetables.” Participants mean score for the question regarding, “I would rather eat sweets or high fat snacks than fruits and vegetables” was a low 2.5 out of 5, with the majority answering either not or slightly important. The majority (60%) of participants also answered ‘strongly agree’ to the PACE question “I enjoy eating fruits and vegetables” (see Table 2.1).
Table 2: Knowledge of the Benefits of Fruits & Vegetables

Means, Standard Deviations, and Total Responses for PACE Questionnaire (n=10)

How important is each statement to you when deciding whether or not to eat fruits & vegetables each day:

<table>
<thead>
<tr>
<th>PACE Questions</th>
<th>Not (1)</th>
<th>Slightly Moderately (2)</th>
<th>Moderately (3)</th>
<th>Very (4)</th>
<th>Extremely (5)</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would have more energy if I ate f &amp; v.</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>4.50</td>
<td>0.84</td>
</tr>
<tr>
<td>I would be doing something good for my body if I ate f &amp; v.</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>7</td>
<td>4.40</td>
<td>1.26</td>
</tr>
<tr>
<td>I would feel healthier if I ate f &amp; v.</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>4.20</td>
<td>1.31</td>
</tr>
<tr>
<td>I would rather eat sweets or high fat snacks than f &amp; v.</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2.50</td>
<td>1.77</td>
</tr>
</tbody>
</table>

Table 2.1: Fruits & Vegetables Enjoyment

Means, Standard Deviations, and Total Responses for PACE Questionnaire (n=10)

Rate how you feel about eating fruits & vegetables:

<table>
<thead>
<tr>
<th>PACE Questions</th>
<th>Strongly Disagree (1)</th>
<th>Somewhat Disagree (2)</th>
<th>Neutral (3)</th>
<th>Somewhat Agree (4)</th>
<th>Strongly Agree (5)</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoy eating f &amp; v.</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>4.40</td>
<td>0.84</td>
</tr>
</tbody>
</table>

The researcher observed many participants in the cafeteria getting fresh fruit and salad. At every meal during the week at camp, the salad bar and other fresh fruits were
empty by the end of the meal. Some of the campers were not able to get an option because there was not enough available. During breakfast, the fruit and milk options were empty, as were the additional options at the salad bar such as cereal, yogurt, grits, or oatmeal. When questioned about why the participant chose the option in which they had to get up for, the responses including statements such as: “I had the taste for one,” “I wanted one,” “I am done with my meal and wanted something else.”

Research Questions

Within the data, the researcher found that while there was a degree of positive and negative peer influences upon the participants, there was also participant independence in regard to their food choices. Though peers were the targets of the study, the participants acknowledged that their parents also served as influences. Finally, the data showed that there is a need for easier access and formal introduction to the mealtime environment so that the participants could fully choose the foods they wanted. Data showed that although peers had influences on eating behaviors, positive and negative, the participants also expressed autonomous thinking about their food choices. Parents also play an active role, as did access to and knowledge about availability of healthy foods.

Question #1: Will peers have an influence on other children’s food choices during summer camp meal times?

The researcher found that while participants stated that their peers did have positive and negative influences upon their eating behaviors, individual autonomy and
parents play influencing roles as well. The results from interviews, daily observations, and the PACE questionnaire together illustrate the influences on children’s food choices.

**Influences from Peers**

In the data, the participants indicated that their peers influenced them in regard to encouragement to try new foods and stated that their peers affected their self-image and emotion.

*Influence to try new foods*

“If they [friends] say something is good and I have never had it then I would try it and see what it is all about,” Maria (age 10). Courtney (age 10) stated “They [friends] will be like, oh I had that before, try that and other things...they talk to me about eating healthy and fruits and vegetables.” “They [friends] will say that maybe I should try this fruit or vegetable. So I might try it. But I still won’t eat the same thing as them if I have had it before and don’t like it,” Meredith (age 10).

*Influence on self-image and emotion*

Maria (age 10) said “They just pick on me and call me fat and stuff and say what you eat and shouldn’t eat…and they are the ones who be eating all that junk food and stuff and they be hating on you…and that makes me feel like I need to eat healthier.” Rachel (age 10) stated that if someone is picked on, “Then that person isn’t your friend anymore because they tell them that you’re fat or something like that.”

The supplemental survey data did not support the interview statements from the campers about their peer influences. In the PACE questionnaire, participants answers to
questions about their friends encouragement to eat fruits and vegetables and also eating fruits and vegetables with them were low, with the highest responses stating either ‘never’ or ‘1-2 days’ a week (see Table 3).

Table 3: Fruits & Vegetables Friend Support

<table>
<thead>
<tr>
<th>PACE Questions</th>
<th>Never (1)</th>
<th>1-2 days (2)</th>
<th>3-4 days (3)</th>
<th>5-6 days (4)</th>
<th>Everyday (5)</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage you to eat f &amp;v?</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2.40</td>
<td>1.57</td>
</tr>
<tr>
<td>Eat f &amp;v with you?</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2.20</td>
<td>1.13</td>
</tr>
<tr>
<td>Do other kids tease you for eating f &amp; v?</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1.40</td>
<td>0.69</td>
</tr>
</tbody>
</table>

As indicated in Table 3, questionnaire results show that the majority of respondents indicated that they are never teased about eating fruits and vegetables. In the questionnaire section regarding friends, eight participants responded ‘not important’ to the question of it they would feel embarrassed about “other kids saying or seeing those eating fruits and vegetables” (see Table 4). The other two participants answered “slightly important” to the same question of embarrassment. While when interviewed the participants stated that they were teased or bullied, their questionnaires state differently.
It seems that their peers may tease them, but the participants seem to not feel embarrassed when seen eating fruits and vegetables.

Table 4: Feelings about Eating Fruits & Vegetables

<table>
<thead>
<tr>
<th>PACE Questions</th>
<th>Not (1)</th>
<th>Slightly (2)</th>
<th>Moderately (3)</th>
<th>Very (4)</th>
<th>Extremely (5)</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would feel embarrassed if</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.20</td>
<td>0.42</td>
</tr>
<tr>
<td>other kids saw me eating f &amp;v.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Influences from Parents

Children’s parents play a direct role in eating patterns through behaviors, attitudes, and feeding styles (Patrick & Nicklas, 2005). Throughout the data, parents appeared to have more influence on this population than peers in a child’s food-related knowledge, preferences, and consumption (Crockett & Sims, 1995). The data illustrated that the participant’s parents provide them with support through the following means: emotional and encouragement, informational and educational, tangible, and structural.

Emotional Support and Encouragement

According to the data, the participant’s parents influenced them through emotional support and encouragement of their children to eat healthy and more specifically, fruits and vegetables.
“She’ll [mother] tell me I have to eat healthy, or she’ll encourage me to eat more food that’s healthier for me,” Maria (age 10). Rachel (age 10) also stated that her parents “…like for me to eat fruits and vegetables as much as I can because they are good for me.” “I should eat them and I should try to exercise every day, it is good for my body and that is what I should do, it is fun to exercise and play.” Olivia (age 10), stated that her parents express their thoughts about eating healthy, “They [parents] talk to me about eating healthy, like drinking lots of water,” Olivia (age 10).

