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# Raising Eaters Part II: Generational Effects of Parenting Styles on Females Eating Behaviors in Childhood

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by

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Raising Eaters Part II: Generational Effects of Parenting Styles on Females Eating Behaviors in Childhood

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**ABSTRACT**

TITLE: Raising Eaters Part II: Generational Effects of Parenting Styles on Females Eating Behaviors in Childhood

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Over the past four decades pediatric obesity rates have more than tripled and child eating disorders are on the rise, suggesting a significant health concern in children's eating habits (US Department of Health and Human Services, 2013; Rosen, 2010). As females are identified as most at risk for disordered eating (Collins, 1991) and mothers remain the primary caretakers of children at home, females are the focus of the present study. Following Bandura's principles of observational learning, attitudes regarding eating practices and body image are likely to be transmitted from mother to daughter and perpetuated across generations through parental control and parental modeling. Therefore, the present study aims to examine eating behaviors across three generations of females: the participant, maternal caregiver, and oldest daughter. Two generations of parenting styles will be examined in relation to the children's subsequent eating behaviors: that of the participant and that of her maternal caregiver.

Participants completed the Parenting Style and Dimensions Questionnaire (PSDQ-SF), Three Factor Eating Questionnaire (TFEQ-R18V2), Child Feeding Questionnaire (CFQ-Revised), and Parental Dietary Modeling Scale (PDMS). It was hypothesized that: (1) parenting styles of participants and participants' maternal caregivers will be positively correlated, (2) eating behaviors of the participant and their

oldest daughter will be positively correlated, (3) parental *restrictive control* will be positively correlated with child *uncontrolled and emotional eating*, and negatively correlated with *cognitive restraint,* (4) parental *pressure to eat control* will be positively correlated with child *cognitive restrained eating* and negatively correlated with child *uncontrolled* and *emotional eating* (5) *authoritarian* parenting will be predictive of greater parental *restriction* and *pressure to eat control*, (6) *authoritarian* parenting will be predictive of more *cognitive restraint*, *uncontrolled*, and *emotional eating behavioral patterns*, (7) and parental *modeling* will account for more predicted variance as compared to parental *control.* Overall, results suggest a transgenerational effect of modeling on the adoption of permissive parenting and eating behavioral patterns. Additional findings include *pressure to eat control* being positively correlated with cognitive restraint, authoritative parenting being predictive of emotional eating, and authoritarian parenting being predictive of restrictive control.

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# INTRODUCTION

Over the past four decades pediatric obesity rates have more than tripled and child eating disorders are on the rise, suggesting a significant health concern in today's youth eating habits (US Department of Health and Human Services, 2013; Rosen, 2010). Although society has shifted toward more egalitarian gender roles in families, women remain the primary child caregivers. Therefore, mothers tend to directly influence children's feeding practices and lay the groundwork for children's future self-conceptualization, body image, and their subsequent relationship and attitudes regarding food and eating practices. Females in particular are significantly preoccupied with how their bodies should look, which subsequently affects their self-image and shapes their attitudes and relationship with food as a reaction to the way they feel about themselves and their bodies. Based on Bandura's principles of observational learning, which suggests that children will internalize modeled behaviors that they observe, attitudes regarding one's self, body, and eating practices are likely to be transmitted from mother to daughter and perpetuated across subsequent generations through parental *modeling* and parental *control*.

The current study, "*Raising Eaters Part II: Generational Effects of Parenting Styles on Females Eating Behaviors in Childhood*", is a continuation study of Drvoshanov, Chavez, Perdigao, and Van Sickle's 2015 study *Raising Eaters: The Intersection of Parenting Styles and Females' Self-Esteem, Disordered Eating, and Eating Behaviors.* Drvoshanov, et al., 2015 recruited (n=235) female participants, 24 years and older, to assess the effects of participant's maternal caregiver's parenting style

(i.e. *Authoritative*, *Authoritarian*, or *Permissive*) on participant's self-esteem and behavioral eating patterns (i.e. *cognitive restraint*, *uncontrolled eating*, and *emotional eating*). It was hypothesized that participants raised by *authoritarian* maternal caregivers would demonstrate significantly high levels of *cognitive restraint* or *uncontrolled eating* behavioral patterns. It was further hypothesized that this would be contrasted with participants who reported being raised by *authoritative* maternal caregivers, who were expected to demonstrate normal levels of *cognitive restraint*, *emotional eating*, and *uncontrolled eating* behavioral patterns. Drvoshanov et. al., 2015 found that participants who reported being raised by *authoritarian* maternal caregivers did in fact show higher levels of *cognitive restraint* when compared to their authoritative counterparts. What was less clear from Drvoshanov et. al.'s (2015) study is whether these behavioral eating patterns were a function of parental modeling or the controlling nature of the authoritarian parenting style. In addition, this study begged further questions as to whether these behavioral eating patterns continue to perpetuate in subsequent generations. As such, the current study *Raising Eaters Part II: Generational Effects of Parenting Styles on Females Eating Behaviors in Childhood"* hopes to focus on the eating behavioral patterns of three generations of females: the participant's maternal caregiver, the participant, and the participant's oldest daughter.

Therefore, the present study's aim is to focus on the eating behavioral patterns of three generations of women: the participants, their maternal caregivers, and the participant's oldest daughter. Two generations of parenting styles, will be examined (i.e. those of the participant's maternal caregiver and the participant) in relation to their

children's subsequent eating behavioral patterns. The parenting styles examined will be *authoritative* parenting style and *authoritarian* parenting style. Exploring the transmission of parenting styles, use of parental modeling and parental control, and eating behavioral patterns may hold potential implications for addressing the growing epidemic of childhood obesity.

## ***Background***

### Obesity Epidemic

Not only have obesity rates increased in the general population, but they have skyrocketed in children and adolescents. Worldwide, adult obesity has more than doubled since 1980 and more than tripled for childhood obesity (US Department of Health and Human Services, 2013). Within this alarming statistic, 42 million of these cases were children under the age of 5, who were clinically diagnosed as being overweight (WHO, 2015). In fact, around the world, obesity has been more recently linked with more deaths than being underweight (WHO, 2014). This further exemplifies that in our world today food has become more accessible and people are inundated with messages stating that "more is better." Moderation is not emphasized.

From a young age, children are surrounded by unhealthy messages related to food, eating, and dieting. It is nearly impossible to go anywhere in public without seeing a billboard advertising a fast food restaurant or a sign promising 2-for-1 extra-large, stuffed-crust pizzas. It is hard to turn on the TV or radio without hearing about supersized meal offers at a local drive-thru. Children and adults are constantly inundated with

exposure to visual images and audio messages about oversized portions, and unhealthy nutritional choices. These messages along with the fast-paced nature of today's society, make fast food a convenient option for parents and their children on-the-go. Additionally, there are immediate, short-term economic savings that accompany a fast food diet, making the appeal of such lifestyles more intriguing to families, particularly among the lower socioeconomic class. Statistics show that eating a healthy, well-rounded diet costs on average $1.50/day more than eating an unhealthy diet (Rao, M., Afshin, A., Singh, G., & Mozaffarian, D., 2013). Although this may not seem like a lot of money from a day-to-day standpoint, it adds up to approximately $550.00 per person over the course of one year (Rao et al., 2013). Additionally, research shows that people from higher socioeconomic status groups with higher education tend to purchase more fruits and vegetables and have higher quality diets compared to those of lower socioeconomic status groups (Mancino, Lin, & Ballenger, 2012).

Being overweight or obese is accompanied with a vast amount of debilitating and life threatening health concerns, which our youth are now increasingly at risk for at an astonishing rate. These health risk factors include, but are not limited to, coronary heart disease, high blood pressure, stroke, and type 2 diabetes. Obesity alone is responsible for 44% of cases of diabetes, 23% of cases of ischemic heart disease, and between 7% and 41% of cases of certain cancers (WHO, 2014).

There are likely many factors leading to this increase in obesity rates. One possible factor may involve the transmission of attitudes from previous generations regarding the significance of food in one's life as a result of enculturation rituals and

parenting practices. A common phrase echoed by many parents and caregivers is "*Always clean your plate.*" Those comments have their roots in eras of scarcity and limited access to food, such as the 1920's-1940's, particularly the Great Depression. It is important to consider, however, how these attitudes and values have come to be transmitted, and subsequently internalized by younger generations.

From as early as age 2, children are targeted and exposed to unhealthy nutritional, and dietary messages (Melnick, 2010). They are surrounded by advertisements of high caloric foods and influenced by the vast amounts of processed meals that are readily accessible and marketed with child-appealing promotions such as a free toy. Such advertisements are promoted by iconic companies such as McDonalds, Taco Bell, and Dominos. Companies create marketing strategies that target young children, utilizing colorful cartoon characters and toys, or developing games or sweepstakes along with their products. Even the placement of food on grocery store shelves is strategic, as shown by a study finding that sugary cereals targeting children are frequently located on lower shelves compared to those targeting adults (Musicus, Tal, & Wansink, 2015).

Furthermore, the American Psychological Association (APA, 2013) report on the impact of food advertising on childhood obesity stated that most children 6 years and younger cannot distinguish between programming and advertising. Accordingly, children under the age of 8 do not understand the persuasive nature behind the advertising ploys (American Psychological Association, 2013). These advertisements pose a significant ethical dilemma in targeting unhealthy messages to young children who may be vulnerable due to not being sufficiently cognitively developed enough to fully evaluate

these messages in terms of the potential detrimental harm to oneself. Nonetheless, junk food advertising has become a billion dollar industry; it is estimated that each year children see at least 1.6 billion dollars-worth of such advertisements (Gottesdiener, 2014). A report issued by the Institute of Medicine (2006) stated, "It can be concluded that television advertising influences children to prefer and request high-calorie and low-nutrient foods and beverages." Additionally, a new trend has taken place with the rise of gaming, computers, tablets, and smart phones. With increased access to children through electronic social media, companies have begun creating online games and websites to further market their products in an arena less likely to be surveyed by parents in the privacy of children's technological devices. The vast majority of this audience tends to be children and adolescents. In the month of February 2011, it was found that approximately 350,000 children under the age of 12 visited two of the main websites created by McDonalds, Happymeal.com and Mcworld.com (Gottesdiener, 2014).

Despite the increase in obesity, discussion of strict dieting fads has also become more widely accepted and commonplace and is also targeting younger and younger age groups. A new online tool from the *New York Times*, called the Chronicle, is used to chart and track the trends of various conversational topics in America. Data shows trends associated with conversational topics of food, nutrition, and dieting in the past 25 years are higher than any other conversational topic in America in the entire previous century (Narula, 2014).

Further examination of research regarding dieting targeting younger age groups shows surprising results. Blaszczak-Boxe (2014) found that dieting at a younger age was

associated with higher weight-control behaviors and led to a greater chance of being obese at a 10-year follow-up. The study found that individuals were having diets implemented by their caretaker at as young as 3 years old (Blaszczak-Boxe, 2014). Moreover, either indirectly or directly influencing children or adolescents to engage in dieting can have not only opposite intended effects but adverse effects as well later in life. However, despite the findings regarding the premature introduction to dieting potentially having adverse late effects, the Chronicle findings (Narula, 2014) demonstrate that adults in American society are obsessed with talking about dieting.

Parental Modeling of Eating Behaviors

In addition to listening to media content and observing advertisement footage children are also listening and observing the food choices and dieting practices of their parents and caregivers, and subsequently develop similar habits of their own (Brown & Ogden, 2004). According to Bandura's principles of observational learning, from a young age we look up to our parents and observe their habits and behaviors, whether they are adaptive or maladaptive (Bandura, 1977). Therefore, parents may also serve as significant influential socialization agents, shaping their children's food choices and eating habits. Furthermore, recent research supports the notion that children tend to engage in eating habits and behaviors modeled by the same sex parent (Blissett, Meyer, and Haycraft, 2006). More specifically, there have been significant findings supporting the relationship between mothers and daughters in transgenerational eating behaviors (Braet & Crombez, 2003). Furthermore, although society is moving towards more egalitarian gender roles in

families, mothers continue to serve as the primary caregivers to their children. Today, censuses shows that roughly 60% of households have two working parents. However, of this percentage, fathers still spend more time engaged in paid work when compared to mothers, who spend more time on child caretaking and household responsibilities (Parker & Wang, 2013). For these reasons, the present study will focus on maternal caregivers and how their parenting styles affect child feeding, and eating behavioral patterns influence their daughters eating behavioral patterns.

### *Baumrind's Parenting Styles and Child Feeding Practices*

Following theories of enculturation, socialization, and social learning theory, parenting styles may contribute to healthy and unhealthy eating behaviors. The construct of parenting encompasses two main domains: *demandingness* and *responsiveness* (Maccoby & Martin, 1983). Accordingly, research conducted at the University of California, Berkley categorized three types of parenting styles: *authoritative, authoritarian*, and *permissive* (Baumrind, 1967, 1971). These parenting styles were formulated based on the measures of utilized control (demandingness), and the measures of imposed warmth, nurturance, and contingent responsivity (responsiveness). The *authoritative* parenting style is defined as parenting that conveys high demandingness and high responsiveness. The *authoritarian* parenting style is defined as high demandingness and low responsiveness. Lastly, the *permissive* parenting style is defined as low demandingness and high responsiveness (Baumrind 1967, 1971).

Hubbs-Tait, Kennedy, Page, Topham, and Harrist (2008) indicated that the feeding practices parents implement with their children have been shown to be predictive of the predominant parenting style utilized by parents. For example, the usage of *monitoring*, *modeling*, and *restriction* was predictive of an *authoritative* parenting whereas usage of *pressure to eat* and *restriction* was predictive of *authoritarian* parenting (Hubbs-Tait et al, 2008). Hubbs-Tait et al. (2008) suggested that parental feeding practices used with children had a direct correlation with the predominant parenting style used by the caregiver. Therefore, Hubbs-Tait et al. (2008) concluded that when examining any interventions or information tied to feeding practices, failing to take the underlying parenting style into account would likely be disadvantageous (Hubbs-Tait et al., 2008).

The *authoritative* parenting style is defined by high control/demandingness as well as high warmth/responsiveness (Darling, 1999). They practice being assertive with their children, without being intrusive or restrictive (Baumrind, 1991). They also tend to display clear standards for their children's behavior while maintaining supportiveness (Baumrind, 1991). Research has deemed *authoritative* parenting as the optimal parenting style, as it has been shown to have various positive impacts on children and adolescents. *Authoritative* parenting may be described as parents treating their children fairly and with acceptance, yet democratically and firmly (Steinberg, Elmen, & Mounts, 1989; Steinberg, Mounts, Lamborn, & Dornbusch, 1991). More specifically, Steinberg et al. (1989) showed that *authoritative* parenting facilitated academic success by fostering children's development of positive attitudes about their abilities to achieve. Furthermore, Steinberg

et al. (1989) found that *authoritative* parenting also helped children develop a healthy sense of autonomy and a healthy psychological orientation regarding work. Regarding feeding, Patrick, Nicklas, Hughes, and Morales (2005) found that *authoritative* parenting was positively associated with parents attempts to get their children to consume dairy, fruits, and vegetables and the reported child consumption of dairy and vegetables.

Such findings regarding healthy food consumption were contrasted with *authoritarian* parenting, which was negatively associated with children's consumption of vegetables. Based on the results of this study, the authors concluded that there are benefits of using *authoritative* parenting for child feedings, particularly if parents are trying to increase their child's consumption of healthy foods such as dairy, fruits, and vegetables (Patrick et al., 2005). Furthermore, Steinberg, Mounts, Lamborn, and Dornbusch (1991) showed children raised by *authoritative* parents had less frequencies of depression, anxiety, and delinquent behaviors, got higher grades in school, and were more self-reliant (Steinberg et al., 1991), indicating the overall positive child outcomes associated with the *authoritative* parenting style. The results suggest that it is the more optimal parenting strategy for rearing children with respect to eating behavioral patterns, among other things.

*Authoritarian* parents are defined by high control and low warmth/responsiveness. Home environments tend to be highly organized and structured (Darling, 1999). Rudy and Grusec (2006) have shown that this type of parenting may lead to lower self-esteem in children, particularly in individualistic cultures when compared to collectivistic cultures. Examining authoritarian parenting, Kelley (2014) explored parenting styles as

predictors of obesity in adulthood. This was a non-experimental study, which required college-age participants to complete a survey to indicate which parenting style their caregiver(s) used in rearing them. It was found that individuals raised by *authoritarian* parents were at a higher risk of becoming overweight or obese in adulthood. Kelley (2014) also concluded that the risk for obesity among authoritarian raised college age adults was greater for females, who indicated having higher BMI's in adulthood in general, when compared to their male counterparts (Kelly, 2014).

*Permissive* parents are defined by low control/demandingness and high warmth. These parents tend to be highly responsive to their children's needs but lack structure and demandingness (Darling, 1999). They tend to be lenient and nontraditional, allowing their children to engage in self-regulation while avoiding confrontation (Baumrind, 1991). Although these parents tend to regard their children with bounds of unconditional love, research shows that children raised by *permissive* parents may be more susceptible to anxiety, depression, and impulsive behaviors (Baumrind, 1967, 1971).

