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# THE FAMILY MEALTIME STUDY: PARENT SOCIALIZATION AND CONTEXT DURING AND SURROUNDING FAMILY MEALTIMES

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THE FAMILY MEALTIME STUDY: PARENT SOCIALIZATION AND CONTEXT  
DURING AND SURROUNDING FAMILY MEALTIMES

by

Car Mun Kok

A DISSERTATION

Presented to the Faculty of  
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In Partial Fulfillment of Requirements  
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Under the Supervision of Professors Julia Torquati and Maria de Guzman

Lincoln, Nebraska

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THE FAMILY MEALTIME STUDY: PARENT SOCIALIZATION AND CONTEXT  
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Car Mun Kok, Ph.D.

University of Nebraska, 2015

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Past research showed that family mealtimes positively impact youth's dietary behaviors. However, the processes through which these benefits occur are unclear. Understanding the aspects of family mealtimes such as parent socialization and mealtime context can increase the understanding of how family mealtimes may benefit youths' dietary behaviors. This mixed methods study identified occurrences around family mealtimes that might impact youths' dietary behaviors. One hundred parent-child dyads completed surveys. A subsample of 40 families participated in family mealtime observations and 20 parents were interviewed. Quantitative findings showed that parents engaged in various food- and mealtime-related socialization behaviors like parent modeling, parent communication about food and nutrition, and parent feeding practices. Parents' beliefs about family meals and about media use during mealtimes shaped the context of family meals and impacted youths' dietary behaviors. Parent communication about nutrition and physical activity was a significant predictor of children's weight concerns, even after accounting for parent resources and frequency of family meals. Parent modeling was a significant predictor of children's consumption of outside food. Higher household income predicted lower youths' weight concerns and longer parent work hours outside the home predicted higher children's consumption of outside food. Parents' controlling feeding practices and values/beliefs about family meals were

correlated to youths' dietary behaviors. Families who ate together more also had children who reported higher preferences for healthy foods and lower consumption of outside food. Qualitative findings showed that mealtime is a platform through which parents teach children about food and nutrition. Mealtime routines and activities like meal planning, grocery shopping, and cleaning-up were important components of family mealtime, and family meals were important for bonding and communication. Obesity prevention interventions should include educating and engaging parents to implement family mealtimes with an emphasis on socializing and building a connection between family members. Focus should also be given to help parents address resource-related challenges in having family meals. Parents should also be educated on providing a healthy home food environment, especially in the availability of healthy foods, in order to promote healthier dietary behaviors in youths.

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## CHAPTER 1: INTRODUCTION

Childhood obesity is a worldwide problem and is considered by the World Health Organization to be a global epidemic as it is increasing at an alarming rate (Department of Health and Children, 2005). Although obesity prevalence has increased most steadily in Western countries, developing countries are beginning to have more obesity in children from high socioeconomic groups as well as poor children in urban areas (International Association for the Study of Obesity, 2012). According to the Centers for Disease Control and Prevention (CDC), childhood obesity has more than doubled in children in the past 30 years (2013). In 2010, more than one third of children and adolescents in the U.S. were overweight or obese (CDC, 2013; Ogden, Carroll, & Flegal, 2008). Obesity in childhood and adolescence is an important problem because obesity is linked with a multitude of health problems like diabetes, high cholesterol, and high blood pressure (CDC, 2013). Children and adolescents who are obese also tend to be obese as adults (CDC, 2013). Thus, obesity is a problem that can no longer be ignored. With obesity on the rise in children and youth, it is important to explore the factors that are involved in this multifaceted problem. One factor that has a huge influence on childhood and youth obesity is family or primary caregivers (Campbell & Crawford, 2001) and one important platform through which families can influence youths' dietary behaviors is family mealtimes (Larson & Story, 2010; Hammons & Fiese, 2011).

Research has shown that family mealtimes play an important role in the development of children's and adolescents' dietary attitudes and behaviors. Most studies showed that children and adolescents who had frequent family meals consumed more fruits, vegetables, grains, calcium-rich food, and less unhealthy food like chips and soda

(Andaya, Arredondo, Alcaraz, Lindsay, & Elder, 2011; Fruh, Fulkerson, Mulekar, Kendrick, & Clanton, 2011; Hammons & Fiese, 2011; Larson & Story, 2010; Videon & Manning, 2003; Neumark-Sztainer, Larson, Fulkerson, Eisenberg, & Story 2010).

Neumark-Sztainer et al., (2010) found that middle-school students who had frequent family meals also consumed less soda and had higher self-efficacy for healthy eating. Studies on family mealtimes have also shown that frequent family mealtimes during childhood and adolescence have a long-term positive impact on the individual's dietary behaviors and patterns. Neumark-Sztainer et al. (2010) found that adolescents who had more frequent meals with their families consumed more fruit and vegetables as young adults, and consumed less soda. Most of these studies utilized correlational and group comparison designs to focus on the benefits of family mealtimes on youth and often compared youth who had frequent family meals with youth who had less frequent meals with their families.

While the benefits of family mealtimes on the development of youths' dietary behaviors are known, the ways through which family mealtimes can provide these benefits are unknown. Past research has not examined the factors or processes that contribute to positive outcomes associated with family meals. Past research has also not examined factors like family resources and other potential confounding factors that could impact the frequency and nature of family meals. Given what is known, it can be hypothesized that family mealtime is a platform, or a proxy variable, through which other processes and dynamics like parental modeling and parental socialization take place in order to influence youths' dietary behaviors (Berge, 2009). Resource factors like food availability, food security, time, and money might also impact the frequency and nature

of family mealtimes, as well as the associated health outcomes of youth (Devine et al., 2009; Devine et al., 2006; Appelhans, Waring, Schneider, & Pagoto, 2014).

Despite evidence of the benefits of family mealtimes, there are also some studies indicating that family mealtimes might not always be beneficial for family members. The impact of family meals can depend on a number of factors like the type of food that is served during meals, availability of resources, the relationships between family members, and activities during mealtimes like talking or watching the television (Masters et al., 2014). Family meals can be stressful if relationships among family members are strained or if the organization or preparation of a meal is stressful due to time or cost barriers (Berge, 2009). Chaotic mealtimes, tension regarding food, children's pickiness and attitudes about food, as well as the lack of help in meal preparation could make for a strained and stressed family mealtime which could lead to more conflict within the family (Fulkerson, Story, Neumark-Sztainer, & Rydell, 2008).

Therefore, taking note of these gaps in the research on family mealtimes, the purpose of this study was to examine and understand the various components of family mealtimes, and the processes that occur during family mealtimes that might influence the dietary behaviors of youth. Specifically, this study investigated the presence and impact of mealtime parental socialization and resources during and surrounding family mealtimes. This study also explored potential factors that could confound associations between frequency of family mealtimes and youth developmental outcomes, such as family resources.

It is important to study the impact of factors like parental socialization and resources during mealtimes on youths' dietary behaviors. Parental socialization is one

way through which mealtimes could benefit youth in terms of healthy eating and other healthy dietary behaviors (Berge, 2009). The availability of resources like time, money, and access to quality food can also impact the frequency and quality of family mealtimes and consequently, youths' dietary behaviors (Bauer et al., 2012). Lack of knowledge about the components, processes, and potential confounds during and surrounding family mealtimes like parental socialization, time, food security, food availability, and parent education is a problem because such factors influence mealtimes that consequently impact youths' dietary behaviors. Knowledge about these processes and factors may also help to explain some of the disparities in research on family mealtimes. For example, a few studies reported that some families, especially those in minority and lower-SES groups, did not experience the same positive impact of family mealtimes on children and adolescents as has been found in the majority of the research on family mealtimes (Kramer et al., 2012; Sen, 2006). It is also important to understand the components that would make family mealtimes beneficial for youth so that these components can be included in obesity prevention and intervention programs as well as in other health programs. By having this knowledge incorporated into such programs, parents and families can learn how to make family mealtimes beneficial and practice positive family mealtimes with their own families as a step towards having healthy youth and families.

Parental feeding practices/strategies, parental modeling and parental communication are part of parental socialization behaviors that influence children's dietary behaviors (Campbell, Crawford, & Ball, 2006; Tysoe & Wilson, 2010; Larson & Story, 2010). Research has shown that parental child-feeding strategies during mealtime are associated with certain dietary practices in children like increased or decreased

consumption of energy-dense food and drink (Campbell et al., 2006; Tysoe & Wilson, 2010). Parental modeling of dietary behaviors can impact children's and adolescents' dietary behaviors as they often adopt behaviors modeled by their parents (Marshall, Golley, & Hendrie, 2011; Larson & Story, 2010; Campbell et al., 2006; Tysoe & Wilson, 2010).

Research has also shown that parents were a source of nutritional knowledge for adolescents through communication, and that parental communication about food and nutrition was related to youths' weight and dietary behaviors (Hertzler & Frary, 1995; Marshall et al., 2011). However, aside from parental modeling, most of these research studies did not examine parental socialization specifically during family mealtimes. These studies also utilized surveys, which is insufficient to thoroughly understand parental socialization behaviors like communication and modeling. Therefore, this research project utilized mixed methodology to study parental socialization that occurred during family mealtimes that could impact youths' dietary behaviors. This is important because identifying these parental socialization behaviors could help in establishing the family component in healthy eating and obesity prevention and could be used in youth health and obesity programs to help families adopt healthier lifestyles.

The majority of research in the area of family meals has often focused on associations with youths' health outcomes but did not study the role played by factors like the availability of resources that would impact family mealtimes. These resource variables could also be confounding or mediating/moderating factors to the association between frequency of family mealtimes and dietary behaviors. Neumark-Sztainer, Hannan, Story, Croll, and Perry (2003) found that frequent family meals were positively

associated with healthier dietary behaviors in youth. They also found that frequency of family meals were positively associated with SES and inversely associated with maternal employment. However, they did not investigate further the role of SES and maternal employment in frequency of family meals and youths' dietary behaviors. Other studies have found that working mothers spend less time meal planning, grocery shopping, and cooking and this has an impact on the frequency of family meals but also on time spent with children on other activities (Cawley & Liu, 2007; Crepinsek & Burstein, 2004). However, these factors have never been studied in conjunction with parental socialization in the context of family mealtimes. This is important because recognizing influential and confounding factors related to resources can contribute to the literature on family mealtime challenges so they can be addressed in health and obesity prevention programming. For all intents and purposes, the words children and youth were being used interchangeably in this study.

### **Purpose**

The purposes of this mixed methods study are to investigate: (1) the context during and surrounding family mealtimes; (2) how youths' dietary behaviors might be impacted by parental socialization behaviors, availability of resources, mealtime context, and frequency of family meals; and (3) parental perceptions of the socializations during family mealtimes and of other family mealtime influences.

The three *aims* of this study and their corresponding research questions are:

- 1. To examine family mealtime contexts, especially parental socialization before, during, and after meals.**



RQ1.1 What kinds of socialization related to food, eating, and healthy behaviors do parents engage in during and outside of family mealtimes?

H1: Parents engage in socialization behaviors like parent modeling, parent feeding practices, and parent communication about food and nutrition during and outside of family mealtimes.

RQ1.2. How are family mealtimes organized (cooking and planning) and what, if any, are the rituals and routines around family mealtimes?

RQ1.3. What is the frequency of media use by family members during family mealtimes? How is media use associated with youths' dietary behaviors?

RQ1.4. What is the home food environment like in terms of availability of healthy and unhealthy foods?

**2. To investigate the influence of family resources, parent socialization, mealtime context, and frequency of family meals on youths' eating patterns and dietary behaviors.**

RQ2.1. Are parent resources (family income, parent employment, and parent education) associated with the frequency of family meals?

H2.1a: Families with higher income and more parent education will have more frequent family meals

H2.1b: Parents who are unemployed or working part time will have more frequent family meals than parents who are employed full time.

RQ2.2. Are parent socialization, parent resources, and frequency of family meals associated with youths' dietary behaviors?

H2.2a: Parent-reported positive parental socialization behaviors related to health and nutrition will be positively associated with youths' healthy eating behaviors.

H2.2b: Youths who have more frequent family meals will practice healthier dietary behaviors.

RQ2.3. Do parent/family resources moderate associations between parent socialization and youths' dietary behaviors?

RQ2.4. Do parent/family resources moderate associations between frequency of family meals and youths' dietary behaviors?

RQ2.5. Do parent socialization behaviors moderate the associations between frequency of family meals and youths' dietary behaviors?

RQ2.6. Is there an association between home food environment with parental socialization and youths' dietary behaviors?

H2.6a: There will be more positive parental socialization during and outside of mealtimes in homes with healthier food availability.

H2.6b: Youths who live in homes with healthier food availability will practice healthier dietary behaviors.

### **3. To understand parents' perceptions of family mealtimes.**

RQ3.1. What do family mealtimes mean for parents?

RQ3.2. What are the challenges and barriers of family mealtimes?

With these specific aims and research questions, this research study used mixed methodology to explore parental socialization during family mealtimes and examined

impacts on youths' dietary behaviors in a more comprehensive manner compared to previous studies on family mealtimes.

The *long-range goal* of my research is to generate knowledge on healthy mealtime and dietary behaviors and to use that information to develop obesity intervention and prevention programs with the purpose of educating families, especially those at-risk for obesity and other health problems, on healthy eating and healthy living. This research study on the influence of parental socialization during family mealtimes on youths' dietary behaviors is a step towards accomplishing this goal. The findings from this study will shed light on the aspects and processes of parental socialization during family mealtimes, which could impact youths' dietary behaviors in positive and/or negative ways. These findings could then be used to educate and encourage parents to practice positive parental socialization behaviors during family mealtimes as a step towards having a healthy family

## CHAPTER 2: REVIEW OF LITERATURE

### **Parental Socialization Regarding Food-Related Attitudes and Beliefs**

Research indicates that family and early experiences can have substantial influence on individuals' food-related attitudes and behaviors. Childhood socialization experiences and parental modeling of food-related behaviors influence youths' eating behaviors later on in life (Rozin, Fallon, & Mandell, 1984; Dube & Stanton, 2010; Branen & Fletcher, 1999). In order to provide a foundation for the present study, research on parental socialization will be reviewed. First, research on parental feeding and strategies will be presented. Next, the literature on parental modeling of dietary behaviors will be reviewed. Finally, the research on parental communication about nutritional knowledge and dietary behaviors will be discussed, followed by a critique of the literature and description of the gaps to be addressed by this study.

### **Parental Feeding Practices and Strategies**

Literature on parental child-feeding practices has identified four broad child-feeding strategies: pressuring, restriction, instrumental feeding, and emotional feeding (Wardle & Carnell, 2006). Pressuring is when a parent persuades a child to eat more, either specific healthy foods or just food in general, especially during mealtimes (Birch et al., 2001). Restriction involves a parent limiting the child's intake of a certain food, usually energy-dense snacks or unhealthy types of food (Birch et al., 2001). Instrumental feeding is the practice of using food as reward and emotional feeding is the practice of offering food to console a child's negative mood or affect (Wardle, Sanderson, Guthrie, Rapoport, & Plomin, 2002).

There have been mixed findings on the influence of child-feeding strategies on children's eating behaviors and weight outcomes. Campbell et al. (2006) found that parental pressuring to eat was associated with children's consumption of more energy-dense food and drink. One possible explanation for this finding is that the practice of pressuring to eat could override a child's innate ability to regulate his/her own hunger and satiety and may compromise the child's ability to do so in the future (Birch, McPhee, Shoba, Steinberg, & Krehbiel, 1987). However, the study did not describe the types of food that mothers pressured their children to eat and the findings might be different if the types of food were differentiated in the study. Tysoe and Wilson (2010) also found that parental pressure towards 3- to 5- year old children's eating was positively associated with children's intake of energy-dense fluids. Wardle and Carnell (2006) found that children who reported being pressured to eat by parents and parents who reported pushing their children to eat (higher parental control over feeding) were associated with leaner children (lower BMI/body weight). However, there was no association between parental restriction of foods with child body weight and no associations between child adiposity and instrumental or emotional feeding (Wardle & Carnell, 2006). Some studies found no association between parental feeding practices and children's weight (Spruijt-Metz, Li, Cohen, Birch, & Goran, 2006) and some studies found an association between high parental feeding control and lower BMI in girls but not in boys (Robinson, Kiernan, Matheson, & Haydel, 2001).

One possible reason for these mixed results is that these studies did not distinguish between the different types of parental feeding strategies mentioned earlier. This may be due in part to the differences in the measurements used by the different

researchers in their studies. For example, Spruijt-Metz et al. (2006) measured parental control through parent-report of parental pressure to eat, parental restriction of food, and parental monitoring of children's food consumption. Other studies have measured parental control through instrumental and emotional feeding measures and structure during feeding and mealtimes (Wardle et al., 2002; Baughcum et al., 2001). Therefore in order to study parental control in terms of child-feeding practices and how it affects youths' eating behaviors and body weight, it is important to concisely examine each of the different feeding practices and study the influence of each on children and adolescents.

### **Parental Modeling of Dietary Behaviors**

Research has shown that parental modeling is an effective way to teach children and adolescents healthy eating behaviors and attitudes at home. Parental modeling has a significant influence on children's dietary behaviors and weight status through mechanisms like observational learning and facilitating/inhibiting occurrences (Marshall et al., 2011). Parental intake of fruit, vegetables, and dairy products was positively associated with children and adolescents' consumption of such foods (Larson & Story, 2010). Campbell et al. (2006) found a positive association between parental modeling of eating and vegetable intake of preschoolers. Parents serve as direct role models for children's vegetable consumption, with mealtimes as the best opportunity of such behavior modeling (Campbell et al., 2006). Tysoe and Wilson (2010) found that parental modeling was positively associated with children's consumption of vegetables and that the association between parental modeling and children's fruit consumption approached statistical significance. Kramer et al. (2012) found that caregivers who used healthier

cooking methods at home tended to have adolescent children who also used healthier cooking methods when they had to cook for themselves.

The modeling of healthy eating behaviors might also be linked to the higher availability of healthy food to children, a potential factor that has yet to be examined but might be an important factor in the effects of parental modeling of dietary behaviors. The two factors (modeling and food availability) were often not differentiated in studies. It is unclear whether the effects on children's food consumption are due to parental modeling or the availability of certain healthy foods like fruits and vegetables during mealtime. In order to fully understand the impact of parental modeling on youths' dietary behaviors, parental modeling and type of food available need to be more clearly differentiated in research.

It is important that parents set rules for children's dietary behaviors (De Bourdeaudhuij, 1997) but it is even more important that parents themselves abide by the rules so that they set examples for their children. Eisenberg et al. (2012) found that parents who had rules for themselves and followed those rules by modeling portion control during mealtimes at home had children who consumed fat less frequently. In contrast, parents who set rules for their children but did not adhere to these rules themselves had children who consumed fatty foods more frequently. Parents of overweight adolescents also reported that it was important for parents to practice what they preach and to model healthy eating behaviors when they are teaching them to their children (Boutelle, Feldman, & Neumark-Sztainer, 2012). This showed that it was important to educate children about healthy eating behaviors through modeling and setting good examples instead of just talking about them. This was advice that the parents

felt was important for other parents to know; however, it is unclear whether the participants actually practiced the advice themselves. Parents felt that it was their responsibility to serve healthier food and have more structured mealtimes to instill healthy behaviors in their adolescent children (Boutelle et al., 2012). However, these parents also reported difficulties in communicating about the importance of healthy dietary and exercise habits with their overweight adolescent children for fear of lowering their self-esteem, which the parents already perceived as low (Boutelle et al., 2012).

### **Parental Communication about Nutritional Knowledge and Dietary Behaviors**

Health professionals have also noted that it is important for parents to talk to their children about the nutritional value of food in order to promote healthy food-related behaviors (Marshall et al., 2011). This is because in order for children to adopt and maintain healthy eating behaviors, they need to possess the nutritional knowledge associated with healthy eating (Worsley, 2002). Westenhoefer (2002) has suggested that communicating about food and nutrition in a fun and relatable way to children is an effective means of motivating children to develop healthy dietary behaviors. Marshall et al. (2011) found that parental communication about food and nutrition was negatively related to children's weight and positively related to healthy dietary outcomes. However, parental communication was not independently related to these outcomes and other maternal factors like parental monitoring and parental guidance were also part of this relationship (Marshall et al., 2011). Therefore, more research is required to concisely examine the different closely-related parental factors like parental communication and parental guidance in order to better understand associations between parental communication with children's weight and dietary outcomes. Marshall et al.'s (2011)



findings indicated that like parental feeding practices, the way parents communicate about food can have positive and negative impacts on children's dietary practices. More research is needed to examine parental communication and family mealtimes in order to understand the link between the two, and the impact on youths' dietary behaviors.

### **Family Mealtimes**

A majority of research on family mealtimes has shown that having frequent family meals is associated with positive health and eating behaviors among children and adolescents. This is presumably because family mealtimes provide opportunities for children and adolescents to be exposed to and learn about healthy food choices and a high quality diet prepared by their parents (Ayala et al., 2007; Boutelle et al., 2007).

### **Family Meals and Dietary Behaviors**

Children and adolescents who reported frequent family meals (at least four times a week) were more likely to practice healthier eating behaviors and have a better diet quality, for example consuming more fruit and vegetables and consuming less soda compared to children and adolescents who reported fewer family meals (Andaya et al., 2011; Fruh et al., 2011; Hammons & Fiese, 2011; Larson & Story, 2010; Videon & Manning, 2003). Regular breakfast consumption with parents is an important indicator of healthy lifestyle patterns such as making healthy food choices for adolescents, and it is a suggested obesity-prevention practice (Fruh et al., 2011; Larson & Story, 2010). Some studies have found that adolescents who reported that they never had meals with their families or who had fewer than three meals per week with their families were more likely to be overweight compared to those who reported that they ate more than three family meals per week with their families (Fruh et al., 2011; Hammons & Fiese, 2011).

In these studies, it is presumed that family mealtimes made healthier food more available compared to when children eat alone without their family members present. However, other factors might be involved in this presumed link between family mealtimes and availability of healthy food. For example, if healthy food like fruits and vegetables are not available during family mealtimes, then family mealtimes might not be as beneficial in terms of encouraging healthy dietary habits in youth. Fulkerson et al. (2008) found that more than three quarters of parents reported having family meals/dinners at least five times a week. However, most parents reported either purchasing fast food or takeout food for the family meal at least once a week and almost half of all parents reported that they visit a full-service restaurant at least once a week for their family dinner (Fulkerson et al., 2008).

The frequency of family mealtimes and the availability of healthier food served need to be differentiated and studied separately to determine the effect of each component on youth eating behaviors. In a study with African American youth, Kramer et al. (2012) found that higher frequency of caregiver food preparation was associated with higher adolescent BMI, noting that the protective effect of family meals or home-cooked meals is not apparent in African American youth. The authors speculated that one reason for this might be because home-cooked meals in these minority populations may not be healthy due to the limited access these minority groups might have to healthier food and fresh produce (Kramer et al., 2012). This showed the potentially important role of food served during family mealtimes on the benefits of family meals for children and other family members. The research so far has assumed that family mealtimes are associated with the likelihood that healthier food is served during mealtimes but the

influence of food availability and eating together still needs to be more concisely differentiated in research. Therefore, this link between family mealtimes, availability of healthy food, and food served during meals needs to be further studied.

### **The Long-Term Benefits of Family Meals**

Some studies have also found that the benefits of family meals carry over transitional periods from early to middle adolescence and from adolescence into young adulthood (Burgess-Champoux, Larson, Neumark-Sztainer, Hannan, & Story, 2009; Larson, Neumark-Sztainer, Hannan, & Story, 2007, Fruh et al., 2011). Adolescents who have meals regularly with their families were more likely to make eating with family and friends a priority when they become young adults (Fruh et al., 2011). Female adolescents who reported having regular family meals were also more likely to regularly consume breakfast as young adults (Fruh et al., 2011).