*Informational and Educational*

Parental influence included educating the participants in the home about the benefits of eating fruits and vegetables.

Lauren (age 10) expressed her parent’s encouragement of the benefits of eating fruits and vegetables, “Because it will help keep my body in shape and it makes me happy…my momma and my family tells me that.” “She [mother] says I need to be active and healthy so that I can play sports…My momma and school say it is good to eat healthy to be stronger and live longer,” Maria (age 10). Meredith (age 10) said that she has a support system that educates her on the importance of eating healthy, “People like my mom and my dad and family and friends; they all say that eating healthy is good for you and you should eat more fruits and vegetables.”

*Tangible*

Parents provide fruits and vegetables in the home to further the children’s consumption of fruits and vegetables and healthy eating.
Maria (age 10) stated that “My momma buys them [fruits and vegetables] at the store and I will go with her and pick them [fruits and vegetables] out…momma likes for me to eat them with my meals and she buys them for me and cooks them.“ “My grandma and my parents always tell me to eat vegetables and fruits and they also make them a lot at home,” said Lauren (age 10). Jennifer (age 10) stated that her parents “…are always cooking vegetables with dinner.” Emily (age 10) said that at home, “I actually eat all kinds of fruits and vegetables.”

In the PACE questionnaire section in which the participants were questioned about how much and how often they ate fruits and vegetables at home (see Table 5), all of the participants stated that they ate fruits and vegetables at home, but there were some differences in how often foods were available. When asked about their parents, the mean score was 4.6 of five where five was “extremely important” that their parents would be pleased that they are eating fruits and vegetables. Participants also stated through their PACE questionnaire answers that their parents tell them they are doing a good job when they eat fruits and vegetables and them with the parents with at meals.
Table 5: Fruits & Vegetables Family Support

Means, Standard Deviations, and Total Responses for PACE Questionnaire (n=10)

During a typical week, how **often** do your parents:

<table>
<thead>
<tr>
<th>PACE Questions</th>
<th>Never</th>
<th>1-2 days</th>
<th>3-4 days</th>
<th>5-6 days</th>
<th>Everyday</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage you to eat f &amp;v?</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>3.80</td>
<td>1.13</td>
</tr>
<tr>
<td>Told you that you are doing a good job with eating f &amp; v?</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>4.40</td>
<td>1.07</td>
</tr>
<tr>
<td>Provide f &amp;v as a snack or part of a meal?</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3.80</td>
<td>1.22</td>
</tr>
<tr>
<td>Eat f &amp;v with you?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>4.20</td>
<td>1.13</td>
</tr>
</tbody>
</table>

*Structural*

Participants expressed how their parent’s household rules about eating fruits and vegetables, exercising, and limiting junk food influenced both their fruits and vegetables consumption and their outlook on healthy and junk food.

When asked if she eats many sweets, Maria (age 10) said, “Not really, I don’t like chocolate and my momma does not have a lot of cookies or cake around the house.” Rachel (age 10) stated, “I think my mom would influence me.” Rachel also expressed that her parents provide rules in the household about eating fruits and vegetables, “She said to eat... she said to eat your fruits and vegetables or you can’t eat dessert. I have to
eat it or she’ll take away my privileges like TV.” Lauren (age 10), stated that her parents do not allow certain drinks in the house “My momma and daddy don’t allow me to drink a lot [soda], they like me to drink milk and water which is fine, cause I really like milk,” Lauren (age 10). Jennifer (age 10) remarked about fast food and her household by saying, “I don’t really like it, too greasy for me. My mom doesn’t buy fast food that much.”

Question #2: Does the camp mealtime environment encourage or discourage influences of peer modeling on eating behaviors?

The study suggests that there is a need for easy access and formal mealtime environment introduction since participants were unaware of such options at the beginning of camp.

Access and Environment

Throughout the data, the participants stated and were observed as needing easier access and introduction to the mealtime environment and additional food options.

Location of foods and foods provided

The location of the food and the food provided at camp influenced the consumption patterns of the participants. The participants expressed having issues with knowing where the food was and the limited quantity of fresh fruits and vegetables provided.

When asked why Jennifer did not bring back an orange when she went to get one, she replied, “They were all gone when I wanted to get something.” Four of the participants (Emily, Maria, Ashley, and Jennifer) all stated how they wished there were
the fruits available at snack time. Ashley shared an orange with Olivia, are friends prior to camp. The girls had to share because there were no more left when Olivia went to get one.

Many of the participants were unaware of the fresh fruit, milk, and salad bar options at Camp Bob during the first day until the researcher or a counselor brought back an option and the participants questioned where they had gotten it. Upon learning of the location, it was observed that the participants would go and get the options as they pleased.

The mealtime environment was one of hectic confusion. The participants engaged in flowing conversations about the activities of the day and sang songs that would be started by one cabin and the whole cafeteria would join in on. This created a ruckus of sorts since the majority of the songs had dance moves associated with the words and the campers would stomp and clap.

A cafeteria rule was that there could only be one person up from a table at time. This rule created an issue with the children being able to get options that were not on the table. Each camper had to wait until someone came back in order to get up and there were times when there were no longer options available by the time the camper returned.

As previously noted, the breakfast and salad bar along with the fresh fruit and milk options were gone after every meal. Observations of the mealtime cabin food wastes showed that the girls were eating all of the options that they chose to get up to get. Together, these observations mean that the children choose to get an option and eat it, not just try it or waste it after a few bites, ate all of it.
Snack time

During snack time there were no fresh fruit or milk options available. Snack time was two hours after lunch and between activities.

The supplemental survey data supported the interviews and observations of the participants concerning access to fruits and vegetables. In the PACE questionnaire, participants indicated that they look for more information about ways to eat more fruits and vegetables and try different fruits and vegetables so that they have more options to choose from (see Table 6).

Table 6: Fruits & Vegetables Change Strategies

<table>
<thead>
<tr>
<th>PACE Questions</th>
<th>Never (1)</th>
<th>Almost Never (2)</th>
<th>Sometimes (3)</th>
<th>Often (4)</th>
<th>Many Times (5)</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I look for information about ways to eat more f &amp;v.</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>3.20</td>
<td>1.39</td>
</tr>
<tr>
<td>I try different kinds of f &amp;v so that I have more options to choose from.</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3.20</td>
<td>1.22</td>
</tr>
</tbody>
</table>
CHAPTER V

DISCUSSION

The purpose of this study was to explore the potential influences of peers on children’s eating behaviors in a summer camp setting. The two questions guiding the study were whether (1) peers have an influence on children’s food choices during summer camp meal times, and (2) the camp mealtime environment encourage or discourage influences of peer modeling on eating behaviors?