Rhee, Lumeng, Appugliese, Kaciroti, and Bradley (2006) found that *permissive* and *authoritarian* parents had the highest risk of having a child who is obese. However, Kremers, Brug, de Vries and Engels (2003) also found that children who had *permissive* parents actually consumed more fruit and generally had a more positive attitude toward eating fruit when compared to children raised by *authoritarian* parents. Although on the surface this may appear to be a positive outcome in child rearing practices around eating behavioral patterns, Bredehoft, Mennicke, Potter, and Clarke (1998) found that when children grow older and enter into adulthood, the children who were raised by *permissive*

parents had trouble regulating their eating, often resulting in overconsumption or uncontrolled eating. Thus, the issue was the poor self-regulation enacted by children in later adulthood as a function of the permissive parenting style and not just the actual healthy food intact, given that the types of food intact were driven by the types of food in their environment.

However, despite the provocative nature of the *permissive* parenting literature findings, the tendency for parents to endorse items indicating their predominant use of a *permissive* style of parenting is quite rare. Drvoshanov, Chavez, Van Sickle, and Perdigao (2015) found that of a sample of n=235, 0% (n=0) of participants endorsed using a predominantly *permissive* parenting style, compared to the remaining sample that endorsed either being more *authoritative* (77.8%, n=151) or *authoritarian* (21.1%, n=41) in their parenting style. While the etiology behind these findings are unclear, it is plausible that they are indicative of social desirability within the community ethos derived through common knowledge-based acceptance that *authoritative* parenting is the most optimal. Thus, parents sensitive to presenting themselves in a favorable light might be more inclined to endorse items that present themselves as demonstrating more ideal parenting behaviors. In addition, endorsements of the *authoritarian* parenting style or any elements of high endorsement of incorporating high structure and discipline, as is also seen with the *authoritative* parenting style and lend themselves to higher levels of parental *control*, may be indicative of the culture of the study sample located within the Southeast region of the United States. Within this geographical region, caregivers tend to hold more conservative views regarding discipline and parenting that are governed by

religious, and other Southern cultural mores and traditions that are exemplified in old adages like "*Spare the rod and spoil the child*."

Therefore, given the low probability of endorsing a *permissive* parenting style in similar Southeastern regions of the United States, it is difficult to examine the relationship between the *permissive* parenting style in relation to subsequent feeding practices and eating behavioral patterns among their children, as compared to the *authoritative* and *authoritarian* parenting styles, which have stronger elements of parental *control* that drive the parental feeding practices of their children. Parental *control* is described as parents influencing and directing their children's behavior. The vast literature on parental *control* (Birch & Fisher, 1998, Birch & Fisher in 2000, Birch, Fisher, & Davison, 2003) speaks to the powerful influence parental *control* serves in shaping children's eating behavioral patterns. Accordingly, such literature on parental *control* has examined its subsequent effects on various child eating outcomes (e.g. eating behaviors, dietary choices, weight/BMI, weight management, and disordered eating), with a substantive amount of this literature dedicated to child weight. Regardless of the type of child eating outcomes examined, the preponderant literature findings point to parental *control* as a significant predictor of child eating outcomes. In their review of 22 published studies, Faith, Scanlon, Birch, Francis and Sherry (2004) illuminated the consistent and critical association between parental *control* feeding practices, which as previously discussed, are heavily influenced by parenting style and child eating outcomes, specifically, child eating behaviors and weight. Faith et al. (2004) found that

86% (n=19) of studies showed at least one significant relationship between parental feeding and child eating outcomes.

### *Parental Influences on Child Eating Behavioral Patterns*

#### Definition and Measurement of Parental Control: Restriction, Pressure to Eat, and Monitoring

Several studies, including but not limited to Birch, Fisher, and Davison (2003), Hubbs-Tait, Kennedy, Page, Topham, and Harrist, (2008), and Ogden, Reynolds, and Smith (2006), set out to assess parental *control* using the Child Feeding Questionnaire (CFQ), which contains 3 variants of the parental *control* construct. They include parental *restriction*, *pressure to eat*, and *monitoring*. *Restriction* is defined as parents' restriction of their child's consumption of both types, and quantities of foods. A sample item from the CFQ measuring *restriction* is "*I have to be sure my child does not eat too many high fat foods.*" *Pressure to eat* is the parental encouragement of their child's consumption of certain types and quantities of foods. An example of a question from the *pressure to eat* subscale is "*My child should always eat all the food on her plate.*" Lastly, parental *monitoring* is described as the extent and ways in which parent's monitor/oversee their child's food consumption. For example, parents are asked, "*How do you keep track of the high fat foods that your child eats*?" (Birch, Johnson, Grimm-Thomas, & Fisher, 2004).

Birch, Fisher, and Davison (2003) used the Child Feeding Questionnaire to examine the use of parental *restriction* and how it affects child eating behavioral patterns in children ages 5, 7, and 9. The results indicated that parents who utilized more

*restriction* had children who were more likely to consume food when they were not hungry or in other words engage in *uncontrolled eating*/overeating. Birch et al. (2003) also found that the highest indications of eating without being hungry, (i.e. uncontrolled eating or overeating) and the propensity for such increasing trends were found among obese 5-year-old girls. (Birch et al., 2003). Results from Faith, Scanlon, Birch, Francis, and Sherry (2004) demonstrated similar findings leading them to conclude that parental *control*, in the form of *restriction*, is a significant predictor of the child's *uncontrolled eating*. Birch and Fisher (1998) demonstrated that the use of parental *control* in child feeding practices also affected children's choices in the foods they were willing to eat. Parental *control* also subsequently inhibited children's ability to self-regulate as a function of their lack of attunement to their body's own satiation. That is, children who were under high parental *restriction* tended to lack attunement to their own internal cues of whether or not they felt hungry, in order to determine their response with respect to food choice and consumption. It is conceivable that such high parental *restriction* resulted in these same children becoming so heavily reliant on their parents for instituting the structural parameters surrounding food intake that they lacked the opportunity to develop the self-regulatory skills for reading their own body's satiation cues in governing their food intake independently.

Based on these collections of studies, it is clear to see the pivotal role parental *control*, especially in the form of child *restriction*, plays in children's feeding practices and subsequent eating behavioral patterns, which appears to be linked to overeating. Overeating may be categorized as an *uncontrolled* eating behavioral pattern, which is

defined by the TFEQ (Karlsson, 2010) as losing control or overeating, and subsequently eating more than intended. Furthermore, it is also conceivable that the eating responses these children demonstrated were an emotional reaction to the parents' *restriction* and potentially over-controlling nature, resulting in the children wanting to indulge in self-comforting strategies that provided the warmth and nurturance not typically demonstrated by the low-warmth *authoritarian* parents. *Emotional eating* is described as eating when experiencing feelings of loneliness, anxiety, or being upset. Therefore, it is conceivable that the food becomes the only object in the child's world he/she can control, thereby reducing their anxieties, as well as offering them the warmth they lack from their parents.

Birch and Fisher (2000) further examined factors effecting child eating behavioral patterns and child weight in a study that pointed to the potential association of genetics and environmental factors, including parental *control* and possibly parental *modeling*. Birch and Fisher (2000) showed that mothers who were heavier were more likely to have daughters who were also heavier. However, this association was particularly strong when compounded by parental *controlling restrictive* practices. It was found that mothers who were trying to *control* their own weight and engaging in dietary restraint while also perceiving their daughters as overweight were more likely to engage in *restrictive* feeding practices with their own children. As a result, mothers using more *restriction* in child feeding practices had daughters who were less likely to be able to self-regulate their eating behavioral patterns. The children included in the Birch and Fisher (2000) study were on average, 5-years-old, which may suggest that eating and weight difficulties may be transmitted to children by their mothers as early as preschool. Thus, it is equally

conceivable that witnessing the maternal caregiver's behavioral *modeling* serves as a stronger and more overriding predictor for children's eating behavioral patterns, rather than simply acquiescing to one's maternal caregiver's *restrictive controlling* behaviors and indications for what and how much to eat. It may be plausible that making this dynamic between mother and daughter, a classic manifestation of the old adage, "*Do what I say, and not what I do,*" which proves ineffectual in raising children to produce a desired behavior, as in this case, of engaging in healthy eating practices. In summation, the current research (Birch & Fisher, 1998; Birch & Fisher, 2000; Birch, Fisher, & Davidson, 2003; Faith, Scanlon, Birch, Francis, & Sherry, 2004) enforces the ideas of the existing literature demonstrating that although the use of stringent parental *control* and *restriction* may be effective at altering child eating behavioral patterns immediately and temporarily, it may also have unintended and potentially harmful consequences to children's later development of self-regulation and negatively impact later outcomes in children's eating behavioral patterns such as *uncontrolled eating* and *emotional eating*.

However, *restriction* is not the only method of parental *control* that has been studied. Fisher, Mitchell, Smickilas-Wright, and Birch (2000) examined child feeding practices influenced by the use of parental *pressure to eat*, defined as the parental encouragement of their child's consumption of certain types and quantities of foods. They examined fruit and vegetable intake of parents and children, as well as parental *pressure to eat*. Fisher et al. (2000) found that when parents utilized more *control* in the form of *pressure to eat* in child feeding, their children consumed fewer fruits and vegetables. In other words, *pressure to eat* resulted in the opposite desired effect in their

children food consumption practices. This study also demonstrated findings that were suggestive of parental *modeling* in that children who were found to consume fewer fruits and vegetables were also shown to have parents who consumed fewer fruits and vegetables (Fisher et al., 2002). Galloway, Fiorito, Francis, and Birch (2006) echoed similar findings in their examination of pressure *to eat* in relation to child food consumption. That is, children tended to eat less the more they experienced *pressure to eat* from their parents. In contrast, children actually consumed significantly more food when their parents did not use *pressure to eat (*Galloway et al., 2006).

Therefore, these findings (Fisher et al., 2000; Galloway, Fiorito, Francis, and Birch, 2006) suggest that the use of *pressure to eat*, a form of parental *control,* only serve to deter children from eating desired foods, which has important implications for efforts to decrease childhood obesity rates and subsequent health concerns by rearing children to eat more healthy foods. It may be speculated that eating less when under control may be similar to the eating behavioral patter of *cognitive restraint*, where the individual restrains him/herself from eating certain foods or amounts of food.

In contrast to parental *pressure to eat* control strategies, *parental monitoring*, the third indicator of parental *control,* as per the CFQ, has been found to produce some favorable responses in eating behavioral patterns in children. *Parental monitoring* is described as the extent and ways in which parents monitor/oversee their children's eating behaviors. Klesges, Stein, Eck, Isbell, and Klesges (1991) examined *parental monitoring* effects on child eating behaviors and found that when mothers utilized *parental monitoring* with their children, their children consumed less unhealthy foods, and had

meals with lower caloric intake. These findings were consistent with that of Arredondo, Elder, Ayala, Campbell, Baquero, and Duerksen (2006) who found that parental monitoring was associated with greater consumption of healthy foods. Noteworthy, however, was this study's incorporation of positive reinforcement, which may have had a beneficial effect on the child's perception of *parental monitoring*.

In summation, the research seems to suggest that the use of *restriction* and *pressure to eat* tend to have detrimental effects, which may actually oppose the objectives of these techniques in rearing children toward healthy eating behavioral patterns. However, it seems that parental *monitoring* may be one form of parental control that has shown more positive and healthy child eating behavioral patterns. This may be due to the fact that *monitoring* involves more indirect oversight of what children are doing behaviorally, as opposed to a more stringent overt form of direct parental *control* seen with parental *restriction* or *pressure to eat.* Perhaps parental *monitoring*, although also a form of *control*, may demonstrate warmth because it is less demanding and direct and allows for children to engage in positive and healthy self-regulation of their own eating behaviors. Regardless, in this examination of the literature there is no denying the powerful effects of the various aspects of parental *control*. However, several studies reviewed including but not limited to Davis (2014) and Fisher, Mitchell, Smiciklas-Wright, and Birch (2002), also suggested additional influential factors other than parental *control,* which contributed to children's eating behavioral patterns, such as parental *modeling*.

Definition and Measurement Parental Modeling

*Modeling* is referred to as the process of vicarious learning through observation and imitation of others' behaviors. *Parental modeling,* therefore, typically occurs when children imitate behaviors observed by their parents and recreate these actions, which may then develop into steady and consistent behaviors. Such processes of behavioral imitation of parents can also be extended to eating behavioral patterns of children who will more than likely emulate their parent's eating behavioral patterns. Brown and Ogden (2004) showed that children tend to mirror their parents in the realm of dieting, whether healthy or unhealthy. Brown and Ogden (2004) also found that if parents engage in emotional eating, their children were more likely to do the same. Davis (2014) showed similar findings where children mirrored their parents' food choices.

However, Davis (2014) also discovered an interesting counter-intuitive relationship with children's BMI. That is, contrary to the author's hypotheses, mothers who modeled higher levels of healthy eating behaviors had children with higher BMI's, whereas mothers who modeled higher levels of unhealthy eating behaviors had children with lower BMI's. Davis (2014) speculated that a possible explanation for this counter-intuitive finding may have been that mothers who reported healthier dietary *modeling* may have actually had higher caloric intake and may have had higher amounts of fat and sugar in their diets than realized. Nonetheless, the significant findings did support the notion that children imitate their parents' behaviors, and parental *modeling* was impactful to the development of child eating behaviors.

Similarly, as discussed previously with respect to parental *control*, Fisher, Mitchell, Smiciklas-Wright, and Birch's (2002) findings were also suggestive of parental *modeling*. In their study utilizing parental *control* related to fruit and vegetable intake, it was found that parents who modeled less consumption of fruits and vegetables and applied more *pressure to eat* had children who consumed less fruits and vegetables (Fisher et al., 2002). Thus, children were inclined to not only follow their parent's directives, but also do what their parents modeled, thereby suggesting and highlighting the powerful saliency of parental *modeling* as well in shaping children's eating behavioral patterns.

Additionally, there is evidence to suggest that these parental *modeling* effects from parent to child are most significantly heightened among same sex pairs, such as mothers to daughters. For example a study conducted by Blissett, Meyer, and Haycraft (2006) looked specifically at unhealthy eating habits and *restrictive* feeding practices of parents as predictors of their children's eating behaviors, in which significant gender effects emerged. That is, Blissett et al. (2006) found that children were more likely to be heavily influence by eating behaviors of the same sex parent. Furthermore, restrictive eating behaviors were more likely to be transmitted from parent to child of the same sex (Blissett et al., 2006).

Similarly, Braet and Crombez (2003) looked at *modeling* related to eating behaviors and eating pathology. The study looked specifically at mother-son relationships and mother-daughter relationships. There was no association between mother-son relationships, but there was a positive association among mother-daughter relationships

in relation to eating behaviors. Mothers who engaged in *emotional eating* patterns had daughters who were likely to emulate this *emotional eating* behavioral pattern. Braet and Crombez (2003) also found results related to another eating behavioral pattern, *cognitive restraint*. It was found that adolescents who had higher body weights were most often exposed to parental *modeling* of *cognitive restraint* as opposed to *emotional eating* (Braet & Crombez, 2003). This is similar to previously reviewed findings of Birch and Fisher (2000), which indicated that mothers who perceived their daughters as heavier or overweight and who used dietary restraint themselves were more likely to use restriction with their children. Therefore, along with parental *control* in the form of *restriction,* mothers may have been *modeling cognitive restraint* eating behaviors in their dieting practices to their daughters. Given that young girls are shown to be more readily affected than young boys, by issues related to eating behaviors and weight concerns (Collins, 1991), in tandem with the stronger effects for mother-daughter pairs in the research (Braet & Crombez, 2003), it seems prudent that subsequent research focus on the effects of parental *modeling* and parental *control* in mother-daughter relationships.

Parental Control Versus Parental Modeling

As previously reviewed, there are studies looking at both parental *control* and parental *modeling* on child eating behavioral patterns. However, what is less clear is if these two variables (i.e., parental *control* or parental *modeling)* are equally predictive of children's eating behavioral patterns, or if one is more influential than the other. Brown and Ogden (2004) examined these two constructs, parental *control* and parental

*modeling*, and the effects on children's eating attitudes and eating behavioral patterns. Brown and Ogden (2004) concluded that parental *modeling* was the more consistent and significant predictor of both child eating attitudes and eating behavioral patterns. More specifically, Brown and Ogden (2004) concluded that children mirrored their parents eating behavioral patterns, whether they encompassed healthy or unhealthy food consumption. However, Brown and Ogden (2004) also found results for parental *control*, indicating that when parents attempt to *control* or *restrict* their child's intake, their children engage in overconsumption or *uncontrolled eating*. This is consistent with the previously discussed literature (Birch et al., 2003; Faith et al., 2004), in that children tend to overeat or engage in *uncontrolled eating* when they are *restricted* from food. Unlike results found for parental *modeling*, Brown and Ogden (2004) did not find that parental *control* influenced child eating attitudes. Moreover, both parental *modeling* and parental *control* were shown to be influential on child eating outcomes; however, Brown and Ogden (2004) concluded that overall, parental modeling was a more consistent predictor of children's eating attitudes and eating behavioral patterns. This thereby supports the notion that parental *modeling* was the more influential predictor of children's food choices and eating behavioral patterns, over parental *control*.