Family meals were also found to be a protective factor against overweight and disordered eating. A longitudinal study by Burgess-Champoux et al. (2009) showed that having regular family meals was associated with an increased probability of consuming a healthier diet and more consistent meal patterns over time. Adolescents who had frequent family meals throughout the transition to adulthood consumed breakfast and dinner more frequently, and consumed more vegetables and food rich in calcium and fiber five years later compared to adolescents who did not have frequent family meals. However, despite the long-term importance of family meals, the study also showed that there was a steep decline in regular family meals from early to middle adolescence (Burgess-Champoux et al., 2009).

### **Family Meals and Family Relationships**

The benefits of family meals do not just encompass healthy eating but also extends to other benefits for families and children as well. Family meals can build and strengthen relationships and facilitate better communication among family members (Fruh et al., 2011; Berge et al., 2012; Diamond, 2010). Frequent family meals are associated with family closeness and connectedness, as well as with improved emotional well-being of family members (Fruh et al., 2011; Hammons & Fiese, 2011). Fulkerson et al. (2008) found that parents reported that they enjoyed the conversation, “togetherness through eating, relaxing, and laughing” during family mealtimes (p. 708). Having frequent family meals is associated with higher self-esteem and better social skills in youth as well as serving as a protective factor against delinquent and high risk behaviors like the use of alcohol and drugs (Fruh et al., 2011). Middle-school students who had frequent family meals were less concerned with their weight and had higher self-efficacy for healthy eating. Frequent family meals are also associated with better academic performance in children and adolescents (Fruh et al., 2011).

### **Factors that Impact Family Mealtimes and its Influence**

While frequent family meals are found to be beneficial for children and adolescents in terms of helping them develop healthy dietary behaviors as well as better social-emotional development, it is important to take into consideration some confounding factors that are associated with family mealtimes as well as with the dietary behaviors children and adolescents. Some of these factors are socioeconomic status and neighborhood ecological niche, which impacts the availability and affordability of healthy food. Food-insecure youth, who lacked access to healthy food, reported having fewer family meals and consuming more fast food and high-fat foods compared to food-

secure youth (Widome, Neumark-Sztainer, Hannan, Haines, & Story, 2009). Households that were lower income and had greater food insecurity had fewer food preparation supplies, and these households also had fewer family meals and lower child consumption of home-prepared meals (Appelhans et al., 2014). It is also important to note that families that have better cohesiveness, closeness, and communication might also be more likely to have frequent family meals, which may confound a predictor or selection factor with family and child outcomes of family meals. On the other hand, families in which the relationships among members are strained could lead to stressful and unpleasant family mealtimes (Berge, 2009). These unpleasant mealtimes could create even more conflicts and tension among family members (Fulkerson et al., 2008). Other factors like food disagreements, children's pickiness and food refusal, as well as having little to no help during meal preparation could also make for a chaotic and stressful family mealtime (Fulkerson et al., 2008). The direction of effects between family variables, like family cohesiveness, communication, and conflict, and family mealtimes is important to consider when conducting research on family mealtimes and children's dietary behavior and social-emotional development.

When it comes to the context of family meals, the presence of distractions like TV and mobile devices could negatively affect mealtimes and dietary behaviors. McIntosh et al. (2010) found that mothers who spent more time watching TV during meals had children who felt that family meals were not important and who also watched TV during dinner. Eisenberg et al. (2012) also found that children who had more screen time during meals were more likely to consume higher amounts of fatty foods. The research on the

presence of media and technology during mealtimes showed that these devices served as distractions and takes away the benefits and positive impacts of family mealtimes.

### **Gaps and Discrepancies in Research on Family Meals**

Despite all the research on family mealtimes, there are still important gaps in this research. It is unclear that the benefits of frequent family meals are a direct result of the family sitting and eating together or are due to processes and events that, in some way, are involved in family mealtimes. As a result, family mealtime can be considered as a proxy variable (Berge, 2009). This explains research which showed that the impact of family meals can depend on a number of factors like the type of food that is served during meals, the relationship of the family, and activities during mealtimes like talking or watching the television.

The benefits of family meals might also not hold true for some ethnic minority families. The protective effect of family meals or home-cooked meals might not be as apparent in Hispanic and African American youth, as mentioned earlier in a study by Kramer et al. (2012). This may be due to the fact that home-cooked meals in these minority populations may not be healthy or that African American youth still eat unhealthy meals outside the home in addition to home-cooked family meals (Kramer et al., 2012).

### **Resources Related to Food Availability and Family Mealtimes**

#### **Financial Resources**

Studies have showed that financial resources like income and SES have an impact on food availability and family meals. Masters, Krogstrand, Eskridge, and Albrecht (2014) found that high-income homes had significantly higher prevalence of fruits, fat-

free/low-fat milk, and salty snacks compared with middle- or low-income homes and this was true for all racial groups in their study (White, Hispanic, and Black). High-income households spent significantly more money on grocery shopping and eating out compared to low- and middle-income households (Masters et al., 2014). Compared with low- and middle-income households, high-income households had significantly lower average number of times someone cooked dinner at home during the week (Masters et al., 2014).

Families with higher socioeconomic status often had greater food security and this impacts family meals and other dietary behaviors. Widome et al (2009) found that youth in families with lower income had lower food security and they reported higher fast food consumption, higher fat intake, and lower breakfast consumption compared to youth from food-secure families. Both food-secure and food-insecure youth perceived similar benefits from healthy eating but food-insecure youth were more likely to perceive healthy eating as inconvenient and were more likely to dislike the taste of healthy foods (Widome et al., 2009). Families with more financial resources and food security were also associated with more home-cooked meals and family meals (Widome et al., 2009).

Family income is also commonly associated with parent education. There is a clear association between higher educational attainment and higher earnings, and this impacts families and children. Among low-income families, 82% were children whose parents did not have a high school diploma. Even if a parent is employed full-time, low education level still greatly affects a family's income. Douglas-Hall and Chau (2007) noted that among families with full-time employment, 73% of children whose parents have less than a high school diploma live in low-income families and 46% of children whose parents have no college education (with high school diploma) live in low-income

families. The low levels of parent education is a struggle commonly faced by low-income families because even with working full-time and multiple jobs, these families often find it hard to make ends meet. The lack of time resulting from work might also prevent these families from having family meals (Blake et al., 2009; Devine et al., 2006; Devine et al., 2009). Considering that studies have found financial resources and food security to be related to family meals, home food availability, and youths' dietary behaviors, and that financial resources and parent education to be related, these factors must be taken into consideration when studying family meals.

### **Time and Parental Employment Status**

Time is another resource that often plays a role in family meals and work is often a factor associated with lack of time that affects family meals (Blake et al., 2009; Devine et al., 2006; Devine et al., 2009). Parents who reported inflexible work schedules were dissatisfied because their work schedules did not allow for family meals (Blake et al., 2009). Mothers reported that their work schedules left them with less time to prepare home-cooked meals for their families (Blake et al., 2009). Working mothers with less help and family support also mentioned skipping meals and using convenience meals due to the lack of time (Blake et al., 2009). Fathers with heavy work schedules reported dissatisfaction due to the lack of time available for them to be present during family meals (Blake et al., 2009).

Devine et al., (2006) found that parents who were pressed for time due to work and other busy family schedules and activities experience work-family spillover. Parents experiencing stress from such spillover often view family meals as “just one more thing to get done” (p.2596). When it comes to family meals, these parents reported feeling “too



tired to eat” and “too rushed and too hurried to eat” (p.2596). They felt that with their work and family demands, they lacked the time and energy to cook meals for their families, to eat with their families, and to make healthy food choices (Devine et al., 2006). These parents also felt the conflict between wanting to be good parents and the lack of time to prepare healthy meals for their children (Devine et al., 2006).

As a result of the lack of time for cooking and preparing meals, parents employ different food choice coping strategies. Devine et al. (2009) found that busy parent work schedules were associated with non-home cooked main family meals. Fathers who worked long and nonstandard hours employed strategies like eating take-out meals, missing family meals, eating convenient, prepared entrees, and eating while working (Devine et al., 2009). Mothers in busy work situations bought and ate restaurant meals, skipped breakfast, prepared quick and easy family meals, and served convenient entrees during family meals (Devine et al., 2009).

### **Methodological Critique of Literature**

All of the studies mentioned above are either quantitative or qualitative studies. There are few mixed methods studies in the field of parental socialization and family mealtimes. There has been only one mixed methods study about the context and dynamics of family mealtimes.

Berge, Jin, Hannan, & Neumark-Sztainer (2013) conducted a mixed methods study on the structure of family mealtimes, the family dynamics that occur during family mealtimes and associations with adolescents' weight and dietary behaviors. Observational data were collected by videotaping two family meals and only data from the second recording were used in order to collect data after participants were

accustomed to the presence of the video recorder from the first recording session. After the collection of qualitative observational data, the researchers used the Mealtime Observation form to observe the structural characteristics of the family mealtime and used the Mealtime Interaction Coding System to code the interpersonal dynamics among family members during the mealtime. The qualitative data were coded and transformed into quantitative data, which were then analyzed with the other quantitative data (adolescent BMI and dietary behaviors) gathered from a previous study, combining the two data types. The results from the analysis were then interpreted together.

Findings from the study showed that more than half of the families had meals in their kitchen or dining room and about 35% of the families had a TV in the same room as the family meal. Most family meals were served family style whereby family members dished out the prepared food onto their own plate. Over 75% of the families served vegetables but only 18% of the families served fruit. When faced with a picky-eater child, the techniques commonly used by parents were verbal coaxing or collaboration with the child to solve the problem. Families who had healthy interpersonal dynamics (task accomplishment, communication, affect management, interpersonal involvement, behavior control, roles, and overall family functioning) during family mealtime also had adolescents who had lower BMIs and who consumed more vegetables.

Even though the authors called it an exploratory study, the methods suggested that parts of a convergent data-transformation design and parts of an exploratory design were used. The use of observational data in a quantitative manner without any qualitative analysis of the data makes it a weak mixed methods design. Besides the lack of qualitative analysis, there was no additional collection of quantitative data after the

qualitative data for it to be a complete exploratory design. Moreover, there was no initial analysis of quantitative data (BMI and dietary patterns) for it to be a complete convergent design.

Despite these shortcomings, the study showed some ways that qualitative and quantitative data can be used to design a mixed methods study. The study showed how qualitative data can be used to inform quantitative data later in the study, a characteristic of an exploratory design (Creswell & Plano Clark, 2011). The study also showed that qualitative data can be transformed into quantitative data so that it can be merged with other quantitative data collected, a characteristic of the convergent data-transformation (Creswell & Plano Clark, 2011). Although this particular study is not a strong and complete mixed methods study, it is an attempt at conducting a mixed methods study in this field and provides an example of how mixed methods can be utilized in the field. This is also one of the few studies in the literature that focused on the role of family functioning and family social interactions during family mealtimes in predicting healthy dietary behaviors in youth.

### **Deficiencies in the Literature**

Given all the research on parental socialization and family mealtimes that has been done, there is still a gap in the literature on parental socialization behaviors like parental feeding strategies and communication which potentially take place during family mealtimes and could make family mealtimes beneficial for youth. Very few studies have been conducted on the interactions and socialization that occurs during family mealtimes and the roles those factors play in making family mealtimes beneficial for youth in terms of helping them shape healthy dietary behaviors. Instead, the majority of the studies were

correlational studies which focused on the benefits or effects of frequency of family mealtimes on youth without explaining how or why. Even fewer studies in the literature of family mealtimes are mixed methods studies or studies which utilize both quantitative and qualitative methodology and data. The use of quantitative and qualitative data provides different but necessary information which together and would produce a clearer understanding to the issue at hand so that better and more practical solutions can be achieved (Creswell & Plano Clark, 2011). In their review of mixed methods research in the broad field of family science, Plano Clark, Huddleston-Casas, Churchill, Green, and Garrett (2008) found that there were limited mixed methods studies in the field. They found that most mixed methods studies in family science were not as complete or thorough as they could be due to the lack of formal coursework in mixed methods research and the lack of literature discussing the use of mixed methods in family science research (Plano Clark et al., 2008). A common definition of mixed methods research is also lacking in the field of family science and most family science research defines mixed methods as combining methods or multimethod research without much focus on the merging of the findings from the two data sources (Plano Clark et al., 2008). In order to understand the dynamics of parental socialization during family mealtimes, there is a need for two data sources – quantitative and qualitative because one data source is insufficient to provide a complete picture of parental socialization during family mealtimes and its potential impact on youths' dietary behaviors. Qualitative data are needed to understand parental perceptions of the interactions and socializations that occur during family mealtimes, and quantitative data are needed to investigate the association between youths' dietary patterns and parental socialization during family mealtimes.

With the deeper examination and understanding of parental socialization behaviors during family mealtimes and its impact on youths' dietary behaviors, components that make family mealtimes beneficial could be identified. These findings can then be incorporated into the family component of a comprehensive youth health program as a prevention and intervention effort against youth obesity and to promote healthier lifestyles in today's youth.

## CHAPTER 3: METHODOLOGY AND PROCEDURE

### **Philosophical Foundations**

The paradigm or worldview through which this mixed methods study is conducted is pragmatism. Pragmatism is a paradigm which acknowledges the existence of singular and multiple realities and focuses on practicality which encourages researchers to collect data that best answers the research questions or that best addresses the issue at hand (Creswell & Plano Clark, 2011; Sale, Lohfeld, & Brazil, 2008). Pragmatism also acknowledges that researchers have biased and unbiased perspectives and is real-world oriented as well as problem-centered (Creswell & Plano Clark, 2011). Utilizing a pragmatic paradigm, mixed methods is best suited for this study because pragmatism allows for the mixing of qualitative and quantitative methods to best inform the research questions in this study (Teddle & Tashakkori, 2009). Also, pragmatism informs the practical implications and purposes of this study, which is to apply the findings of this study to family-based prevention and intervention programs pertaining to youth health and obesity.

### **Methods**

Mixed methods design encompasses methodology and method. It is a research design that contains all the steps of a research process including problem identification, review of literature, purpose identification, development of research questions, data collection and analysis, as well as data report and evaluation. In terms of being a methodology, mixed methods involves a philosophical assumption or paradigm which guides the data collection, analysis, and mixing of quantitative and qualitative approaches. As a method, it involves the procedures of collecting, analyzing, and mixing

of quantitative and qualitative data. The mixing of quantitative and qualitative data in a mixed methods study can often be achieved through merging, embedding, or connecting the two data types. This mixed methods approach is often used when one type of data is insufficient to fully address an issue or the topic at hand or when both data types can better inform the research study (Creswell & Plano Clark, 2011).

The mixed methods designs that were used in this study were the convergent parallel design (parallel-databases variant) in data collection and analysis, and the explanatory sequential design in data interpretation (Creswell & Plano Clark, 2011). In the convergent parallel design, the quantitative and qualitative data were collected and analyzed separately but during the same phase of the research process and the separate results were then merged during interpretation of the overall study (Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009). During the interpretation of the findings, the explanatory sequential design was used so the qualitative data informed the quantitative data during data merging and interpretation (Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009). The purpose of using the two mixed methods design in this study was to use the different data types in synthesizing different but complementary results in order to develop a more complete understanding of parental socializations and interactions during family mealtimes. Quantitative and qualitative data were collected and analyzed separately during the same phase of the research process but the qualitative data were used to inform the quantitative data during the merging and interpretation phase. A parallel-databases variant of the convergent design was used because the quantitative and qualitative research strands were conducted independently and were only brought together during interpretation and discussion of the results. Equal value,

emphasis, and priority is placed on both data types and both data strands (Creswell & Plano Clark, 2011). .

A phenomenology design will be used in the qualitative portion of the study to understand family mealtimes through the interactions and parental socializations during family mealtimes, and through other occurrences during and surrounding family meals. The purpose of this qualitative portion of the study is to explore the occurrences during and surrounding family mealtimes, one of which is the process and dynamic of parental socializations and interactions during family mealtimes, through the views of parents and family members. This makes phenomenology a well-suited approach for the qualitative portion of this study (Plano Clark & Creswell, 2010).

### **The Use of Mixed Methods in the Literature**

Even though there are not many complete or strong mixed methods studies in the field of family science, specifically in the research area on parental socializations and family mealtimes, there have been attempts at conducting mixed methods studies through methods usually used in a convergent parallel design. In a study by Park et al. (2011) on the role of Hispanic immigrants' food beliefs and preferences in relation to food access and environment with dietary behaviors, the authors used aspects from the convergent-parallel design in which they had two separate data sources (quantitative and qualitative) collected at the same time in the research process. They also had separate quantitative and qualitative analysis and they merged the results from both analyses through interpretation as well as drew conclusions based on both data sources. In the study on family mealtime structure and dynamics, despite a weaker attempt at a mixed methods study, Berge et al. (2013) utilized the two quantitative measures and methods that will be



used in this study (discussed in the quantitative data collection and analysis section) and their study showed that these measures are valid instruments that have been used in a mixed methods study in the area of family mealtimes.

Another study in the field of family science has demonstrated how the separate but concurrent collection of quantitative and qualitative data sources merged during interpretation has been utilized. Knodel and Saengtienchai (2005) utilized a triangulation or convergent parallel design in their study on the role of elder parents in caring for their child with HIV or AIDS. They had equal weighting in the priority of the quantitative and qualitative data strands and they collected data separately but concurrently which were merged later in the study through interpretation and discussion (Knodel & Saengtienchai, 2005). In their study on the effects of economic difficulties on family relationships among African American, Latino, and Euro-American families, Gomel, Tinsley, Parke, and Clark (1998) also utilized concurrent data collection and analysis which was merged later, a characteristic of the convergent parallel design used in this study. In yet another study in the field of family science, Weigel-Garrey, Cook, and Brotherson (1998) examined the privacy of the home environment for families with young children with disabilities through the use of surveys and interviews. Both data sources provided different data through concurrent data collection and were analyzed separately. The results from the two data sources were brought together by incorporating the qualitative data from semi-structured interviews with the survey data (Weigel-Garrey et al., 1998). Through these studies, it is clear that mixed methods studies are accepted in the field of family science and that there is a need for mixed methods studies in the area of family

mealtimes and dietary behaviors, especially with implications for youth obesity prevention.

### **Study Recruitment and Sample**

For the quantitative data collection portion of this study, participants were recruited through the use of convenience sampling which is a non-probability sampling strategy. Participants were recruited through public schools and summer recreation programs in Lincoln, NE. The requirement for participation in this study was that a family had to have at least one child aged 11-18 years. Participants were recruited through flyers and letters posted at youth camps, schools, churches, and community centers. The flyers were also distributed electronically to parents by the principals of public middle and high schools in Lincoln, NE and to parents of home schools by the home school association. An example of the recruitment flyer and letter can be found in Appendix A and B respectively. Parents who were interested in participating contacted the researcher and provided their contact information so the researcher could mail them a survey packet to start. During this time, the researcher also answered any questions or provided more information to parents if needed.

Before recruiting participants and collecting data for this study, permission from the Institutional Review Board (IRB) was obtained to ensure that there was no harm or risk to the participants and that the rights and privacy of the participants are protected. The informed consent and youth assent forms for this study can be found in Appendix C and D. Approvals from Lincoln Public Schools to send flyers to the parents through the principals, and from the Lincoln Parks and Recreation Services to post flyers at community centers and youth camp sites were also obtained.

A total of 100 parent-child dyads and their families participated in this study. For the quantitative portion of the study, 100 parent-child dyads completed the revised F-EAT and EAT 2010 surveys respectively. From the 100 parent-child dyads, 40 families participated in video recordings of mealtime observations, which is part of the qualitative portion of this study. From the 40 families, 20 parents participated in the remaining part of the qualitative portion which consisted of semi-structured interviews. Tables 3.1 and 3.2 show the parent and child demographic variables, respectively.

TABLE 3.1

<i>Parent Demographic Variables</i>		Survey Sample N = 100	Observation Sample N = 40	Interview Sample N = 20
		n (%)	n (%)	n (%)
Relationship to child	Mother	83	80	75
	Stepmother	2	2.5	5
	Father	15	17.5	20
Ethnicity	White/Caucasian	86	82.5	70
	African American	8	10	20
	Hispanic or Latino	2	2.5	5
	Asian American	2	-	-
	Others	2	5	5
Marital status	Married/committed relationship	78	77.5	60
	Divorced/separated	16	15	25
	Single	6	7.5	15
Highest school grade completed	Did not finish high school	1	-	-
	Finished high school or GED	8	7.5	5
	Some college/training after high school	25	22.5	35
	Finished college	45	60	55
	Advanced degree (e.g., Master's, Ph.D., M.D.)	20	10	5

Highest school grade spouse completed	N/A (no spouse)	21	20	35
	Did not finish high school	1	-	-
	Finished high school or GED	11	10	15
	Some college/training after high school	16	20	20
	Finished college	26	25	15
	Advanced degree (e.g., Master's, Ph.D., M.D.)	24	25	15
Employment status	Working full-time	54	52.5	70
	Working part-time	24	25	15
	Stay at home caregiver	19	17.5	10
	Not working for pay (retired, student, unable to work)	3	5	5
Public assistance	No	83	82.5	65
	Yes	16	17.5	35
Total household income	Less than \$20,000	7	12.5	25
	\$20,000-\$34,999	20	12.5	35
	\$35,000-\$49,999	17	12.5	5
	\$50,000-\$74,999	25	27.5	30
	\$75,000-\$99,999	16	17.5	5
	\$100,000 or more	14	7.5	-

TABLE 3.2

*Child Demographic Variables*

		Survey	Observation	Interview
		Sample N = 100 n (%)	Sample N = 40 n (%)	Sample N = 20 n (%)
Gender	Male	56	55	45
	Female	44	45	55
Grade	6 <sup>th</sup>	16	20	20
	7 <sup>th</sup>	14	15	10
	8 <sup>th</sup>	8	10	10
	9 <sup>th</sup>	15	12.5	5
	10 <sup>th</sup>	15	17.5	20
	11 <sup>th</sup>	15	15	20
	12 <sup>th</sup>	12	7.5	10
	Graduated/college	5	2.5	5
School type	Public	54	60	80
	Private	23	20	10
	Home	21	20	10
	Others (e.g., college)	2	-	-

Ethnicity					
	White/Caucasian	83	82.5	70	
	African American	10	7.5	15	
	Hispanic/Latino	2	2.5	5	
	Asian American	2	-	-	
	American Indian/Native American	1	2.5	5	
	Others	2	5	5	
Language spoken at home					
	English	96	97.5	95	
	A language other than language	1	-	-	
	English and another language equally	3	2.5	5	

After receiving their survey packets and providing consent, participating parents completed the revised F-EAT questionnaire (Appendix E) and children completed the revised EAT 2010 (Appendix F). All surveys were completed in the participants' homes, and participants (parent and child) were told to complete the surveys separately from one another. Upon completion of the surveys, the participants contacted the researcher to arrange for a time that the researcher could collect the surveys and present \$20 compensation to the participants. Participants also had the option to continue on to the next qualitative phase of the study.

### **Quantitative Measures**

Quantitative data were collected through the use of selected subscales from the Project F-EAT (Families and Eating and Activity in Teens) questionnaire and from the EAT (Eating and Activity in Teens) 2010 surveys. The Project F-EAT questionnaire (Bruening, MacLehose, Loth, Story, Neumark-Sztainer, 2010; Bauer et al., 2012; Berge et al., 2012) and EAT 2010 questionnaire (Neumark-Sztainer et al., 2012; Berge, Wall, Larson, Loth & Neumark-Sztainer, 2013; Eisenberg et al., 2012) were used in the Project F-EAT and EAT studies which examined the influences of family and the home environment on adolescents' dietary and physical activity behaviors, and the dietary and physical activity behaviors of adolescents, respectively. More information on these measures can be found in the Appendices A and B. Both the F-EAT and EAT 2010 questionnaires have demonstrated validity and reliability. The EAT 2010 has been found to be a good measure of dietary behaviors in adolescents and the F-EAT has been found to be reliable in measuring influences in the family and home environment on adolescent dietary and physical activity behaviors (Berge et al., 2013; Gillman et al., 2008; Larson et



al., 2007; University of Minnesota, Epidemiology & Community Health Research). In order to address research questions under Aim 1 (examining family mealtime context) and 2 (investigate the role of resources, parent socialization, mealtime context, and frequency of family meals on youths' dietary behaviors), subscales were used to measure parent socialization, parent resources, and youths' dietary attitudes and behaviors. Subscales of parental modeling, parental controlling feeding practices, parental values and beliefs, parental communication about nutrition and physical activity, and media use during meals were selected to measure parental socialization. Parental resources were measured by total household income, parent education and food insecurity. Youths' dietary behaviors were operationalized as children's preferences for healthy foods, children's weight concerns, children's consumption of outside food, and availability of unhealthy food and fruits and vegetables at home. Tables 3.3, 3.4, 3.5, and 3.6 present descriptive statistics for each scale and corresponding items used for data analysis.