The study found that in the data, the participants indicated that their peers influenced them in regard to encouragement to try new foods and stated that their peers affected their self-image and emotion. The data illustrated that the participant’s parents provide them with support through the following means: emotional and encouragement, informational and educational, tangible, and structural. Finally, throughout the data, the participants stated and were observed as needing easier access and introduction to the mealtime environment and additional food options.

Based upon the coded and transcribed data that was collected at Camp Bob, the participants indicated that their peers did influence them, positively and negatively, during mealtime. However, participants also indicated independence about their food choices. They seemed to be more internally influenced than externally and supported the study Taylor, Evers, and McKenna (2005) found that children and adolescents attitudes and preferences were strong determinants of healthy eating. The results of this study show that the participants chose foods based upon what their preferences of what they
wanted and liked. Participants also explained their food choices based upon their strong autonomous attitudes towards fruits and vegetables as depicted in the results.

This study was inspired by Birch’s (1980) study exploring the role of peers in children’s eating behaviors in school lunchrooms. However, the results of this study do not agree with what she found, but there are a number of things that are quite different between the two studies. First, her study was done in a school lunchroom, which is different from the camp dining room in that at the school in Birch’s study, the children were only allowed one serving, there was not a salad bar or no milk option, and the lunchroom did not allow for walking around or getting up from the table.

Also, her study was done with children (preschool, ages 3-10). Participants’ demographics in the Birch study consisted of three African Americans, two Asians, and the remaining of the 39 were Caucasian, all of middle-class families. The participants of in this study were of low socio-economic status and were more culturally diverse which might have affected the outcome. As Hesse-Biber & et al, (2004) contended, African American and Hispanic children such as those making up the study population in this study are affected differently by their peers than White children. In addition, the children in this study were several years older than the children in Birch’s study. This could be an issue because research has shown that children aged 10 experience more influences from peers than preschool aged (Kaplan, 1996).

The data show that there was some degree of peer influence among the participants in this study, but not necessarily at mealtime itself. The participants did not say that they chose to get an option at mealtime because their peer was eating it. There is
more peer influence during the day when there is teasing about someone’s weight or body type, gossip and picking on each other. It seemed in this study that children of the participant’s age feel that bullying is common at their age and a way of expressing their attitudes towards a particular person or action. Children this age use bullying for affirming group norms and friendships (Cobb, 2010).

The majority of this study’s participants indicated that they were more influenced by their parents than anyone else. The results from this study support Birch and Fisher’s (1998) finding that children who model their parents eating patterns could be due to the foods available at home. The participants in this study stated during various interviews and observations that they were used to eating similar foods at home that they were served at camp, such as the baked chicken and vegetables.

The PACE questionnaire results showed that they are much more aware of their parents influence on their eating fruits and vegetables each day as opposed to their friends. Parents are seen to be the great influencers of non-dominant culture children (Hesse-Biber, Howling, Leavy, & Lovejoy, 2004). The parents teach their children to have pride in their racial identity, self-esteem, and to ignore opinions of the wider world (Hesse-Biber, Howling, Leavy, & Lovejoy, 2004). This was found through the participants’ continued statements about their autonomous confidence when describing why they chose fruits and vegetables and why they did not feel peers influenced them.

According to the research participants, parents seem to encourage the participants to eat healthy by cooking fruits and vegetables, limiting junk food intake, and teaching
the girls about the important benefits of eating healthy while also encouraging them to be themselves and not listen to their peers.

Young females from different cultures accredit their self-confidence to the support and influence of their parents (Hesse-Biber, Howling, Leavy, & Lovejoy, 2004). Through the study, many of the female participants stated that their parents taught them to not worry about others opinions, but to worry about themselves. Hesse-Biber & et al, (2004) found that female children of African American and non-white Hispanic culture are taught the ability of non-internalizing comments by others and to ignore, reject, and disbelieve them. This non-internalization in turn is a direct result of their increased racial identity (Hesse-Biber, Howling, Leavy, & Lovejoy, 2004). Participants in this study and the Hesse-Biber, Howling, Leavy, & Lovejoy (2004) study spoke about relying on their own feelings and self-assessments of themselves. While many of the participants stated that they had been teased about their appearance, all the girls expressed pride and/or satisfaction in their appearance.

Patrick and Nicklas (2005) found that children showed more willingness to try new foods when they saw an adult eating it. At mealtime, the researcher chose to eat the same foods as the participants. The researcher chose to get a vegetarian option one day. At the table, one of the girls (Rachel) asked if she could get it as well but was told that she had to be vegetarian to get it, she looked disappointed. This only happened once during the week and further observation of the meal showed that Rachel did not like the sauce that was on the chicken and wanted something else to eat. Rachel ended up getting a salad to go with her meal. Within the cafeteria one day, a counselor at another table
approached the researcher after a meal and said that a few of the girls in her cabin had
gotten up to try the oatmeal provided at the options bar during breakfast because they saw
her try it. She said that they tried it and expressed their disgust.

When further analyzing the mealtime observations, the data showed that the
participants did try foods or eat the same foods that either the researcher was eating or a
fellow counselor. While this study was conducted to see if there were cases of peer
modeling at summer camp, there may have been instances of role modeling the
counselors as well.

Social relationships that develop while eating meals with others build a sense of
belonging (Fulkerson, Neumark-Sztainer, & Story, 2006). A meal can be a crucial time
for socialization and role modeling of healthful eating habits (Fulkerson, Neumark-
Sztainer, & Story, 2006). Research conducted by Fulkerson, Neumark-Sztainer, & Story
(2006), showed that family meals are important for adolescents by providing the structure
and sense of connectedness. Participants could have modeled the researcher and fellow
counselors in attempts to feel the sense of connectedness. The participants were at an
overnight summer camp for a week away from home and while they knew other girls
within the cabin, could still have looked to the counselors as adults and almost guardian
figures. Moreover, the development of unity through meals is important during
adolescence (Collins, 1995) and may provide the structure and sense of unity and
connectedness young children need to feel safe and secure (MacKenzie, 1993). The
participants could have seen that modeling the counselor was a way to feel more secure
and comfortable with the camp experience.
Research has shown that younger boys and girls (ages seven to ten) will see counselors as role models, using the term "worship" rather than "look up to" to describe how campers this age think of their counselors (Schafer, 2007). A counselor’s authority and influence comes from the relationship that they create and the examples they set (Schafer, 2007). In the present study, the researcher and participants developed relationships. The researcher rode the bus with the participants to the camp and was able to introduce and interact with them there and then once at camp and divided into cabins, icebreaker games were played. Role modeling is arguably the most salient "delivery system" through which campers and staff learns and develops over the summer (American Camp Association, 2008). Role modeling is in the thousands of small, daily interactions that occur throughout the summer (mealtime, learning a new activity, and cabin clean up, etc.) (Schafer, 2007).