As previously mentioned, there has been an increasing prevalence of dieting problems related to obesity and eating disorders, specifically found to be true for children. Previous research supports that diet and eating behavioral patterns learned in childhood persist through adulthood. Dickens and Ogden (2014) set out to determine which factor, parental *modeling* or parental *control*, was a better predictor for offspring's

diet and eating behaviors once they left home as young adults. This longitudinal study was conducted on a sample of 93 parent-child dyads. When examining the results, it was found that parental *modeling* was the best long-term predictor for *emotional eating* and consumption of unhealthy foods in adult offspring. Furthermore, this pattern was consistent even after the offspring left home. Additionally, Dickens and Ogden (2014) did not discover any significant findings related to parental *control,* and child eating behavioral patterns. Overall, parental *modeling* of *emotional eating* significantly predicted that the child would engage in *emotional eating.* Thus, parental *modeling* was shown to be a better predictor of offspring's eating behavior after leaving home. The authors speculated that one possible explanation for the lack of significant findings related to parental *control* may have been due to the fact that parental *control* is important in child diet and relationship with food while the child is at home living with their parents but does not carry over and subsequently deteriorates once the child lives independently outside their parents' household (Dickens & Ogden, 2014).

In summary, the literature related to whether parental *modeling* or parental *control* is the better predictor of child eating behavioral patterns has not been widely studied. Many studies, including but not limited to Birch et al. (2003), Faith et al. (2004), Fisher et al., (2002), and Galloway et al. (2006), have examined the effects of parental *control* on child eating behavioral patterns, while studies including but not limited to Brown and Ogden (2004) and Davis (2014) examined the effects of parental *modeling* on child eating behavioral patterns. Additionally, although some studies aimed to examined only the effects of parental *control* on child eating behavioral patterns, it appeared that there

may have been some evidence of parental *modeling*, as displayed in studies including Birch and Fisher (2000) and Fisher et al. (2002). Additionally, studies examining both parental *control* and parental *modeling* together (Brown & Ogden, 2004; Dickens & Ogden, 2014) have found some differing results for child eating behavioral patterns. As previously reviewed, Brown and Ogden (2004) found significant findings for both parental *modeling* and parental *control*, ultimately concluding that parental *modeling* was the more consistent predictor of child eating attitudes and eating behavioral patterns. However, Dickens and Ogden (2014) found parental *modeling* to be a long-term predictor of eating behavioral patterns (i.e.: *emotional eating*) in children but did not find any significant findings related to parental *control*. Therefore, it seems necessary to flesh out these two constructs by assessing maternal caregiver's *control* and *modeling* and comparing them together to determine how they affect outcomes specifically related to child eating behavioral patterns.

### *Eating Behavioral Patterns*

Accordingly, the researched literature points to efforts to measure three styles of eating behavioral patterns, which include *cognitive restraint*, *emotional eating*, and *uncontrolled eating*, as defined by the Three Factor Eating Questionnaire (TFEQ). *Cognitive restraint* is defined as controlling one's food intake in order to change one's weight or bodily shape. *Emotional eating* is described as an individual's food consumption driven by emotional urges. Finally, *uncontrolled eating* is defined as an

individual losing control or overeating and subsequently eating more than he/she intended.

In regards to *cognitive restraint*, as previously reviewed, Fisher et al. (2002) and Galloway et al. (2006) found that parental control in the form of *pressure to eat* resulted in children eating less. This could be suggestive of *cognitive restraint* in child eating behavioral patterns, where children *restrained* their consumption of food. Moreover, when parents attempted to get their children to eat more food, the children actually consumed less food (Fisher et al., 2002; Galloway et al., 2006), which is an important finding for parents who may have good intentions for wanting to *pressure* their children to eat healthy foods without realizing the *pressure* may have contrasting effects.

When examining *cognitive restraint* and *emotional eating* positive correlations have been found regarding eating behavioral patterns and weight/BMI. More specifically, Angle, Engblom, Eriksson, Saha, Lindfors, and Rimpela (2009) found that among child and adult females, the eating behavioral patterns of *cognitive restraint* and *emotional eating* were positively correlated with higher BMI. These results were similar to findings from Elfhag and Linne (2005), where it was discovered that both *cognitive restraint* and *emotional eating* behavioral patterns were positively correlated with BMI of adolescent girls and their mothers.

De Lauzon-Guillain, Romon, Musher-Eizenman, Heude, Basdevant, Charles, and Fleur-Laventie Ville Sante Study Group (2008) used the TFEQ to highlight the strong mirrored resemblance and correlational relationship in eating behavioral patterns among parents and their same sex offspring, particularly as it pertains to mothers and daughters.

That is, among 135 adolescents/young adults ages 14 to 22 and their parents, daughters' *uncontrolled* and *emotional eating* behaviors were found to be positively related to their mothers' scores in these domains. However, the same was not replicated for daughters with their fathers, or for mothers with their sons. Although there was also a strong correlation between fathers and sons, the relationship was more complex and presented in contradictory eating behavioral patterns. That is, fathers who possessed a *cognitive restrained* eating behavioral pattern produced sons who were the opposite of them, with *uncontrolled eating* tendencies. These findings may suggest that sons may not only resist being like their fathers but also strive to be the antithesis of their fathers. Therefore, what we can extrapolate from these findings is that, at least with respect to the potential for parental *modeling* to have a role in predicting child eating behavioral patterns, its effects might be more strongly seen with mother-daughter dyads, as compared to any other parent-child gender dyadic combination. Also these findings taken together with the preponderance of females having more concerns and issues related to eating behaviors and weight (Collins, 1991) may suggest that issues related to eating practices and child rearing are most relevant for women. Thus, with the male configuration of correlated opposing eating behavioral patterns, we see some potential support for the notion that parenting styles influence eating behavioral patterns.

Research shows that children raised by authoritarian parents, as might be the case with the *cognitive restrained* fathers in the Lauzon-Guilain et al. (2008) study, tend to overeat in adulthood, similar to the *uncontrolled eating* behaviors demonstrated in the Lauzon-Guilain et al. (2008) sons. Such findings may be due to subjects having a lack of

knowledge, independent experiences with self-regulation in eating and identifying their hunger cues or an increased desire for restricted foods, as often seen in *cognitive restrained* eating behaviors (Birch, 1998; Fisher & Birch, 1999; Meindl et al., 2002).

### *Present Study and Hypotheses*

As suggested in the literature review, children are influenced at a very young age by their caregiver's behaviors related to feeding practices. Children are raised under different parenting styles (*authoritative* and *authoritarian*) and exposed to varying degrees of parental *control* and parental *modeling* related to parental feeding practices and eating behavioral patterns. Research examining parental *control* has shown significant effects on child eating behavioral patterns such as *restriction* predicting *uncontrolled eating* and *emotional eating* (Birch et al., 2003; Faith et al., 2004) and *pressure to eat* predicting eating behavioral patterns similar to *cognitive restraint* (Fisher et al., 2002; Galloway et al., 2006). Furthermore, from a very early age, children look up to their parents, observing their behavioral habits, both adaptive and maladaptive, and subsequently internalize and mimic similar behaviors. Research examining parental *modeling* has shown that eating behavioral patterns (i.e., *cognitive restraint, uncontrolled eating, and emotional eating*) are transmitted from caregiver to child (Blissett et al., 2006), this being specifically true of mother-daughter dyads (Braet & Crombez, 2003).

The present study aims to examine the parenting style and eating behavioral patterns/styles of two generations of maternal caregivers and investigate the subsequent outcomes in eating behavioral patterns/style in their oldest daughter/granddaughter. It is

anticipated that this 3-generational examination of eating behavioral patterns/styles and 2-generational parenting styles will also illuminate and differentiate the specific predictive contributions of parental *control* and parental *modeling* on subsequent eating behavioral patterns/styles of parental offspring. More specifically, the current study seeks to examine how the parenting styles (i.e. *authoritative* versus *authoritarian*) of adult female mothers differ or remain similar to their maternal caregivers and how these parenting styles affect their oldest female child's eating behavioral patterns/style. The eating behavioral patterns/style will be measured via the TEFQ's subscales of *cognitive restraint*, *emotional eating*, and *uncontrolled eating*. Based on the current literature, this study seeks to examine the effects of parental *control* and parental *modeling* across three generations. That is, the female maternal participant, her maternal caregiver, and the participant's oldest female child. After reviewing the literature, the following hypotheses were generated:

*H1*: Participants' parenting style will be positively correlated and mirror the parenting style of their maternal caregivers.

*H2*: Eating behavioral patterns of the participant, the participants' maternal caregiver, and the participants' oldest daughter are expected to be similar and positively correlated.

*H3*: Participants' use of parental *control* in the form of *restriction* will be positively associated with *uncontrolled and emotional eating behavioral patterns of the participants' oldest daughter* and negatively correlated with *cognitive restrained eating behavioral patterns of the participants' oldest daughter.*

H4: Participants' use of parental *control* in the form of *pressure to eat* will be positively associated with *cognitive restraint eating behavioral patterns of the participants' oldest daughter.*

*H5*: Participants who reported being AUTHORITARIAN parents and having maternal caregivers who were AUTHORITARIAN parents will demonstrate greater caregiver *control* in *child feeding (CFQ)* practices in the form of *restriction* and *pressure to eat*, as compared to their AUTHORITATIVE counterparts.

*H6*: Participants who reported being AUTHORITARIAN parents and having maternal caregivers who were AUTHORITARIAN parents will demonstrate greater *cognitive restraint*, *uncontrolled eating*, and *emotional eating* behavioral patterns compared to their AUTHORITATIVE counterparts.

*H7*: It is hypothesized that parental *modeling* will account for significantly more of the predicted variance above and beyond parental *control* with respect to each of the eating behavior patterns (i.e., *cognitive restraint*, *emotional eating*, and *uncontrolled eating*.)

## METHODS

### *Study Design*

The present study utilized a correlational model. A correlational design was used for the purposes of assessing whether or not the parenting style (i.e., *authoritarian*, *authoritative*, and *permissive*) of the participant and the maternal caregiver were

correlated with one another across the two generations. Additionally, a correlational design was used to examine whether or not eating behavioral patterns (i.e., *cognitive restraint*, *uncontrolled eating*, and *emotional eating*) of the participant, the maternal caregiver, and the oldest daughter were correlated across the three generations. A correlational design was used to examine the relationship among participants use of parental control (i.e., *restriction* and *pressure to eat*) and oldest daughters' eating behavioral patterns (i.e., *cognitive restraint*, *uncontrolled eating*, and *emotional eating*).

The parenting styles of both generations were measured using the Parenting Style and Dimensions Questionnaire- Short Version (PSDQ- Short; Robinson et al., 2001). Participant *parental control* variables, which consisted of *restriction* and *pressure to eat,* were measured by the Child Feeding Questionnaire- Revised (CFQ; Birch, Fisher, Grimm-Thomas, Markey, Sawyer, & Johnson, 2001). Finally, eating behavioral patterns of *cognitive restraint*, *uncontrolled eating*, and *emotional eating* were measured using the Three-Factor Eating Questionnaire-Revised 18 Item (TFEQ-R18).

A correlational design was also used for the purposes of assessing the effects of parenting style strategies on subsequent use of parental control in child feeding practices. eating behavioral patterns across the three generations of females. More specifically, the design was used to distinguish whether authoritarian parenting strategies of maternal caregiver and participant significantly accounted for the most predictive variance for the participants' use of parental control in the form of restriction and pressure to eat, with their oldest daughter. Such predictive variance was assessed as being above and beyond any associated predictive variance accounted for by parenting style of both the

participant, and the participant's maternal caregiver, as well as all corresponding three generations of race, BMI, SES and health concerns. As such the predictive variables included: race, BMI, SES, health concerns, parenting style, maternal caregiver *parental control*, maternal caregiver and participant parenting style, and two-way interaction variables of participant and maternal caregiver parenting styles. Criterion variables included participant parental control in the form of *Restriction* and *Pressure to Eat*.

The parenting styles of both generations were measured using the Parenting Style and Dimensions Questionnaire- Short Version (PSDQ- Short; Robinson et al., 2001). The participant *parental control* variables, which consisted of *restriction* and *pressure to eat,* were measured by the Child Feeding Questionnaire- Revised (CFQ; Birch, Fisher, Grimm-Thomas, Markey, Sawyer, & Johnson, 2001). Participants were asked to describe their maternal caregivers feeding practices with the participant as a child. In addition, race, BMI, SES, and health concerns served as covariates.

A correlational design was also used for the purposes of assessing the effects of parenting style strategies on subsequent oldest daughters eating behavioral patterns. More specifically, the design was used to distinguish whether authoritarian parenting strategies of maternal caregiver and participant significantly accounted for the most predictive variance the participants' oldest daughters' eating behavioral patterns. Such predictive variance was assessed as being above and beyond any associated predictive variance accounted for by parenting style of both the participant, and the participant's maternal caregiver, as well as all corresponding three generations of race, BMI, SES and health concerns. As such the predictive variables included: race, BMI, SES, health concerns,

maternal caregiver and participant parenting style, and two-way interaction variables of participant and maternal caregiver parenting styles. Criterion variables included oldest daughters' eating behavioral patterns in the form of *cognitive restraint, uncontrolled eating,* and *emotional eating*.

The parenting styles of both generations were measured using the Parenting Style and Dimensions Questionnaire- Short Version (PSDQ- Short; Robinson, Mandleco, Olsen, and Hart, 2001). Eating behavioral patterns of *cognitive restraint*, *uncontrolled eating*, and *emotional eating* were measured by the Three-Factor Eating Questionnaire-Revised 18 Item (TFEQ-R18). In addition, race, BMI, SES, and health concerns served as covariates.

Finally, a correlational design was implemented to examine the relationship of *parental control* and *parental modeling* and child *eating behavioral patterns*. More specifically, the design was used to distinguish which of the two variables of *parental control* and *parental modeling,* significantly accounted for the most predictive variance for subsequent eating behavioral patterns of the participants' oldest daughter. The predictive variables included: race, BMI, SES, health concerns, parental *control*, parental *modeling*, and two-way interaction variables for maternal caregiver and participant *parental control* and *parental modeling*. Criterion variables included oldest daughters' *cognitive restraint*, *uncontrolled eating,* and *emotional eating*.

The participant and maternal caregiver *parental control* variables, which consisted of *pressure to eat, monitoring, restriction, and structure and rules* were measured by the Child Feeding Questionnaire- Revised (CFQ; Birch, Fisher, Grimm-

Thomas, Markey, Sawyer, & Johnson, 2001) and the Parental Dietary Modeling Scale (PDMS; Tibbs, Haire-Joshu, Schechtman, Brownson, Nanney, Houston, and Auslander, 2001). Participant and maternal caregiver parental modeling was measured using the Parental Dietary Modeling Scale (PDMS; Tibbs, et al., 2001). Oldest daughters' eating behavioral patterns, which consisted of *cognitive restraint, uncontrolled eating,* and *emotional eating*, were measures using the Three-Factor Eating Questionnaire-Revised 18 Item (TFEQ-R18). In addition, race, BMI, SES, and health concerns served as covariates.

***Procedures***

Prior to data collection, approval from the Florida Institute of Technology Institutional Review Board (IRB) was obtained. Participants were asked to participate in the present study, and upon agreeing they were be provided with a website address through Qualtrics.com, that directed them to the online survey. Once on the website, they were provided with a consent form (Appendix A), which was required to be completed prior to filling out the questionnaires. Special screening criteria was utilized in that all participants were required to be 18 years of age or older. By signing the consent form, participants acknowledged that they were of the appropriate age. For the purposes of the present study, only females who endorse being mothers of female children and being raised by a maternal caregiver were included in data analyses.

Informed consent (Appendix A) therefore was obtained from each participant and completed on the day of data collection. The study consists of 127 total questions, and

took approximately 40 minutes to complete. Participants completed a series of questionnaires including: the Parenting Style and Dimensions Questionnaire – Short Version (PSDQ - Short) as a measure of *parenting style*, the Child Feeding Questionnaire (CFQ) as a measure of parental *control in child feeding practices,* the Parental Dietary Modeling Scale (PDMS) as a measure of parental modeling, and the Three Factor Eating Questionnaire-Revised Item 18 (TFEQ-R18) as a measure of *eating behavioral patterns/styles.* Additionally, participants completed a demographic questionnaire (see appendix C) asking them to indicate their race, age, sex, height, weight and whether they have any health concerns.

Following completion of the aforementioned questionnaires, participants were provided with an online debriefing explaining the present study and provided with additional references and resources. Additionally, if interested participants were able to submit themselves in a drawing for a $25 Visa gift card raffle, by emailing edraisingeaters2@gmail.com with the subject line Raising Eaters Part 2 and thereby be entered into the drawing.

***Measures: Independent Variables***

Demographic questionnaire (Appendix C). Participants were asked to complete an objective demographic questionnaire assessing their race, age, sex, height, and weight. Participants were also asked to indicate whether they are on a special diet and information provided regarding weight and height were used to calculate participant

BMI. Additionally, they were asked to complete a demographic questionnaire in relation to their maternal caregiver (Appendix D) and their oldest daughter (Appendix E).

Parenting Style and Dimensions Questionnaire – Short Version (PSDQ – Short). The PSDQ-Short (Robinson et al., 2001) is a 32-item self-report measure, which was modified from the original 62-item *PSDQ (*Robinson, Mandleco, Olsen, & Hart, 1995*)*. Although the PSDQ-Short is designed to be completed by parents, research has shown that child-perceived parenting has significantly stronger associations with child dieting behaviors and body dissatisfaction when compared to the parents' own perspective regarding their parenting style (Haines, Neumark-Sztainer, Hannan, & Robinson-O'Brian, 2008). Therefore, for the purposes of the current study, this measure was filled out by study participants regarding their maternal caregiver's behavior toward them during their childhood. The PSDQ-Short Version assesses the quality of their parental interactions with their children. Factor analysis (Robinson et al., 2001) indicated three factors, which were labeled as *Authoritative, Authoritarian*, and *Permissive* Parenting Style factors. Originally, the present study was only going to examine the *Authoritative* and the *Authoritarian* parenting styles[1]. However, as will be explained in the results section, data analyses found some evidence of permissive parenting styles among participants and maternal caregivers and this style was therefore reported on in the results. The *Authoritative* factor consists of 15 items and has a Cronbach Alpha of .91.