TABLE 3.3

*Parent Socialization During Family Mealtimes*

	N	Mean	SD	Alpha
<b>Parent modeling<sup>1</sup></b>	100	4.47	.68	.57
Parent consumption of breakfast over the past week				
Parent consumption of fruit over the past week				
Parent consumption of vegetables over the past week				
Parent consumption of sugar-sweetened beverages over the past week				
Parent consumption of fast food over the past week				
<b>Parent controlling feeding practices<sup>2</sup></b>	100	2.19	.61	.62
My child should always eat all of the food on his/her plate				
I have to be especially careful to make sure my child eats enough				
If my child says "I'm not hungry," I try to get him/her to eat anyway				
If I did not guide or regulate my child's eating, my child would eat much less than he/she should				
I have to be sure that my child does not eat too many high fat foods				
I have to be sure that my child does not eat too many sweets (candy, ice cream, cake, or pastries)				
I have to be sure that my child does not eat too much of his/her favorite foods				
If I did not guide or regulate my child's eating, he/she would eat too much of his/her favorite foods				
I intentionally keep some foods out of my child's reach				
If I did not guide or regulate my child's eating, he/she would eat too many junk foods				
<b>Parent values/beliefs<sup>1</sup></b>	100	3.5	.58	.61
It is important that our family eat at least one meal a day together				
In our family, children are expected to be home for dinner				
<b>Parent communication about nutrition and physical activity<sup>2</sup></b>	100	3.22	.88	.71
Have you had a conversation with your child about healthy eating habits?				
Have you had a conversation with your child about being physically active?				
<b>Media use during meals<sup>1</sup></b>	100	1.23	.41	.78
Watch television or movies				
Play with hand-held games (e.g., DS, PSP, Game Boy, etc.)				
Talk on the phone (cell or other)				
Text message				

Listen to music with headphones (e.g., with iPod,  
MP3 player, or other devices)

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Higher value denotes more socialization behaviors. <sup>1</sup>: a scale of 1-6 or 7 was used with 1 being the least frequent and 6 or 7 being the most frequent. <sup>2</sup>: a scale of 1-5 was used with 1 being the least frequent and 5 being the most frequent

TABLE 3.4

*Family/Parent Resources (Parent-report)*

	N	Mean	SD	Alpha
<b>Parent education</b> <sup>1</sup>	100	2.77	.88	-
What is the highest grade or year of school that you have completed?				
<b>Household income</b> <sup>1</sup>	100	3.66	1.50	-
What was the total income of your household before taxes in the past year?				
<b>Food insecurity</b> <sup>1</sup>	100	1.24	1.95	.89
The food that we bought just didn't last, and we didn't have money to get more				
We couldn't afford to eat balanced meals				
In the last 12 months, did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?				
In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?				
In the last 12 months, were you ever hungry but didn't eat because there was not enough money for food?				
<b>Parent employment</b>		-	-	-
Working full time	54			
Working part time	24			
Unemployed	22			

<sup>1</sup>Higher numbers denotes higher value on the item.

TABLE 3.5

*Children's Dietary- and Health-Related Behaviors (Child-report)*

	N	Mean	SD	Alpha
<b>Children's preferences for healthy food<sup>1</sup></b>	100	3.17	.53	.62
Milk tastes good to me				
I like the taste of most fruits				
I like the taste of whole wheat bread				
Most vegetables taste bad				
Most healthy foods just don't taste that great				
<b>Children's weight concerns<sup>1</sup></b>	100	1.7	.75	.74
I am worried about gaining weight				
I think a lot about being thinner				
I weigh myself often				
<b>Children's consumption of outside food<sup>2</sup></b>	100	1.65	.51	.79
Traditional "burger-and fries" fast food restaurant (such as McDonalds, Burger King, Wendy's, or Culvers)				
Mexican fast food restaurant (such as Taco Bell, Taco Johns, or Chipotle)				
Fried chicken (such as KFC)				
Sandwich or sub shop (such as Subway, Panera, or Quiznos)				
Pizza place				
Sit-down restaurant (where wait-staff brings food to your table)				

Higher numbers denotes higher value on the item. <sup>1</sup>: a scale of 1-4 was used with 1 being 'strongly disagree' and 4 being 'strongly agree.' <sup>2</sup>: a scale of 1-6 was used with 1 being the least frequent and 5 being the most frequent

TABLE 3.6

<i>Home Food Environment (Child-report)</i>				
	N	Mean	SD	Alpha
<b>Availability of unhealthy food at home<sup>1</sup></b>	100	2.35	.66	.78
I have 'junk food' in my home				
Potato chips or other salty snack foods are available in my home				
Chocolate or other candy is available in my home				
Soda pop is available in my home				
<b>Availability of fruit and vegetables at home<sup>1</sup></b>	100	3.02	.46	.68
Fruits and vegetables are available in my home				
Vegetables are served at dinner in my home				
In my home, there is fresh fruit on the counter, table or somewhere where I can easily get it				
In my home, there are cut-up vegetables in the fridge for me to eat				

Higher numbers denotes higher value on the item. <sup>1</sup>: a scale of 1-4 was used with 1 being 'never' and 4 being 'always.'

Quantitative data were analyzed using SPSS version 22, a statistical software package. Together with the qualitative data (findings discussed in the next chapter), the quantitative data were used to achieve the **first aim**, which is to examine family mealtime contexts, especially parental socialization before, during, and after meals, and the **second aim**, which is to investigate the influence of family resources, parent socialization, mealtime context, and frequency of family meals on youths' eating patterns and dietary behaviors. Preliminary analyses (correlations and ANOVAs) were conducted to determine if there were significant associations between parental socialization variables, youths' dietary behaviors, and other home, family, and food-related variables. The data were then analyzed using a multiple regression model, with parental socialization behaviors, family resources, and frequency of family meals as the independent variables and youths' dietary behaviors as dependent variables, controlling for potential confounds like age and gender.

### **Qualitative Methods and Procedures**

The qualitative portion of this study consisted of family mealtime observations and parent interviews. Parents and adolescents who completed the surveys and who were interested in the qualitative portion of this study contacted the researcher and a time was scheduled for the researcher to video record family meals at the participants' homes. Two video cameras on tripods were set up in the participants' homes and recorded the family mealtimes without the presence of the researcher in the home. After families finished their meal, they contacted the researcher, who returned to the participants' homes to stop the recording and collect the recording equipment. For the first five participating families, their family meals were recorded twice within a week of each other. The purpose for recording twice initially was to compare the video recordings from the two sessions to see if there were any differences in participants' behaviors. The mealtime videos of the first five participating families were observed and coded by the researcher and another research team member. The observation coding sheet can be found in Appendix G. The behaviors of the participating families were similar across the two video sessions, as family members acclimated to the presence of the video cameras within the first 10 minutes of the mealtime. After noting this, one mealtime session was recorded instead of two for the remainder of the sample. A total of 40 families participated in the mealtime observations, with saturation reached at 35 families. All sessions were standardized by using the same recording equipment and procedures, and all sessions were conducted by the same researcher. Upon completion of the mealtime observation phase, participants were compensated \$50.

After completion of the mealtime observation phase, participants were given the option to participate in the third phase of the study which consisted of parent interviews.

Interested participants contacted the researcher to schedule an interview at a time and location that was convenient to them. Participants were interviewed about their thoughts and experiences regarding family mealtimes. A semi-structured interview protocol was used and the interviews were audio recorded. The questions were asked to understand the nature and context of family meals, and to understand parents' perspectives on family meals (Appendix H). Semi-structured interviews have been utilized by other studies using a similar triangulation or convergent parallel design (Park et al., 2011; Knodel & Saengtienchai, 2005; Weigel-Garrey et al., 1998). Each interview lasted approximately 30 minutes. A total of 20 parents were interviewed, with saturation reached at 18 families. All interview sessions were standardized by using the same audio recording equipment, the same interview protocol, and were conducted by the same researcher. Upon completion of this last phase, participants were compensated with \$30.

Together with the survey data, the observation data were used to achieve the **first aim** (to examine family mealtime contexts before, during, and after meals) and the **second aim** (to investigate the influence of family resources, parent socialization, mealtime context, and frequency of family meals on youths' eating patterns and dietary behaviors). The interview data were used to achieve the **third aim**, which is to understand parents' perceptions of family mealtimes. A phenomenology design was used to understand family mealtimes through the interactions and parental socializations during family mealtimes. The purpose of this qualitative portion of the study is to explore the occurrences during and surrounding family mealtimes, one of which is the process and dynamic of parental socializations and interactions during family mealtimes, through



the views of parents and family members. This makes phenomenology a well-suited approach for the qualitative portion of this study (Plano Clark & Creswell, 2010).

**Overview of analysis.** Qualitative data were analyzed primarily through open thematic analysis, a process in which categories were developed from the data (Plano Clark & Creswell, 2010). For the mealtime observations, occurrences, behaviors, and interactions were coded for every 10 seconds of the observation. A description of any mealtime occurrences was provided in each 10 second block by five research members (including the researcher). All members met before the start of data coding and analysis so they could be trained by the researcher on how to code the data. Each research team member then coded an observation and met with the researcher before proceeding to code other observations. This ensured that all members were coding the observations correctly. Twenty percent of the observation and interview data were coded twice by different research members to compare for reliability. If there were discrepancies or disagreements, the research members would meet to discuss them until a 100% agreement was reached. All coding completed by each research member were reviewed by the primary researcher and any discrepancies were discussed until an agreement was reached.

The observations were coded and analyzed in NVivo, a qualitative coding software using an open thematic analysis. Data analysis began by familiarizing with the data by reading through each observation (descriptions of occurrences during each 10-second block) and treating each piece of data with equal importance. The experiences and interactions in the observations were then clustered into meaning units, which were used to generate initial codes. Codes were revisited and refined by combining or separating

different codes. Themes were then developed from those codes and were reviewed by comparing each code to ensure it matches the theme. In order to further refine and develop the themes, additional codes that matched were added to the existing themes. Whenever additional codes were added to existing themes, constant comparison was used to question if the code belonged to the theme, or if another theme needed to be developed. As a final step in data analysis, the essence of each theme was related to the bigger research question.

Interview data were transcribed verbatim and were systematically organized by initial categories/questions. The data were then coded through thematic analysis and constant comparison in NVivo, utilizing the same approach as the observation data coding. Throughout the qualitative data analysis, codes and themes were developed based on meaning units and whenever possible, *in vivo* codes, or codes in the participants' actual words, were used to provide a more salient participant perspective. Themes were then developed based on codes, and the constant comparison method was used to compare codes to provide the best fit into themes. Quotes from the participants were used to present the participants' perspectives and experiences, and to illustrate codes and themes.

### **Mixed Methods Data Analysis Procedures**

This mixed methods study utilized a concurrent data collection procedure in which quantitative and qualitative data were collected at around the same time in the research process and one type of data collection is not dependent on the other. After the separate but concurrent collection and analysis of the quantitative and qualitative data, the results from the two data types were merged together through interpretation, where an

explanatory approach was used in which the qualitative findings were used to inform the quantitative findings. During data merging, the implications of the findings and the interpretation were also explored. The quantitative results were compared with the qualitative themes, and the qualitative findings were used to explain the quantitative results. Using this merging method, the findings from the two different but complementary data types were synthesized into an interpretation. Any inconsistent or conflicting quantitative and qualitative findings were noted and viewed as an opportunity for further research and investigation. Interpretation of the merged, mixed methods data occurred through a discussion of how, compared to a single quantitative or qualitative study, the merged findings from the two data sources provides a more complete understanding of parental socialization during family mealtimes and the effects or implications on youths' dietary behaviors.

The qualitative findings were validated through the use of member checking, a process in which the researcher brings the findings or themes back to some of the participants to check for the accuracy of the findings (Creswell & Plano Clark, 2010). Member checking was conducted with ten participants either through phone or email, depending on the preference of the participants randomly selected to verify the qualitative report. All participants agreed that the findings reflected their experiences.

## CHAPTER 4: QUANTITATIVE RESULTS

This chapter will present the quantitative results from the analysis of the parent and child surveys. To address the first aim of this study, which is **to examine family mealtime contexts, especially parental socialization before, during, and after meals**, descriptive analyses were conducted. Specifically, descriptive analyses were conducted to better understand parent socialization during family meal times, including parent modeling, socialization, and communication; organization of family meal times (planning, cooking, responsibilities), the context of family meal times (media use), and the home food environment. To address the second aim of this study, which is **to investigate the influence of family resources, parent socialization, mealtime context, and frequency of family meals on youths' eating patterns and dietary behaviors**, Pearson correlations, ANOVA, and multiple regression analyses were conducted. Refer to Table 4.1 for the list of variables used in the analyses.

Table 4.1  
*List of Variables*

Parent Socialization Variables	Parent modeling Parent controlling feeding practices Parent values/beliefs Parent communication about nutrition and physical activity Media use during meals
Parent-report Resources	Parent education Food insecurity Total household income Parent employment
Children's Dietary Behaviors	Children's food preferences Children's weight concerns Children's consumption of outside food
Child-report Home Food	Unhealthy food availability at home

Availability Variables	Fruit and vegetable availability at home
Frequency of Family Meals	Parent-report Child-report

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### **Family Mealtime Contexts**

**RQ1.1.** What kinds of socialization related to food, eating, and healthy behaviors do parents engage in during and outside of family mealtimes?

H1: Parents engage in socialization behaviors like parent modeling, parent feeding practices, and parent communication about food and nutrition during and outside of family mealtimes.

As hypothesized, parents engaged in different socialization behaviors during and outside of family mealtimes. Surveys, mealtime observations and parent interviews revealed that parents engaged in modeling of eating behaviors and also talked to children about nutrition and physical activity during and outside of family meals. Surveys indicated that parents modeled both healthy (eating breakfast, fruits, and vegetables) and unhealthy dietary behaviors (drinking sugar sweetened beverages and eating fast food). When it came to talking to children about healthy eating habits, 32% parents reported doing so ‘a few times a month,’ 31% of parents reported doing so ‘a few times a week,’ and 11% of parents reported doing so ‘almost every day.’ Parents also reported talking to children about being physically active ‘a few times a month’ (40%), ‘a few times a week’ (30%), and ‘almost every day’ (8%). Parents also held high values and beliefs about family meals, with 95% reporting that they ‘somewhat agree’ (18%), or ‘strongly agree’ (77%) that it is important for family members to eat at least one meal a day together and 86% reporting ‘somewhat agree’ (40%), or ‘strongly agree’ (46%), that children were

expected to be home for dinner. Parents reported some engagement in controlling feeding practices that regulated children's eating to make sure they ate enough food or do not overconsume food during mealtimes ( $M = 2.19$ ). Refer to Table 3.3 for the descriptive statistics for the parental socialization behaviors.

**RQ1.2.** How are family mealtimes organized (cooking and planning) and what, if any, are the rituals and routines around family mealtimes?

To answer the first part of RQ2, parents' engagement in meal planning and enjoyment of cooking were examined. On average, parents agreed that they enjoyed cooking. About 60% of parent participants 'agreed' or 'strongly agreed' that they enjoyed cooking and trying new recipes. About 60% of parent participants also 'agreed' or 'strongly agreed' that they engaged in some amount of meal planning. Refer to Table 3.3 for descriptive statistics.

**RQ1.3.** What is the frequency of media use by family members during family mealtimes? How is media use associated with youths' dietary behaviors (food preferences, consumption of outside food, and weight concerns)?

Seventy-nine percent of parents said that they set rules and limits on their children's media use during family meals. Half of the parents reported that they 'strongly disagree' with their families watching TV while eating dinner. Fifteen percent reported that they 'somewhat disagree' and 34% reported that they 'somewhat agree' or 'strongly agree' with watching TV during dinner. There were no significant correlations between media use during mealtimes and youths' dietary behaviors. However, there were small but significant correlations with child-reported TV use during mealtimes, children's weight concerns, and consumption of outside food. Children who reported watching TV

with family during dinner also reported more weight concerns ( $r(98) = .23, p = .01$ ) and more consumption of outside food ( $r(98) = .22, p = .02$ ). Table 4.2 shows the correlations between the variables.

**RQ1.4.** What is the home food environment like in terms of availability of healthy and unhealthy foods?

Children reported both the availability of healthy food like fruits and vegetables and the availability of calorie-dense snacks like chocolate, soda, and other snacks at home. Twenty-six percent of children reported that they ‘usually’ or ‘always’ have unhealthy food at home and 49% of children reported they ‘sometimes’ have unhealthy food at home ( $M = 2.35, SD = .66$ ). Sixty-six percent of children reported that they ‘usually’ or ‘always’ have fruits and vegetables available at home and 32% reported that they ‘sometimes’ have fruits and vegetables at home ( $M = 3.14, SD = .54$ ).

When asked if green salad is served during dinner, 62% reported ‘sometimes,’ 25% reported ‘usually,’ and only one parent said ‘always.’ Parents also reported that they ‘usually’ (55%) serve a vegetable other than potatoes during dinner, with 13% reporting ‘sometimes’ and 32% reporting ‘always.’ Half of the parents reported ‘usually’ or ‘always’ serving fruit during dinner and 42% reported doing so ‘sometimes.’ More than half of the parents (68%) did not serve sugar-sweetened beverages during dinner, while 29% reported ‘sometimes’ and 3% reported ‘usually’ serving sugar-sweetened beverages. Parent-report of food served during dinner was correlated with the availability of fruits and vegetables at home and the availability of unhealthy food at home. Children who reported higher fruit and vegetable availability at home also had parents who reported serving green salad ( $r(98) = .27, p = <.01$ ) and vegetables other than potatoes more often

during dinner ( $r(98) = .39, p = <.01$ ). Children who reported higher availability of unhealthy food at home also had parents who reported serving fruit less frequently during dinner ( $r(98) = -.27, p = <.01$ ) and sugar-sweetened beverages more frequently during dinner ( $r(98) = .22, p = .01$ ). Parent-report of food served during dinner was not significantly correlated with youths' dietary behaviors. Refer to Table 3.6 for descriptive statistics of home food environment.

### **Family Resources, Parent Socialization, Mealtime Context, Frequency of Family Meals, and Youths' Dietary Behaviors**

**RQ2.1.** Are parent resources (family income, parent work status, and parent education) associated with the frequency of family meals?

H2.1a: Families with higher income and more parent education will have more frequent family meals.

Contrary to the hypotheses, there were no significant correlations between family income or parent education and frequency of family meals. However, food insecure families had fewer family meals together, as reported by children,  $r(98) = -.20, p = .03$ . Food insecurity was significantly and inversely correlated with parent education and total household income. Higher parent education ( $r(98) = -.36, p = <.01$ ) and higher household income ( $r(98) = -.57, p = <.01$ ) were negatively correlated with food insecurity. Parent education was also positively correlated with household income,  $r(98) = .43, p = <.01$ . The correlations are presented in Table 4.3.

H2.1b: Parents who are unemployed or working part time will report more frequent family meals than parents who are employed full time.



Contrary to the hypothesis, ANOVA revealed that there was no significant difference in frequency of family meals for parents who are employed full time, employed part time, or unemployed.

**RQ2.2.** Are parent socialization, parent resources, and frequency of family meals associated with youths' dietary behaviors (food preferences, weight concerns, and consumption of outside food)?

H2.2a: Parent-reported positive parental socialization behaviors related to health and nutrition will be positively associated with youths' healthy eating behaviors, controlling for family resources.

Pearson correlations were conducted between variables. Multiple regression analyses were then conducted when indicated by the significant correlations. Refer to Tables 4.2, 4.3, 4.5, and 4.7 for correlations and multiple regression analyses. Results are discussed below.

**Children's food preferences.** Contrary to the hypothesis, parent socialization behaviors (parent modeling, parent controlling feeding practices, parent values and beliefs about family meals, parent communication of nutrition and physical activity, and media use during family meals) were not significantly correlated with youths' dietary behaviors. There was, however, a positive correlation between child-reported frequency of family meals and children's food preferences. Children who reported having more frequent family meals tended to report healthier food preferences,  $r(98) = .22, p = .01$ .

**Children's weight concerns.** Parent controlling feeding practices and parent communication about nutrition and physical activity were positively correlated with children's weight concerns ( $r(98) = .19, p = .03$ ;  $r(98) = .30, p = <.01$ ). Total household

income was inversely correlated with children's weight concerns,  $r(98) = -.22, p = .01$ .

To further explore the impact of these parent socialization and resource variables on children's weight concerns, a multiple linear regression analysis was conducted (Table 4.5). The model with parent controlling feeding practices and parent communication about nutrition and physical activity, controlling for age and gender, was significant ( $F(6, 91) = 3.51, p = <.01, R^2 = .19, R^2_{adjusted} = .13$ ). Only parents' communication about nutrition and physical activity significantly predicted children's weight concerns ( $p = .02$ ). Parents who spoke more frequently about nutrition and physical activity tended to have children who had more weight concerns. When total household income was added to the model, the model remained significant,  $F(7, 90) = 3.76, p = <.01, R^2 = .23, R^2_{adjusted} = .17$ . Controlling for age, gender, parent controlling feeding practices, and parent communication about nutrition and physical activity, families with higher income tended to have children with lower weight concerns ( $p = .04$ ). Parent communication about nutrition and physical activity remained significant ( $p = .04$ ). Parent controlling feeding practices remained non-significant ( $p = .04$ ). The model remained significant when frequency of family meals was added,  $F(9, 88) = 3.11, p = <.01, R^2 = .24, R^2_{adjusted} = .16$ . However, frequency of family meals was not significant a predictor in the model. Overall, multiple regression analyses indicated that parent communication about nutrition and activity predicted greater weight concerns for youth, while family income predicted lower weight concerns for youth. Frequency of family meals did not significantly predict youth weight concerns.

**Children's consumption of outside food.** Parent modeling and parent values and beliefs about family mealtimes were significantly and inversely correlated with children's

consumption of outside food, ( $r(98) = -.29, p = <.01$ ;  $r(98) = -.20, p = .03$ ). Parent employment and food insecurity were significantly and positively correlated with children's consumption of outside food ( $r(98) = .29, p = <.01$ ;  $r(98) = .18, p = .04$ ). A multiple regression analysis was conducted to further explore the impact of these parent socialization variables and parent resources on children's consumption of outside food (Table 4.7). The model with parent modeling and parent values and beliefs about family mealtimes, controlling for age and gender, was not significant. When parent employment and food insecurity were added to the model, the model became significant,  $F(8, 89) = 2.46, p = .02, R^2 = .18, R^2_{adjusted} = .11$ . Upon examination of the coefficients, only parent employment was a significant predictor in the model. Controlling for other predictors, parents who worked longer hours tended to have children who reported consuming more outside food ( $p = .02$ ). When frequency of family meals was added to the model, the model became marginally significant,  $F(10, 87) = 1.95, p = .05, R^2 = .18, R^2_{adjusted} = .09$ . Coefficients revealed that frequency of family meals was not a significant predictor in the model and parent employment remained significant ( $p = .02$ ). Thus, only parent employment significantly predicted consumption of outside food in the multivariate analysis.

H2.2b: Youths who have more frequent family meals will practice healthier dietary behaviors.

Child-reported and parent-reported frequency of family meals were positively correlated. Children who reported more family meals had parent who also reported having more family meals ( $r(98) = .63, p = <.01$ ). However, both reports of frequency of family meals were related to different dietary behaviors of youths. Child-reported

frequency of family meals was positively correlated with children's preferences for healthy foods,  $r(98) = .22, p = .01$ . Parent-report of frequency of family meals was negatively correlated with children's consumption of outside food,  $r(98) = -.20, p = .03$ . Children who reported having more family meals also reported having higher fruit and vegetable availability at home ( $r(98) = .30, p = <.01$ ). See Table 4.3 for the correlation matrix.