The participants in this study could have felt that modeling the food choices of others (i.e. counselors, researcher) could have been a benefit to the behavior. This benefit connects back to social desirability and if the counselor or researcher would have viewed the participant differently based upon her eating choices. People are more likely to follow the behaviors modeled by someone with whom they can identify (Fulkerson, Neumark-Sztainer, & Story, 2006). The more perceived commonalities and/or emotional attachments between the observer and the model, the more likely the observer will learn from the model (Bandura, 1977). In this study, the model was intended to be a peer, but instead, the data showed that even the counselor and researcher could be the model.
In this study, the participants could have been reinforcing the concepts of Bandura’s social cognitive theory within their eating behaviors. The participants stated through their self-efficacy or autonomous confidence that they choose the foods they wanted to choose, and most acknowledged fruits and vegetables. Through observational learning of either their peers at school, in the summer camp lunch room or their counselors, the participants took part in the notion of modeling. Behavioral capacity was found through their knowledge of fruits and vegetables and how and when they choose to eat those foods; expectations were established through what they expressed were the benefits of eating fruits and vegetables; functional meanings included how they viewed themselves in comparison to others and how bullying may affect their choices, consumption behaviors; then finally, reinforcement through either letting the bullies affect the foods they want to eat or whether they feel that with their self confidence and view of themselves, should continue to eat the foods they eat or change their patterns to eat fruits and vegetables.

In Bronfenbrenner’s (1979) ecological perspective, early adolescent eating behavior is viewed as being a function of multiple levels of influence (p. 22-45). The three levels of influence are individual, social and physical environment, and society (Story, Neumark-Sztainer, & French, 2002). On the individual or intrapersonal influence level, participants in the study stated through the three data collection methods their attitudes, beliefs, self-efficacy, taste, and food preferences about various foods including fruits and vegetables. Social or interpersonal environmental influences included the participant’s support of their eating behaviors from their family, friends, and peer
networks (Story, Neumark-Sztainer, & French, 2002). The participant’s family served as a major influence in providing the food at home, modeling, and introducing new foods. The study found that friends and peer networks helped to introduce new foods to the participants and also reinforce notions of either bullying or peer acceptance based upon food choices. Interpersonal influences can affect eating behaviors through modeling, reinforcement, social support, and perceived norms (Story, Neumark-Sztainer, & French, 2002). Camp Bob served as the physical and community settings as the camp and mealtime rules and layout served as the environmental influences on the participant’s behavior. There were no instances of societal influences upon the participants eating behaviors made aware throughout the data collection process.

The second research question was posed as an observation of the Camp Bob mealtime environment and whether such setting encouraged or discouraged peer-modeling influences on eating behaviors. At Camp Bob, the meals were served family-style with the food already placed on the table upon arrival. To get a second helping if a certain food ran out, the individual who took the last of the food would have to walk to the kitchen to get more. The salad bar, milk, and fruit stations were all by the kitchen entrance. If a child did not get up to get seconds for the table before or walked by the kitchen, they would have not known about the options available. During snack time, the fresh fruits were not available, only the prepackaged foods (e.g. Oreos, granola bars, Sun Chips) were laid out.
Social learning theory, derived from the work of Bandura, proposed that social learning occurs through stages of imitation, including close contact, imitation of superiors, and role model behavior (Bandura, 1977). The SLT model consists of three parts: observing, imitating, and reinforcements (Bandura, 1977). In the study, the participants including the counselors and researcher were with each other everyday for a week. Further peer relationships, researcher-camper, and counselor-camper were developed throughout the time spent at camp. Through the camp activities, mealtime, and downtime in the cabin, numerous instances of social learning were taking place. The participants learned how to perform various physical skills (canoeing, archery, swimming, amongst others), learned the camp songs and dances, and also learned about each other. These situations could have alluded to the social learning stages and could have become evident within the mealtime setting.

Implications for Practitioners

Evaluating and updating current programs to include healthier meals and readily available fruits and vegetables would continue the fight against childhood obesity and encourage proper nutrition. Schwartz and Puhl (2003) found that children who are continuously exposed to healthful foods would learn to enjoy those foods and alter their preferences. Food availability is one of the most influential factors in choosing food as reported by children (Story, Neumark-Sztainer, & French, 2002). In the physical environment, children are more likely to eat foods that are readily available and easily accessible (Patrick & Nicklas, 2005). By continuing to offer healthful foods in schools,
camps, and other environments, could prove to be beneficial for changing children’s eating behaviors and food preferences.

Camps and other recreational settings can use this information in programming nutrition education classes for children and when choosing the mealtime foods and options. In the future, before mealtime, the cabin counselors could go over the mealtime environments including rules and layout with the campers. Having prior knowledge of the fresh fruit, milk, and salad bar options at camp could prove to be more beneficial in providing and allowing the children to be more informed of the healthier alternatives. It was observed in the researcher’s cabin that the counselors did not make the children aware of the options. However, counselors from the other camp cabins may have told their children. At Camp Bob, there was also the issue of allowing only one person up from the table at a time. Since the dining room was small, this was a good rule but also hindered children from being able to get another food option. There were many instances when a child would get up to get an option and there were none left.

Camps and other recreational settings with children and mealtime could also rearrange the food options within the environment. Such an example could be having the chips or french fries placed where the children would have to get up to get them and have the fresh fruits and vegetables on the table. Edward Lewine published an article about Cornell University Professor Brian Wansink’s studies of the mealtime environment and said that if you alter choices available then you will be encouraging people to eat better while making them think it was their idea (Lewine, 2011). “If you want your kids to eat carrots, then give them the choice between carrots and broccoli,” said Wansink (Lewine,
Lewine (2011) also found that placement is important and by placing healthful foods like fruits and vegetables in more obvious places such as on the table or in the front of the meal line, consumption increases by 70%. “Never underestimate the power of convenience, moving the salad bar away from the wall and into the path of kids walking through the lunch line can triple consumption,” said Wansink (Lewine, 2011, pg. 71). Rearranging the placement of foods could help further children’s consumption patterns of fruits and vegetables or healthier options over the grease or sugar-laden products.

In Camp Bob’s situation, the rearranging of the placement could be beneficial in that all children would have availability to the options at the table. As previously noted, the one person up from a table at a time rule hindered some children from getting fresh options since by the time they reached the bar, there were none left. The salad bar, fresh fruit, and milk options were also across the cafeteria from the camper’s tables and were against the wall. Campers did not have to pass the salad bar to get the additional food when hopping. In having the options already placed on the table in the same family-style serving, there would not be an issue of running out before reaching the options. The options could also be “hopped” to get more of if need be and recycled for the next meal if there are leftovers.

In conjunction with the current government efforts to improve healthy eating options for children in schools, camps serve as an important environment for funding
opportunities. Camp financial programs could invest in having the monetary budgets for providing fresh fruits and vegetables during mealtimes at their summer camp programs. There could be financial implications that could prevent camps from having such options, but working with governmental grants and programs aligned with the childhood nutrition campaigns, could prove beneficial.

Camps could also research into developing gardens on the campgrounds that could grow fruits and vegetables to be served at mealtimes. Currently, the National Park Service is working with Nature Bridge to program for providing park goers a fresh meal made of fruits and vegetables grown on the parkland (Smartt, 2010). Implementing and investing in such programs could help camps in one day becoming self-sustaining and alleviate costs in their food service.