[1] Hypotheses were not originally made regarding *permissive* parenting style for the purpose of the current study due to insufficient sampling among participants who reported having a maternal caregiver with a predominantly *permissive* parenting style in previous studies (Drvoshanov, Chavez, VanSickle, & Perdigao, 2015. However, the items pertaining to *permissive* parenting style from the PSDQ- Short were included in the survey for data collection.

The *Authoritarian* factor consists of 12 items and has a Cronbach Alpha of .86. The *Permissive* factor consists of 5 items and has a Cronbach Alpha of .75. The PSDQ-Short Version uses a 5-point Liket scale. The scale was included once for the participant to answer about their behaviors with their oldest daughter and a items were reworded and used a second time second time for the participant to answer in relation to her maternal caregiver's parenting style, while she was growing up (see appendix F).

*Authoritative parenting style*: Making one rating for each item, please rate how often YOU exhibited this behavior with your OLDEST DAUGHTER when she was growing up. [(1) Never, (2) Once in a While, (3) Half the Time, (4) Very Often, (5) Always]:

1. I am/was responsive to my OLDEST DAUGHTER'S feelings and needs.
2. I encourage(d) my OLDEST DAUGHTER to talk about her troubles.
3. I give/gave comfort and understanding to my OLDEST DAUGHTER when she is/was upset
4. I give/gave praise to my OLDEST DAUGHTER when she is/was good
5. I have/had warm and intimate times together with my OLDEST DAUGHTER.
6. I explaine(d) to my OLDEST DAUGHTER how I feel/felt about her good and bad behavior.
7. I emphasize(d) the reasons for the rules.
8. I give/gave my reasons why rules should be obeyed.
9. I help(ed) my OLDEST DAUGHTER to understand the impact of behavior by encouraging her to talk about the consequences of her own actions.
10. I explaine(d) the consequences of my behavior.
11. I take/took my OLDEST DAUGHTER'S desires into account before asking her to do something.
12. I encourage(d) my OLDEST DAUGHTER to freely express herself even when I disagreed with her.
13. I take/took into account my OLDEST DAUGHTER'S preferences in making plans for the family.
14. I respect(ed) my OLDEST DAUGHTERS opinions by encouraging her to express them.
15. I allow(ed) my OLDEST DAUGHTER to give input into family rules.

*Authoritarian parenting style*- Making one rating for each item, please rate how often YOU exhibited this behavior with your OLDEST DAUGHTER when she was growing up.

1. I use(d) physical punishment as a way of disciplining my OLDEST DAUGHTER.
2. I spank(ed) my OLDEST DAUGHTER when she is/was disobedient.
3. I grab(bed) my OLDEST DAUGHTER when she is/was being disobedient.
4. I slap(ped) my OLDEST DAUGHTER when she misbehaves/misbehaved.
5. I yell(ed) or shout(ed) when my OLDEST DAUGHTER misbehaves/misbehaved.
6. I explode(d) in anger towards my OLDEST DAUGHTER.
7. I scold(ed) and criticize(d) to make my OLDEST DAUGHTER improve.
8. I scold(ed) or criticize(d) when my OLDEST DAUGHTER'S behavior doesn't/didn't meet my expectations.
9. When my OLDEST DUAGHTER asks/asked why she has/had to conform, I state(d) 'because I said so' or 'I am your parent and I want you to'.
10. I punish(ed) my OLDEST DAUGHTER by taking privileges away from her with little if any explanations.
11. I use(d) threats as punishment with little or no justification.
12. I punish(ed) my OLDEST DAUGHTER by putting her off somewhere alone with little if any explanations.

*Permissive parenting style*- Making one rating for each item, please rate how often YOU exhibited this behavior with your OLDEST DAUGHTER when she was growing up.

1. I found it difficult to discipline my OLDEST DAUGHTER.
2. I gave into my OLDEST DAUGHTER when she caused a commotion about something.
3. I threatened my OLDEST DAUGHTER with punishment more often than actually giving it.
4. I stated punishments to my OLDEST DAUGHTER and did not actually do them.
5. I spoiled my OLDEST DAUGHTER.

***Measures: Dependent Variables***

Three-Factor Eating Questionnaire – Revised 18 Item Version 2 (TFEQ-R18V2).

The TFEQ-R18V2 (Karlsson, 2010) is an 18-item scale that measures cognitive and behavioral components of eating. It was modified from the original 51-item scale (Stunkard & Messick, 1985), to a 21-item scale (Tholin, Rasmussen, Tynelius, & Karlsson, 2005) and most recently to an 18-item scale (Karlsson, 2010). The

questionnaire has three subscales: *cognitive restraint,* which measures one's tendency to consciously restrict food consumption in order to influence, reduce, or control weight, *uncontrolled eating,* which measures one's propensity to consume more food than usual due to a loss of control of food consumption when hungry, and *emotional eating,* which measures one's inability to overeat as a means of coping with negative mood states. The TFEQ-R18V2 uses a four-point Likert scale. Item scores are summed according to their loadings onto each of the three scales in order to derive three scale sum scores, which are then transformed to a 0-100 scale. The higher the raw score for each subscale, the greater the *cognitive restraint*, *uncontrolled eating* or *emotional eating* participants exhibited (Karlsson, 2010).

Internal reliability for all three subscales ranges from 0.70 to 0.92. Specifically, the *cognitive restraint* scale, which consists of 3 items and had a Cronbach Alpha of .70 ($\alpha = .70$), the *uncontrolled eating* scale, which consists of 9 items, has a Cronbach Alpha of .84 ($\alpha = .84$), and the *emotional eating* scale, which consists of 6 items, has a Cronbach alpha of .92 ($\alpha = .92$) (Cappelleri et al., 2009).

Participants were asked to complete the TFEQ-R18V2 a total of three times in the survey, once for determining the behavioral eating patterns of the participant, once for that of the maternal caregiver of the participant (see appendix G), and once for the participant's oldest daughter (see appendix H).

*Cognitive Restraint*- Please answer the following questions in relation to YOURSELF. [(1) Definitely True, (2) Mostly True, (3) Mostly False, (5) Definitely False]:

1. I deliberately take small helpings as a means of controlling my weight.
2. I don't eat some food because they make me fat.
3. I consciously hold back at meals to keep from gaining weight.

*Uncontrolled Eating*- Please answer the following questions in relation to YOURSELF. [(1) Definitely True, (2) Mostly True, (3) Mostly False, (5) Definitely False]:

1. Sometimes when I start eating, I just can't seem to stop.
2. Being with someone who is eating often makes me want to also eat.
3. I often get so hungry that my stomach often seems like a bottomless pit.
4. I am always so hungry that it's hard for me to stop eating before I finish the food on my plate.
5. When I smell appetizing food or see a delicious dish, I find it very difficult to keep from eating – even if I've just finished a meal.
6. I am always hungry enough to eat at any time.
7. When I see something that looks very delicious, I often get so hungry that I have to eat right away.
8. Do you go on eating binges though you are not hungry?
9. How often do you feel hungry?

*Emotional Eating*- Please answer the following questions in relation to YOURSELF. [(1) Definitely True, (2) Mostly True, (3) Mostly False, (5) Definitely False]:

1. I start to eat when I feel anxious.
2. When I feel sad, I often eat too much.
3. When I feel tense or "wound up", I often feel I need to eat.
4. When I feel lonely, I console myself by eating.
5. If I feel nervous, I try to calm down by eating.
6. When I feel depressed, I want to eat.

Child Feeding Questionnaire - Revised (CFQ - Revised). The original 57-item CFQ was developed by Johnson and Birch (1994). The questionnaire assessed three factors including, *Parental Control of Child Feeding*, *Parental Concern*, and *Parental Perception of Child's Overweight.* Birch, Fisher, Grimm-Thomas, Markey, Sawyer, and Johnson (2001) revised the CFQ, which resulted in a shorter 31-item version. Overall, the scales were designed to first measure the parents' view of their own weight and that of their children. Second, views on eating/meal time are assessed, as well as views about the participant's daughter's eating behaviors. Third, the CFQ-Revised probes for any future

health concerns participants may have for their daughters related to their weight. The CFQ-Revised has two main categories, *Risk Factors and Concerns* and *Parental Control in Child Feeding*. There are four factors identified within the *Risk Factors and Concerns* category, *Perceived Feeding Responsibility*, *Perceived Parent Overweight*, *Perceived Child Overweight*, and *Concerns about Child Weight*. For the purposes of the proposed study, only the latter three subscales were used to assess potential risk factors (*Perceived Parent Overweight*, *Perceived Child Overweight*, and *Concerns about Child Weight*).

As a measure of parental *control*, the *Control* category of the CFQ-Revised was used. The Control category consists of three subscales: *restriction*, *pressure to* eat, and *monitoring*. The CFQ-revised uses a 5-point Likert type response scale with varying anchors dependent on the subscale (see sample items below). Birch et al. (2001) reported good model fit dictators for this questionnaire (GFI = .918), with an Adjusted Goodness of Fit equaling .893 (AGFI = .893), and a comparative Fit Index of .947 (CFI = .947). Of the factors being used in the present study, the following psychometric properties were gathered based on mothers' responses (Birch, Fisher, Grimm-Thomas, Markey, Sawyer, and Johnson, 2001). The CFQ-Revised yielded moderate to good internal consistency across the several subscales based on Cronbach alpha coefficients ranging from .68 - .82 (*Perceived Parent Overweight* factor Cronbach α= .72, *Perceived Child Overweight Factor* Cronbach α= .82, *Concerns About Child Overweight* Cronbach α=.74, *Restriction* Cronbach α=.77, *Pressure to Eat* Cronbach α= .68, and *Monitoring* Cronbach α=.86 (Birch et al., 2001). For scoring, individual items earn a score between 1 and 5, based on

a 5-point Likert-type scale. Scale scores are then derived via a mean composite across the scale items.

Wording and time periods were adjusted slightly for the purposes of this study and for clarity for the participant to answer in relation to her oldest daughter. Additionally, CFQ-Revised items from the *Perceived Parent Overweight*, *Concern about Child Overweight*, and all *Control* subscales were also reworded for the participant to answer in relation to their maternal caregiver (see appendix I). The *Perceived Parent Overweight* items were replicated twice, once for the participant to respond based on what they believe their maternal caregivers' perceived regarding their weight (see appendix I) and once for the participant to respond in relation to how they perceived their maternal caregivers' weight (see appendix I).

*Perceived Parent Overweight*- Using the scale below, please indicate how you would classify YOUR weight at each of these time periods. [(1) Markedly Underweight, (2) Underweight, (3) Average, (4) Overweight, (5) Markedly Overweight, (6) N/A]:

1. Childhood
2. Adolescence
3. 20's
4. Currently

*Perceived Child Overweight*- Using the scale below, please indicate how you would classify your OLDEST DAUGHTER'S weight at each of these time periods. [(1) Markedly Underweight, (2) Underweight, (3) Average, (4) Overweight, (5) Markedly Overweight, (6) N/A]:

1. First year of life
2. Toddler
3. Pre-school
4. Childhood (5-11)
5. Adolescence
6. 20's and above
7. Currently

*Restriction* (REST)- Using the scale below, please chose one description for each item that best corresponds to your answer. Please answer about your OLDEST DAUGHTER**.** If your OLDEST DAUGHTER is currently an adult, please respond based on your behaviors with her as a child. [(1) Disagree, (2) Slightly Disagree, (3) Neutral, (4) Slightly Agree, (5) Agree]:

1. I have/had to be sure my OLDEST DAUGHTER does/did not eat too many sweets (candy, ice cream, cake, or pastries).
2. I have/had to be sure that my OLDEST DAUGHTER does/did not eat too many high fat foods.
3. I have/had to be sure that my OLDEST DAUGHTER does/did not eat too much of her favorite foods.
4. I intentionally keep/kept some foods out of my OLDEST DAUGHTER'S reach.
5. I offer(ed) sweets (candy, ice cream, cake, or pastries) to my OLDEST DAUGHTER as a reward for good behavior.
6. I offer(ed) my OLDEST DAUGHTER her favorite foods in exchange for good behavior.
7. If I did not guide or regulate my OLDEST DAUGHTER's eating, she would eat too many junk foods.
8. If I did not guide or regulate my OLDEST DAUGHTER'S eating, she would eat too much of her favorite foods.

*Pressure To Eat* (PRESS): Using the scale below, please chose one description for each item that best corresponds to your answer. Please answer about your OLDEST DAUGHTER**.** If your OLDEST DAUGHTER is currently an adult, please respond based on your behaviors with her as a child. [(1) Disagree, (2) Slightly Disagree, (3) Neutral, (4) Slightly Agree, (5) Agree]:

1. My OLDEST DAUGHTER should always eat all the food on her plate.
2. I have/had to be especially careful to make sure my OLDEST DAUGHTER eats/ate enough.
3. If my OLDEST DAUGHTER says/said "I'm not hungry," I try/tried to get her to eat anyway.
4. If I did not guide or regulate my OLDEST DAUGHTER'S eating she would eat much less than she should.

*Monitoring* (MONIT)- Using the scale below, please chose one description for each question that best corresponds to your answer. Please answer about your OLDEST DAUGHTER. If your OLDEST DAUGHTER is currently an adult, please respond based on your behaviors with her as a child. [(1) Never, (2) Rarely, (3) Sometimes, (4) Mostly, (5) Always]:

1. How much do/did you keep track of the sweet (candy, ice cream, cake, pies, pastries) that your OLDEST DAUGHTER eats/ate?

2. How much do/did you keep track of the snack food (potato chips, Doritos, cheese puffs) that your OLDEST DAUGHTER eats/ate?
3. How much do/did you keep track of the high fat foods that your child eats/ate?

*Concerns about Child Overweight*- Using the scale below, please chose one description for each question that best corresponds to your answer. Please answer about your OLDEST DAUGHTER. If your OLDEST DAUGHTER is currently an adult, please respond based on your behaviors with her as a child. [(1) Unconcerned, (2) Slightly Unconcerned, (3) Neutral, (4) Slightly Concerned, (5) Concerned]:

1. How concerned are/were you about your OLDEST DAUGHTER eating too much when you are/were not around her?
2. How concerned are/were you about your OLDEST DAUGHTER having to diet to maintain a desirable weight?
3. How concerned are/were you about your OLDEST DAUGHTER becoming overweight?

Parental Dietary Modeling Scale (PDMS)- The PDMS is a 6-item scale developed to assess parental *modeling* of dietary behaviors to their children (Tibbs, et al., 2001). The scale uses a 5-point Likert type scale and has shown to be moderately reliable, with a Cronbach Alpha of 0.59 ($\alpha = 0.59$). For the purposes of the present study, two Forced 2-Factor analyses were conducted and the following two factors were used for the main analyses: *Structure and Rules* and *Modeling*. A *control* score and a *modeling* score were calculated by summing individual item scores in the given subscale, then dividing by the total number of items in that subscale to derive a mean composite score.

The PDMS was also included in the survey a second time (see appendix J) for the participant to answer in relation to their maternal caregiver's behaviors with the participant as a child. Please see Appendix J for the reworded items, for the participant to answer in relation to their maternal caregiver. Listed below are the items for the participant to answer in relation to her behaviors with her oldest daughter.

*Structure and Rules*- Using the scale below, please chose a description for the following items in relation to your behaviors with your OLDEST DAUGHTER. [(1) Never, (2) Rarely, (3) Sometimes, (4) Often, (5) Almost Always/Always]:

1. I limit(ed) my OLDEST DAUGHTER'S intake of snacks.
2. I set rules about my OLDEST DAUGHTER eating certain foods.

*Modeling*- Using the scale below, please chose a description for the following items in relation to your behaviors with your OLDEST DAUGHTER. [(1) Never, (2) Rarely, (3) Sometimes, (4) Often, (5) Almost Always/Always]:

1. I eat/ate food I want(ed) my OLDEST DAUGHTER to eat.
2. My OLDEST DAUGHTER learns/learned to eat snacks from me.
3. When I show(ed) my OLDEST DAUGHTER I enjoy(ed) certain foods, she tries/tried them.
4. I sit/sat with my OLDEST DAUGHTER at mealtime.

***Participants***

Based on a power analysis (G*Power 3.1) with an effect size of 0.2 and a power of 0.8, an estimated n=191 female adult participants were aimed to be recruited. Female participants were required to be age 18 years or older, who report being mothers of a least one daughter and having a maternal caregiver during their childhood. Participants were recruited via online advertising on university forums, university Sona-System, and through social networking sites including Craigslist and Facebook. Posts made on Craigslist and Facebook, as well as university contacts reached individuals throughout Eastern Central Florida and the rest of the United States. Additionally, flyers advertising the study were created and placed in areas in the community such as, local schools, pediatrician's offices, and community centers. For the purpose of this study, only data for females was utilized. The average time to complete the online survey was approximately 40-minutes. Response rates were calculated based on the following: the number of

individuals who initially viewed the online survey, number of individuals who began the survey, and the number of individuals who completed the survey in its entirety. Participants were also compensated for their participation in the study by being entered into a drawing for a $25.00 Visa gift card.