**RQ2.3.** Do parent/family resources moderate associations between parent socialization and youths' dietary behaviors?

Multiple regression analyses were conducted to investigate this research question. Moderation was tested by computing an interaction term of parent socialization (parent controlling feeding practices, parent communication about nutrition and physical activity, parent modeling, parent values/beliefs about family meals) and parent resources (household income, parent employment, food insecurity) for each youths' dietary behaviors (children's weight concerns and children's consumption of outside food). The specific interactions for each youths' dietary behaviors are listed below.

**Children's weight concerns.** Parent controlling feeding practices, parent communication about nutrition and physical activity, and household income were correlated with children's weight concerns. Moderated regression analyses showed that household income did not significantly moderate the influence of parent controlling feeding practices or parent communication of nutrition and physical activity on children's weight concerns (Table 4.6).

**Children's consumption of outside food.** Parent modeling, parent values/beliefs about family meals, parent employment and food insecurity were correlated with

children's consumption of outside food. Moderation regression analyses revealed that food insecurity and parent employment were not moderators for parent modeling or parent values/beliefs about family meals on children's consumption of outside food (Tables 4.8 and 4.9).

**RQ2.4.** Do parent/family resources moderate associations between frequency of family meals and youths' dietary behaviors?

Multiple regression analyses with resources and frequency of family meals were conducted for each youth dietary behavior (Table 4.10). The model for children's consumption of outside food with parent- and child-reported frequency of family meals as the predictors was not significant. After adding parent resources, the model became significant,  $F(6, 90) = 2.62, p = .02, R^2 = .15, R^2_{adjusted} = .09$ . Examination of the coefficients revealed that food insecurity and parent employment were significant predictors in the model. Children who reported consuming more outside food tended to be more food insecure ( $p = .03$ ) and had parents who worked outside of the home more ( $p = .01$ ). The model was not significant for children's food preferences and children's weight concerns.

A moderated regression analysis was conducted to test if food insecurity and parent employment were moderators for frequency of family meals on children's consumption of outside food (Tables 4.11 and 4.12). This was tested by computing an interaction term of frequency of family meals and parent resources (food insecurity, parent employment). Neither food insecurity nor parental employment moderated the influence of frequency of family meals on children's consumption of outside food.

**RQ2.5.** Do parent socialization behaviors moderate the associations between frequency of family meals and youths' dietary behaviors?

Multiple regression analysis was conducted based on previous correlation results. Children's food preferences was not examined because it did not have an association with any parent socialization variables. Moderation was tested by computing an interaction term of parent socialization (parent controlling feeding practices, parent communication about nutrition and physical activity) and frequency of family meals to predict children's weight concerns. For children's consumption of outside food, moderation was tested by computing an interaction term of parent socialization (parent modeling, parent values/beliefs about family meals) and frequency of family meals.

**Children's weight concerns.** The model for children's weight concerns with parent- and child-reported frequency of family meals as the predictors was not significant. After adding parent controlling feeding practices and parent communication, the model became significant,  $F(4, 95) = 3.11$ ,  $p = .02$ ,  $R^2 = .12$ ,  $R^2_{adjusted} = .08$ . Examination of the coefficients revealed that only parent communication about nutrition and physical activity was contributing to the model ( $p = .01$ ). A moderated regression analysis was conducted to test if parent communication about nutrition and physical activity was a moderator for frequency of family meals on children's weight concerns. Parent communication about nutrition and physical activity did not significantly moderate the influence of frequency of family meals on children's weight concerns (Table 4.13).

**Children's consumption of outside food.** The model for children's consumption of outside food with parent- and child-reported frequency of family meals as the predictors was not significant. After adding parent modeling and parent values/beliefs

about family meals, the model became significant,  $F(4, 95) = 3.01, p = .02, R^2 = .11, R^2_{adjusted} = .08$ . Examination of the coefficients revealed that only parent modeling was a significant contributor to the model ( $p = .01$ ). A moderated regression analysis was conducted to test if parent modeling moderated the association between frequency of family meals and children's consumption of outside food. Parent modeling did not significantly moderate the association between frequency of family meals and children's consumption of outside food (Table 4.14).

**RQ2.6.** Are there associations between the home food environment and parental socialization, and between the home food environment and youths' dietary behaviors?

H2.6a: There will be more positive parental socialization during and outside of mealtimes in homes with healthier food availability.

As hypothesized, some positive parent socialization behaviors, specifically parent modeling, parent values and beliefs about family meals, and media use during mealtimes, occurred more frequently in homes with healthier food availability. Higher home fruit and vegetable availability (reported by children) was positively correlated with more parent modeling,  $r(98) = .21, p = .02$ . Parent modeling was also negatively correlated with child-reported availability of unhealthy food at home (reported by children),  $r(98) = -.26, p = .01$ . There was also a positive correlation between parent values and beliefs about family meals and the availability of fruits and vegetables at home,  $r(98) = .22, p = .02$ . Parent socialization about media use during meals was negatively correlated with home fruit and vegetable availability,  $r(98) = -.21, p = .02$ . Contrary to the hypothesis, there were no significant associations between parent controlling feeding practices or

parent communication about nutrition and physical activity with healthier home food availability.

H2.6b: Youths who live in homes with healthier food availability will practice healthier dietary behaviors.

As hypothesized, children who reported more fruit and vegetable availability at home tended to report having healthier food preferences,  $r(98) = .44, p = <.01$ . Children who reported having more unhealthy food available at home also reported consuming more outside food,  $r(98) = .43, p = <.01$ . Contrary to the hypothesis, there was no significant association between home food environment and children's weight concerns. See Table 4.4 for the full correlation matrix.



TABLE 4.2  
*Correlations of Parent Socialization and Parent-report Variables by Youths' Dietary Behaviors and Child-report Variables*

		Children's food preferences	Children's weight concerns	Children's consumption of outside food	Children's report of unhealthy food availability at home	Children's report of fruit and vegetable availability at home
Parent modeling	r	.12	-.01	-.29**	-.26**	.21*
	p	.13	.44	<.01	<.01	.02
	N	100	100	100	100	100
Parent controlling feeding practices	r	-.14	.19*	.06	-.12	.05
	p	.08	.03	.28	.12	.32
	N	100	100	100	100	100
Parent values/beliefs	r	-.01	-.02	-.20*	.02	.21*
	p	.45	.44	.03	.42	.02
	N	100	100	100	100	100
Parent communication about nutrition and physical activity	r	-.04	.30*	.02	.02	-.02
	p	.34	<.01	.43	.42	.44
	N	100	100	100	100	100
Media use during meals	r	.09	.14	-.01	.17	-.21*
	p	.19	.08	.47	.05	.02
	N	100	100	100	100	100

Parental planning of meals	r	-.18*	-.10	.07	.07	-.05
	p	.04	.16	.24	.28	.32
	N	100	100	100	100	100
Parental liking for cooking	r	-.13	-.02	.04	.06	-.13
	p	.10	.43	.35	.28	.10
	N	100	100	100	100	100
Household Food Insecurity	r	-.19*	.11	.18*	-.12	-.32**
	p	.03	.15	.04	.13	<.01
	N	99	99	99	99	99
Total Household Income	r	.14	-.22*	-.05	-.02	.36**
	p	.08	.01	.30	.41	<.01
	N	99	99	99	99	99
Parent education	r	.06	-.11	-.04	.05	.22*
	p	.27	.14	.34	.31	.02
	N	99	99	99	99	99
Parent employment	r <sub>s</sub>	.08	.06	.28**	.25**	-.07
	p	.21	.30	<.01	.01	.26
	N	99	99	99	99	99

*Note.* \* denotes statistical significance at the p<.05 level; \*\* at the p<.01 level

TABLE 4.3  
*Correlations of Frequency of Family Meals, Parent Resources, and Youths' Dietary Behaviors*

		Parent-report frequency of family meals	Child-report frequency of family meals
Household income	r	.07	.16
	p	.24	.06
	N	99	99
Food insecurity	r	-.09	-.19*
	p	.18	.03
	N	100	100
Parent education	r	.15	.1
	p	.07	.16
	N	99	99

Parent employment	r	-.18*	-.07
	p	.04	.24
	N	99	99
Children's preferences for healthy foods	r	-.03	.22*
	p	.4	.01
	N	100	100
Children's weight concerns	r	-.16	-.14
	p	.06	.08
	N	100	100
Children's consumption of outside food	r	-.20*	-.14
	p	.03	.08
	N	100	100

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level

TABLE 4.4

*Correlations of Home Food Environment (child-report), Parental Socialization and Youths' Dietary Behaviors*

		Unhealthy food availability at home	Fruit and vegetable availability at home
Parent modeling	r	-.30**	.21*
	p	<.01	.02
	N	100	100
Parent controlling feeding practices	r	-.12	.05
	p	.12	.32
	N	100	100
Parent values/beliefs	r	.02	.21*
	p	.42	.02
	N	100	100
Parent communication about nutrition and physical activity	r	.02	-.02
	p	.42	.44
	N	100	100
Media use during meals	r	.17	-.21*
	p	.05	.02
	N	100	100
Children's food preferences	r	-.10	.44**
	p	.17	<.01
	N	100	100
Children's weight concerns	r	.13	-.10
	p	.10	.17
	N	100	100
Children's consumption of outside food	r	.43*	-.06
	p	<.01	.27
	N	100	100

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level

TABLE 4.5  
*Summary of Hierarchical Regression Analysis for Variables Predicting Children's Weight Concerns (N = 100)*

	Model 1			Model 2			Model 3			Model 4		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Parent age	<.01	.01	.02	<.01	.01	.03	.01	.01	.09	.01	.01	.09
Parent gender	.07	.21	.03	-.01	.20	-.01	-.07	.20	-.04	-.08	.20	-.04
Child age	.03	.04	.08	.04	.03	.13	.03	.03	.09	.03	.03	.07
Child gender	.33	.15	.23*	.37	.14	.25*	.38	.14	.25*	.39	.14	.27*

Parent controlling feeding practices	.21	.13	.18	.24	.13	.20	.21	.13	.18
Parent communication about nutrition and physical activity	.22	.09	.26*	.19	.09	.23*	.19	.09	.23*
Household income				-.10	.05	-.21*	-.10	.05	-.20
Frequency of family meals (parent-report)							-.03	.06	-.07
Frequency of family meals (child-report)							-.04	.06	-.07
$R^2$	.06	.19			.23			.24	
$F$ for change in $R^2$	1.51	7.10			4.45			.89	

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level

TABLE 4.6

*Summary of Moderated Regression Analysis for Parent Socialization and Household Income Predicting Children's Weight Concerns (N = 100)*

	Model 1	
	<i>B</i>	<i>SE B</i>
Parent controlling feeding practices	.15	.13
Parent communication about nutrition and physical activity	.19	.09
Household income	-.10	.05
Parent controlling feeding practices x household income	-.02	.08
Parent communication about nutrition and physical activity x household income	-.01	.06
<i>R</i> <sup>2</sup>		.13
<i>F</i> for change in <i>R</i> <sup>2</sup>		2.87

*Note.* \* denotes statistical significance at the p<.05 level; \*\* at the p<.01 level



TABLE 4.7  
*Summary of Hierarchical Regression Analysis for Variables Predicting Children's Consumption of Outside Food (N = 100)*

	Model 1			Model 2			Model 3			Model 4		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Parent age	-.01	.01	-.15	<-.01	.01	-.03	<-.01	.01	-.01	<.01	.01	<-.01
Parent gender	-.04	.15	-.03	.04	.15	.03	.11	.15	.08	.11	.16	.08
Child age	.01	.03	.03	.01	.02	.02	<.01	.02	.02	<.01	.02	.01
Child gender	-.04	.11	-.04	-.07	.1	-.07	-.05	.10	-.05	-.05	.11	-.05

Parent modeling	-.24	.09	-.29*	-.16	.09	-.19	-.15	.10	-.19
Parent value/beliefs about family meals	-.14	.09	-.16	-.10	.09	-.12	-.09	.11	-.11
Food insecurity				.19	.18	.12	.2	.18	.12
Parent employment				.16	.07	.26*	.16	.07	.26*
Frequency of family meals (parent-report)							-.02	.04	-.06
Frequency of family meals (child-report)							.12	.05	.04

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level

TABLE 4.8

*Summary of Moderated Regression Analysis for Parent Socialization and Food Insecurity Predicting Children's Consumption of Outside Food (N = 100)*

	Model 1		
	<i>B</i>	<i>SE B</i>	$\beta$
Parent values/beliefs about family meals	-.15	.09	-.17
Parent modeling	-.21	.08	-.25*
Food insecurity	.19	.16	.12
Parent values/beliefs about family meals x food insecurity	.01	.31	<.01
Parent modeling x food insecurity	.21	.28	.07
$R^2$		.13	
<i>F</i> for change in $R^2$		2.72	

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level

TABLE 4.9  
*Summary of Moderated Regression Analysis for Parent Socialization and Parent Employment Predicting Children's Consumption of Outside Food (N = 100)*

	Model 1		
	<i>B</i>	<i>SE B</i>	$\beta$
Parent values/beliefs about family meals	-.13	.09	-.15
Parent modeling	-.17	.08	-.21*
Parent employment	.12	.07	.20
Parent values/beliefs about family meals x parent employment	.07	.12	.06
Parent modeling x parent employment	-.03	.10	-.03
$R^2$		.15	
<i>F</i> for change in $R^2$		3.29	

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level

TABLE 4.10

*Summary of Hierarchical Regression Analysis for Frequency of Family Meals and Parent Resources Predicting Children's Consumption of Outside Food (N = 100)*

	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Frequency of family meals (parent-report)	-.06	.04	-.19	-.04	.04	-.13
Frequency of family meals (child-report)	-.01	.05	-.03	<-.01	.05	-.10
Household income				.03	.04	.07
Food insecurity				.43	.20	.26*
Parent education				.01	.07	.01
Parent employment				.17	.07	.26*
$R^2$		.04			.15	
<i>F</i> for change in $R^2$		2.17			2.62	

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level

TABLE 4.11

*Summary of Moderated Regression Analysis for Frequency of Family Meals and Food Insecurity Predicting Children's Consumption of Outside Food (N = 100)*

	Model 1		
	<i>B</i>	<i>SE B</i>	$\beta$
Frequency of family meals (parent-report)	-.06	.04	-.19
Frequency of family meals (child-report)	<.01	.05	.01
Food insecurity	.25	.16	.16
Frequency of family meals (parent-report) x food insecurity	.08	.12	.08
Frequency of family meals (child-report) x food insecurity	.05	.14	.04
$R^2$		.07	
<i>F</i> for change in $R^2$		1.51	

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level

TABLE 4.12

*Summary of Moderated Regression Analysis for Frequency of Family Meals and Parent Employment Predicting Children's Consumption of Outside Food (N = 100)*

	Model 1		
	<i>B</i>	<i>SE B</i>	$\beta$
Frequency of family meals (parent-report)	-.04	.04	-.12
Frequency of family meals (child-report)	-.02	.04	-.05
Parent employment	.16	.06	.25*
Frequency of family meals (parent-report) x parent employment	.03	.05	.07
Frequency of family meals (child-report) x parent employment	<-.01	.05	<-.01
$R^2$		.11	
<i>F</i> for change in $R^2$		2.32	

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level

TABLE 4.13

*Summary of Moderated Regression Analysis for Frequency of Family Meals and Parent Communication about Nutrition and Physical Activity Predicting Children's Weights Concerns (N = 100)*

	Model 1		
	<i>B</i>	<i>SE B</i>	$\beta$
Frequency of family meals (parent-report)	-.06	.06	-.14
Frequency of family meals (child-report)	-.02	.07	-.03
Parent communication about nutrition and physical activity	.26	.08	.30**
Frequency of family meals (parent-report) x parent communication about nutrition and physical activity	.04	.07	.07
Frequency of family meals (child-report) x parent communication about nutrition and physical activity	<.01	.08	.01
$R^2$		.12	
<i>F</i> for change in $R^2$		2.48	

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level



TABLE 4.14

*Summary of Moderated Regression Analysis for Frequency of Family Meals and Parent Modeling Predicting Children's Consumption of Outside Food (N = 100)*

	Model 1		
	<i>B</i>	<i>SE B</i>	$\beta$
Frequency of family meals (parent-report)	-.04	.04	-.12
Frequency of family meals (child-report)	-.02	.04	-.04
Parent modeling	-.22	.08	-.27*
Frequency of family meals (parent-report) x parent modeling	-.10	.07	-.19
Frequency of family meals (child-report) x parent modeling	-.04	.08	-.07
$R^2$		.15	
<i>F</i> for change in $R^2$		3.34	

*Note.* \* denotes statistical significance at the  $p < .05$  level; \*\* at the  $p < .01$  level

## CHAPTER 5: QUALITATIVE FINDINGS

In order to achieve the **third aim** of the study which was to understand parents' perceptions of family mealtimes, mealtime observations and interviews were conducted. Findings, together with quantitative results, also informed the **second and third aim** of the study. Codes developed from the mealtime observations and interviews were categorized into three overarching categories – before mealtimes, during mealtimes, and after mealtimes. For the interview data, *in vivo* codes, which were taken exactly as the participants said them, were placed in quotation marks. Observation notes are stated without quotation marks.

### **Before Mealtimes**

There were three main themes regarding the parental socialization behaviors and occurrences before family meals – meal planning and grocery shopping, food preparation and cooking, and other mealtime duties and rituals. Each theme is further categorized into sub-themes.

#### **Meal Planning and Grocery Shopping**

All families have some degree of meal planning involved, with grocery shopping mentioned as a large part of meal planning. For some families, meal planning is a process whereby parents would set a time, usually on the weekdays, to plan the meals for the rest of the week. Parents who did so found it helpful as it saves them time and provides organization, especially during the weekdays.

*“If we don’t have that (plan), then it’s all chaos.”*

*“Yes, within the whole week. Then we have an idea for a meal specifically for this night because of scheduling...it’s just easier putting together a meal.”*

Some parents also found that meal planning was helpful in keeping their meal costs down because it ensures that they only buy things on the grocery list and prevents unnecessary spending.

*“It helps us not buy things at the grocery store that we don’t need. It will keep out costs down.”*

Some families found planning to be important so that the food served is complete and nutritious.

*“Family mealtimes are very important, especially planning by the parents. So the planning, if it includes nutritional or complete food including cereals, vegetables, fruits. So if you ready plan to have all those, I think that is great for the kids.”*

Some parents, however, have very minimal planning. As one parent described, “Sometimes, there’s no planning. It’s just this is what we’re going to have and let’s hurry up and make it, and then that’s it.” Other parents might plan for meals the night before or on the day of the meal.

*“Well it just depends on what’s in my refrigerator. If it’s low, then we have to decide what we want to cook. Sometimes I plan the day before, like yesterday, I planned what I wanted us to eat for today.”*

[mealtime observation] *Father asked what he should cook for dinner. Mother told father to just cook the steaks that were in the fridge. She told him to quickly make something simple.*

Sometimes, parents want to plan family meals but forget to do so. These parents mentioned that they tried making it a habit to meal prep and plan but have yet to get into the routine of doing so.

*“I try to do it like the day before...A lot of times I don’t...I’ve been working on that a little bit so it’s kind of like trying to figure it out a habit to get into to actually do it because I’m not into a habit yet. So I’m trying to figure out that routine. Typically, I would say I would take it out in the morning before I went to work as long as I remember.”*

When it comes to the responsibility for planning and decision-making regarding meals, most families have joint decision-making to a certain extent. For most families, parents or the mother has the final say in the food served during family meals. They would ask for opinions from children and take their feedback into consideration but would make the final decision.

*“Most of the time I do (decide on what to serve during meals). Sometimes I’ll ask the kids, “What do you want to have for dinner?” and some will agree on something and we’ll go with that.”*

*“I always decide, sometimes with assistance from the kids but very rarely.”*

*“I try to ask them (children) on the weekend sometimes...and I won’t always make what they want because it’s too time consuming.”*

However for some families, decision-making on the food served during meals consisted of family discussion where everybody provides input. Sometimes, each family member take turns in deciding what food should be served for the family meal and everyone gets a chance to pick their favorite food.

*“We do it (deciding what to eat for dinner) together. If they can’t decide, I’ll pick for us but I do ask them if they have a preference, what they want.”*

*“We all do (decide the family meal). When it’s time for grocery shopping, I’ll have everybody pick the meal that they want for the next week.”*

Grocery shopping is also handled in the same way whereby for some families, everybody participates but for others, only one or two parents shop for groceries. Parents who have children join them for grocery shopping said that it’s a “family event” and “everybody goes because everybody is a part of the decision-making.” Some parents have their children join them for grocery shopping but do not include children in the decision-making on the purchase of the groceries. These parents decide on what to buy and often tell children they would not purchase certain items like snacks. They would explain that “it is unhealthy” or “this is not good for you.” There were also some parents who include children in mealtime decisions but did not bring them along for grocery shopping because of convenience and also to save time and money.

*“I go (grocery shopping) by myself but they’re (children) going to put their report saying what they want from the grocery store.”*

*“No, I don’t usually take my kids with me to the store. It’s never a good idea.*

*They see things they want...I usually walk out spending twice as much and getting half the cart I normally get. I’ve been asking for their input lately and I have them send me texts if there is something they can think we’re out of or if there’s something that they want.”*

All families found financial resources to be a major determinant in their decision-making for meals and groceries. Most families have a budget that dictates the type of food they will eat and buy.

*“Because you know, the prices of meat also determine what we’re going to have.”*

*“At the beginning of the month, we typically have more money for groceries...But then at the end of the month, when things get a little tight, then we start...figuring out what will make do.”*

*“...is there stuff on sale that we can save money on, obviously buy in bulk...the meats when they knock them 25% off because they’re nearing expiration. I don’t have a problem with that...bring it home, cook it up, and it saves me money and I have prepared meals for the family.”*

Budget and financial resources is a factor for all families but is especially prevalent among lower-income families, single-income families, and single-parent households.

### **Food Preparation and Cooking**

For most families, mothers were responsible for food preparation and cooking. Mothers might receive help from other family members like grandparents, children, or

spouses but they did the bulk of the cooking. Sometimes, mothers will encourage their children to help them in the kitchen in order to teach them how to cook.

*“Me (mother). If I’m not home, then it’s grandma. But it’s primarily me.”*

*“I (mother) usually do it. The girls will help sometimes but primarily me.”*

*“I’ll (mother) call on the kids if necessary if I need their help. Sometimes I’ll call them on purpose to teach them a new dish.”*

However for a one family, the father was the individual responsible for cooking because the mother does not cook well. For some other families, food preparation and cooking responsibilities were split between two adults, usually the parents. This was due to both parents working and that one parent cook certain foods better than the other.

*“Before it was you work and you pay the bills, so now I work and I help pay the bills so then we’re going to share the responsibility of cooking. If we both work all week and you don’t get off any earlier than I do and I cooked last night, then you can cook tonight. I am just not going to do it all. I cannot do it all.”*

*“Half and half...there are some things that he cooks better and there are some things that I cook better. And so it depends on what the meal is or who gets home from work and cooks.”*

In some families, children have the responsibility to make some of their own meals, usually because parents were busy and were not available to cook meals. Sometimes, children might not like the food served during the meal and they have the option of cooking their own food.

*“If we’re (parents) not home, they’re (children) responsible to make their own meal. They have to make their own lunches for school. I make them do that.”*

*“Sometimes, the kids will tell us something they want that I’m not really interested in. If we have leftovers and they’re not interested, they will go, “Can I have mac and cheese?” and I’ll be like, “Yeah, you can do that. I’m not.” And so they will fix (the food) themselves.”*

All parents also tend to spend less time cooking on the weekdays due to work and busy schedules. In order to save time on cooking meals, parents either prepared food ahead of time or utilized time-saving cooking methods.