Limitations

This study helps to understand the thoughts of elementary school-aged girls, their personal confidence, attitudes, and how they view foods and healthy eating. This study had a limited number of participants and looked at only girls, limiting its generalizability to other child populations. What is to be learned from this study is that the children who participated expressed their knowledge of fruits and vegetables and willingness to try all foods. According to these data, they might be willing to consume fruits and vegetables if they are readily available and served as options during mealtimes. This can help schools, summer camps and community activities in their programming of food selection, food placement, and health education classes.
The one-week length of camp was also a limitation. The children were only at camp from Monday at lunchtime until Friday at lunchtime. Having a longer camp duration could shape more relationships with other peers than those the participants already knew and possibly yield peer modeling and influences.

Another limitation is the gender, race/ethnicity, socioeconomic status (SES) and cultural differences amongst the participants. Research has shown that an adolescents’ SES, weight, age and gender can all affect body image and food advice they receive from others such as parents and peers (O’Dea & Caputi, 2001). African American and non-white Hispanic adolescents are closer to their family members than peers are which decreases the likelihood that said peers would influence them (Tolson & Urberg, 1993). Research conducted by Padilla-Walker and Bean (2009) found that the ethnicities adolescents experience lower negative indirect peer association and higher positive indirect peer association than Caucasian adolescents. Conducting a future study with different social and demographic class participants could yield further peer modeling results.

The females in the researcher’s cabin all knew at least one other person in the cabin prior to camp. Having the previously established relationships before camp is a limitation in that they brought their friendships with one another into the camp setting. The study was conducted to see if there were peer influences during mealtime at camp, with the participants bringing in their already founded friendships; peer modeling could have been affected in that they no longer modeled said peers but adopted eating behaviors as their own. Said peers at school or other social activities may have already influenced
the participants and while at camp may not have changed their behaviors with said peers at mealtime. When peers are routinely exposed to other children with different food preferences, they will learn to accept those foods as their own (Birch, 1980). With the prior friendships and being around those peers longer, the participants may have already accepted certain food preferences as their own and no longer modeled.

While the researcher allowed ample time for the participants to express their thoughts fully, the researcher could have posed more questions to create for further elaboration in the participants’ responses. Since the collection of parental consent and waivers occurred the morning of camp at the drop off location, there was not an opportunity to gather participant’s residential addresses. Acquiring of the addresses could have helped the researcher distribute follow-up questions or gain further insight into the participant’s responses as the data analysis and coding process took place. In the future, providing a space on the parental consent or participant waiver for the participant’s contact information (phone, parents email, or residential address) could prove beneficial for follow-up questions.

The food availability at Camp Bob could have also proved to be a limitation. The participants did not have access to the “junk food” they described in the data. While the participants commented about how the honey buns were “junk food,” they did not have the opportunity to buy from the vending machine. As for the drinks at camp, the participants were not exposed to soda, but only juice, milk and water available. If there were more junk food available during the camp or in a future study, then observing to see
if the participants still choose the healthy food options and fruits and vegetables when there were also candy, cookies, and other “junk food” available.

The researcher’s bias towards healthy eating behaviors could have also served as a limitation. The researcher’s eating behaviors could have affected the choices of the participants. While the researcher attempted to eat the same foods as the participants, bias still could have occurred in terms how much the researcher ate in comparison to the campers, if the researcher ate more of a fruit or vegetable, or the side options the researcher chose to get. If the children caught on that the study regarded nutrition, they may have altered their food choice behaviors to mirror the researcher’s. The researcher did have a high interest in the importance of healthy eating choices and could have influenced the participant’s answers through the interviewing and administering of the questionnaires.

Throughout the week, the participants could have begun to understand what the researcher was studying and altered their behaviors to match what they felt the researcher was looking for. “It is plausible that social desirability would be related to dietary reports and to dietary reporting error in particular. Because many foods are regarded generally as “good” or “bad”, a respondent who tends to answer in a socially desirable way might underreport consumption of “bad” foods and over report consumption of “good” foods,” (Baxter, Smith, Litaker, Baglio, Guinn & Shaffer, 2004).

Discrepancies that arose were evident upon the layering of the data methods collected. Observations that were found during mealtime and PACE questionnaire answers did not match the participants interview answers. This could be a case of actions
speak louder than words. While not all of the data were discrepant and participants did seem to choose to eat the foods that they wanted, there were issues in connection with the social desirability between the participants and researcher.

In relation to social desirability, the participants not only seemed to answer the questions to the PACE questionnaire and interviews in a way they felt the researcher wanted, but during mealtime, seemed to model the researchers food choices.

While the researcher allowed ample time for the participants to express their thoughts fully, the researcher could have posed more questions to create the room for further elaboration in the participants’ responses. Since the collection of parental consent and waivers occurred the morning of camp at the drop off location, there was not an opportunity to gather participant’s residential addresses. Acquiring of the addresses could have helped the researcher distribute follow-up questions or gain further insight into the participant’s responses as the data analysis and coding process took place. In the future, providing a space on the parental consent or participant waiver for the participant’s contact information (phone, parents email, or residential address) could prove beneficial for follow-up questions.

Future Research

There are ways this research could be followed up to better understand peers influences on eating behaviors. First, conducting the study again during a longer period than one week could provide for more instances of peer modeling amongst the age group. The longer the children are together and if they become friends could either encourage or
discourage peer modeling. Secondly, future research should also consider a similar study looking at boys to see if there are differences in eating choices and behaviors amongst peers. A study that also includes boys could provide more variation and may even provide examples of peer influence.

Presently, the United States is concerned about the growing childhood obesity epidemic. In order to solve this problem affecting many children, we must understand that it does not just involve the parents and home, but also the influence of peers in schools, and social activities like summer camp where the parents have less presence. It seems that while a child may say that they do not care about what their peers say about their eating behaviors, and that peers do influence children’s food choices in terms of introducing and encouraging them to try new foods.

There are various national campaigns striving for better meals and more active children, but in the end, education is proving to be key in generating awareness and change. Educating children in proper nutrition, encouraging healthy food choices, and providing healthier options earlier on in life could prove to be the most beneficial way of combating obesity and poor eating habits. If we can continue to serve and teach the younger generation about healthy lifestyles, then they are more prone to lifelong success (Marie, 2011).
Appendix A

IRB Approval

June 6, 2011

Dr. Dorothy Schmalz
Clemson University
Department of Parks,
Recreation, and Tourism
286 Lehotsky Hall
Clemson, SC 29634

SUBJECT: IRB Protocol #IRB2011-170, entitled “The Degree of Peer Influences on Children’s Food Choices at Summer Camp”

Dear Dr. Schmalz:

The Institutional Review Board (IRB) of Clemson University reviewed the above-mentioned study using Expedited review procedures and has recommended approval. Approval for this study was granted on June 6, 2011 for all research sites with a support letter on file with IRB. Please find enclosed with this letter your original, stamped consent documents to be used with this protocol.