Descriptive Statistics of Participants

When examining the descriptive statistics of participants used in the present study, 99.5% (n=195) of participants gave informed consent to participate in the study and 0.5% (n=1) did not give informed consent. The participant who did not provide consent, was directed to the end of the survey and no information was used in the analyses. Additionally, 99.0% (n=194) of participants indicated that they were 18 years and older. Data from two participants was missing on this statistic and therefore could not be used in the analyses. The mean age of participants was 41.42, ranging in age from 21 to 80 years old. In regards to gender, 92.9% (n=182) participants indicated they were females, compared to 1.5% (n=3) participants who indicated they were male. No data on male participants was used for the purposes of the present study.

In terms of the current sample's racial ethnic distribution, the majority of participants were predominately White (n=153; 78.1%), followed by Hispanic (n=9; 4.6%), Black (n=7, 3.6%), Biracial (n=3; 1.5%), Asian (n=2; 1.0%), and American Indian/Native American (n=1; 0.5%). There were 1.0% (n=2) of participants who identified themselves as Other (see Figure 1). Data was missing from 19 respondents (n=19; 9.70%). Due to the vast majority of participants identifying as White, participants

were categorized as either White or Other (a combination of Hispanic, Black, Biracial, Asian, Native American, and Other) for the purposes of the statistical analyses.

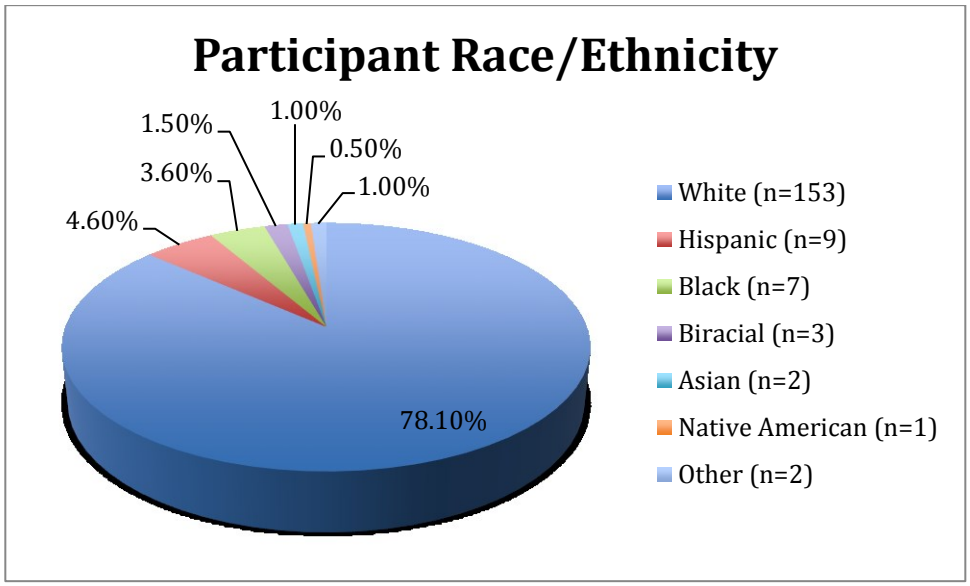


Figure 1: Descriptive Statistics of Participant Race/Ethnicity

In regards to marital status, the majority of the sample indicated that they were married (n=144; 73.5%). The marital status of the remaining participants was as follows: Single (n=17; 8.7%), Divorced (n=10; 5.1%), Separated (n=4; 2.0%) and Widowed (n=2; 1.0%) (see Figure 2). Data was missing from 19 respondents (n=19; 9.70%).

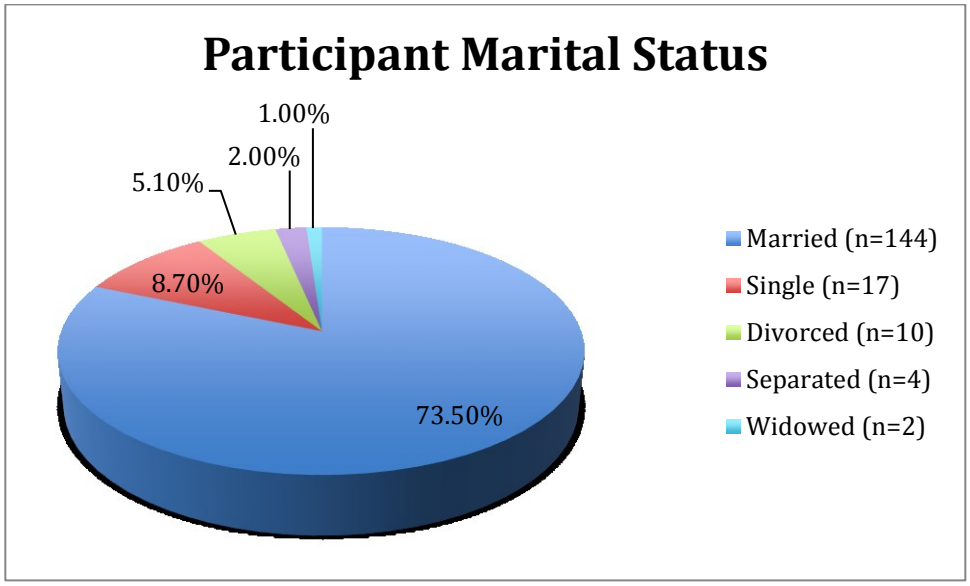


Figure 2: Descriptive Statistics of Participant Marital Status

In regards to participants parenting style, n=66 participants (33.7 %) identified their parenting style as *authoritative* in comparison to the n=0 participants (0%) who identified their parenting style as *authoritarian*. Additionally, n=2 participants (1.0%) identified their parenting style as *permissive* (see Figure 3). Data was missing from 128 respondents (n=128; 65.3%). Due to the lack of findings of authoritarian participants, for the main analyses, each participant received a mean score for each parenting style as opposed to being categorized into one single parenting style.

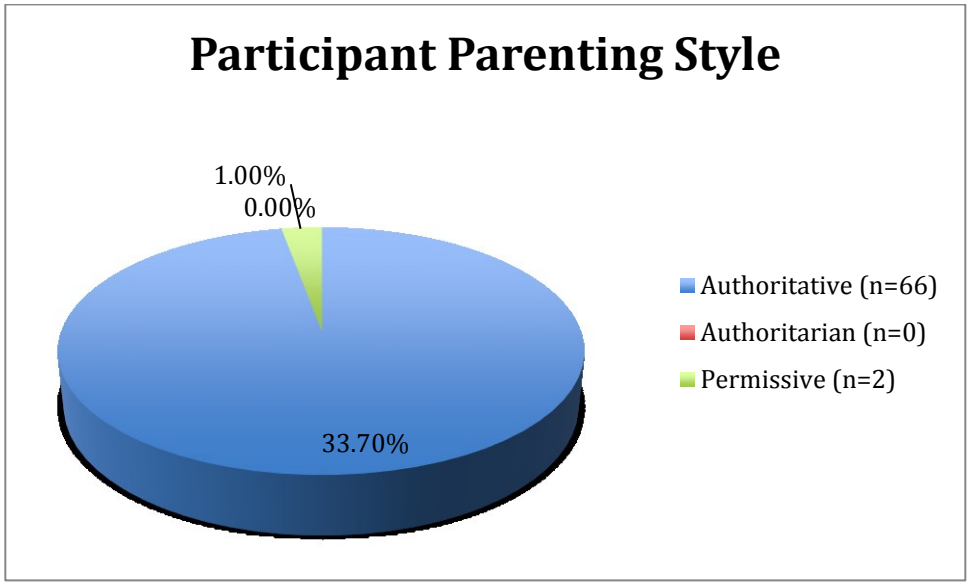


Figure 3: Descriptive Statistics of Participant Parenting Style

Socioeconomic status was calculated using the total scores on the Hollingshead Index, which was determined by one's occupation and education level. In examining demographic variables with respect to SES, the majority of participants identified themselves as Upper Middle Class (n=68; 34.7%). The remaining participants fell within the following categories: Lower Middle Class (n=50, 25.5%), Middle Class (n=39; 19.9%), Upper Class (n=16; 8.2%), and Lower Class (n=4, 2.0%) (see Figure 4). Data was missing from 19 respondents (n=19; 9.70%).

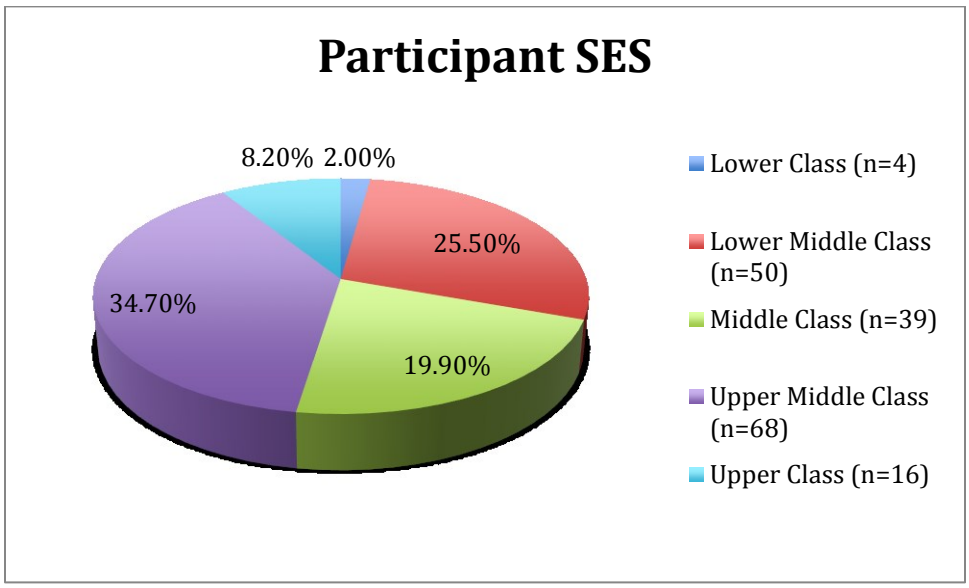


Figure 4: Descriptive Statistics of Participants SES based on Hollingshead Index

Additionally, in examining BMI, which is the specifically calculated index of body fat based on one's height and weight, the majority of the participants (n=75; 38.3%) fell within the Normal Weight range (i.e., a BMI range of 18.5-24.9), 27.6% (n=54) fell within the Overweight range (as defined by a BMI range of 25-29.9), 18.9% (n=37) fell within the Obese range (as defined by a BMI greater than 30), and 1.5% (n=3) fell within the Underweight BMI range (as defined by a body mass index less than 18.5) (see Figure 5). Data was missing from 27 respondents (n=27; 13.8%).

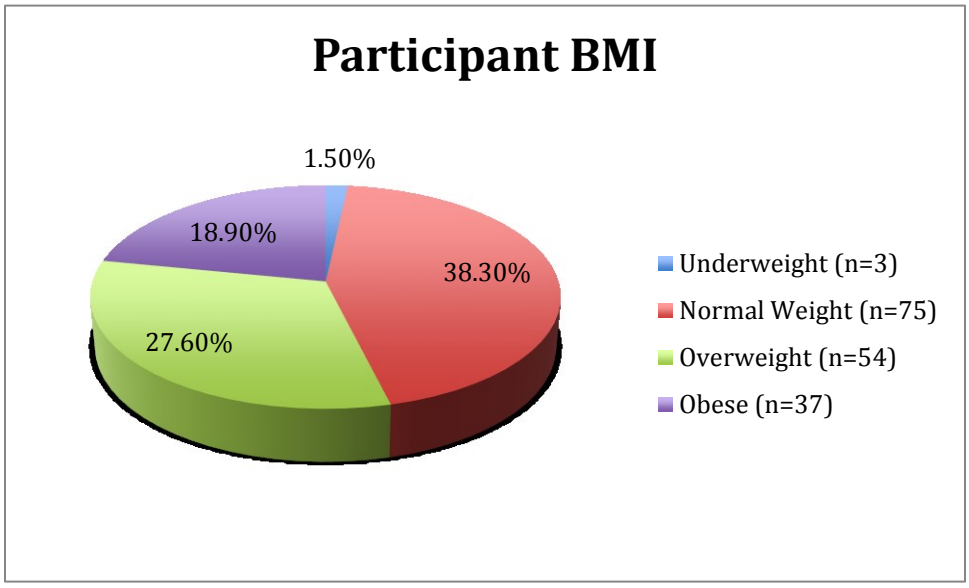


Figure 5: Descriptive Statistics of Participant BMI

In examining whether participants were on a special diet due to health reasons, being overweight or personal preference, 7.3% (n=13) stated that they were on a special diet due to health reasons compared to 92.7% (n=164) who said that they were not on a special diet due to health reasons. Similarly, 6.2% participants (n=11) indicated they were on a diet die to being overweight, compared to 93.8% participants (n=166) stated that they were not on a special diet due to being overweight. Further, 33.9% (n=60) of the participants indicated that they were on a special diet due to personal preference, compared to 66.1% (n=117) of the participants that stated they were not on a special diet due to personal preference (see Figure 6). Data was missing from 19 respondents (n=19; 9.7%).

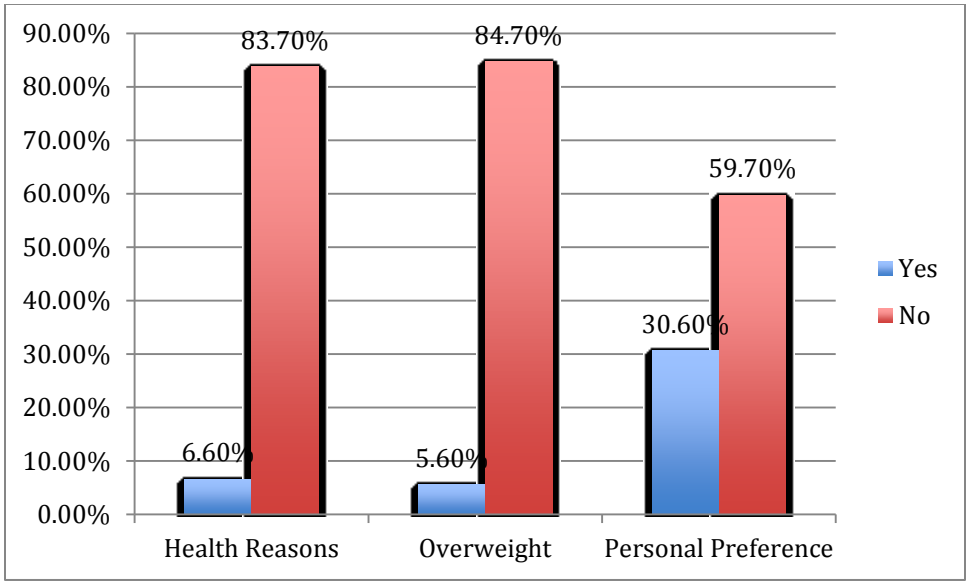


Figure 6: Descriptive Statistics of Participants on a Special Diet

Descriptive Statistics of Participant's Maternal Caregivers

Of the participants, 48.5% (n=95) reported they had a maternal caregiver present during their childhood, compared to 2.6% (n=5) who reported they did not have a maternal caregiver present during their childhood. Data from 96 participants were missing from this statistic and therefore information on the missing participants could not be used in the analyses. The mean age of participants' maternal caregivers was 67.78, ranging in age from 40 to 99 years old.

In terms of the participant's maternal caregivers racial ethnic distribution, the majority of participants were predominately White (n=81; 41.3%), followed by Black (n=3; 1.5%) and Hispanic (n=3; 1.5%), Asian (n=2; 1.0%), and American Indian/Native American (n=1; 0.5%). There were 0.5% (n=1) of participants who identified themselves

as Other (see Figure 7). Data was missing from 105 respondents (n=105; 53.6%). Due to the vast majority of maternal caregivers identified as White, maternal caregivers were categorized as either White or Other (a combination of Hispanic, Black, Asian, Native American, and Other) for the purposes of the statistical analyses.

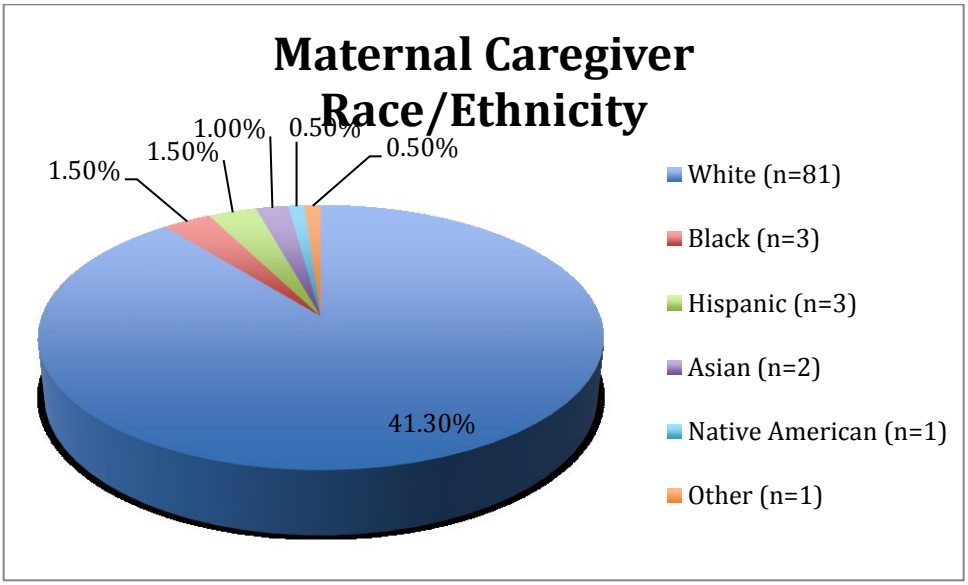


Figure 7: Descriptive Statistics of Participant Race/Ethnicity

In regards to marital status, the majority of the sample indicated that they were married (n=65; 33.2%). The marital status of the remaining participants was as follows: Divorced (n=15; 7.7%), Widowed (n=10; 5.1%), and Separated (n=1; 0.5%) (see Figure 8. Data was missing from 105 respondents (n=105; 53.6%).