*“On the weekends, I spend a good share of one day just preparing all kinds of different foods for the next week or week and a half or two weeks. Just get it all prepared. That way then we can just go to the freezer and (decide), “What sounds good tonight?”*

*“I use a lot of crock pot things during the week so I might make some in the morning and put them in the crock pot. Or a lot of fast meals.”*

For some families, parents spent a longer time cooking on weekends; either preparing meals for the week, cooking more elaborate meals, or trying new recipes because they had more time during the weekends.

*“On weekends, I usually make things that...take longer, that I usually spend like more than an hour on preparation.”*



*“Weekends, breakfast is our biggest meal of the day...and it’s very ornate. So we cut up fruits and vegetables and make flowers out of them...we’ll do specific eggs for each person. And then we’ll cut up summer sausage and cheese...we have multiple plates with yogurts and jellies and jams and different types of bread...and that will be taking for the whole day.”*

### **Other Mealtime Duties and Rituals**

Besides meal planning and cooking, some families also had other mealtime duties and rituals that they engaged in before mealtime. For most families, children were responsible for setting the table prior to mealtime. For some families, this was a chore rotated among children and for others, this was a shared chore between children. If children did not set the table, then parents would do so.

Mealtime prayer before the meal was also observed in almost all families. Families had different ways in how they said prayer. In some families, one member of the family would say the prayer. This member was either the head of the household or a family member in rotation. For some families, the mealtime prayer was said in unison where they recited the same prayer before each mealtime. A mealtime prayer in which each family member took turns to say something during the prayer can also be seen in a few families.

### **During Mealtimes**

### **Parental Rules and Expectations**

All parents had certain rules and expectations regarding family mealtimes that they wanted children to follow. Most parents wanted children to try all foods at least once, even if it was just a bite. Parents did not require that children finish all the food on their plate but they wanted children to taste new foods or foods that children did not like.

[mealtime observation] *Mum took child's fork and put some food on it. She then told him to take the bite and that it's "really, really good with the cheese on it."* *He made a face. Mum said he has to take at least one bite.*

*"We have a one-bite rule, that you have to at least try something, at least one bite. You don't have to like it. You don't have to finish it but you need to at least try one bite of everything and then you're free."*

*"It's really important to me that they at least try some things. If they don't like the way it looks, I just ask that they try it."*

If children wanted second helpings, most parents also required that children finished food on their plates before having more food.

*"If they're going to have seconds, they have to eat everything that's there. They can't just have seconds of the main dish and not eat the green beans. So if you want seconds, you have to finish the green beans first."*

[mealtime observation] *Son wanted second helpings of pasta when he saw his brothers getting more. Mother told him he had to finish cantaloupe and beans first.*

Parents also had rules where children had to be home for family meals with some parents being stricter about the rule than others. For some families, members were required to be home for meals every day unless they are unable to due to work or travel.

*“Everyone needs to be present when it’s meal time. Meal time is adjusted when necessary for sports practices and other activities but for the most part, everyone needs to be home at the regular meal time and eat together.”*

[mealtime observation] *Before the meal started, mother called son to ask where he was She told him that they were going to have dinner soon and that he needs to come home.*

For other families, parents tried to arrange for family meals a few times a week, if not at least once a week. These families often have parents who were busy with work and were unable to have family meals every night or have children who were busy with various school and after-school activities.

*“I try to at least make sure one day a week we’re eating together. There are seven of us and the oldest has a job, and you know sports and stuff that doesn’t work. If it doesn’t happen, it doesn’t happen but the majority of the time, it actually happens.”*

*“It is expected to be home for dinner whenever possible. We try to have family meals but the schedules are always busy.”*

[mealtime observation] *Mother and daughter finished the meal earlier and left because daughter had an after-school activity (practice for a musical) that she had to go to and mother had to send her.*

Most parents also required children to sit and eat at the table, together with other family members, during family meals. Some parents required children to ask to be excused before leaving the table.

*“They (children) have a rule to stay at the table but they don’t always do that so they get up and walk a lap around the room and come back and take a bite and walk in a little while. But there’s a rule against that.”*

*“They’re supposed to...the rule is you’re supposed to ask if you can be excused when we’re done.”*

[mealtime observation] *Daughter asked mother if she could be excused. Mother replied, “Dad is still eating.”*

Other parents do not have that explicit rule because it was implemented since their children were young and now that they were older, it was an understood and unspoken practice that everyone stays at the table until the meal was over.

*“Now that they’re gotten older, we really don’t have. I guess we do have rules because they were put in place when they were younger and I just don’t think of them so much as rules anymore.”*

For some families, there were no rules for sitting at the table. Children were allowed to leave the table as soon as they were done eating.

*“Unless there’s an important discussion, they’re free to go as soon as they’re done eating.”*

### **Parental Dietary Behaviors and Modeling**

During family meals, parents often modeled dietary behaviors to their children and this occurred both intentionally and unintentionally. Children were observed imitating parent’s eating habits at the dinner table. This occurred to both healthy and unhealthy dietary behaviors.

[mealtime observation] *Father finished his bun with meat and said he will have another. Mother said he should. Son said he should (get seconds) too.*

[mealtime observation] *Mother places lettuce on her plate and adds salad dressing on lettuce. Daughter follows.*

[mealtime observation] *Mother drinks soda. Daughter ask for soda. Mother mentioned that there will be pop soda for dinner and daughter cheered.*

Some parents had a more conscious and intentional teaching and modeling of healthy eating during family meals. These parents used family meals as opportunities to teach children about food and nutrition.

*“We try to make healthy choices, teach the kids how to eat healthy during mealtimes.”*

*“Yeah, by seeing us and what we are eating, how we are eating, maybe by seeing that, they can learn how to eat. Most of the time, we show them, “Yeah, this is what we need to eat and this is good.”*

*“...it’s important for me to model as well as practice the healthy eating habits for them (children). That was something that was sometimes done in my household and sometimes not, and so I am just trying to build those healthy habits too.”*

### **Parental Feeding Strategies**

Parents engaged in feeding strategies when children refused to eat or try a certain food, or when children overate certain foods. These strategies included serving food that children will eat, asking children if they wanted a certain food or if they have tried it,

placing food on children's plate, telling children to eat, denying children food, and threatening to take away food or non-food privileges.

Parents who called their children picky eaters said that they usually serve food that children will eat. Some parents would rotate the food served according to each family member's liking so that everyone will have their favorite foods served during the week.

*"I have modified...they don't like casserole so instead of making something that's like a casserole, I have to make the dish separate...so I decide to modify some of the meals just to get them something to eat as much as they can."*

*"My son is pickier than anyone else and so a lot of times, if I say something he doesn't like...if I make something he doesn't like for lunch, I'll try to make something he likes for dinner or the other way around."*

Parents also often asked if children wanted a food item or if children tried a certain food item. Parents often encouraged children to try each food item served during the meal. These feeding strategies are illustrated in the following examples from the mealtime observations.

*Mother asked if children want cherries and passed them around.*

*Mother asked son if he tried the broccoli.*

Sometimes, parents would tell children to eat their food or place food items on children's plate and asked them to eat the food that was on their plates.

*Father tells son he wants him to eat a couple of potatoes and puts them on son's plate. Father says he (son) needs to eat them and they aren't going to hurt him.*

*Mother tells son to make sure he eats the rest of the food on his plate.*

*Daughter says she doesn't want her fruit. Mother tells her she has to eat it.*

*Daughter pouts.*

It was also observed that when children refused to eat food that was served during the meal, parents might deny children food like dessert. Parents also denied children of eating certain food items if children had consumed too much of them.

*Mother tells son he will not get desert later if he doesn't stop whining about the corn.*

*Everyone has a cookie after dinner. Daughter could not get her cookie until she finished her dinner.*

*Daughter was jumping and laughing around during dinner time. Mother called out her name in a stern manner and told her that she assumes daughter will not want dessert tonight because of the way she was acting.*

*Daughter asked mother if she could have more pepperoni. Mother said no.*

*Daughter asked why.*

*Daughter asked if she can have the last slice of bread. Father asked how many had she had. Daughter replied two. Father then asked the other children how many they had. Youngest son replied one. Father gave the last slice to youngest son. Daughter pouts. Father said she had enough bread. Daughter said she was*

*still hungry. Father said she can have more soup or tomatoes if she was still hungry.*

Parents were also observed using threats to take away non-food privileges, like after-meal activities, if children did not finish their meal.

[mealtime observation] *Mother says daughter needs to eat or she can't go out to play.*

*"You know, I didn't want them to just take two bites and then run off and go play. So I have to tell them to sit and eat, or else they won't get to go out afterwards...that's my rule."*

### **Food Served during Meals**

When families had mealtimes together, parents reported that they preferred to cook at home rather than eat out. Most families had meals at home most of the time and only ate out occasionally, around "2-3 times a month." Parents opted to have food outside of the home either when they did not have time to cook or if there was a special occasion that they wanted to celebrate. Sometimes, parents bought food from outside and served them at home.

*"Well, I like to cook so I mostly cook but we do eat out too, but I mostly cook."*

*"We try to eat at home a lot. We might eat out a couple of times a month but we try to eat at home."*

*"Sometimes it might be a situation where we're really pressed for time and we had to go through a drive-thru or something like that or sometimes it will be*



*someone's birthday or a special occasion and then we will go to more or less a sit-down place."*

*"On special occasions like birthdays, we go out to eat."*

[mealtime observation] *Mother and daughter had take-out Chinese food for lunch.*

[mealtime observation] *Dinner was pizza bought from the store and baked at home.*

There were a few families who ate out more often, "once or twice a week" and these were families who could afford to do so. In general, parents thought that cooking at home was cheaper and healthier compared to consuming outside food.

*"It's expensive. It is convenient but it's just way too expensive and I know a lot of prepared foods have a lot of salt, cholesterol, fats, things that we don't need...if we eat out, I know it right away because if it's greasy then that will make us very nauseous and queasy because that doesn't agree with us. So once in a while we have eat out food but not very often."*

Some families would also have meals at other friends' or relatives' homes every so often.

*"We usually get together with friends once a week. Usually it's around a football game or something and we have a potluck."*

*"We have family here for meals or we go to my parents' for meals."*

*“Maybe once or twice a month we will go. Their grandparents...my parents live in Seward so we’ll go into their house then have dinner with them.”*

When parents cook meals at home, they try to serve food from different food groups so that the family will have a more balanced meal. Parents usually try to serve protein, grain, and vegetable dishes during each meal. Instead of serving separate dishes, sometimes one dish will contain more than one food group. Some families also had dessert after the meal.

*“But I usually try one large protein, a meat of some kind. Typically a grain, either rice or potato and then a vegetable of some kind. So if I can sneak the vegetables into the pasta sauce for example, there may not be any side vegetable, it will be just the spaghetti and the sauce. If it’s stir-fry or something like that, it all goes together. So I try to hide the vegetables into the food a lot of times because that goes a little easier than separate vegetables on the plate.”*

*“We usually have some kind of meat. We have a lot of chicken or if the girls like pulled pork so there’s always some meat and veggies. They definitely like dessert so there’ll be a dessert in there and salad, the usual typical meal.”*

[mealtime observation] *Dinner was pulled pork, grapes, bread, tomatoes, and celery. They had apple pie for dessert after.*

Serving meals that contain food from different food groups is an effort to introduce healthy and different foods to children during family mealtimes. As one parent described, “food served during meals is important so they (children) know what they want and they know what they like.” Parents viewed mealtimes as an opportunity to serve children healthy and fresh foods. Mealtime was also used as a platform to serve healthy foods that

children otherwise would not have. Parents thought that if children did not have family meals and were left to have their own meals, they would select food that is unhealthy or not nutritious.

*“Sure. So to me, per the whole idea behind family meal time is to introduce healthy foods and healthy lifestyle as well as the family part or the social part of the meal. And so to me, making sure that we have fresh fruits and vegetables”*

### **Mealtime Conversation**

All families engaged in conversations during mealtimes. For most families, mealtime is a relaxed environment where members can talk, joke, laugh, and “just be themselves.” The topics during mealtime conversation usually revolved around school, work, and other activities or events that happened in each family member’s day. Topics like movies, news, and food were also common during mealtimes.

*“Typically about what happened during the day. What they may have done at school that day. Since I’m a teacher, it’s always about what happened at school that day so school or work for me or school for all of them. We own a company, we own a business so there are a lot of times that it may be things like that.”*

*“Well, my kids like to share the things that they’ve done at summer camp or if they’re at school, they like to share whatever they did in school. I don’t know, it’s just pretty much like a free—just whatever they want to say or what they want to talk about more than anything. Pretty much anything.”*

Often times, each member has a turn in talking about their days. One family has a routine where each person talked about one worst part and three best parts of his/her day.

*“Yup, we try to do that. It’s usually if we do it, it’s what’ your worst part of your day and then your three best parts of your day and then it usually sucks up the whole time. By the time everybody’s done doing that, usually, it’s done.”*

Parents often used mealtime as an opportunity to make plans and other arrangements.

*“We usually sit here at the table and just talk and figure out what’s going on tomorrow; who’s going where and what our schedules are.”*

*“Sometimes at the dinner table, what do you have going on tomorrow? What’s the agenda? You know, what’s the plan?”*

Sometimes, mealtimes were used to discuss about serious issues. This was seen a few families who used mealtimes as a venue to discuss issues like bullying.

*“My daughter was experiencing bullying at school two weeks ago and she knew that during family time that was something she could openly ask about and ways to cope with it and the boys offered their solutions and it was more of a problem solving while we are the dinner table. That way, they know that no matter what’s happening in their world, they have a safe place to talk to people they love and trust.”*

[mealtime observation] *Daughter talked about trouble she was having at school with peers talking about her and saying she made a ‘burn book.’ Daughter said she did not do it but peers were talking about her behind back and ignored her. Parents and daughter talked about discussing the issue with the school counselor.*

### **Media Use**

Most parents in the study had rules about media use during family mealtimes. These rules ranged from not using any media during mealtimes to using some media

during mealtimes. For parents who did not allow any media use, there was no TV, phones, laptops, or any other media allowed at the dinner table. These parents felt that media devices were “distracting and took away from the precious family time.” They also felt that family mealtimes were supposed to be for “socializing and communicating” and having media and technological devices prevented members from doing so.

*“It’s (phones and TV) a distraction. I like to know that they’re here in the conversation rather than playing with their phones or iPads.”*

*“It’s very distracting. It would not be conducive for good conversation so TV time is separate, always. And no phones, we don’t need all that at the table either. You wouldn’t be very interested in the conversation... you know... every time that you’re talking with somebody, if I call you write now, I got a text and I’m reading it and trying to talk to you. I’m not really giving full attention so it’s kinda like a sacred time for family to be able to just talk without all that distraction.”*

*“So they don’t get cell phones. So no cell phone usage and we don’t have the TV on.”*

*“It’s important to build the family. I mean it’s such a distraction when you have somebody watching TV and you’re trying to have a conversation and he’s looking at the TV.... Because it’s loud and then you can’t connect with the people you’re eating with.”*

[mealtime observation] *Family members sat around the dinner table in the dining area. There was no TV or other media present.*

[mealtime observation] *There was a TV present in the room but it was not switched on. Mother, grandmother, and the two daughters sat around the dining table for dinner.*

A lot of families felt that it was not alright to have cellphones at the dinner table but that it was okay to have the TV switched on during family meals. These families felt that cellphones engaged individuals in a different way from TVs, and that cellphones were more distracting than TVs. Some families felt that TV was just “background noise” and other families treated watching the TV during meals as a family activity.

*“TV, you know whatever. I mean it’s—I know they say it’s probably better not to have it on during mealtime but sometimes we just sit and watch TV or you know like I said if it’s the news, they could care less about it so it’s okay anyway.”*

*“And that’s another thing about the TV. You know the TV is over there and you can turn it down and it’s just kind of there for background noise and you know they might look over at it or sit and watch it for a second but it’s not directly in front of you. I turn it off sometimes.”*

*“Computers, those go away when we eat and cell phones I don’t think you should have them at the table. I’m not perfect about that. There are times when I’ve sat down and my phone sat right here or you know my son had his phone but for the most part, I don’t—I don’t know. Like the TV’s not a big deal to me, the computer and the phones are more of a deal.”*

*“I guess maybe because when we do the TV, maybe it’s because we’re all doing it together and we’re all doing the same thing and we can all still have a conversation about it. Like I said, like it’s usually always Wheel of Fortune so*

*we're all kind of like playing a game together and the phone kind of feels like you're being more individualized and cutting people out instead of you and somebody else or you and Facebook or whatever it is that you're doing is not us together as a family like bonding or joining. We can't have a conversation because I have no idea what you're looking at.*

*"It is allowed a lot longer and at least in my opinion, a little more socially acceptable to have the TV on. But with the tech thing and the phone, we really don't...we still don't allow that. And if something goes off, we'll make a comment to one of the kids about it."*

[mealtime observation] *Family members sat around the dining table. The TV was switched on in the same room. Members did not seem to pay attention to the TV and it was just in the background.*

[mealtime observation] *TV was switched on during dinner. Father and daughter occasionally turned their attention to the TV. Overall, family still seemed engaged in conversation with occasional pauses and attention to TV.*

Two of the twenty parents did not have any media rules during mealtimes. One parent said that because her daughter was older and that it was just the both of them, she did not think that it mattered much that they used their phones and watched TV during meals. They also have their meals on the couch in front of the TV.

*"I don't mind it being there because I use it as well. Like just tonight, I was looking on the calendar because we were discussing upcoming events that you know she's going to be leaving on vacation with her sister and her dad to go back to her dad's family in Wisconsin. So the vacation is coming up, different activities*

*that are going to be taken up through the week, what the weather's going to be like for the rest of the week. Yeah, I get on my phone and she does too. She was texting her dad and I think texting her sister so yeah we both do. It's just part of our society now and so we have to learn to accept that and integrate it into what's going on in our lives."*

*[mealtime observation, same family] Mother and daughter built their dinner plates in the kitchen. They then took them to the living room and sat on the couch to eat. The TV was turned on and they watched TV as they ate. They shifted their focus between the TV, their phones, and mealtime conversation with one another. There was conversation during the mealtime.*

Another parent preferred that the TV was not on but it usually is. She also said that she and her daughter have their cellphones on the dinner table but usually do not use them.

*"Yes, there's always a TV on. Most of the time. There are times when we shut it off and it's wonderful. And then it comes back on..."*

*"Sometimes there is (cell phones), yes. Yes, a lot of times myself or my daughter have our cell phones at the table but I don't think we use them. I would say it's not a good idea but we've just been in the habit of having the TV on usually during mealtime...Sometimes it can't be helped."*

### **After Mealtimes**

#### **Clean-up**

For most families, mothers usually do the clean-up after mealtimes. Sometimes, mothers will get help from children or spouse. Some mothers preferred to have help with clean-up while others preferred to do it alone.



*“I would like more help with the clean-up. A lot of times that I don’t get... it sorts of frustrates me... that it’s my primary responsibility to get meals on the table and then it’s also my primary responsibility to make sure that everything gets cleaned up afterwards.”*

*“Sometimes I wish I had more help, but I do like everything a certain way so it is my fault that I don’t have more help since I don’t ask for anyone else to help.”*

*“Sometimes when children help, it makes things messier or takes longer time and I have to clean-up after children’s cleaning up.”*

[mealtime observation] *After dinner, daughters brought their dishes to the sink and went to their rooms. Mother washed the dishes and wiped the table.*

For some families, there is a chore list where children have some responsibility in cleaning up or were required to wash their own plates. In these families, children were expected to clean the dishes after each mealtime.

*“The boys have to clean the dishes before they can leave the house.”*

*“So the rule in our house is you are responsible for cleaning up your own dishes and putting them in the dishwasher.”*

*“The children. Well, sometimes—well they for sure have to take away their own plate and make sure the area where they sit is clean and they both have a set time to do the dishes so they rotate the dishes, clean the dishes and everything. Yeah, because I got some big girls so the help is really good.”*

*“Each daughter rotates on who wipes down the counter, who sweeps and who does the table.”*

[mealtime observation] *Each child took their plate to the kitchen sink after they ate. They washed their plates before returning to the table.*

A few families had a practice where whoever who did not cook will do the cleaning.

*“Sometimes (I get help) but not very often. If somebody cooked, we don’t want that person to clean too.”*

*“I am cooking or he is cooking and usually, she (daughter) would clean. But if he will cook, usually I (mother) will try to take care of the dishes. So she (daughter) wouldn’t have to spend the whole time being in the kitchen, that’s the idea.”*

For other families, clean-up involved the whole family where each member has a clean-up task. This was practiced because “when everyone chips in, the work gets done faster.”

*“We all do. And the boys all have a chore day and wipe offs the table before we eat and after we eat. There’s one that does that and one boy sets the table and one boy serves the table and then Jared rinses the dishes after we eat or I do it sometimes depending on them so we all kind of—I try to put the plates away or Jared puts it away, we kind of share out the work.”*

*“...you have to clean your plate. After that, it’s always somebody’s trying to wipe down the table and sweep floor and alternate. There’s like a little cycle where everybody takes a turn.”*

*“Usually the person that doesn’t cook (cleans up). So he cooks, I clean-up. If I cook, he cleans up. But it all depends on, you know, kids help clean-up if we have something going on, it might be totally one hundred percent that the kids help me to clean-up.”*

[mealtime observation] *Everyone cleaned up their own plate after the meal.*

*Father cleaned most of the other dishes. Mother wiped the counter. Daughter wiped the table.*

### **Other Practices**

Some families had certain routines and practices that they engaged in after every family mealtime. For some, families engaged in prayer after mealtime where they “thanked God for the food and the time spent together as a family.” This was often coupled with thanking the parent, usually the mother, for preparing and cooking the meal.

*“We usually say a prayer before and after meals. That is just a thing that we do.”*

[mealtime observation] *After the meal, everyone held hands, bowed their hands, and closed their eyes. They then said a prayer in unison that thanked God for the meal and time they had together.*

*Father and both children thanked mother for the meal. Mother replied “You’re welcome.”*

Another practice that a few families engaged in was religious activity like bible study. This was observed in a few families where one parent reads the bible or other religious texts to the whole family at the dinner table once everyone has finished eating.

*After everyone was mostly finished eating their dinner, mother read a Christian devotional to father and three children. As mother was reading, she left blanks (and asked what) so children could answer. After the reading, children asked her questions and she answered.*

*After everyone has finished their dinner and placed their dishes in the sink, they all returned to the table. Father returned to the table with bible and books. He*

*then led a bible study session. During the session, he read from the Bible and the whole family engaged in discussions. They ended the session with a prayer.*

### **Relationship Building through Conversation and Connection**

All families felt that family mealtimes were very important. Parents ranked family mealtimes as one of the most important thing in their lives. They said that it was important for family communication and connection. Families agreed that mealtime was an opportunity to spend time together as a family in a relaxed environment where “everyone can be themselves.”

*“To me, it gives me an opportunity to bond with my kids. They you know pretty much are free to talk about whatever they want to talk about, say whatever they want to say. You know, just pretty much a free time.”*

*“I think it’s super, super important. And it might, I have to think, might be one of the most important things because like I said, it’s the one time that we’re spending together as a family and especially as everybody’s getting older, they’re busy and they’re not here and you don’t see them and you just don’t know so I think it’s super, super important.”*

One parent said that without those regular mealtimes, the family felt less connected.

*“I do notice that when we don’t eat together or when we do eat out, there isn’t that feeling of cohesiveness. There’s not as much laughter, not as much family connectedness.”*

For a lot of families, mealtime was the only time members could get together for “family time to talk, bond, and connect.” It also gave some “routine and structure” to families.

When family members missed mealtimes due to work or busy schedules, they often felt “lost and left out” and that they “missed out on valuable family time.”

*“He feels out of touch when he is away and unable to have family dinners. He misses that time and feels a bit left out. Family mealtime is a way that he can stay connected before he goes out of town for work. I think that when you’re out of town, you enjoy it. And I think when you’re out of town, you miss it because stuff will go on and the girls and I will have conversations and he’s out of town. When he gets back, I feel like sometimes, we’ll be at the table talking and he’ll kinda look at us and like “Oh, we probably discussed this...” and will have the full conversation for several days and I think he feels out of loop.”*

Because of the importance of family mealtimes to these families, many parents thought that a lot of families are separating and breaking up because they lacked family mealtimes.