Your approval period is June 6, 2011 to June 5, 2012. Your continuing review is scheduled for May 2012. Please refer to the IRB number and title in communication regarding this study. Attached are handouts regarding the Principal and Co-Investigators’ responsibilities in the conduct of human research. The Co-Investigator responsibilities handout should be distributed to all members of the research team. The Principal Investigator is also responsible for maintaining all signed consent forms (if applicable) for at least three (3) years after completion of the study.

No change in this approved research protocol can be initiated without the IRB’s approval. This includes any proposed revisions or amendments to the protocol or consent form. Any unanticipated problems involving risk to subjects, any complications, and/or any adverse events must be reported to the Office of Research Compliance immediately. Please contact the office if your study has terminated or been completed before the identified review date.

The Clemson University IRB is committed to facilitating ethical research and protecting the rights of human subjects. Please contact the Office of Research Compliance at 656-6460 if you have any questions.

Sincerely,

Laura A. Moll, M.A., CIP
IRB Administrator

www.clemson.edu/research/compliance
Appendix B

Youth Learning Institute Camp Bob Approval Letter

May 23, 2011

Dear Internal Review Board member,

This letter is to inform that I (Greg Linke) have granted permission in my capacity as Chief Program Development Officer with the Youth Learning Institute (YLI), to allow data collection for the thesis on “The Degree to Which Peers Influence Children’s Food Choices at Summer Camp” to take place at one of the designated YLI camps.

I have arranged for Clemson University graduate student, Erin O’Neill to be a volunteer at Camp Bob in Hendersonville, NC for two one-week sessions, June 6 through June 17, 2011. While at camp, Erin will help with camp activities, programs, and provide assistance to counselors in addition to conducting her data collection.

The data collection will include demographic survey data, interview data, and observational data about children's food choices and whether they feel peers influence them or not during mealtime choices. Data collection will take place throughout the two weeks she is at camp. My participation is as an advisor and liaison between the YLI program and Erin O’Neill. The results from her research will help programmers and meal planners at Camp Bob understand influences on children’s food choices, and consider alternative serving strategies to encourage healthy behaviors in the camp dining room.

Sincerely,

Mr. Greg Linke
Chief Program Development Officer
Youth Learning Institute
Appendix C

Parent Permission Form

Clemson University

CHILDREN’S FOOD CHOICES AT SUMMER CAMP

(English Version)

Description of the Research and Your Child’s Part in It

Your child has been invited to participate in a research study conducted by researchers at Clemson University as part of a student’s requirement for graduation. The purpose of this research is to explore children’s eating during mealtimes in a camp environment.

If you agree to allow your child to participate, she will be asked to complete a survey and to answer some questions in an interview about the kinds of foods she likes to eat. The survey will take approximately ten minutes to complete. She will complete the survey at the same time as her cabin mates, so she will not miss any activity time.

Interviews will take approximately ten to fifteen minutes to complete, and will be audio-recorded. They will be conducted during camp scheduled down time and will therefore not take away from her time in activities with her cabin mates.
**Risks and Discomforts**

Participants may experience minimal discomfort at being questioned about how their peers might influence their eating behaviors. Other risks could include stress related to other girls wanting to know what was asked and what was said in the interviews done with the other girls and the possibility of tiredness due to the length of the interviews. However, long term risk or discomfort is unlikely. The benefits far outweigh the risks, in that these data will provide us with greater insight into how children make their food choices, and how their peers play a role in those decisions.

**Possible Benefits**

We do not know of any way your child would benefit directly from taking part in this study. However, this research may help us to understand the food choices, food preference, and influence of peers during mealtime on girl’s aged 10 at summer camp.

**Protection of Privacy and Confidentiality**

We will do everything we can to protect your child’s privacy and confidentiality. We will not tell anybody outside of the research team that your child was in this study or what information we collected about your child in particular. All data collected will be stored on the researcher’s personal computer and password protected. The data collected during the interviews and observations will be reviewed and used only by the researchers. If requested to publish in the future, the researcher will continue to follow the agreed upon confidentiality of the participants. For publication, all data will be shared as a group
response or described with removal of all identifiers. All data will be destroyed within one year of data collection--audio tapes will be erased and surveys will be shredded.

**Choosing to Be in the Study**

Your child’s participation in this study is voluntary. She, or you, may request to be removed from the study at any time. Your child’s camp experience will not be affected by her willingness to participate in this study, or if she choose to not participate later on.

We will also ask your child if they want to take part in this study at the beginning before interviews and questionnaires are conducted. Your child will be able to refuse to take part or to quit being in the study at any time.

**Contact Information**

If you have any questions or concerns about this study or if any problems arise, please contact (Dorothy Schmalz) at Clemson University at 864.656.2184. If you have any questions or concerns about your child’s rights in this research study, please contact the Clemson University Office of Research Compliance (ORC) at 864.656.6460 or irb@clemson.edu. If you are outside of the Upstate South Carolina area, please use the ORC’s toll-free number, 866.297.3071. **I have read this form and have been allowed to ask any questions I might have. I give my permission for my child to be in this study.**

Parent’s signature: ______________________________ Date: ____________

Child’s Name: ______________________ A copy of this form will be given to you.
Appendix D

Parent Permission Form

Clemson University

CHILDREN’S FOOD CHOICES AT SUMMER CAMP

(Spanish Version)

Formulario de Permiso de los padres
Universidad de Clemson
Opciones de las niñas de alimentos en el campamento de verano

Descripción de la investigación y la parte de su hija en lo

Su hija ha sido invitada a participar en un estudio de investigación realizado por investigadoras de la Universidad de Clemson como la parte del requisito de un estudiante para la graduación. El propósito de esta investigación es explorar comer de las niñas durante las comidas en un ambiente de campamento.

Si está de acuerdo para permitir que su hija participe, se le pedirá que complete una encuesta y para contestar algunas preguntas en una entrevista sobre los tipos de alimentos que le gusta comer. La encuesta tendrá una duración aproximada de diez minutos para completar. Ella va a completar la encuesta en el momento mismo que sus compañerías de cabaña, para que no se perderá ningún momento la actividad.

Las entrevistas tendrán aproximadamente diez a quince minutos para completar, y estarán grabadas. Se llevarán a cabo durante un tiempo asignado y por lo tanto no quitarle su tiempo en actividades con sus compañerías de cabaña.

Riesgos y Molestias

Las participantes pueden experimentar molestias mínimas al ser preguntado acerca de cómo sus compañerías puedan influir en su conducta alimentaria. Otros riesgos podrían incluir énfasis relacionado a otras chicas que quieren saber lo que fue preguntado y lo que fue dicho en las entrevistas hechas con las otras chicas y la posibilidad del cansancio.
debido a la longitud de las entrevistas. Sin embargo, el riesgo o molestia a largo plazo es poco probable. Los beneficios tienen más peso que los riesgos, en que estos datos nos proporcionará un mayor conocimiento de cómo las niñas hacen sus elecciones de alimentos, y cómo sus compañeras juegan un papel en esas decisiones.