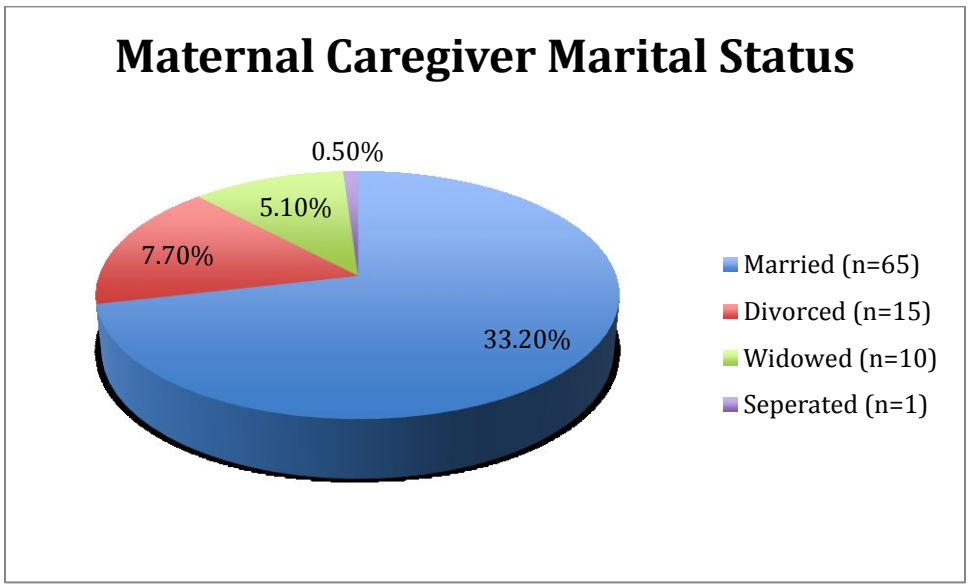


Figure 8: Descriptive Statistics of Participants Marital Status

In regards to participant's maternal caregivers parenting style, n=57 participants (29.1%) identified their maternal caregivers parenting style as *authoritative* in comparison to n=23 participants (11.7%) who identified their maternal caregivers parenting style as *authoritarian*. Additionally, n=5 participants (2.6%) identified their maternal caregivers parenting style as *permissive* (see Figure 9). Data was missing from 111 respondents (n=111; 56.6%). For consistency, due to the lack of findings of authoritarian participants, for the main analyses, each maternal caregiver received a mean score for each parenting style as opposed to being categorized into one single parenting style, as did the participants.

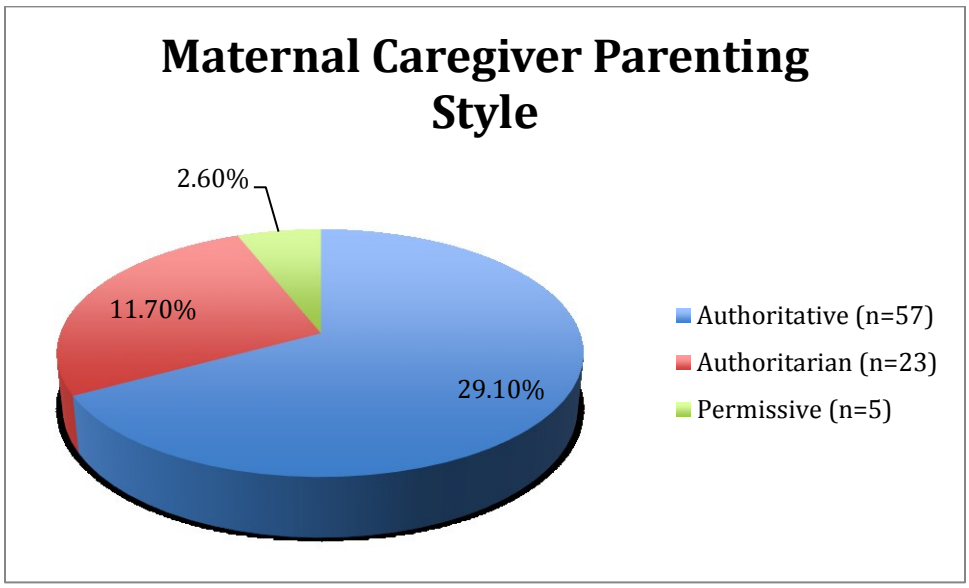


Figure 9: Descriptive Statistics of Maternal Caregiver Parenting Style

Socioeconomic status for the participant's maternal caregiver was calculated using the total scores on the Hollingshead Index, which was determined by one's occupation and education level. In examining demographic variables with respect to SES, the majority of participants identified themselves as Middle Class (n=33; 16.8%). The remaining participants fell within the following categories: Upper Middle Class (n=28; 14.3%), Lower Class (n=15, 7.7%), Lower Middle Class (n=9, 4.6%), and Upper Class (n=6; 3.1%) (see Figure 10). Data was missing from 105 respondents (n=105; 53.6%).

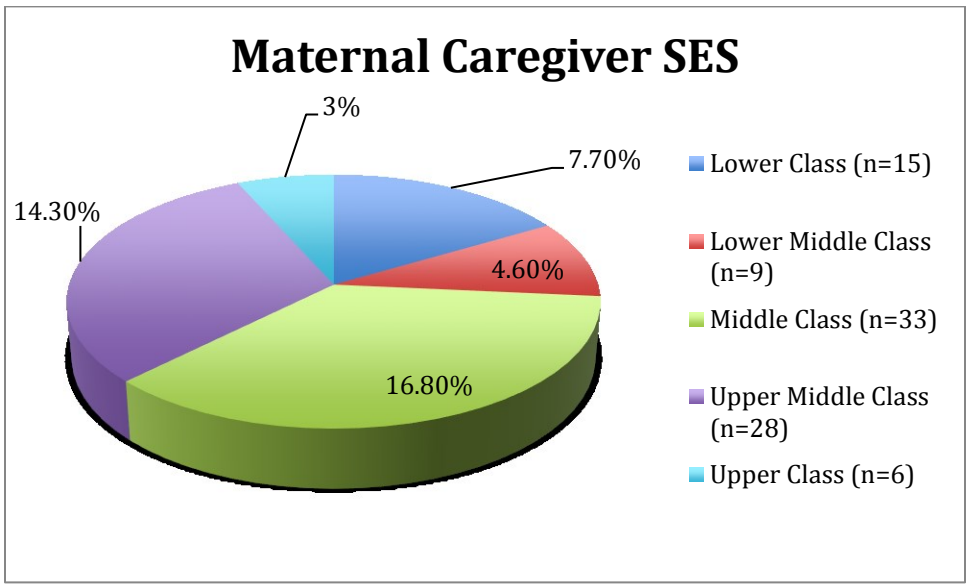


Figure 10: Descriptive Statistics of Maternal Caregivers SES based on Hollingshead Index

In examining participant's maternal caregivers BMI, n=6 participants indicated that their maternal caregivers are deceased. However, of those n=6 participants, n=3 reported their maternal caregivers height and weight at their time of death. Therefore, that data was used to calculate BMI. The remaining n=3 participants who indicated their maternal caregivers were deceased but did not report height and weight at time of death were not used in the analyses. In terms of the Participants' maternal caregivers' BMI, which is the specifically calculated index of body fat based on one's height and weight, the majority of the participants maternal caregivers (n=33; 16.8%) fell within the Normal Weight range (i.e., a BMI range of 18.5-24.9), 12.8% (n=25) fell within the Obese range (as defined by a BMI greater than 30), 8.7% (n=17) fell within the Overweight range (as defined by a BMI range of 25-29.9), and 0.5% (n=1) fell within the Underweight BMI

range (as defined by a body mass index less than 18.5) (see Figure 11). Data was missing from 120 respondents (n=120; 61.2%).

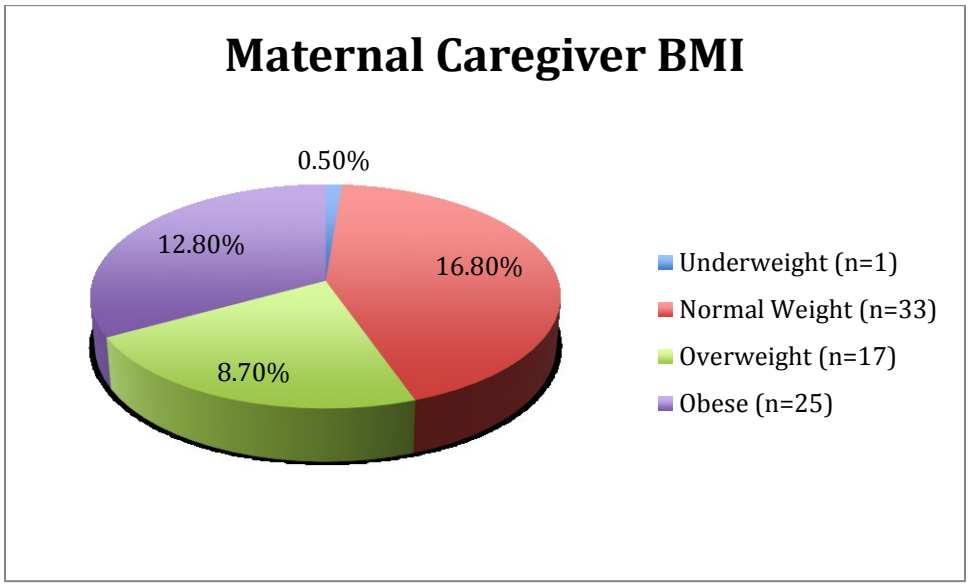


Figure 11: Descriptive Statistics of Maternal Caregiver BMI

In examining whether participants' maternal caregivers were on a special diet due to health reasons, being overweight or personal preference, 3.1% (n=6) stated that their maternal caregivers were on a special diet due to health reasons compared to 43.4% (n=85) that reported that their maternal caregivers were not on a special diet due to health reasons. Similarly, 6.1% of participants (n=12) reported their maternal caregivers were on a special diet due to being overweight, compared to 40.3% of participants (n=79) that stated their maternal caregivers were not on a special diet due to being overweight. Further, 17.3% (n=34) of the participants indicated that their maternal caregivers were on a special diet due to personal preference, compared to 29.1% (n=57) of the participants

that stated their maternal caregivers were not on a special diet due to personal preference (see Figure 12). Data was missing from 105 respondents (n=105; 53.6%).

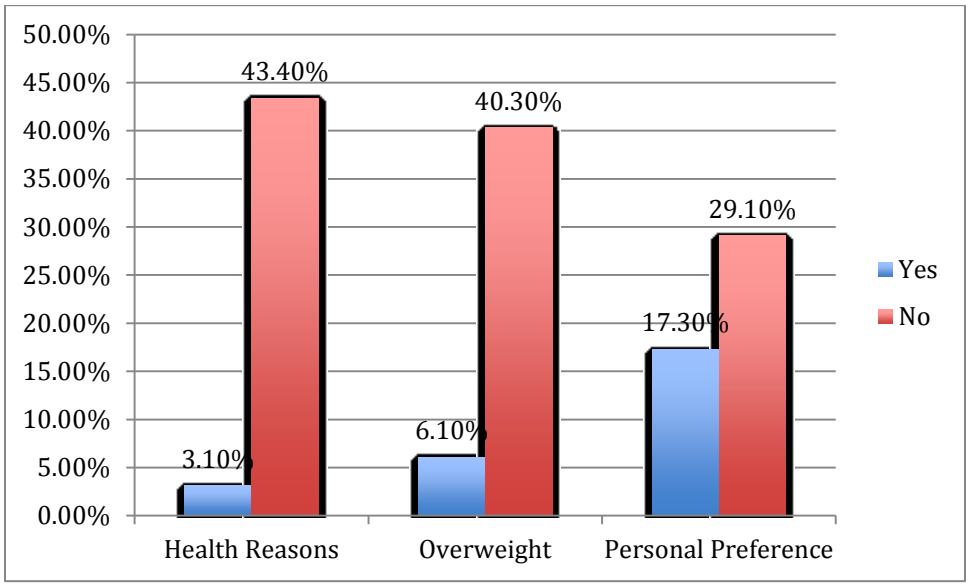


Figure 12: Descriptive Statistics of Maternal Caregivers on a Special Diet

Descriptive Statistics of Participant's Oldest Daughters

Of the participants, 41.3% (n=81) indicated they have at least one daughter, compared to 17.9% (n=35) who reported they do not have any daughters. Data on participants who did not have any daughters was not utilized for the purposes of the present study. Additionally, data on this statistic was missing from 80 participants and therefore the missing data could not be used in the analyses. The mean age of participants' oldest daughters was 15.57, ranging in age from 6 months to 42 years old.

In terms of the participant's oldest daughters racial ethnic distribution, the majority of participants were predominately White (n=64; 32.7%), followed by Biracial (n=7; 3.6%), Hispanic (n=3; 1.5%), Black (n=2, 1.0%), and Asian (n=1; 0.5%). There were 1.0% (n=2) of participants who identified themselves as Other (see Figure 13). Data was missing from 117 respondents (n=117; 59.7%). Due to the vast majority of oldest daughters identified as White, oldest daughters were categorized as either White or Other (a combination of Hispanic, Black, Biracial, Asian, and Other) for the purposes of the statistical analyses.

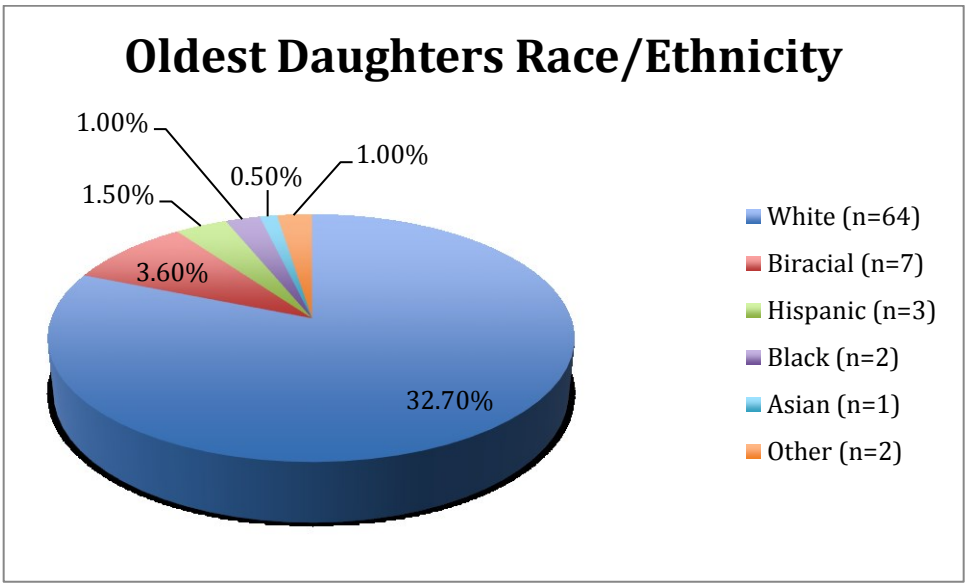


Figure 13: Descriptive Statistics of Participant Race/Ethnicity

In examining participants' oldest daughters BMI, which is the specifically calculated index of body fat based on one's height and weight, the majority of the participants oldest daughters (n=33; 16.8%) fell within the Normal Weight range (i.e., a

BMI range of 18.5-24.9), 15.3% (n=30) fell within the Underweight BMI range (as defined by a body mass index less than 18.5), 5.1% (n=10) fell within the Overweight range (as defined by a BMI range of 25-29.9), and 1.0% (n=2) fell within the Obese range (as defined by a BMI greater than 30) (see Figure 14). Data was missing from 121 respondents (n=121; 61.7%).