*“I think, for me like for example, the families that we know that are strong families, do family meal times pretty regularly and the families that we know that sometimes struggle, they might be something where the kids sit around the table and eat or it might be something where there is meal times specifically and they still at home but maybe there’s not that consciousness effort of creating that feel of meal times. And those families seem to... at least from our outside observation, maybe have their struggles. So like, I mean I have like one family in mind in particular that I think about... you know they often... the parents are often home but the kids sit at the table and the parents might stand up and eat in the kitchen or you know, something else. So there’s not like that concerted effort to all, in*

*their case, five of them to sit around the table and so to me that just shows a little bit of disconnectedness maybe of the family.”*

*“I think more people need to have family meals. I think that’s one of the reasons people are so separated right now. If they don’t take even 15 to 20 minutes out of their life to sit down with their family...”*

*“I don’t think enough families do it...and that is why families are splitting up. They are not having that time together to bond and talk.”*

*“My parents have been married 56 years. That’s a long time and nowadays you have a lot of families that are split. So to actually find probably a family like ours where we’re all together, it’s probably not very common.”*

*“I think it’s critical and a lot of people don’t do it. Like we had one of my daughter’s friends over one day and she’s like “Do you guys always eat like this?” And we’re like “Yeah...” She goes “Well, I always eat by myself and my parents eat by themselves.” And I was like “No, no. We always eat together. It is an expectation.”*

### **Mealtimes Challenges**

Given the importance that parents placed on family mealtimes, parents in this study tried to have family meals as often as possible. However, there are several challenges that families faced in having regular family meals. One major challenge was the busy schedules of parents and children. Parents’ work and school as well as children’s school and after-school activities were barriers in families having regular family meals.

*“I work a lot. I really do and sometimes I won’t be here to eat dinner with them.”*

*“There are times I’m in school and sometimes I have—I make them all (children) sit at the table and eat but there are times that I sit out there. But I try not to very*

*often but sometimes I'm like doing homework and stuff. That's like twice a month maybe."*

*"For me, I know like Mondays I'm in grad school. So Monday nights, I have night class from 6 to 10. My daughter, she goes back and forth between my mom and my apartment so like if she's at my mom's place, she'll just have supper at my mom's place."*

*"Yes. So if somebody has an early practice or an activity that interferes or if I have a meeting, sometimes we don't all make it to the family meals or sometimes we may eat... some of the family may eat earlier than others so that they can leave and go to practice or games or something like that."*

*"Now mealtimes are more difficult when they were younger because kids are so involved in many activities that run later at night and kids each have different things to go to, which takes parents in different directions."*

*"Usually, they're (children) not here before school activities or practices, sports, or they have practice. It is (a challenge), yeah, especially in high school. They're involved with a lot of things so getting everyone together is a challenge during the week."*

Another barrier that parents faced in having family meals was the difficulties they sometimes faced in carrying out mealtimes. Mothers were usually the ones who encountered these difficulties because they were the ones who cooked the meals. They felt that it could be tiring and time-consuming to put together family meals, especially when they were busy with work.

*“Like I want my kids to remember having meals as a family and it being a good time even if it’s hard and exhausting feeding all of them and making sure there’s enough for everybody, you know with someone to eat it and stuff.”*

*“It takes a lot of patience... We have trouble with the 6-year-old who wants to leave the table every five minutes to use the bathroom or something or clean up or whatever”*

*“It (mealtime) can be very crazy. It can be very you know frustrating, with the time and the work because I have a full-time job too.”*

Parents also thought that it could be difficult to prepare meals that satisfied everyone’s tastes and that are healthy.

*“Satisfying everybody’s likes and dislikes, like their interest in food and stuff. So some people want this and some don’t. Some like it and some don’t.”*

*“It can be a challenge with kids to find healthy meals and be together and yeah it can be... yeah, it’s a task.”*

*“My younger boy is inquisitive about new foods. He looks at the food that I make for other people, like for work, and he is curious and asked why I don’t make that for him. But when I do make it and new food is introduced at the table, he doesn’t necessarily want to try it and I don’t know how to get him to try it. Then, if my other son, his older brother, doesn’t like the food, he will absolutely not try it.”*

### **Desired Mealtime Changes**

Most parents were satisfied with their current family mealtimes. However, most of them did wish that they were less busy so that they could have “longer and more relaxed mealtimes.” Parents would like to be able to “sit longer and spend more time



together” during family meals but it was hard due to parents’ and children’s busy schedules.

*“The only wish is that mealtimes were not so rushed and that we have more time to have longer family meals.”*

*“It doesn’t happen as often as we would like with everybody’s schedule and practices and you know... like meetings and whatnot but it’s important that at least a few times a week, we try.”*

*“I guess I would like for us to sit longer so that you know, we could spend more time... like not rush...it just seems like we eat fast and we’re on to the next thing so it would be nice to maybe linger at the meal or at the table a little bit longer.”*

Along with wanting more time for longer family meals, parents also wished for more time to cook and prepare meals. Parents felt that with their busy schedules, they did not have time to cook as much as they wanted to. They also wanted more time to cook varied meals and try new recipes.

*“I enjoy cooking but I wished I had more time to cook, especially during the weekdays. During the weekends I have more time to experiment, to try new recipes but I wish I had more time for that during the week.”*

Parents also wanted to improve the nutritional quality of their family meals, mostly by “adding more fruits and vegetables.” One parent said that she would like having the help of a dietitian to help plan more nutritious family meals.

*“I would really love to have somebody plan my meals for me, like to have a dietitian or to have somebody just to make the list and say this is what you’re going to do this week, you know this is going to be your food, this is going to be*

*your vegetable, this will be your fruit, this is something you know a new idea I want you try.”*

Some parents also wanted to have more meaningful and engaging conversations during family meals. These parents wanted to talk about different things during family meals in order to “engage everyone at the table.”

*“The one thing I want to do is I’ve seen sometimes there’s like card games that you can buy that are like family meal conversations and I think those would be really fun so I’ve always wanted to get one of those...I think that’d be really fun to do. Because we’ve done like High-Low where we’ll go around and tell me the best thing, their high about the day, and then the bad thing about the day. So we’ll do that sometimes and I want to do that more so that would be one thing I would change, kind of direct the conversations like that.”*

*“I just read in a magazine, in a book, that I thought about doing. And that was somebody has taken a clear table cloth and you put like a world map under it and then they would talk about stories where somebody would travel around the world and they would use the map that was on the table already to talk about while they ate.”*

Parents’ desire for more engaging conversations showed that they treated family meals as an opportunity for family members to converse and engage with one another. Engaging conversations helps “build family relationships” and “brings the family together.”

TABLE 5.1

*Summary of Qualitative Findings from Mealtime Observations and Interviews*

Before mealtimes	Meal planning and grocery shopping	<ul style="list-style-type: none"> <li>• Planning vs. minimal planning</li> <li>• Family joint decision-making vs. sole responsibility of the parent</li> <li>• Grocery shopping as a family event or parent-only</li> </ul>
	Food preparation and cooking	<ul style="list-style-type: none"> <li>• Mostly mother's responsibility</li> <li>• Sometimes, children have responsibility for their own meals</li> <li>• Less time cooking during the weekdays</li> </ul>
	Other mealtime duties and rituals	<ul style="list-style-type: none"> <li>• Children's responsibilities for table setting</li> <li>• Mealtime prayer</li> </ul>
During mealtimes	Parental rules and expectations	<ul style="list-style-type: none"> <li>• "One-bite rule." Trying food at least once.</li> <li>• Food on plate needs to be finished before having second helpings.</li> <li>• Varying degrees in expectation to be home for meals.</li> <li>• Sitting and eating at the table, and asking to be excused.</li> </ul>
	Parental dietary behaviors and modeling	<ul style="list-style-type: none"> <li>• Intentional and unintentional parent modeling.</li> <li>• Children imitated both healthy and unhealthy dietary behaviors of parents.</li> <li>• Some families used mealtimes to consciously teach and model healthy eating.</li> </ul>
	Parental feeding strategies	<ul style="list-style-type: none"> <li>• Serving food that children will eat.</li> <li>• Asking children if they wanted or if they have tried a certain food item.</li> <li>• Placing food on children's plate.</li> <li>• Telling children to eat.</li> <li>• Denying children food.</li> <li>• Threatening to take away food or non-food privileges.</li> </ul>
	Food served during meals	<ul style="list-style-type: none"> <li>• Most parents preferred to cook rather than eat outside food.</li> <li>• Eating out was done once in a while to</li> </ul>

		<p>varying degrees by different families.</p> <ul style="list-style-type: none"> <li>• Parents tried to serve food from different food groups during family meals.</li> </ul>
	Mealtime conversation	<ul style="list-style-type: none"> <li>• Relaxed environment when family members can joke, laugh, and talk about almost anything.</li> <li>• Things that happened during the day, at work, or at school.</li> <li>• News and current events.</li> <li>• Media like movies, songs, shows, advertisements.</li> <li>• Planning and scheduling.</li> <li>• Discussion of serious issues like bullying.</li> </ul>
	Media use	<ul style="list-style-type: none"> <li>• Rules ranged from no media rules to no media of any kind during family meals.</li> <li>• In general, TV use was viewed as more accepted than other media use during mealtimes.</li> </ul>
After mealtimes	Clean-up	<ul style="list-style-type: none"> <li>• Mothers cleaning alone vs. shared responsibility among family members.</li> </ul>
	Other practices	<ul style="list-style-type: none"> <li>• Mealtime prayer</li> <li>• Other religious activity like bible study</li> </ul>
Relationship building through conversation and connection		<ul style="list-style-type: none"> <li>• Family meals were important for family bonding, communication, and connection.</li> <li>• Mealtimes also provided routine and structure to the family.</li> <li>• Many parents felt that the lack of family meals contributed to the break up of families today.</li> </ul>
Mealtime challenges		<ul style="list-style-type: none"> <li>• Busy schedules of parents and children.</li> <li>• Difficulty in preparing meals that satisfied everyone and that are healthy.</li> <li>• Difficulty when mother has to prepare meals alone when time is lacking.</li> </ul>
Desired mealtime changes		<ul style="list-style-type: none"> <li>• “Longer, more relaxed mealtimes.”</li> <li>• Less busy schedules.</li> <li>• More time for cooking and preparing meals.</li> <li>• Improve the nutritional quality of</li> </ul>

	<p>meals.</p> <ul style="list-style-type: none"><li>• Have more meaningful and engaging mealtime conversations.</li></ul>
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TABLE 5.2

*Summary of Quantitative and Qualitative Results/Findings according to Research Questions and Hypotheses*

		Quantitative Results	Qualitative Findings
Aim 1	RQ1.1. What kinds of socialization related to food, eating, and healthy behaviors do parents engage in during and outside of family mealtimes?	<p>H1: Parents engage in socialization behaviors during and outside of family mealtimes. (Supported)</p> <p>Parents engaged in food-related socialization behaviors like parent modeling, parent communication and food and nutrition, and parent feeding practices. Parents also reported values and beliefs about family meals and media use during mealtimes which shaped the context of family meals.</p>	<p>Parents engaged in food-related socialization behaviors before, during, and after mealtimes. Rules and expectations about family meals were part of parents' values and beliefs about mealtimes. Parents used mealtimes as opportunities to teach children about food and nutrition, and also modeled healthy eating to children consciously and unconsciously. Parents had different feeding strategies that they engaged in with children. Families had varied amounts of conversation during meals and a variety of topics as well.</p>
	RQ1.2. How are family mealtimes organized (cooking and planning) and what, if any, are the rituals and routines around family mealtimes?	<p>Majority of the parents said that they enjoyed cooking and trying new recipes, and that they engaged in some amount of meal planning.</p>	<p>Parents engaged in meal planning and grocery shopping for family meals in varying degrees. The responsibility of cooking mainly falls on mothers. Most families also had certain rituals and routines related to mealtime like prayer and clean-up.</p>
	RQ1.3. What is the frequency of media use by family members during family mealtimes? How is media use associated with youths' dietary behaviors?	<p>Most parents had rules and limits on their children's media use during family meals. There were more parents who said they did not watch TV during family meals than parents who said</p>	<p>Most parents had rules about media use during meals. Some families had a strict no media rule whereas others allowed TV but not other devices like cell phone. In general, TV viewing during</p>

		they did watch TV during family meals. Children who reported watching TV during family meals also reported more weight concerns and more consumption of outside food.	meals was more accepted than cell phone use during meals. Some parents also regarded having the TV switched on during meals as being in the background and was not considered as watching TV during meals.
	RQ1.4. What is the home food environment like in terms of availability of healthy and unhealthy foods?	<p>Almost half of the children reported ‘sometimes’ having unhealthy food like sweets, chocolate, soda, and other salty snacks available at home. The majority of children reported that they had healthy food like fruits and vegetables at home. More than half of the parents reported serving vegetables and fruit during dinner, and they reported not serving sugar-sweetened beverages. Parents who reported serving more green salad and vegetables during dinner had children who reported higher fruit and vegetable availability at home. Parents who reported serving less fruit and more sugar-sweetened beverages during dinner also had children who reported higher availability of unhealthy food at home.</p>	<p>Parents tried to serve food from different food groups during family meals. All families had a protein and carbohydrate dish during the meal. Most had some type of vegetable. Only some families had green vegetables. Some had soda but the majority had water or milk. Most families also had dessert after their meal.</p>
Aim 2	RQ2.1. Are parent resources (family income, parent employment, and parent education) associated with the frequency of family meals?	<p>H2.1a: Families with higher income and more parent education will have more frequent family meals. (Rejected)</p> <p>There were no significant correlations between family</p>	<p>Financial budget and parent work schedules impacted family meals. Most families mentioned having a budget for grocery shopping and utilized things like coupons and sales for cheaper food. Families with only one</p>

		<p>income or parent education and frequency of family meals. However, food insecurity was significantly and inversely correlated with parent education, household income, and frequency of family meals.</p> <p>H2.1b: Parents who are unemployed or working part time will have more frequent family meals than parents who are employed full time. (Rejected)</p> <p>There was no significant difference in frequency of family meals for parents who were employed full time, part-time, or unemployed.</p>	<p>parent working spoke more about the financial constraints of feeding their families. Parents also spoke about busy work schedules that prevented them from having family meals as frequently as they wanted to.</p>
	<p>RQ2.2. Are parent socialization, parent resources, and frequency of family meals associated with youths' dietary behaviors?</p>	<p>H2.2a: Parent-reported positive parent socialization behaviors related to health and nutrition will be positively associated with youths' healthy eating behaviors. (Partially supported)</p> <p>Parent socialization behaviors were not significantly correlated with children's preferences for healthy foods.</p> <p>Parent controlling feeding practices and parent communication about nutrition and physical activity were positively correlated with children's weight concerns.</p>	<p>Parents used mealtimes as an opportunity to feed children healthier food. Parents thought that if children were to eat on their own, they would consume unhealthy food. Therefore, parents tried to have family meals whenever possible so children would eat healthier food, as opposed to when they ate by themselves or with friends.</p>



		<p>Household income was inversely correlated with children's weight concerns. Multiple regression analyses indicated that parent communication about nutrition and physical activity predicted greater weight concerns for youth, while family income predicted lower weight concerns for youth.</p> <p>Parent modeling and parent values and beliefs about family mealtimes were significantly and inversely correlated with children's consumption of outside food. Parent employment and food insecurity were significantly and positively correlated with children's consumption of outside food. Multiple regression analyses indicated that only parent employment significantly predicted consumption of outside food.</p> <p>H2.2b: Youths who have more frequent family meals will practice healthier dietary behaviors. (Supported)</p> <p>Child-reported frequency of family meals was positively correlated with children's preferences for healthy foods. Parent-report of frequency of family meals was negatively correlated</p>	
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		with children's consumption of outside food.	
	RQ2.3. Do parent/family resources moderate associations between frequency of family meals and youths' dietary behaviors?	None of the parent/family resources were moderators between frequency of family meals and youths' dietary behaviors.	-
	RQ2.4. Do parent/family resources moderate associations between parent socialization and youths' dietary behaviors?	None of the parent/family resources moderated the associations between parent socialization and youths' dietary behaviors.	-
	RQ2.5. Do parent socialization behaviors moderate the associations between frequency of family meals and youths' dietary behaviors?	None of the parent socialization behaviors moderated the associations between frequency of family meals and youths' dietary behaviors.	-
	RQ2.6. Is there an association between home food environment with parental socialization and youths' dietary behaviors?	<p>H2.6a: There will be more positive parental socialization during and outside of mealtimes in homes with healthier food availability. (Partially supported)</p> <p>There was a significant positive correlation between some parent socialization behaviors (parent modeling, parent values and beliefs about family meals, media use during mealtimes) and healthier home food environment. There were no significant associations between parent controlling feeding practices or parent communication about nutrition and physical</p>	-

		<p>activity with healthier home food availability.</p> <p>H2.6b: Youths who live in homes with healthier food availability will practice healthier dietary behaviors (Partially supported)</p> <p>There was a significant positive correlation between fruit and vegetable availability at home with children's healthier food preferences. There was also a significant positive association between unhealthy home food availability and children's consumption of outside food. However, there was no association between home food environment and children's weight concerns.</p>	
Aim 3	RQ3.1. What do family mealtimes mean for parents?	-	Parents reported that family mealtimes were opportunities for bonding, communication, and connection between family members. This was the main aspect of family meals for parents. Parents also viewed family mealtimes as an opportunity to teach children about food and nutrition.
	RQ3.2. What are the challenges and barriers of family mealtimes?	-	The busy schedules of parents and children were the main challenge. Parents, mostly mothers, also faced difficulties in carrying out mealtimes due to the lack of time and the different tastes of family members.

## CHAPTER 6: DISCUSSION

Given the rising importance of obesity prevention and the impact of family meals on youths' dietary behaviors, it is pivotal for researchers and practitioners to understand family mealtime as a platform for positive impact on youths' dietary behaviors. This study provided insight into family mealtimes to better understand the occurrences during and surrounding family mealtimes, the factors that play a role in family mealtimes, and the impact of these on youths' dietary behaviors. Previous research found associations between frequency of family meals and children's and adolescents' dietary behaviors. This study was designed to investigate and explore the factors and processes underlying those associations. This study utilized both quantitative and qualitative data from surveys, mealtime observations, and interviews to address the research questions. The findings from all data sources are integrated into this discussion.

### **Parent Food- and Meal-related Socialization Behaviors**

Parents engaged in different socialization behaviors that reflected their views about nutrition and family meals. These behaviors were modeling, communication about nutrition and physical activity, and controlling feeding practices. Parents also had values and beliefs about family meals that reflected their mealtime expectations and socialization. Parents' rules about media use during mealtimes were also seen through reported and actual media use during meals. This reflected parents' socialization about media use during mealtimes. These behaviors were prevalent in both the quantitative and qualitative data.

Past studies have shown that parent modeling positively impacted youths' dietary behaviors (Marshall et al., 2011; Larson & Story, 2010; Campbell et al., 2006; Tysoe &

Wilson, 2010). Consistent with prior research, qualitative and quantitative data in this study revealed that parent modeling of healthy eating behaviors occurred during and outside of family meals. Quantitative data showed that parents who modeled more healthy dietary behaviors also had children who reported consuming less outside food. There was also a marginal significance for the association between parent modeling and parents' liking for cooking. This could mean that parents who modeled healthier eating might also cook more, thus providing them with opportunities to model those behaviors to children at home. Interview data revealed that parents talked about using mealtimes as an opportunity to model healthy eating for children, and observation data revealed that parents did use mealtimes to model and discuss healthy eating. However, parents also modeled unhealthy dietary behaviors during observations, and children imitated those behaviors as well. Therefore, it is important to note that children pick up on modeling of both healthy and unhealthy dietary behaviors from parents. This is something that parents need to be aware of in order to engage in positive modeling.

Parent controlling feeding practices was also related to children's dietary behaviors in the quantitative data. This was consistent with many studies which showed that controlling feeding practices by caregivers often resulted in poor dietary behaviors in children and youth like higher consumption of energy-dense food, lower consumption of fruits and vegetables, and lower self-regulation of food intake (Campbell et al., 2006; Tysoe & Wilson, 2010; Birch, 1987; Sellers et al., 2005). In this study, parents who practiced more controlling feeding had children who reported more weight concerns. The higher weight concern could potentially result from children's poor dietary consumption and lower eating self-regulation as found in other studies. In this study, it is unclear

whether parent controlling feeding practices were in response to legitimate children's weight concerns, or if parent controlling feeding practices were associated with unnecessary weight concerns. The controlling feeding practices that parents used in this study included placing food on children's plate, telling children to eat, denying children food, and threatening to take away food and non-food privileges. These feeding practices were consistent with the literature on controlling feeding practices often used by caregivers (O'Connor et al., 2009; Haycraft & Blissett, 2010). Haycraft and Blissett (2010) also noted that parents often used controlling feeding practices such as pressuring to eat in response to children's food refusal and picky eating, which was also observed in this study.

Parents who considered family meals to be important also had children who reported consuming less outside food. The values about family meals included the expectation for children to be home for dinner and the importance placed on mealtimes for family bonding and communication. Parents' beliefs about mealtimes included the meaning of family meals and their expectations during family meals like requiring children to try food at least once and to sit and eat at the table with family members. Parents believed that family meals provided an opportunity for family members to "catch up" on each other's days and that the lack of family meals contributed to the "breakdown of families," according to the interview data.

Despite the correlations between parent socialization behaviors and youths' dietary behaviors, further analyses revealed that none of the parent socialization variables were moderators between frequency of family meals and youths' dietary behaviors. It could be that the parent socialization might be the driving force or mediator for frequency

of family meals to have an effect on youths' dietary behaviors. This is an area worth exploring for future studies.

Contrary to previous research (Andaya et al., 2011; Fruh et al., 2011; Hammons & Fiese, 2011; Larson & Story, 2010), none of the parental socialization behaviors in this study were related to children's preferences for healthy foods in the quantitative analysis. However, this study did find that different parent socialization behaviors that occurred during and outside of mealtime and these behaviors impacted other youths' dietary behaviors like youths' weight concerns and youths' consumption of outside foods. Youths' dietary behaviors consist of more than just preferences for healthy foods. It could be that the other dietary behaviors that are impacted by parent socialization behaviors would in turn impact youths' preferences for healthy foods. This means that when examining the influence of parents' socialization on youths' dietary behaviors, it is important to take into consideration the associations between the different parent and child behaviors. It is also important to keep in mind the bidirectional influences of parent-child interactions and behaviors regarding food and family meals. This was not within the scope of the current study, but should be a focus for future studies.

### **Frequency of Family Meals**

One theme that stood out in this study was that the families thought they were an anomaly in having family meals. Parents thought that family having meals together is an uncommon occurrence in today's society, and cited that as one reason for the breakdown of families in today's society. Coupled together with the challenges and changes that parents wanted for family meals, it is clear that families thought family meals were important but they also faced challenges that prevented them from doing so, or from

having them as often as they wanted. Some of these challenges included the lack of time and the lack of help. Most parents in this study were employed outside the home, with some working and going to school at the same time, or working multiple jobs and long hours. This is representative of the national working population where 70% of mothers and 93% of fathers with children aged 18 years and below were in the work force or job market (Bureau of Labor Statistics, 2014). This left little time for parents to cook and have family meals. Children also participated in sports and other after-school activities that made it difficult for families to have meals together. The responsibility of cooking meals often fell on the mother who usually received little to no help. Coupled with the busy schedules, this made family meals a challenging responsibility for mothers. Given the positive effects of frequent family meals on youths' dietary behaviors, it is important for future research to focus on addressing these challenges for family meals, and to apply those findings to programming that make it easier and less stressful for families to have meals together.