**Posibles beneficios**

No sabemos de ninguna manera que su hija se beneficiaría directamente de participar en este estudio. Sin embargo, esta investigación puede ayudarnos a entender la elección de alimentos, preferencias de alimentos, y la influencia de sus compañeras durante la hora de comer en niñas de 9 a 10 en el campamento de verano.

**Protección de la Intimidad y Confidencialidad**

Vamos a hacer todo lo posible para proteger la intimidad y la confidencialidad de su hija. No le diremos a nadie fuera del equipo de investigación de que su hija estaba en el estudio o la información que hemos recogido sobre su hija en particular. Todos los datos recogidos serán almacenados en la computadora personal de la investigadora y protegido con contraseña. Los datos recogidos durante las entrevistas y observaciones serán analizadas y sólo se utilizarán con fines del curso de posgrado de la investigadora. Si le pide que publique en el futuro, la investigadora continuará cumpliendo a lo acordado confidencialidad de los participantes. Todos los datos serán destruidos dentro de un año de recogida de datos -- cintas de audio serán borradas y las inspecciones serán destrozadas.

**La elección de participar en el estudio**

La participación de su hija en este estudio es voluntaria. Ella, o bien, podrán solicitar que se eliminen del estudio en cualquier momento. La experiencia de su niña del campamento no se verá afectado por su disposición a participar en este estudio, o si decide no participar más adelante.

También le pediremos a su niña si quiere participar en este estudio al principio antes que entrevistas y cuestionarios sean realizados. Su hija será capaz de negarse a participar o dejar de participar en el estudio en cualquier momento.

**Información de Contacto**

Si tiene cualquier pregunta o preocupación acerca de este estudio o si surge algún problema, póngase en contacto con Dorothy Schmalz en la Universidad de Clemson en el 864.656.2184. Si tiene cualquier pregunta o preocupación acerca de los derechos de su hijo en este estudio de investigación, póngase en contacto con la Universidad de Clemson Oficina de Cumplimiento de Investigaciones (ORC) en el 864.656.6460 o irb@clemson.edu. Si se encuentra fuera de la zona norte del estado de Carolina del Sur, por favor, utilizar el número gratuito de la ORC, 866.297.3071.
Consentimiento

He leído este formulario y se les ha permitido hacer cualquier pregunta que pueda tener. Doy mi permiso para que mi hija participe en este estudio.

Firma del padre:                      Fecha:

Nombre de la niña: ________________________________

Una copia de esta forma se le dará a usted.
Appendix E

Child/Minor Agreement to Be in a Research Study

Clemson University

CHILDREN’S FOOD CHOICES AT SUMMER CAMP

Who Are We?

- You have been invited to take part in a research study conducted by researchers at Clemson University. Research is used to find out more information and to help people to better understand a certain subject or topic. The purpose of this research is to explore children’s eating during mealtimes in a camp environment.

What Is It For?

- The information is to be used only by the researchers and your camp experience will not be affected by you agreeing to take part in this study, or if you choose to not take part later on.

Why You?

- The study is trying to determine if there is a link between food choices amongst children in a camp setting. As a camper at Camp Bob this summer, you have the option to take part in an interview and survey about your food choices.
- Choosing to take part in the study will not have a negative impact on you.
What Will You Have to Do?

- If you agree to take part, you will be asked to complete a survey and to answer some questions in an interview about the kinds of foods you like to eat. The survey will take approximately ten minutes to complete.
- You will complete the survey at the same time as your cabin mates, so you will not miss any activity time.
- Interviews will take approximately ten to fifteen minutes to complete. They will be conducted during camp scheduled down time and will therefore not take away from your time in activities with your cabin mates.

What Are the Good Things and Bad Things that May Happen to You If You Are in the Study?

- Nothing bad will happen to you if you take part in the study. The information you give us will help us understand how campers choose their food while with friends during camp mealtimes.

What If You Want to Stop? Will You Get in Trouble?

- You will not get in trouble for taking part in the study. You can stop anytime.

Are There Any Other Choices?

- You do not have to take part in the interviews; you can choose to continue in the daily routine or activities.
Do You Have Any Questions?

- You can ask questions at any time. You can ask them now. You can ask later.

You can talk to me or you can talk to someone else at any time during the study. If you have any questions, contact Dorothy Schmalz at Clemson University at 864.656.2184.

Permission for my child to be in this study.

Parent’s signature: ________________________________  Date: __________________

Child’s Name: ________________________________

A copy of this form will be given to you.
Appendix F

Data Collection Procedures and Schedule

June 13-17, 2011

<table>
<thead>
<tr>
<th>Day of Week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Tool</strong></td>
<td>Journals, Mealtime (lunch, dinner only) Observation</td>
<td>Journals, Mealtime Observation, Interviews</td>
<td>Journals, Mealtime Observation, Interviews, PACE Questionnaire</td>
<td>Journals, Mealtime Observation, Interviews</td>
<td>Journals, Mealtime (breakfast, lunch only) Observation</td>
</tr>
</tbody>
</table>
## Data Collection Methods

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Perspective</th>
<th>Description</th>
</tr>
</thead>
</table>
| Participant Questionnaire    | Participant | PACE Questionnaire  
Supplemental data to support interviews, observations.  
Provided guidance for how the participant currently ate during mealtime. |
| Participant Interview        | Participant | Semi-structured  
Provided detailed information about the participant’s outlook on their eating choices, possible peer influences, and mealtime food choices. |
| Mealtime Observations        | Researcher  | Observation guide  
Show how the children ate during mealtime with their peers.  
If they ate the foods they like based upon their answers to the questionnaire.  
Did their peers influence the foods they choose to eat, voluntary get up from the table to get or receive additional portions. |
Appendix G

PACE Questionnaire

Fruits & Vegetables Stages

1. How many servings of fruits and vegetable do you usually eat each day (a serving is ½ a cup of cooked vegetables, 1 cup of salad, a piece of fruit, ¾ cup of 100% fruit juice)?
Mark the answer that is true for you.

0 1 2 3 4
0 0 0 0 0
(If you answered between “0” and “4” to question 1, go to question 3.)

5 6+
0 0
(If you answered “5” or “6 or more” to question 1, go to question 2.)

2. Have you been eating 5 or more servings of fruits & vegetables a day in the next 6 months?

1 o Less than 6 months
2 o 6 months or more

3. Do you think you will start eating 5 or more servings of fruits & vegetables a day in the next 6 months?

1 o No, and I do not intend to in the next six months.
2 o Yes, I intend to in the next six months.
3 o Yes, I intend to in the next 30 days.

2001 PACE, San Diego State University. All Rights Reserved.
Fruits & Vegetables Change Strategies

The following are activities, thoughts, and feelings people use to help them change their fruit & vegetable intake. Think of any similar experiences you may be having or have had in the past month. Then rate HOW OFTEN you do each of the following.

PLEASE:
* Fill in each circle completely.
* Erase all changes completely.