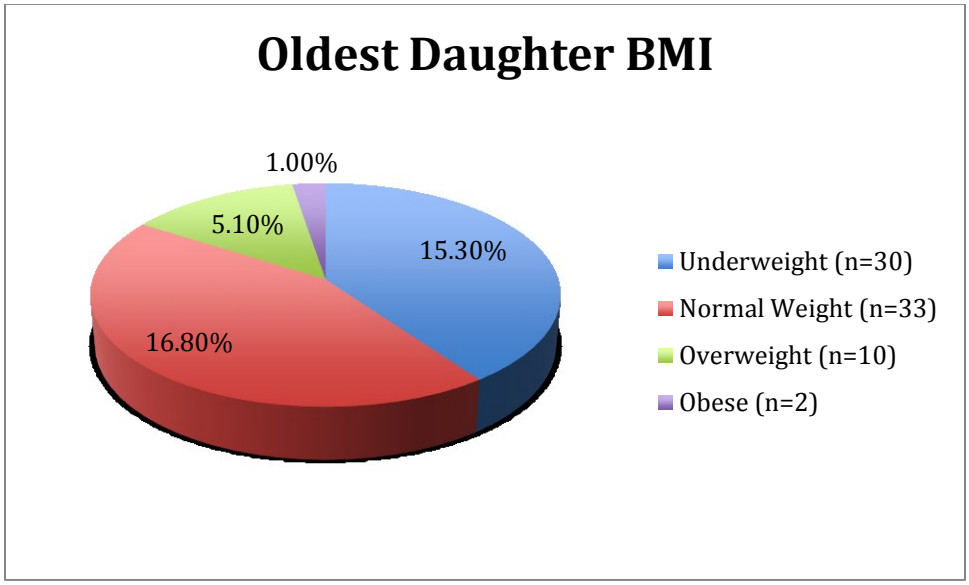


Figure 14: Descriptive Statistics of Oldest Daughter BMI

In examining whether participants' oldest daughters who were on a special diet due to health reasons, being overweight or personal preference, 1.0% (n=2) stated that their oldest daughters were on a special diet due to health reasons compared to 38.8% (n=76) who said that their oldest daughters were not on a special diet due to health reasons and data was missing from 118 respondents (n=118; 60.2%). Similarly, 2.0% of participants (n=4) said their oldest daughters were on a special diet due to being

overweight, compared to 38.3% of participants (n=75) that stated their oldest daughters were not on a special diet due to being overweight and data was missing from 117 respondents (n=117; 59.7%). Further, 5.1% (n=10) of the participants indicated that their oldest daughters were on a special diet due to the participants' personal preference, compared to 34.7% (n=68) of the participants that stated their oldest daughters were not on a special diet due to the participants' personal preference and data was missing from 118 respondents (n=118; 60.2%). Lastly, 5.% (n=10) of the participants indicated that their oldest daughters were on a special diet due to the oldest daughters' personal preference, compared to 35.2% (n=69) of the participants that stated their oldest daughters were not on a special diet due to the oldest daughters' personal preference and data was missing from 117 respondents (n=117; 59.7%) (see Figure 15).

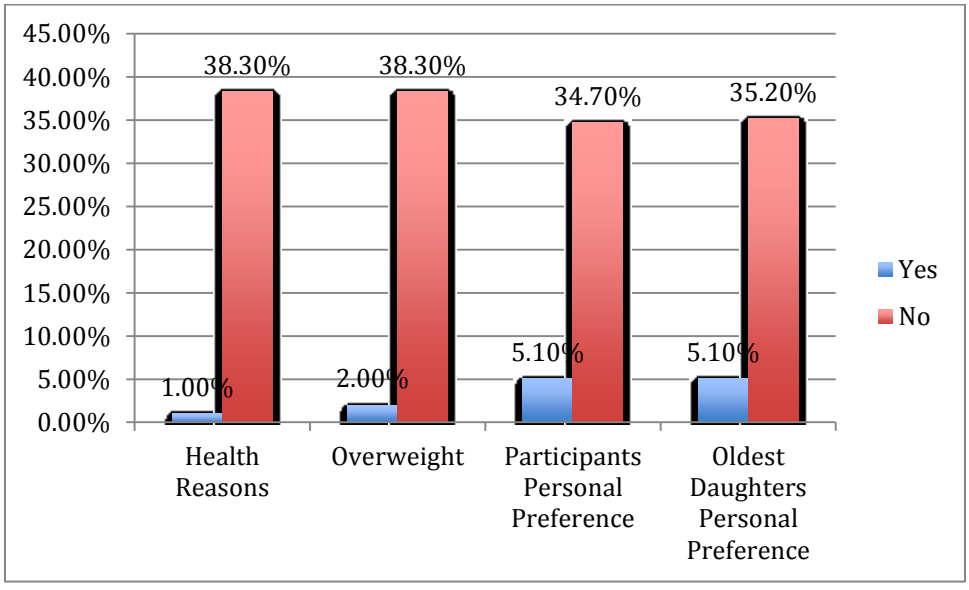


Figure 15: Descriptive Statistics of Oldest Daughters on a Special Diet

# RESULTS

## *Preliminary Analyses*

A factor analysis was conducted to determine factor structure of the Parental Dietary Modeling Scale for the present sample. This was performed using an Orthogonal factor analysis, with Eigen values of 1 or greater. Internal consistency was examined, using Chronbach Alpha for each of the factors as well as the total measure. Then a correlational matrix was used to determine correlation among subscales. Based on these results the Parental Dietary Modeling Scale was divided into two subscales, Structure and Rules (parental control) and Modeling (parental modeling).

The *Parental Dietary Modeling Scale* (PDMS) was used for the present study to measure parental modeling. Due to limited information on psychometric properties in the existing literature and the addition of the scale being used in relation to the participant's maternal caregiver, the psychometric properties were evaluated for the present study. First, the measure's factor structure was determined through an Orthogonal factor analysis, with Eigen values of 1 or greater. Internal consistency was determined using Cronbach's α for the total measure and subscales. This measure was used in the survey twice, to be answered in relation to the participant and again in relation to the participant's maternal caregiver. The measure consisted of 6 statements relating to parental modeling. A five-point likert scale with the following rating scale of "1" (never), "2" (rarely), "3" (sometimes), "4" (often), and "5" (almost always/always) was used to assess how much the participant agreed with each statement. Two Free Floating factor analyses were performed for each version of the scale, PDMS Participant and PDMS

Maternal Caregiver. From the free floating factor analysis for the PDMS Participant two factors emerged from the original 6-item index, based on Eigen values equal to or greater than one. The emerging themes included *Structure and Rules* and *Modeling*. Factor loadings for each item were rounded to one decimal, and a cut-off for factor loading of .5 was used for an item to be included in a scale. Items and reliability information can be seen in Table 2. The PDMS Participant posed moderate internal reliability as demonstrated by a Cronbach alpha ($\alpha = .584$) for the entire measure.

Table 1. PDMS Participant Free Floating Factor Analysis

| Component | Factor Loading | % of Variance | Cumulative % | Eigen Value |
|---|---|---|---|---|
| ***Structure and Rules*** | | 33.28 | 33.28 | 1.99 |
| 3. I limit(ed) my oldest daughter's intake of snacks. | .86 | | | |
| 5. I set rules about my oldest daughter eating certain foods. | .82 | | | |
| ***Modeling*** | | 21.16 | 54.44 | 1.27 |
| 1. I eat/ate food I wanted my oldest daughter to eat. | .59 | | | |
| 2. My oldest daughter learns/learned to eat snacks from me. | .58 | | | |
| 4. When I show(ed) my oldest daughter I enjoyed certain foods, she tries/tried them. | .68 | | | |
| I sit/sat with my oldest daughter at mealtime. | .66 | | | |

From the free floating factor analysis for the PDMS Maternal Caregiver three factors emerged from the original 6-item index, based on Eigen values equal to or greater than one. The emerging themes included *Learning, Structure and Rules,* and *Modeling*. Factor loadings for each item were rounded to one decimal, and a cut-off for factor loading of .5 was used for an item to be included in a scale. Items and reliability information can be seen in Table 1. The PDMS Maternal Caregiver posed good internal reliability as demonstrated by a Cronbach alpha ($\alpha = .682$) for the entire measure.

Table 2. PDMS Maternal Caregiver Free Floating Factor Analysis

| Component | Factor Loading | % of Variance | Cumulative % | Eigen Value |
|---|---|---|---|---|
| ***Structure and Rules*** | | 40.28 | 40.28 | 2.42 |
| 3. My maternal caregiver limited her child's intake of snacks. | .93 | | | |
| 5. My maternal caregiver set rules about her child eating certain foods. | .91 | | | |
| ***Modeling*** | | 20.40 | 60.67 | 1.22 |
| 1. My maternal caregiver ate food she wanted her child to eat. | .75 | | | |
| 4. When my maternal caregiver showed her child she enjoyed certain foods, they tried them. | .64 | | | |
| 6. My maternal caregiver sat with her child at mealtime. | .84 | | | |
| ***Learning*** | | 17.38 | 78.05 | 1.04 |
| 2. My maternal caregiver's child learned to eat snacks from her. | .94 | | | |

Based on the results from the two Free Floating factor analyses above, two subsequent factor analyses were performed. Two Forced 2-Factor analyses were performed, for the PDMS Participant and the PDMS Maternal Caregiver. This decision was determined based on the results from the two previous Free Floating factor analyses, which indicated different amounts of factors for each version of the scale. More specifically, the Free Floating factor analysis of PDMS Participant identified two factors, whereas the Free Floating factor analysis for the PDMS Maternal Caregiver identified three factors. Furthermore, one of the factors identified on the PDMS Maternal Caregiver scale only included one item. Therefore, it was decided that two factors would be more sufficient. The results from the Forced 2-Factor analysis for the PDMS Participant scale and the PDMS Maternal Caregiver scale can be found in the following two tables (Table 3 and Table 4).

Table 3. PDMS Participant Forced 2-Factor Analysis

| Component | Factor Loading | % of Variance | Cumulative % | Cronbach Alpha | Eigen Value |
|---|---|---|---|---|---|
| ***Structure and Rules*** | | 33.28 | 33.28 | .67 | 1.99 |
| 3. I limit(ed) my oldest daughter's intake of snacks. | .86 | | | | |
| 5. I set rules about my oldest daughter eating certain foods. | .82 | | | | |
| ***Modeling*** | | 21.16 | 54.44 | .53 | 1.27 |
| 1. I eat/ate food I wanted my oldest daughter to eat. | .59 | | | | |
| 2. My oldest daughter learns/learned to eat snacks from me. | .58 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4. When I show(ed) my oldest daughter I enjoyed certain foods, she tries/tried them. | .68 | | | | |
| 6. I sit/sat with my oldest daughter at mealtime. | .66 | | | | |

Table 4. PDMS Maternal Caregiver Forced 2-Factor Analysis

| Component | Factor Loading | % of Variance | Cumulative % | Cronbach Alpha | Eigen Value |
|---|---|---|---|---|---|
| ***Structure and Rules*** | | 40.28 | 40.28 | .85 | 2.42 |
| 3. My maternal caregiver limited her child's intake of snacks. | .93 | | | | |
| 5. My maternal caregiver set rules about her child eating certain foods. | .89 | | | | |
| ***Modeling*** | | 20.40 | 60.67 | .60 | 1.22 |
| 1. My maternal caregiver ate food she wanted her child to eat. | .78 | | | | |
| 2. My maternal caregiver's child learned to eat snacks from her. | .56 | | | | |
| 4. When my maternal caregiver showed her child she enjoyed certain foods, they tried them. | .73 | | | | |
| 6. My maternal caregiver sat with her child at mealtime. | .56 | | | | |

When examining internal reliability for the PDMS Participant, moderately good internal reliability was found for the *Structure and Rules* subscale with a Cronbach alpha ($\alpha = .67$). Additionally, moderate internal reliability was found for the *Modeling* subscale, with a Cronbach alpha ($\alpha = .53$). For the PDMS Maternal Caregiver, good internal reliability was found for the *Structure and Rules* subscale with a high Cronbach alpha ($\alpha$

= .85). Additionally, moderate internal reliability was found for the *Modeling* subscale with a Cronbach alpha (α = .60).

A correlational matrix was also performed among the subscales of the PDMS Participant and the CFQ subscales for the participant, as well as for the subscales of the PDMS Maternal Caregiver and the CFQ subscales for the maternal caregiver. The correlational matrix was performed to determine any correlation among subscales and to examine cross validation of the subscales of the PDMS. For the PDMS Participant, results indicated that the Structure and Rules subscale of the PDMS was positively correlated with the following CFQ Participant subscales: Restriction (r=.616, $p \leq .001$), Pressure to Eat (r=.397, $p \leq .001$), and Monitoring (r=.599, $p \leq .001$). For the PDMS Maternal Caregiver, results indicated that the Structure and Rules subscale of the PDMS was positively correlated with the following CFQ Maternal Caregiver subscales: Restriction (r=.666, $p \leq .001$), Pressure to Eat (r=.336, $p \leq .01$), and Monitoring (r=.720, $p \leq .001$). Results also showed that the Structure and Rules subscale for the PDMS Maternal Caregiver was positively correlated (r=.310, $p \leq .01$) with the Modeling subscale of the PDMS Maternal Caregiver.

Table 5: Cross Validation of PDMS subscales and CFQ subscales for Participant

| Variable | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Structure & Rules | | | | |
| 2. Modeling | r=.234 | | | |
| 3. Restriction | r=.616*** | r=.285* | | |
| 4. Pressure to Eat | r=.397*** | r=.049 | r=.357** | |
| 5. Monitoring | r=.599*** | r=.367** | r=.585*** | r=.113 |

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

Table 6: Cross Validation of PDMS subscales and CFQ subscales for Maternal Caregiver

| Variable | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Structure & Rules | | | | |
| 2. Modeling | r=.310** | | | |
| 3. Restriction | r=.666*** | r=.205 | | |
| 4. Pressure to Eat | r=.336** | r=.232* | r=.406*** | |
| 5. Monitoring | r=.720*** | r=.067 | r=.583*** | r=.101 |

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

Additionally, a one-way MANOVA was performed, with an independent variable of *counter balance order effect*. That is, respondents varied on the order combination of the survey (2 levels): half of the respondents received the survey in the original order, while the other half of the respondents received the second half of the survey first and the first half of the survey second, thereby giving two ordered versions of the survey. The dependent variables used were participants' and participants' maternal caregivers' parenting styles, participants' and participants' maternal caregivers' use of *parental control (restriction, pressure to eat, monitoring,* and *structure and rules)*, participants' and participants' maternal caregivers' use of *parental modeling*, and participants', participants' maternal caregivers', and participants' oldest daughters' *eating behavioral patters (cognitive restraint, uncontrolled eating, and emotional eating)*. No significant findings resulted for parenting styles [$F$ (6, 60) = 1.32, NS], parental control [$F$ (8, 55) = 1.30, NS], parental modeling [$F$ (2, 55) = .712, NS], or for eating behavioral patterns (F (9,55) = .818, NS).

A correlational matrix was also run to determine the relationships between *ethnicity* (participant, maternal caregiver, and oldest daughter), *SES* (participant and maternal caregiver), *health concerns* (participant, maternal caregiver, and oldest

daughter), and *BMI* (participant, maternal caregiver, and oldest daughter), and the dependent variables of *parenting style* for participant and maternal caregiver (i.e., mean score for *authoritarian, authoritative*, and *permissive*), *eating behavioral patterns* for participant, maternal caregiver, and oldest daughter (i.e., *cognitive restraint, uncontrolled eating,* and *emotional eating*), *parental control* for the participant and maternal caregiver (i.e., *restriction, pressure to eat, monitoring,* and *structure and rules*), and *parental modeling* for the participant and maternal caregiver to ascertain the suitability for the main analyses. In addition, it was important to ascertain the potential colinearity and proper grouping of SES, *ethnicity, health concerns,* and *BMI* regarding their use as covariates in subsequent Regression analyses.

For SES, the findings indicate that *maternal caregiver SES* was found to be positively correlated with *maternal caregiver* mean score of *authoritarian parenting style* ($r=.360$; $p\leq.001$) and negatively correlated with *maternal caregiver* mean score of *authoritative parenting style* ($r=-.349$; $p\leq.001$). In regards to ethnicity, *participant ethnicity* was found to be positively correlated with *maternal caregiver emotional eating* ($r=.230$; $p<.05$). For *participant health concerns*, in the form of being on a special diet due to being overweight, positive correlations were found among *participant emotional eating* ($r=.240$; $p<.01$) and *participant uncontrolled eating* ($r=.236$; $p<.01$). For *participant health concerns*, in the form of being on a special diet due to personal preference, positive correlations were found among *participant uncontrolled eating* ($r=.193$; $p<.05$) and *participant cognitive restraint* ($r=.387$; $p<.001$) and a negative correlation was found among *maternal caregiver monitoring control* ($r=-.273$; $p<.05$).

For *maternal caregiver health concerns,* in the form of being on a special diet due to being overweight, positive correlations were found among *maternal caregiver emotional eating* (r=.400; p<.001), *maternal caregiver uncontrolled eating* (r=.287; p≤.01), and *participant cognitive restraint* (r=.207; p<.05) and negative correlations were found among *maternal caregiver authoritative parenting style* (r=-.256; p<.05) and *maternal caregiver pressure to eat control* (r=-.288; p<.05). For *maternal caregiver health concerns*, in the form of being on a special diet due to personal preference, positive correlations were found among *maternal caregiver emotional eating* (r=.240; p<.05) and *maternal caregiver cognitive restraint* (r=.403; p<.001) and negative correlations were found among *maternal caregiver monitoring control* (r=-.290; p<.05) and *maternal caregiver pressure to eat control* (r=-.232; p<.05). For *oldest daughter health concerns*, in the form of being on a special diet due to being overweight, positive correlations were found among *oldest daughter emotional eating* (r=.328; p<.01) and *oldest daughter cognitive restraint* (r=.344; p<.01) and a negative correlation was found among *maternal caregiver restrictive control* (r=-.271; p<.05). For oldest daughter health concerns, in the form of being on a special diet due to participant's personal preference, a negative correlation was found among *participant structure and rules control* (r=-.316; p<.05). For oldest daughters health concerns, in the form of being on a special diet due to her personal preference, positive correlations were found among *participants pressure to eat control* (r=.282; p<.05), *oldest daughter emotional eating* (r=.313; p≤.01), and *oldest daughter cognitive restraint* (r=.692; p<.001). For BMI, participant BMI was found to be positively correlated with *maternal caregiver monitoring control* (r=.234; p≤.05) and

*oldest daughters cognitive restraint* (r=.264; p<.05) and negatively correlated with *participant modeling* (r=-.271; p<.05), *participant emotional eating* (r=-.249; p<.01), *participant uncontrolled eating* (r=-.198; p<.05), and *maternal caregiver cognitive restraint* (r=-.250; p<.05). Maternal caregiver BMI was found to be negatively correlated with *maternal caregiver emotional eating* (r=-.359; p<.01), *maternal caregiver uncontrolled eating* (r=-.393; p≤.001), and *oldest daughter uncontrolled eating* (r=-.269; p<.05). Oldest daughters BMI was found to be negatively correlated with *participants pressure to eat control* (r=-.497; p<.001).