Studies have shown that youths who had more frequent family meals had healthier dietary behaviors (Andaya et al., 2011; Fruh et al., 2011; Hammons & Fiese, 2011; Larson & Story, 2010; Neumark-Sztainer et al., 2010). Consistent with those studies, children in the present study who had more family meals consumed less outside food and had greater preferences for healthy foods. However, in the regression analyses, frequency of family meals did not significantly predict youths' weight concerns or consumption of outside food after accounting for family resources and parent socialization. This could mean that there might be other driving forces for the association between frequency of family meals and youths' dietary behaviors. Also as previously



noted, there are various challenges associated with the frequency of family meals that might also impact youths' dietary behaviors. For example, the busy schedules that made it hard to have family meals might also impact children's consumption of outside foods. The relationship between parent socialization behaviors, mealtime challenges, frequency of family meals, and youth's dietary behaviors would be worth exploring for future studies.

### **Family/Parental Resources**

The family or parental resources examined in this study were household income, parent education, food insecurity, and parent employment. Contrary to the findings from Widome et al. (2009), there was no association between income and frequency of family meals in this study. There was also no association between parent education and frequency of family meals. There was also no difference in frequency of family meals for parents who worked full time, part time, or did not work. However, consistent with Widome et al. (2009), there was an association between food insecurity and frequency of family meals. Families who were food insecure reported having fewer family meals. Parents who had higher education and higher household income reported lower food insecurity. Parents who had higher education also reported higher household income. This is intriguing given that parent education, household income, and food insecurity were related but only food insecurity was related to frequency of family meals. Food insecurity represents a threshold of income, and there may be an absence of associations above a specific threshold. There could also be a complex relationship whereby some parent/family resources predict food insecurity, which in turn predicts frequency of family meals.

The role of family resources, especially monetary resources, on family meals was evident in parent interviews. Parents had food budgets that they had to follow. Single parents tended to say that they worked more hours and jobs, and that they had to keep food budgets low and utilized resources like sales and coupons. Some parents were also in school and talked about graduating so they can provide their children with “more food and a better life.” In the surveys, parents who worked more hours outside the home reported fewer family meals and this was consistent with qualitative findings where parents who had to work more often and longer hours had difficulty finding time to prepare and have meals with family. Sometimes, parents also had to travel for work which resulted in missed family meals. These challenges associated with parent employment were similar to those found in other studies (Blake et al., 2009; Devine et al., 2006; Devine et al., 2009). Consistent with Masters et al. (2014), families that had higher income reported eating out more compared to families who had a lower income.

### **Media Use during Mealtimes**

There was some variation in the extent to which media was used during family meals. Most parents interviewed reported that they had rules about media use during family meals and this was consistent with the parent-report on media rules and limits in the surveys. Some families did not allow any form of media during family meals while others allowed some form of media like the TV. A few families allowed all media during family meals and this included the use of cellphone devices and the TV.

It is interesting to note that many families in this study treated TV use differently from the use of other media. About half of families in this study strongly disapproved with watching TV during dinner. However when observed and interviewed, some of

these families did not consider having a TV switched on during meals the same as watching TV during meals. These families thought that having the TV switched on during family meals was “okay” because most of the time, families said it was “just in the background” without their full attention focused on the TV. This brought to light a potential discrepancy in the definition of media or TV use during meals between parents’ and researchers.

Other families thought that watching TV during meals was different from using cellphone devices during meals. Families found that if they watched TV during meals, it was still a family activity as they were doing it together whereas cell phone use is a more individual activity. For these families, it may be that mealtime is an opportunity to do something they enjoy together, even if it is watching TV while eating. Also, most families do not cease communication even if the TV was switched on during meals. They either had divided focus between the TV and family communication, or they talked about the program that they were watching. In contrast, almost all parents disapproved of cellphone use during meals and doing so was frowned upon heavily by the parents in this study, even if the meal was outside of the home. Most parents firmly believed that there should be no cellphone use during any mealtimes. Parents who did not allow any media during meals believed that family meals should be an opportunity for communication so that family members can learn about each other’s days. One family went further on this and banned any media-related conversation (e.g., movies, social media, games) because they thought that mealtimes should be “completely media-free.” The diversity in media use captured by this study brings a unique contribution to the literature on media use during mealtimes. This sheds light on the potentially different definitions of media use

during meals. This difference in definitions could also impact youths' dietary behaviors differently, an area that could also be further examined.

Even though there was diversity in media use during mealtimes in this study, there were no associations between self-reported media use during meals and youths' dietary behaviors. This conflicts with findings from other studies that showed media use during meals negatively impacted children's dietary behaviors (McIntosh et al., 2010; Eisenberg et al., 2012). However, there was a significant negative correlation between fruit and vegetable availability at home with media use during meals. There was also a positive correlation with unhealthy food available at home and media use during meals. These home food environment variables could be combined in future analysis as a possible latent variable in the association between media use and youths' dietary behaviors. The differences in parents' perceptions of media use during meals could also contribute to the lack of association between media use and youths' dietary behaviors.

### **Home Food Environment and Food Availability**

Home food environment, as defined by the availability of fruits and vegetables at home, and the availability of unhealthy foods like soda, sweets, and snacks at home, was also related to youths' dietary behaviors and to parent socialization of food- and mealtime-related behaviors during and outside of family mealtimes. Healthier home food availability was linked to healthier dietary behaviors in children. This was consistent with existing research (Kramer et al., 2012; Gable & Lutz, 2000). In homes with healthier food environments, parents engaged in more modeling of healthy dietary behaviors, had greater values about family meals, and did not allow for media use during mealtimes. Gable and Lutz (2000) also found similar associations between home food availability,

parent controlling feeding practices, and parent values/beliefs in their study. The availability of unhealthy food at home was linked with parents who practiced more control with children and with parents who had lower values and beliefs about mealtimes and their roles in socializing child health and nutrition (Gable & Lutz, 2000). Some evidence of the home food availability could be seen in the food that parents tried to serve during family meals. Most families tried to serve different food groups in a meal, either by serving them as separate dishes (salad, chicken, rice) or having them together in one dish (casserole). Parents wanted children to have as healthy and as balanced of a meal as possible and tried to provide them with that whenever possible.

Less healthy food during family meals were also present. A lot of families had a sweet treat like pie or cookie for dessert after dinner. Some families however did not serve dessert at all, or had fruit for dessert. Some families also had soda during family meals. For the families that did not, they either had water or milk. In families that had soda during dinner, usually it was the parents who had soda. This was sometimes followed by the children asking to have soda as well. This indicated a clear evidence of the link between home food environment, parent modeling of dietary behaviors, and youths' dietary behaviors. Most parents also preferred cooking at home compared to eating outside food and this seemed to be an important part of the home food environment. Parents thought that home cooked food was healthier and cheaper than outside food. Outside food was consumed sometimes as a means of convenience, celebration, or gathering with others. However, more family meals were home-cooked food compared to outside food. In this study, the impact of home food environment, which included the food served during meals, on youths' dietary behaviors was

differentiated from the impact of frequency of family meals on youths' dietary behaviors. This is important because the impact of family mealtime frequency might be affected by the home food environment (Fulkerson et al., 2008; Kramer et al., 2012). Most research on the home food environment also did not examine the food served during meals in detail (Hanson, Neumark-Sztainer, Eisenberg, Story, & Wall, 2005). Therefore, this study made a contribution in examining the home food environment in a more comprehensive manner and in differentiating the impact of home food environment and frequency of family meals on youths' dietary behaviors.

### **Meaning of Family Meals**

One aspect that was clear from both quantitative and qualitative findings was that families found family meals to be important. Parents all thought that meal times were opportunities for connecting with one another. For these families, mealtimes hold a deeper meaning than just sitting and eating together. Instead, it is embedded in their day-to-day routines and has an emotional and affective element associated with family rituals. Routines such as mealtime chores and behavior (e.g., prayer, table manners) were directly observed in these families. On the other hand, the ritual elements of mealtimes which were more symbolic and affective were captured through the interviews. Family meals were often associated with happiness, jokes, and laughter, as well as with frustration. Family meals created a sense of belonging as each family member knew that they were in a safe space "to be themselves" during mealtimes. There were also instances where parents spoke about "family recipes" which was a symbol of generational continuity of mealtimes from one generation to the next (Fiese, 2006).

Fiese (2006) noted that family mealtimes were “multilayered activities that serve to regulate behavior and hold deep symbolic meaning for participants” (p.67). This was true for most families in this study. Family mealtimes did not consist of just the meal itself. Instead, there were multiple layers of meal planning, preparation, cooking, clean-up, and other after mealtime practices. Family mealtimes consisted of an “everyday practice shared by multiple members of society, yet each family comes to carry out these tasks in its own unique way” (p.67). The families in this study had similarities and uniqueness in the way family meals are carried out. This can be seen in the way they cooked, ate, talked, and worked during and surrounding family meals. The richness of the qualitative data, combined with generalizability of the quantitative data in this study, allowed for a deeper understanding of family meals and the impact it has on children and youth.

Overall, this study showed that there socialization behaviors related to health and nutrition occurred during and surrounding family mealtimes. Some of these parent socialization behaviors were related to youths’ dietary behaviors. Children who reported more concern about weight also had parents who reported practicing more controlling feeding practices and who communicated more about nutrition and physical activity to children. Parents who reported more modeling of healthy eating and parents who valued family meals had children who reported consuming less outside food. Parent resources were also associated with youths’ dietary behaviors. Higher household income predicted lower weight concerns in youth, and longer parent work hours predicted more consumption of outside food by youth. Families who had more meals together also had

children who reported higher preferences for healthy foods and lower consumption of outside food.

Given that most parents reported that their work hours and schedules as well as their financial budget affected the frequency and quality of family meals, it is clear that parent resources like work, time, and income affected the frequency of family meals, which in turn affected youths' dietary behaviors. Parents reported that family meals were sometimes the only time in the day where the family can get together as whole. Without family mealtimes, parents may miss out on the opportunity for some socialization like parent modeling and family communication. Parents may also value family meals but might not have the resources to carry out family meals as often as they would like. From this study, we learned that family mealtime is a platform for socialization behaviors and family communication and interaction, and that family mealtimes are impacted by parent resources.

The home food environment is often overlooked in studies on family meals. This study showed that a healthier home food environment was associated with greater parent resources such as household income and parent education. The home food environment was also associated with parent socialization (parent modeling, parent feeding practices, parent values and beliefs about family meals, media use during meals) and youths' dietary behaviors (healthier food preferences, consumption of outside food). This indicates that even though the home food environment might not be directly associated with frequency of family meals, it might play a role given its associations with factors that are linked to family meals. It is clear from this study that multiple factors need to be considered in the association between family meals and youths' dietary behaviors. Some



of these factors are parent socialization, parent resources, and the home food environment. It is also important to consider that for most families, relationship building and bonding among family members was more often the focus of family meals rather than youths' dietary behaviors. This would be an important aspect to consider for any programming related to families and youths' dietary behaviors.

### **Limitations**

Post hoc analyses revealed that there was insufficient power in this study. It is unclear whether the insufficient power and non-significant associations were due to insufficient sample size, low alpha or to other reasons. Previous quantitative studies which utilized the EAT 2010 and F-EAT surveys had substantially larger sample sizes with higher scale alphas. Therefore, the smaller sample size in this study could be a plausible reason for some of the associations not found in this study that were found in others. However, the qualitative data in the current study supplemented the quantitative results and provided some support for some of the non-significant associations. For example, even though the quantitative results showed no significant association between parent resources (income, parent education, and parent employment) and frequency of family meals, qualitative findings suggested that income and parent employment does impact family meals in terms of budget and frequency.

Some of the scales used in this study also had low alphas, particularly parent modeling parent controlling feeding practices, and parent value and beliefs about family mealtimes. The lower scale reliability could be a factor in the lack of some associations otherwise found in the literature. However again, data from mealtime observations and interviews informed some of the scale items. For example, parent controlling feeding

practices were observed and were consistent with the items in the scale. This serves as a recommendation for utilizing qualitative findings for the future development of scales and measures.

This study was conducted in a Midwestern state and findings might not be generalizable to other states in the U.S. There was also a lack of ethnic diversity in this study whereby the majority of participants were White/Caucasian, therefore making the generalizability of the findings to other ethnic groups limited. However, it should be noted that this accurately reflected the ethnic diversity of the state. There was also some diversity in other areas captured in this study like parent education, parent employment, and children's school type. The presence of diversity in these areas revealed interesting information about parent resources, family meals, and children's dietary behaviors.

There might also be selection bias and social desirability present. Families in this study might already highly value family meals and have frequent family meals, making them more interested and inclined to participate in this study. Participants might also be more inclined to answer or behave a certain way that is deemed socially desirable during the completion of surveys and participation in mealtime observation and interviews. This was addressed in the mealtime observations by having two sessions for the first few families to ensure that the behaviors of families were consistent across the two recording sessions. Most families also acclimate to the presence of recording equipment within the first quarter of the mealtime.

### **Directions for Future Research**

This study yielded findings which showed that some associations needed further investigation. There is a complex relationship between family resources, food insecurity,

and frequency of family meals which should be examined. This study found that families faced challenges in have meals together and this impacted the frequency of family meals. The relationship between parent socialization behaviors, mealtime challenges, frequency of family meals, and youths' dietary behaviors would also be worth exploring for future studies.

Future research could focus on the bidirectional and reciprocal relationship between parent and child. How a child reacts or responds to food and to their interactions with parents might also impact parent's socialization behaviors. Future studies on parent socialization and family meals could include children's reactions and perceptions of these socialization behaviors. Future research in this area could also focus more in-depth into different parent socialization behaviors or youths' dietary behaviors to understand the full impact of specific socialization behaviors on youths' dietary behaviors.

This study has shown that it is important to be more comprehensive when examining the home food environment. Any future research on home food availability and environment should include food served during meals as well as the preference or extent of cooking versus eating outside food. These studies could also examine the potential moderating or mediating effects of home food environment on the association between frequency of family meals and youths' dietary behaviors.

Lastly, this study revealed that the extent and definition of media use during meals varies among families. Parents gave different weight to different types of media used during mealtimes. Future studies should examine the definition of media use during meals, taking into account that some media devices might be viewed in a different light

than others. This difference in definitions could also impact youths' dietary behaviors differently, an area that could also be further examined in the future.

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## APPENDIX A

# The Family Mealtime Study

Have at least one child between ages 11-18? Want to contribute to research on family mealtimes? Want to earn up to \$100? Come participate in the **Family Mealtime Study**!



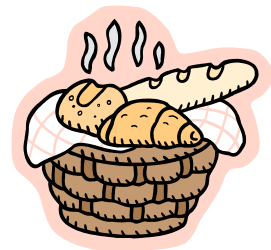
This research study is interested in understanding more about family mealtimes and youths' dietary behaviors. This study consists of three phases and participants can participate in one, two, or all three phases. The phases are:

- Phase 1: Parent-child surveys. Upon completion, you will receive \$20.
- Phase 2: One to two mealtime sessions. Upon completion, you will receive \$50.
- Phase 3: One interview session. Upon completion, you will receive \$30.

For more information, please contact CarMun at [carmun@huskers.unl.edu](mailto:carmun@huskers.unl.edu) or **402-617-2254**.

Thank you for your attention and I hope that you will consider participating in this research study! I look forward to hearing from you!

CarMun Kok  
Doctoral Candidate  
University of Nebraska-  
Lincoln



## APPENDIX B



## Recruitment Letter



Dear Parent or Primary Caregiver:

I am excited to invite you to participate in a University of Nebraska-Lincoln research study on family mealtimes and an opportunity to earn up to \$100 while contributing to research. The information gathered from this study will be used to support parents in having family mealtimes that can be beneficial for children's eating behaviors. The long-term research goal is that by understanding more about family mealtimes and youths' dietary behaviors, parents, teachers, and other professionals will be better able to support healthy eating habits in youths.

You are invited to participate in this study if you have at least one child who is between 11-18 years of age. This study consists of three parts and you are welcomed to participate in either one, two, or all three parts of this study.

The first part of this study will consist of you and your child filling out two different questionnaires separately. If you and your child are interested to complete the surveys, please contact the researcher (details below) and a survey packet will be mailed to you. You will receive \$20 after you and your child's completed surveys are handed back to the researcher.

After completing the survey, if you wish, you are also invited to participate in the second part of the study. This will consist of you and your family participating in one to two family mealtime video recordings. No researcher will be present during the recordings. If you agree to participate, the researcher will call you to arrange the mealtime recording sessions at your convenience. Upon completion of the recordings, you will receive an additional \$50.

After completion of the survey and the mealtime recordings, if you wish, you are also invited to participate in the final part of the study which will consist of you participating in a brief interview. An interview session will be arranged at your convenience. Upon completion of the interview session, you will receive an additional \$30 for your time.

Please be assured that your responses and recordings will be kept strictly confidential and will only be accessed by the researchers, and all reported data will not contain any personal information. There is no known risk for participating in this study. Participation is voluntary. You are free to decide to participate in one or more parts of this study, or not to participate in this study. If you have questions about the study, please do not hesitate to call me, Car Mun, at (402) 617-2254 or e-mail me at [carmun@huskers.unl.edu](mailto:carmun@huskers.unl.edu)

You and your family's participation in this study will greatly contribute to efforts in understanding family mealtimes and its influence on the health of children and adolescents. If you are interested in participating, please contact me, Car Mun, at (402) 617-2254 or email me at [carmun@huskers.unl.edu](mailto:carmun@huskers.unl.edu). You can also contact my co-investigator Dr. Julia Torquati at [jtorquati@unl.edu](mailto:jtorquati@unl.edu) if you have any additional questions.

Thank you in advance for your willingness to participate. Your contribution to this study is of great significance for the field of youths' dietary behaviors.

Sincerely,  
Car Mun Kok, M.S., Principal Investigator



**PRIMARY INVESTIGATOR:**  
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## APPENDIX C

## Informed Consent Form

## The Family Mealtime Study

The purpose of this research is to gain a deeper understanding of family mealtimes and how they may be related to children's dietary behaviors. You are invited to participate in this study because you are a parent of at least one child between the ages of 11-18.

If you consent, you will be asked to will complete a questionnaire about your dietary behaviors and your family's mealtimes. The questionnaire should take no more than 30 minutes to complete. Your child who received the recruitment letter will also be asked to complete a different questionnaire about his/her eating behaviors and thoughts on family mealtimes. You and your child are to complete your different questionnaires separately.

Additionally, if you consent to participate in the second part of the study, two of your family mealtimes will be videotaped during the same week. The video appointment will be scheduled at your convenience. The recordings of your family mealtimes will depend on the length of your family mealtimes and the researcher will not be present during the mealtime recordings.

Finally, if you consent to participate in the last part of the study, we will schedule an interview about your experiences regarding family mealtime interactions. The interview will last about 30-40 minutes and will be in the convenience of your home or another convenient and private location on the University of Nebraska-Lincoln campus if you prefer.

There are no known or anticipated risks associated with this research. As an incentive to participating in this study, upon completion of the survey portion of this study (both you and your child's completed surveys), you will receive \$20. If you decide to participate in the mealtime recordings, you will receive an additional \$50 upon completion. Finally, if you decide to participate in the interview, you will receive another additional \$30 for your time.

There are no direct benefits to you of participating in this research. However, this study will help us learn more about the roles of family in children's healthy behaviors. This information may be useful for parents and professionals seeking to improve children's dietary behaviors.

Any information obtained during this study will be kept strictly confidential. Information from your questionnaires, videotapes, and interviews will be identified only by an identification number and will be stored in a secure storage area accessible only to the investigators. Findings of this study will be reported in a doctoral dissertation, in scholarly meetings, and in scientific publications but results will be reported as group findings only.

If you have any additional questions about the study or about your rights as a research participant, please contact Car Mun Kok (402-617-2254). You may contact the University of Nebraska-Lincoln Institutional Review Board (UNL IRB) at (402) 472-6965 if those

questions have not been answered by the primary investigator, or to report any concerns about the study.

Participation in this study is voluntary. You are free to decide not to enroll in this study or to withdraw at any time without affecting your relationship with the researcher, or the University of Nebraska-Lincoln.

Please check/mark the following checkboxes as deemed appropriate:

- ☐ I wish to participate in the first part of this study by completing the provided questionnaire.
- ☐ In addition to completing the questionnaire, I also wish to participate in the second part of this study by participating in mealtime recordings. I understand that video recording will be used and agree to be a part of the recordings.
- ☐ In addition to completing the questionnaire and participating in mealtime recordings, I also wish to participate in the final part of this study by participating in an interview. I understand that audio recording will be used and agree to be a part of the recording.

YOU ARE VOLUNTARILY MAKING A DECISION WHETHER OR NOT TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR CHECKED BOXES ABOVE AND YOUR SIGNATURE BELOW CERTIFIES THAT YOU HAVE DECIDED TO PARTICIPATE IN THIS STUDY (SOME OR ALL PARTS) AND THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION PRESENTED.

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

**PRIMARY INVESTIGATOR:**  
**Car Mun Kok, M.S.**  
**Email: carmun@huskers.unl.edu**

**SECONDARY INVESTIGATOR:**  
**Julie Torquati, Ph.D.**  
**Email: jtorquati@unl.edu**

## APPENDIX D

## YOUTH ASSENT FORM

## The Family Mealtime Study

**Purpose of the Research:**

We are learning more about your family mealtimes and the interactions that might occur between you and your parents during family mealtimes. We are also interested in learning about your eating behaviors. Here is some information about this study and what you need to do so you can make up your mind whether you want to participate.

**Procedures:**

If you participate in this research, you will complete a questionnaire about your eating habits and behaviors. The questionnaire should not take more than 20 minutes to complete. Your mom/dad will also be given a different questionnaire to complete and the both of you will complete your questionnaires separately.

**Risks and/or Discomforts:**

There are no known risks about participating in this study.

**Opportunity to ask Questions, Freedom to Withdraw:**

You can ask me questions about the study at any time. Participation is voluntary and it is alright if you decide that you do not want to participate in this study.

**I UNDERSTAND THE PROCEDURES OF THE STUDY AND I VOLUNTARILY AGREE TO PARTICIPATE**

---

Child's Name

---

Child's Signature

---

Date

**PRIMARY INVESTIGATOR:**

Car Mun Kok, M.S.

Email: [carmun@huskers.unl.edu](mailto:carmun@huskers.unl.edu)

**SECONDARY INVESTIGATOR:**

Julie Torquati, Ph.D.

Email: [jtorquati@unl.edu](mailto:jtorquati@unl.edu)



## APPENDIX E

**This survey is to be completed by a PARENT or PRIMARY CAREGIVER of the child who completed the child survey.**

**Thank you for your willingness to complete this questionnaire! Your time and effort is greatly appreciated.**

- In this survey, we will be asking questions about yourself, your family, and also about your child who completed the other questionnaire in the packet. Please keep this child in mind when responding.
- Your name is not on this survey and all of your answers will be kept private, so please answer honestly. There are no right or wrong answers.
- Parents get a lot of mixed messages about food and health and it can be hard to know what to do. The information that you and other parents provide in this survey is teaching us about the challenges that families are facing. Your input will guide the development of programs for children and their families. Your input **WILL** make a difference!