1. I set goals to eat at least five serving or fruits & vegetables a day.
2. I have a friend or family member who encourages me to eat more fruits & vegetables.
3. I say positive things to myself about eating fruits & vegetables.
4. I think about the benefits I will get from eating fruits & vegetables.
5. I reward myself for eating at least five servings of fruits & vegetables a day.
6. I look for information about ways to eat more fruits & vegetables.
7. When I'm not eating enough fruits & vegetables, I tell myself I can get right back on track eating fruits & vegetables.
8. I put reminders around my home to eat fruits & vegetables.
9. I keep track of the number of fruits & vegetables I eat.
10. I think about how my surroundings affect the amount of fruits & vegetable I eat. (Surroundings are things like fast food restaurants and pre-packaged foods in stores.
11. I find ways to get around the things that get in the way of eating fruits & vegetables.
12. I do things to make the eating fruits & vegetables more enjoyable.
13. I try to think more about the benefits of eating fruits & vegetables and less about the hassles of healthy eating.
14. I make back-up plans to be sure I eat fruits & vegetable everyday.
15. I try different kinds of fruits & vegetables so that I have more options to choose from.

2001 PACE, San Diego State University. All Rights Reserved.
### Fruits & Vegetables Pros & Cons

The following statements are different beliefs about eating fruits & vegetables. Please rate HOW IMPORTANT each statement is to your decision to eat 5 fruits & vegetables a day. Use the following scale:

**PLEASE:**
- Fill in each circle completely.
- Erase all changes completely.

**HOW IMPORTANT IS EACH STATEMENT TO YOU WHEN DECIDING WHETHER OR NOT TO EAT 5 SERVINGS OF FRUITS & VEGETABLES A DAY?**

1. I would feel embarrassed if other kids say me eating fruits & vegetables.
2. I would have more energy if I ate fruits & vegetables.
3. I would be doing something good for my body if I ate fruits & vegetables.
4. I would need too much help from my parents to eat fruits & vegetables.
5. I would feel healthier if I ate fruits & vegetables.
6. It takes too much time to cut up fruits & vegetables.
7. My parents would be pleased if I ate fruits & vegetables.
8. I would rather eat sweets or high fat snacks than fruits & vegetables.
9. Eating fruits & vegetables would be a great way to start the day.
10. Fruits & vegetables are too difficult to prepare.

2001 PACE, San Diego State University All Rights Reserved.
Fruits & Vegetables Confidence

There are many things that can get in the way of eating fruits & vegetables. Rate HOW SURE you are that you can do the following in each situation. Please answer ALL questions.

PLEASE:
- Fill in each circle completely.
- Erase all changes completely.

1. Eat 5 servings of fruits & vegetables everyday.
2. Ask someone in your family to buy your favorite fruit or vegetable?
3. Ask for fruits & vegetables with your lunch?
4. Drink 100% fruit juice instead of fruit punch or soda?
5. Eat fruits or vegetables for a snack instead of chips or candy?
6. Ask someone in your family to include fruits or vegetables with dinner?
7. Eat fruits & vegetables when eating out at a restaurant?
Fruits & Vegetable Family Support

During a typical week, how often has a member of your household:
(For example, your father, mother, brother, sister, grandparent, or other relatives)

PLEASE:
* Fill in each circle completely.
* Erase all changes completely.

1. Encouraged you to eat fruits & vegetables?
2. Told you that you are doing a good job with eating fruits & vegetables?
3. Provided fruits & vegetables as a snack or part of a meal?
4. Eaten fruits & vegetable with you?

Fruits & Vegetable Friend Support

During a typical week, how often:

1. Do your friends encourage you to eat fruits & vegetables?
2. Do your friends eat fruits & vegetables with you?
3. Do other kids tease you for eating fruits & vegetables?
Appendix H

Cabin Participant Interview Questions

Design

The interviews were conducted throughout the week of camp during downtime or other breaks such as time slots during activities. The researcher interviewed each participant individually until all the children in the cabin had been interviewed. Each interview lasted approximately fifteen to forty-five minutes.

Aims and Objectives

*The aim of the study is:*

To determine if peers have an influence on children’s food choices during mealtime at summer camp.

*The objectives are:*

1. Ask the cabin participants about their eating choices and behaviors, whether they feel their peers influence their eating choices, and how they view themselves during mealtime.
2. Identify what children in the cabin hang out with one another and compare their friendships to the activities and food chosen during mealtime.
3. Identify the foods that children choose and do not choose to eat at mealtime.
Participant Profile

1. Name
2. Age

Peers Question

1. Tell me about your friends.
   a. Tell me about your relationships with the other campers in your cabin.

2. Tell me about your experiences at camp so far.
   a. What are your favorite activities during camp time?
      i. Describe a situation when maybe you choose an activity because you wanted to be with your friend.
   b. Tell me about your relationships with the counselors. Do you like and get along with them? Is there one in particular that you feel closest to?

Food Likes and Dislikes

1. Tell me about your favorite and least favorite types of food.
2. Describe a typical family dinner. Do you all eat together as a family? Who does the cooking?
   i. What types of fruits and vegetables do you eat at home?
   ii. What types of food do your parents make you eat? What types of food do they not let you eat?
   iii. What is your favorite beverage to drink with your food?
iv. How often do you eat outside of the home (i.e. restaurants)?

v. Do you ever have friends over to eat with you or go to their houses?

3. What do you think about the foods being served at camp?
   i. If you could change anything about the food, what would it be?
   ii. Describe a situation when maybe you choose to choose a certain food because your friend chose it.
   iii. Tell me about how you choose where to sit at mealtime. Do you usually sit next to your closest friend, to the counselor?
Appendix I

Journal Observations Structure

For each journal entry, include the following:

1. Date and time of observation
2. Place of observation
3. Type of activity / number of campers, names
4. Observations of peers demeanor to peers, counselor
5. Commentary based on conversation between peers, counselors and peers, peers and I.
Appendix J

Dining Room Observation Questions

Date:

Meal (breakfast, lunch, or dinner):

Researcher’s Cabin Table

Mealtime Observations

How many kids got up from the table got up to get…

- Fresh fruit __________________________
- Salad
- Milk ______________________________
- Other (item at the bar that was not placed on the table)__________________________

How many times did the hopper get up?

________________________________________________________________________

What foods did the hopper get up to get more of?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

What foods were left on the table?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Were there any foods that the campers said things about (ew gross, yummy, etc…). If so, what were these foods, how did the other campers respond (agreed, disagreed, still ate, did not eat, etc…)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Describe the conversation, demeanor of the girls to each other during mealtime. (Happy, very talkative, mean, etc…)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Describe any situation where a camper was left out of a conversation or was not involved in the table’s emotions. (Quiet, did not talk much, sulked, etc…)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Describe any situation of modeling (the counselor got up to get salad, the children chose a vegetable due to another child choosing it, due to me choosing it, etc…)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Describe any observations about anyone choosing the vegetarian option (what were the reactions of the other children, their opinions, etc…)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Additional thoughts/observations:

____________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Draw the layout of the seating arrangement during the meal:
REFERENCES