**Upon completion of this survey (and your child's completed survey), please contact the researcher for further arrangements and \$20 will be given to you in appreciation of your time.**

**1. What is your relationship with the child participant in this study (the one who completed the other questionnaire)?**

- 1 ☐ Mother
- 2 ☐ Stepmother
- 3 ☐ Other female guardian
- 4 ☐ Father
- 5 ☐ Stepfather
- 6 ☐ Other male guardian
- 7 ☐ Other: \_\_\_\_\_

**2. Where does your child (same child as mentioned above) live?**

- 1 ☐ My child lives only in my home
- 2 ☐ My child lives mostly in my home
- 3 ☐ My child lives equally in my home and in another home
- 4 ☐ My child lives mostly in another home
- 5 ☐ My child does not live in my home

**Let's start with some questions about YOUR eating habits...**

**3. During the past week, on how many days did you eat breakfast?**

- 1 ☐ Never
- 2 ☐ 1-2 days
- 3 ☐ 3-4 days

- 4 ☐ 5-6 days  
 5 ☐ Every day

**4. Thinking back over the past week, how many servings of fruit did you usually eat on a typical day?**

**(A serving is a half cup of fruit or 100% fruit juice, or a medium piece of fruit.)**

- 1 ☐ Zero servings per day  
 2 ☐ Less than 1 serving per day  
 3 ☐ 1 serving per day  
 4 ☐ 2 servings per day  
 5 ☐ 3 servings per day  
 6 ☐ 4 servings per day  
 7 ☐ 5 or more servings per day

**5. Thinking back over the past week, how many servings of vegetables did you usually eat on a typical day? (A serving is a half cup of cooked vegetables or one cup of raw vegetables.)**

- 1 ☐ Zero servings per day  
 2 ☐ Less than 1 serving per day  
 3 ☐ 1 serving per day  
 4 ☐ 2 servings per day  
 5 ☐ 3 servings per day  
 6 ☐ 4 servings per day  
 7 ☐ 5 or more servings per day

**6. Thinking back over the past week, how often did you drink sugar-sweetened beverages (regular soda pop, Kool-Aid)?**

- 1 ☐ Less than once per week  
 2 ☐ 1 drink per week  
 3 ☐ 2-4 drinks per week  
 4 ☐ 5-6 drinks per week  
 5 ☐ 1 per day  
 6 ☐ 2 or more per day

**7. In the past week, how often did you eat something from a fast food restaurant, such as McDonald's, Burger King, Domino's, or similar places? (pizza counts)**

- 1 ☐ Never  
 2 ☐ 1-2 times  
 3 ☐ 3-4 times  
 4 ☐ 5-6 times  
 5 ☐ 7 times  
 6 ☐ More than 7 times

**8. In the past month, how often did you eat something from the following types of restaurants (include take-out and delivery)? Please check/ tick the appropriate boxes.**

	Never/ rarely	1-3 times per month	1-2 times per week	3-4 times per week	5-6 times per week	1+ times per day

a. Traditional “burger-and-fries” fast food restaurant (such as McDonald’s, Burger King, Wendy’s, or Culver’s)						
b. Mexican fast food restaurant (such as Taco Bell, Taco John’s, or Chipotle)						
c. Fried chicken (such as KFC)						
d. Sandwich or sub shop (such as Subway, Panera, or Quiznos)						
e. Pizza place						
f. Sit-down restaurant (where waitstaff brings food to your table)						

**The next questions are about your FAMILY’S eating habits...**

**9. During the past week, how many times did all, or most, of your family living in your household eat a meal together?**

- 1 ☐ Never  
 2 ☐ 1-2 times  
 3 ☐ 3-4 times  
 4 ☐ 5-6 times  
 5 ☐ 7 times  
 6 ☐ More than 7 times

**10. During the past week, how many times was a family meal purchased from a fast food restaurant and eaten together either at the restaurant or at home? (pizza counts)**

- 1 ☐ Never  
 2 ☐ 1 time  
 3 ☐ 2 times  
 4 ☐ 3 or more times

**11. How much do you agree with the following statements? Please check/tick the appropriate boxes.**

	Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
a. It is important that our family eat at least one meal a day together				
b. Different schedules make it hard to eat meals together on a regular basis				
c. In our family, it is often difficult to find a time when family members can sit down				

to a meal together				
d. In our family, children are expected to be home for dinner				

**12. Think about a typical family dinner at your home...**

- ☐ We never eat family dinners (If true, check the box to the left and skip to Question 16)

	Never or Rarely	Sometimes	Usually	Always
a. Is a green salad served?				
b. Are vegetables other than potatoes served?				
c. Is 100% fruit juice served?				
d. Is fruit (not including juice) served?				
e. Is milk served?				
f. Are sugar-sweetened beverages (soda pop, Kool-aid, etc.) served?				

**13. How is food served at a typical family dinner in your home?**

- 1 ☐ Food is served "family style" where everyone can help themselves from food on the table  
 2 ☐ Family members serve themselves from the counter or stove top  
 3 ☐ Food is put on family members' plates/bowls by whoever cooked it and then served  
 4 ☐ Some combination of all these ways  
 5 ☐ Other serving style (please describe): \_\_\_\_\_

**14. How often does your child do the following during family meals?**

	Never or Rarely	Sometimes	Usually	Always
a. Watch television or movies				
b. Play with hand-held games (e.g., DS, PSP, Game Boy, etc.)				
c. Talk on the phone (cell or other)				
d. Text message				
e. Listen to music with headphones (e.g., with iPod, MP3 player, or other devices)				

**15. Do you set limits (have rules, including no use) on your child's media use (TV, cell phone, texting, etc.) during family meals?**

- 1 ☐ No  
2 ☐ Yes

**16. Who does the majority of food shopping for your family? (Choose more than one person if the task is split evenly.)**

- 1 ☐ Me  
2 ☐ Spouse/partner  
3 ☐ Child/children  
4 ☐ Other adult in the home  
5 ☐ Other (please describe) \_\_\_\_\_

**17. Who usually prepares food for your family? (Choose more than one if the task is split evenly.)**

- 1 ☐ Me  
2 ☐ Spouse/partner  
3 ☐ Child/children  
4 ☐ Other adult in the home  
5 ☐ Other (please describe) \_\_\_\_\_

**18. How many hours per week do you normally spend preparing food for your family?**  
\_\_\_\_\_ hours per week

**19. How many hours per week does your spouse, partner, or another adult in your household spend preparing food for your family?**  
\_\_\_\_\_ hours per week

**20. How much do you agree with the following statements?**

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. I usually know or plan in the morning what we will eat for dinner that night				
b. I find cooking to be a real chore				
c. I usually decide at night what we will eat for dinner that night				
d. I like trying new recipes and cooking new things				
e. I don't buy many fruits because they cost too much				
f. I don't buy many vegetables because they cost too much				

g. At the store where I buy my groceries, the variety of fresh fruits and vegetables is limited				
h. At the store where I buy my groceries, the condition of fruits and vegetables is poor				

**21. How strongly do you agree with the following statements? For these questions, think about your family in general.**

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>
a. Family members are accepted for who they are				
b. Making decisions is a problem for the family				
c. We don't get along well together				
d. We can express feelings to each other				
e. Planning family activities is difficult because we misunderstand each other				
f. We confide in each other (By 'confide' we mean to trust your family members enough to tell them something that is important to you)				

**22. How much do you agree with the following statements?**

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Not employed</b>
a. Because of the requirements of my job, I miss out on home or family activities that I would prefer to participate in					
b. Because of the requirements of my job, my family time is less enjoyable or more pressured					
c. Working leaves me with too little time or energy to be the kind of parent I want to be					

**Now, a few questions about YOUR CHILD who completed the other questionnaire for this study**

**23. How would you describe your child's weight?**

- ☐ Very underweight  
☐ Somewhat underweight  
☐ About right  
☐ Somewhat overweight  
☐ Very overweight

**24. How concerned are you about your child's weight?**

- ☐ Not at all concerned  
☐ A little concerned  
☐ Quite concerned  
☐ Very concerned

**25. To what extent do you encourage your child to diet to control his/her weight?**

- ☐ Not at all  
☐ A little bit  
☐ Somewhat  
☐ Very much

**26. How often in the past year....**

	Never or Rarely	A few times a year	A few times a month	A few times a week	Almost every day
a. Have you had a conversation with your child about healthy eating habits?					
b. Have you had a conversation with your child about being physically active?					
c. Have you had a conversation with your child about his/her weight or size?					
d. Have you mentioned to your child that he/she weighs too much?					
e. Have you mentioned to your child that he/she should eat differently in order to lose weight or keep from gaining weight?					
f. Have you mentioned to your child that he/she should exercise to lose weight or keep from gaining weight?					

**27. How much do you agree with the following statements?**

	<b>Disagree</b>	<b>Slightly Disagree</b>	<b>Slightly Agree</b>	<b>Agree</b>
a. My child should always eat all of the food on his/her plate				
b. I have to be especially careful to make sure my child eats enough				
c. If my child says "I'm not hungry," I try to get him/her to eat anyway				
d. If I did not guide or regulate my child's eating, my child would eat much less than he/she should				
e. I have to be sure that my child does not eat too many high fat foods				
f. I have to be sure that my child does not eat too many sweets (candy, ice cream, cake, or pastries)				
g. I have to be sure that my child does not eat too much of his/her favorite foods				
h. If I did not guide or regulate my child's eating, he/she would eat too much of his/her favorite foods				
i. I intentionally keep some foods out of my child's reach				
j. If I did not guide or regulate my child's eating, he/she would eat too many junk foods				

### Finally, just a few more questions about you

**28. Do you think of yourself as...? (You may choose more than one)**

- 1 ☐ White
- 2 ☐ Black or African American
- 3 ☐ Hispanic or Latino
- 4 ☐ Asian American
- 5 ☐ Native Hawaiian or other Pacific Islander
- 6 ☐ American Indian or Native American
- 7 ☐ Other: \_\_\_\_\_

**29. What is your current marital status?**

- 1 ☐ Married or in a committed relationship



- 2 ☐ Divorced/Separated  
 3 ☐ Single  
 4 ☐ Widowed  
 5 ☐ Other (please specify): \_\_\_\_\_

**30. How many children (18 years and under) live in your household?** \_\_\_\_\_

**31. What is the highest grade or year of school that you have completed?**

- 1 ☐ Did not finish high school  
 2 ☐ Finished high school or got GED  
 3 ☐ Some college or training after high school  
 4 ☐ Finished college  
 5 ☐ Advanced degree (e.g., Master's Degree, PhD, MD)

**32. What is the highest grade or year of school your spouse or partner has completed?**

- 1 ☐ Not applicable (No spouse/partner)  
 2 ☐ Did not finish high school  
 3 ☐ Finished high school or got GED  
 4 ☐ Some college or training after high school  
 5 ☐ Finished college  
 6 ☐ Advanced degree (e.g., Master's Degree, PhD, MD)  
 7 ☐ I don't know

**33. Which of the following best describes your current work situation?**

- 1 ☐ Working full-time  
 2 ☐ Working part-time  
 3 ☐ Stay at home caregiver  
 4 ☐ Currently unemployed, but actively seeking work  
 5 ☐ Not working for pay (unable to work, retired, student)

**34. Does your household receive public assistance (like food support/stamps, EBT, WIC, TANF, SSI or MFIP)?**

- 1 ☐ No  
 2 ☐ Yes  
 3 ☐ I don't know

**35. Please indicate how often each statement was true for your household in the last 12 months:**

	Often true	Sometimes true	Never true
a. The food that we bought just didn't last, and we didn't have money to get more			
b. We couldn't afford to eat balanced meals			

**36. In the last 12 months, did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?**

- 1 ☐ No
- 2 ☐ Yes, only 1 or 2 months
- 3 ☐ Yes, some months but not every month
- 4 ☐ Yes, almost every month

**37. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?**

- 1 ☐ No
- 2 ☐ Yes
- 3 ☐ Don't know

**38. In the last 12 months, were you ever hungry but didn't eat because there was not enough money for food?**

- 1 ☐ No
- 2 ☐ Yes
- 3 ☐ Don't know

**39. What was the total income of your household before taxes in the past year?**

- 1 ☐ Less than \$20,000
- 2 ☐ \$20,000 – \$34,999
- 4 ☐ \$35,000 – \$49,999
- 5 ☐ \$50,000 – \$74,999
- 6 ☐ \$75,000 – \$99,999
- 7 ☐ \$100,000 or more

**40. What is your birth date?** |\_\_|\_\_| |\_\_|\_\_| |\_\_|\_\_|

**Thank You!**

## APPENDIX F

**This survey is to be completed by the same CHILD (11-18 year old).**

**Thank you for agreeing to complete this survey! Your time and effort is greatly appreciated.**

- The survey you are about to complete is very important! The information you share with us will be used to develop health and nutrition programs for youth. Please answer every question carefully.
  - Do not spend too much time on any one question. If something is not clear, please ask for an explanation. You can ask your mom/dad or contact me. My contact information can be found on the youth assent form that came with this survey.
  - This is NOT a test. There are no right or wrong answers to the questions.
  - Your name will not be on this survey so please be as honest as you can in your responses.
- 

***Let's START with some GENERAL QUESTIONS about you***

**1. Are you ...?**

- 1 ☐ Male  
2 ☐ Female

**2. What is your birthdate?**    /    /      
Month Day Year

**3. What grade are you in (starting in the August 2014 school year)?**

- 1 ☐ 6<sup>th</sup>  
2 ☐ 7<sup>th</sup>  
3 ☐ 8<sup>th</sup>  
4 ☐ 9<sup>th</sup>  
5 ☐ 10<sup>th</sup>  
6 ☐ 11<sup>th</sup>  
7 ☐ 12<sup>th</sup>

**4. Which of the following school category do you attend?**

- 1 ☐ Public school  
2 ☐ Private school  
3 ☐ Home school  
4 ☐ Others: \_\_\_\_\_

**5. Do you think of yourself as...? (You may choose more than one)**

- 1 ☐ White
- 2 ☐ Black or African American
- 3 ☐ Hispanic or Latino
- 4 ☐ Asian American
- 5 ☐ Native Hawaiian or other Pacific Islander
- 6 ☐ American Indian or Native American
- 7 ☐ Other: \_\_\_\_\_

**6. Were you born in the United States?**

- 1 ☐ Yes
- 2 ☐ No: In what country? \_\_\_\_\_

**7. About how long have you been in the United States?**

- 1 ☐ Less than 1 year
- 2 ☐ 1 to less than 5 years
- 3 ☐ 5 to less than 10 years
- 4 ☐ 10 years or more
- 5 ☐ Always

**8. What language is usually spoken in your home?**

- 1 ☐ English
- 2 ☐ A language other than English: What other language? \_\_\_\_\_
- 3 ☐ English and another language about equally: What other language? \_\_\_\_\_

***Your EATING HABITS...  
when, why, how, and what?***

**9. During the past week, how many days did you eat *breakfast*?**

- 1 ☐ Never
- 2 ☐ 1-2 days
- 3 ☐ 3-4 days
- 4 ☐ 5-6 days
- 5 ☐ Every day

**10. During the past week, how many days did you eat *lunch*?**

- 1 ☐ Never
- 2 ☐ 1-2 days
- 3 ☐ 3-4 days
- 4 ☐ 5-6 days
- 5 ☐ Every day

**11. During the past week, how many days did you eat *dinner*?**

- 1 ☐ Never
- 2 ☐ 1-2 days
- 3 ☐ 3-4 days
- 4 ☐ 5-6 days
- 5 ☐ Every day

**12. In the past week, how often did you eat something from a fast food restaurant (like McDonald's, Burger King, Hardee's, etc.)?**

- 1 ☐ Never  
 2 ☐ 1-2 times  
 3 ☐ 3-4 times  
 4 ☐ 5-6 times  
 5 ☐ 7 times  
 6 ☐ More than 7 times

**13. Are you a vegetarian?**

- 1 ☐ Yes  
 2 ☐ No (If no, then go to question #14)

**14. As a vegetarian, do you eat any of the following? Please check/tick your response.**

	<i>Yes</i>	<i>No</i>
a. Eggs		
b. Dairy food (such as milk, cheese)		
c. Chicken		
d. Fish		

**15. In the past year, how many times did you usually drink the following? Please check/tick your response.**

	<i>Never or less than once per month</i>	<i>1-3 per month</i>	<i>1 per week</i>	<i>2-4 per week</i>	<i>5-6 per week</i>	<i>1 per day</i>	<i>2 or more per day</i>
a. an energy drink (such as Red Bull, Full Throttle, Rockstar, etc)?							
b. a sports drink (such as Gatorade, Powerade, etc)?							

**16. How strongly do you agree with the following statements? Please check/tick your response.**

	<b>Strongly Disagree</b>	<b>Somewhat Disagree</b>	<b>Somewhat Agree</b>	<b>Strongly Agree</b>
a. Milk tastes good to me				
b. I like the taste of most fruits				
c. I like the taste of whole wheat bread				
d. Most vegetables taste bad				
e. Most healthy foods just don't taste that great				
f. Eating healthy just costs too much				
g. I am a picky eater				
h. I like to cook				
i. I am worried about gaining weight				
j. I think a lot about being thinner				
k. I weigh myself often				

**17. Which of the following best describes your eating behavior?**

	<b>Hardly ever</b>	<b>Sometimes</b>	<b>Much of the time</b>	<b>Almost always</b>
a. I stop eating when I feel full				
b. I eat everything that is on my plate, even if I'm not that hungry				
c. I trust my body to tell me how much to eat				

**18. How often are the following true?**

	<b>Never</b>	<b>Sometimes</b>	<b>Usually</b>	<b>Always</b>
a. Fruits and vegetables are available in my home				
b. Vegetables are served at dinner in my home				

c. I have 'junk food' in my home				
d. I have fruit juice in my home				
e. Milk is served at meals in my home				
f. Potato chips or other salty snack foods are available in my home				
g. In my home, there is fresh fruit on the counter, table or somewhere where I can easily get it				
h. Chocolate or other candy is available in my home				
i. Soda pop is available in my home				
j. In my home, there are cut-up vegetables in the fridge for me to eat				
k. Whole wheat bread is available in my home				

**19. In the past month, how often did you eat something from the following types of restaurants (include take-out and delivery)?**

	<i>Never/ rarely</i>	<i>1-3 times per month</i>	<i>1-2 times per week</i>	<i>3-4 times per week</i>	<i>5-6 times per week</i>	<i>1+ times per day</i>
a. Traditional "burger-and fries" fast food restaurant (such as McDonalds, Burger King, Wendy's, or Culvers)						
b. Mexican fast food restaurant (such as Taco Bell, Taco Johns, or Chipotle)						
c. Fried chicken (such as KFC)						
d. Sandwich or sub shop (such as Subway, Panera, or Quiznos)						
e. Pizza place						
f. Sit-down restaurant (where wait-staff brings food to your						

table)						
--------	--	--	--	--	--	--

***FAMILY may affect your eating & activity habits, so we'd like to know more about them.....***

**20. Which adults do you live with? (Mark all that apply)**

- ☐ 1 my mother  
☐ 2 my father  
☐ 3 sometimes with my mother, sometimes with my father (they have separate homes)  
☐ 4 stepmother  
☐ 5 stepfather  
☐ 6 my grandparent(s)  
☐ 7 other relative(s)  
☐ 8 an adult or adults I am not related to (other than stepparents)  
☐ 9 other: \_\_\_\_\_

***EATING TOGETHER with your FAMILY and FOOD in your HOME***

**21. During the past seven days, how many times did all, or most, of your family living in your house eat a meal together?**

- ☐ 1 Never  
☐ 2 1-2 times  
☐ 3 3-4 times  
☐ 4 5-6 times  
☐ 5 7 times  
☐ 6 More than 7 times

**22. During the past seven days, how many times did all, or most, of your family living in your house eat...**

	<i>0 days</i>	<i>1-2 days</i>	<i>3-4 days</i>	<i>5-6 days</i>	<i>7 days</i>
a. breakfast together?					
b. lunch together?					
c. dinner or supper together?					

**23. How strongly do you agree with the following statements?**

	<b>Strongly Disagree</b>	<b>Somewhat Disagree</b>	<b>Somewhat Agree</b>	<b>Strongly Agree</b>
--	--------------------------	--------------------------	-----------------------	-----------------------



a. I enjoy eating meals with my family				
b. In my family, we often watch TV while eating dinner				

**24. In the past week, how many times did all, or most, of your family living in your household eat out together at a restaurant?**

- 1 ☐ Never  
 2 ☐ 1 time  
 3 ☐ 2 times  
 4 ☐ 3 or more times

**25. In the past week, how many times did you help make dinner or supper for your family?**

- 1 ☐ None  
 2 ☐ 1-2 times  
 3 ☐ 3-4 times  
 4 ☐ 5-6 times  
 5 ☐ 7 times

**26. Do you qualify for free or reduced-price school lunch?**

- 1 ☐ No  
 2 ☐ Yes  
 3 ☐ I don't know

**27. Which of these statements best describes the food eaten in your home in the last 12 months:**

- 1 ☐ Often we don't have enough to eat  
 2 ☐ Sometimes we don't have enough to eat  
 3 ☐ We have enough to eat but not always the kinds of food we want  
 4 ☐ We always have enough to eat and the kinds of food we want

**Thank You!**

**Please hand this completed survey to your mom/dad/caregiver so it can be returned to the researcher.**

## APPENDIX G

ID:

Child ages:

Target child:

Target child's gender:

Coder:

00:10-00:20	00:20-00:30	00:30-00:40	00:40-00:50	00:50-01:00	01:00-01:10	01:10-01:20	01:20-01:30	01:30-01:40	01:40-01:50
01:50-02:00	02:00-02:10	2:10-2:20	2:20-2:30	2:30-2:40	2:40-2:50	2:50-3:00	3:00-3:10	3:10-3:20	3:20-3:30
3:30-3:40	3:40-3:50	3:50-4:00	4:00-4:10	4:10-4:20	4:20-4:30	4:30-4:40	4:40-4:50	4:50-5:00	5:00-5:10
5:10-5:20	5:20-5:30	5:30-5:40	5:40-5:50	5:50-6:00	6:00-6:10	6:10-6:20	6:20-6:30	6:30-6:40	6:40-6:50

Context and environment:

Overall thoughts:

## APPENDIX H

## Interview Protocol

1. Firstly, thank you so much for agreeing to participate in this study. Again, my name is Car Mun and I would just like to talk to you about your experiences as parent during family mealtimes. First, I would like you to think about your most recent family meal, or a typical family meal over the past week.
2. Who was present during the meal time?
  - a. Are there any rules regarding being present during mealtime?
  - b. If there were family members who were not present, why were they not present? What are some of the barriers/challenges with having all members present during mealtimes?
3. What types of food were being served during the meal?
  - a. Who decides the food/dishes for the meal?
  - b. Do you usually cook, have convenience meals, eat out, take-out, etc.?
  - c. How much planning is involved in deciding what food to serve for the meal?
  - d. What role does the type of food served play in mealtimes? Is the type of food an important aspect of mealtime?
  - e. Does the way the meal is served (build own plate, pre-plated, family-style, etc.) dependent on the type of food during the meal?
  - f. Do you ever have family meals outside of the home, either at someone else's place or outside at an eatery/restaurant? If yes, how often?
4. Who prepared the food?
  - a. Was there help in food preparation?

- b. Part of food preparation is doing grocery shopping. Can you tell me more about that (e.g., how long and often, do you go alone, etc.)
  - c. How long does it take for the food to be prepared/cooked?
  - d. How long does it take for the cleaning-up after the meal? Did you get help during clean-up?
  - e. If there was no help, did you wish you had help with food preparation/cooking/cleaning or are you fine with handling it by yourself?
5. Did everyone sit down at the meal at the same time?
- a. If no, why?
6. Was there any conversation during the meal time?
- a. If yes, what were the topics of the conversation?
  - b. Who talked during the meal time and who talked the most?
  - c. Is there any one person that guides the conversation? Who and how?
  - d. If there was no conversation, why? (This question will be skipped if participant responded affirmatively to 'a.')
7. How long did the meal last?
8. Did you have a TV switched on in the same room you were dining in?
9. Were there any technological devices (e.g., cell phones, tablets, laptops, mp3 devices) around the dinner table?
- a. Were any of the devices being used during the mealtime? (e.g., anyone talking on the phone, texting, playing games, etc.)
  - b. What are your thoughts on that in regards to technological devices and TV?

10. Thinking about the mealtime that you have described so far - was this a pretty typical mealtime?
11. What are some of your thoughts about family mealtimes in general?
  - a. Do you think it is important or not important relative to other things in your life right now?
12. How do you view your own family mealtimes in general?
  - a. What do family mealtimes mean to you?
  - b. What do you think family mealtimes mean to your child(ren)?
  - c. What do you think family mealtimes mean to your spouse (if any)?
  - d. Do you think mealtimes would be different if there were younger/older children at home?
  - e. If only one child at home, do you think family mealtimes would be different if there were more than one child living at home?
  - f. Did you have family meals growing up? Could you describe them?
13. Is there anything that you would like to change or do differently regarding your own family mealtimes?
  - a. If yes, what and why?
14. Is there anything else you would like to add about family mealtimes, either your own family mealtime or in general?

Thank you so much for your time! I really appreciate it!