Finally, multiple MANOVA's were conducted to test for any significant differences among grouping categories in regards to the participants', maternal caregivers', and oldest daughters' race, BMI, and health concerns and the participants' and maternal caregivers' marital status and SES, for each of the dependent variables of interest. The dependent variables included eating behavioral patterns, parental control/modeling, and parenting styles.

There were no significant group differences found among participants' race using the dependent variables of eating behavioral patterns [F(36,55)=1.17, p=NS], parental control/modeling [F(40,55)=.928, p=NS], or parenting styles [F(24,60)=.738, p=NS]. There was a significant group differences found among maternal caregivers' race using the dependent variable of eating behavioral patterns [F(9,49)=2.26, p<.05]. However, there were no significant group differences found among maternal caregivers' race using the dependent variables of parental control/modeling [F(10,49)=1.45, p=NS] or parenting styles [F(6,53)=.446, p=NS].There were no significant group differences found among

oldest daughters' race using the dependent variables of eating behavioral patterns [F(45,55)=1.38, p=NS], parental control/modeling [F(50,55)=.956, p=NS], or parenting styles [F(30,60)=.842, p=NS].

There were no significant group differences found among participants' marital status using the dependent variables of eating behavioral patterns [F(24,67)=1.16, p=NS], parental control/modeling [F(20,64)=1.10, p=NS], or parenting styles [F(12,69)=.936, p=NS]. There were no significant group differences found among maternal caregivers' marital status using the dependent variables of eating behavioral patterns [F(27,55)=.969, p=NS], parental control/modeling [F(30,55)=.816, p=NS], or parenting styles [F(18,60)=1.10, p=NS].

There were no significant group differences found among participants' SES using the dependent variables of eating behavioral patterns [F(36,55)=1.06, p=NS], parental control/modeling [F(40,55)=.952, p=NS], or parenting styles [F(24,60)=1.34, p=NS]. There were no significant group differences found among maternal caregivers' SES using the dependent variables of eating behavioral patterns [F(36,55)=.902, p=NS], parental control/modeling [F(24,60)=1.26, p=NS], or parenting styles [F(18,60)=1.10, p=NS].

There were no significant group differences found among participants' BMI using the dependent variables of eating behavioral patterns [F(36,55)=1.17, p=NS], parental control/modeling [F(20,54)=1.11, p=NS], or parenting styles [F(12,59)=.831, p=NS]. There were no significant group differences found among maternal caregivers' BMI using the dependent variables of eating behavioral patterns [F(18,67)=1.66, p=NS], parental control/modeling [F(30,49)=1.14, p=NS], of parenting styles [F(18,51)=.810,

p=NS]. There were no significant group differences found among oldest daughters' BMI using the dependent variables of eating behavioral patterns [F(27,53)=2.94, p=NS], parental control/modeling [F(30,53)=1.14, p=NS], or parenting styles [F(18,57)=.771, p=NS].

In regards to health concerns in the form of being on a special diet due to health reasons, there were no significant group differences found among participant grouping using the dependent variables of eating behavioral patterns [F(9,55)=.704, p=NS], parental control/modeling [F(10,55)=.481, p=NS], or parenting styles [F(6,60)=.558, p=NS]. There were no significant group differences found among maternal caregivers grouping using the dependent variables of eating behavioral patterns [F(9,55)=.536, p=NS], parental control/modeling [F(10,55)=.660, p=NS]. However, there was a significant group difference found when using the dependent variable of parenting styles [F(6,60)=2.64, p<.05]. There were no significant group differences found among oldest daughter grouping using the dependent variables of eating behavioral patterns [F(9,54)=.780, p=NS], parental control/modeling [F(10,54)=1.28, p=NS], or parenting styles [F(6,59)=1.28, p=NS].

In regards to health concerns in the form of being on a special diet due to being overweight, there were no significant group differences found among participant grouping using the dependent variables of eating behavioral patterns [F(9,55)=1.03, p=NS], parental control/modeling [F(10,55)=.567, p=NS], or parenting styles [F(6,60)=.581, p=NS]. There was a significant group difference found among maternal caregivers grouping when using the dependent variable of eating behavioral patterns

[F(9,55)=2.20, p≤.05]. However, there were no significant group differences found among maternal caregivers grouping using the dependent variables of parental control/modeling [F(10,55)=1.86, p=NS] or parenting styles [F(6,60)=1.36, p=NS]. There was a significant group difference found among oldest daughter being on a special diet due to being overweight when using the dependent variable of eating behavioral patterns [F(9,54)=.510, p≤.001]. However, there were no significant group differences found among oldest daughter grouping using the dependent variables of parental control/modeling [F(10,55)=1.61, p=NS] or parenting styles [F(6,60)=.301, p=NS].

In regards to health concerns in the form of being on a special diet due to personal preference, there was a significant group difference found among participant grouping using the dependent variable of eating behavioral patterns [F(9,55)=2.50, p≤.05]. However, there were no significant group differences found among participant grouping using the dependent variables of parental control/modeling [F(10,55)=.847, p=NS] or parenting styles [F(6,60)=1.52, p=NS]. There were no significant group differences found among maternal caregivers grouping using the dependent variables of eating behavioral patterns [F(9,55)=1.12, p=NS], parental control/modeling [F(10,55)=.817, p=NS]. However, there was a significant group difference found using the dependent variable of parenting styles [F(6,60)=.917, p=NS]. There were no significant group differences found among oldest daughter's being on a special diet due to the participants' personal preference when using the dependent variables of eating behavioral patterns [F(9,55)=1.12, p=NS], parental control/modeling [F(10,54)=1.54, p=NS], or parenting styles [F(6,60)=.510, p=NS]. There was a significant group difference found among

oldest daughter's being on a special diet due to their own personal preference when using the dependent variable of eating behavioral patterns [$F(9,55)=5.10$, $p \leq .001$]. However, there were no significant group differences found among oldest daughter's being on a special diet due to their own personal preference when using the dependent variables of parental control/modeling [$F(10,55)=1.61$, p=NS] or parenting styles [$F(6,60)=.301$, p=NS].

***Main Analyses***

Correlational analyses were performed to test the first four hypotheses: (H1) a positive correlation with the *participants' parenting style (authoritative and authoritarian)* and the *participants' maternal caregivers' parenting style (authoritative, authoritarian, and permissive)*, (H2) positive correlations among the *maternal caregivers'*, *participants', and oldest daughters' eating behavioral patterns (cognitive restraint, uncontrolled eating, and emotional eating)*, (H3) a positive correlation with the *participants' use of restrictive control* and the *participants' oldest daughters' uncontrolled and emotional eating behavioral patterns*, a negative correlation with the *participant's use of restrictive control* and the *participants' oldest daughters' cognitive restrained eating behavioral patterns*, (H4) a positive correlation with the *participants' use of pressure to eat control* and the *participants' oldest daughters' cognitive restrained eating behavioral patterns*, and a negative correlation with the *participants' use of pressure to eat control* and the *participants' oldest daughters' uncontrolled and emotional eating behavioral patterns.*

Results indicate that hypothesis one (H1) was partially supported. More specifically, there was a positive correlation (r=.442; p<.001) found among participants' *permissive parenting style* and participants' maternal caregivers' *permissive parenting style*. There was a negative correlation (r= -.248; p<.05) found among participants' *permissive* parenting style and participants' maternal caregivers' *authoritative* parenting style. However, no correlation (r= .034; NS) was found among participants' *authoritative* parenting style and participant's maternal caregivers' *authoritative* parenting style. No correlation (r=.216; NS) found among participants' *authoritative* parenting style and participants' maternal caregivers' *authoritarian* parenting style. No correlation (r=.005; NS) was found among participants' *authoritative* parenting style and participants' maternal caregivers' *permissive* parenting style. No correlation (r=1.68; NS) was found among participants' *authoritarian* parenting style and participants' maternal caregivers' *authoritarian* parenting style. No correlation (r=-.088; NS) was found among participants' *authoritarian* parenting style and participants' maternal caregivers' *authoritative* parenting style. No correlation (r=.108; NS) was found among participants' *authoritarian* parenting style and participants' maternal caregivers' *permissive* parenting style. Finally, no correlation (r=.034; NS) was found among participants' *permissive* parenting style and participants' maternal caregivers' *authoritarian* parenting style.

Hypothesis 2 (H2) was partially supported. When examining maternal caregivers and participants, a positive correlation was found among maternal caregivers' *cognitive restrained* eating and participants' *cognitive restrained* eating (r=.288, p=.01). A positive correlation (r=.574, p<.001) was found among maternal caregivers' *uncontrolled eating*

and participants' *uncontrolled eating* behavioral patterns. A positive correlation (r=.405, p<.001) was found among maternal caregivers' *emotional eating* and participants *emotional eating* behavioral patterns. A positive correlation (r=.334, p<.01) was found among maternal caregivers' *uncontrolled eating* and participants' *emotional eating*. A positive correlation (r=.392, p<.001) was found among maternal caregivers' *emotional eating* and participants' *uncontrolled eating* behavioral patterns. No correlation (r=.169, NS) was found among maternal caregivers' *cognitive restrained* eating and participants' *uncontrolled eating*. No correlation (r=.155, NS) was found among maternal caregivers' *cognitive restrained* eating and participants' *emotional eating*. No correlation (r=.177, NS) was found among maternal caregivers' *uncontrolled eating* and participants' *cognitive restrained* eating behavioral patterns. No correlation (r=.192, NS) was found among maternal caregivers' *emotional eating* and participants' *cognitive restrained* eating behavioral patterns.

When examining maternal caregivers' and oldest daughters' eating behavioral patterns a positive correlation (r=.467, p<.001) was found among maternal caregivers' *uncontrolled eating* and oldest daughters' *uncontrolled eating*. A positive correlation (r=.284, p<.05) was found among maternal caregivers' *emotional eating* and oldest daughters' *emotional eating* behavioral patterns. A positive correlation (r=.316, p<.05) was found among maternal caregivers' *cognitive restrained* eating and oldest daughters' *uncontrolled eating* behavioral patterns. A positive correlation (r=.276, p<.05) was found among maternal caregivers' *uncontrolled eating* and oldest daughters' *emotional eating* behavioral patterns. Additionally, a positive correlation (r=.322, p<.05) was found among

maternal caregivers' emotional eating and oldest daughters' uncontrolled eating behavioral patterns. No correlation (r=-.014, NS) was found among maternal caregivers' *cognitive restrained* eating and oldest daughters' *cognitive restrained* eating. No correlation (r=.066, NS) was found among maternal caregivers' *cognitive restrained* eating and oldest daughters *emotional eating* behavioral patterns. No correlation (r=.873, NS) was found among maternal caregivers *uncontrolled eating* and oldest daughters *cognitive restrained* eating behavioral patterns. Finally, no correlation r=.094, NS) was found among maternal caregivers *emotional eating* and oldest daughters *cognitive restrained* eating.

When examining participants' and oldest daughters' eating behavioral patterns a positive correlation (r=.314, p<.05) was found among participants' *cognitive restrained* eating behavioral pattern and participants' oldest daughters' *cognitive restrained* eating behavioral pattern, therefore suggesting that participants who engaged in cognitive restrained eating had oldest daughters who were more likely to engage in cognitive restrained eating. A positive correlation (r=.408, p<.01) among participant's *uncontrolled* eating behavioral pattern and participants' oldest daughters' *uncontrolled* eating behavioral pattern. More specifically, participants who engaged in uncontrolled eating were more likely to have daughters who engaged in uncontrolled eating. A positive correlation (r=.323; p<.01) was found among participants' *cognitive restrained* eating behavioral pattern and participants' oldest daughters' *emotional* eating behavioral pattern. Therefore, participants who engaged in cognitive restrained eating were more likely to have older daughters who engaged in emotional eating. No correlation (r=.171; NS) was

found for participants' *emotional* eating behavioral pattern and participants' oldest daughters' *emotional eating* behavioral pattern. No correlation (r=.210; NS) was found among participants' *cognitive restrained* eating behavioral patterns and participants' oldest daughters' *uncontrolled* eating behavioral patterns. No correlation (r=-.052; NS) was found among participants' *uncontrolled* eating behavioral pattern and participants' oldest daughters' *cognitive restrained* eating behavioral pattern. No correlation (r=.189; NS) was found among participants' *uncontrolled* eating behavioral pattern and participant's oldest daughters' *emotional* eating behavioral pattern. No correlation (r=.214; NS) was also found among participants' *emotional* eating behavioral pattern and participants' oldest daughters' *uncontrolled* eating behavioral pattern. Finally, no correlation (r=-.092; NS) was found among participants' *emotional* eating behavioral pattern and participants' oldest daughters' *cognitive restrained* eating behavioral patterns.

Hypothesis 3 (H3) was not supported, as results indicate that participants' use of *restrictive* control was found to be negatively correlated (r=-.406, p<.01) with participants' oldest daughters' *uncontrolled eating* behavioral patterns and not correlated (r=-.164, NS) with participant's oldest daughters' *emotional eating*. No correlation (r=.232, NS) among participants' use of *restrictive* control and participants' oldest daughters' *cognitive restrained* eating behavioral patterns.

Hypothesis 4 (H4) was partially supported, as findings showed a positive correlation (r=.384, p<.01) among participants' use of *pressure to eat* control and participants' oldest daughters' *cognitive restrained* eating behavioral patterns. There was also a positive correlation (r=.380, p<.01) found among participants' use of *pressure to*

*eat* control and participants' oldest daughters' *emotional eating* behavioral patterns and no correlation (r=.064, NS) found among participants' use of *pressure to eat* control and participants' oldest daughters' *uncontrolled eating behavioral patterns*. Therefore, results indicated that participants who utilized control in the form of pressure to eat were more likely to have daughters in engaged in cognitive restrained eating behavioral patterns and were less likely to engage emotional eating behavioral patterns.

Hypotheses five and six were originally proposed to be tested using MANOVA's. However, due to a lack of findings for authoritarian participants, these hypotheses were reconstructed and participants received a mean score for each parenting style as opposed to being categorized under one single parenting style. Therefore, hypotheses five, six, and seven were tested using a series of hierarchical multiple linear regressions. For the revised hypothesis five (H5), it was hypothesized that *authoritarian* participant parenting and *authoritarian* maternal caregiver parenting will be most predictive of the use of *restriction* and *pressure to eat control*. To test hypothesis five, a series of two regressions were performed for each of the following outcome variables: *participant restrictive control* and *participant pressure to eat control.* At the first step of the model, a series of covariates were entered. These included maternal caregiver and oldest daughter ethnicity/race, participant, maternal caregiver, and oldest daughter BMI, and participant and maternal caregiver socioeconomic status, and participant, maternal caregiver, and oldest daughter health concerns. At the second step of the model, the z-scored simple effects terms of the predictive variable of the MATERNAL CAREGIVER CONTROL (RESTRICTION and PRESSURE TO EAT) and MATERNAL CAREGIVER mean

scores of PERMISSIVE, AUTHORITATIVE, and AUTHORITARIAN parenting styles were entered respectively. At the third step of the model, the z-scored simple effects terms of the predictive variable of the PARTICIPANT mean scores PERMISSIVE, AUTHORITATIVE, and AUTHORITARIAN parenting styles were respectively entered. At the fourth step of the model, the following interaction terms were entered: PARTICIPANT MEAN SCORE PERMISSIVE x MATERNAL CAREGIVER MEAN SCORE PERMISSIVE, PARTICIPANT MEAN SCORE AUTHORITATIVE x MATERNAL CAREGIVER MEAN SCORE AUTHORITATIVE, and PARTICIPANT MEAN SCORE AUTHORITARIAN x MATERNAL CAREGIVER MEAN SCORE AUTHORITARIAN.

The following presented findings by each regression performed for each of the criterion variables of *participant restrictive control* and *participant pressure to eat control* provided partial support for Hypothesis 5, such that maternal caregivers' use of *authoritarian* parenting was predictive of participants' use of *parental control* in the form of r*estriction*, with their oldest daughters. However, there was no significant indication of *authoritarian* parenting being predictive of *parental control* in the form of *pressure to eat*.

***Participant Restrictive Control.*** This model (Table 7) was not statistically significant [$F$ (17, 29) = 1.64, NS] in its explanation of the variance in participants' use of *restrictive control* with their oldest daughters at the first step. Among the covariates, no variables were significant. Entry of the simple effects of MATERNAL CAREGIVER RESTRICTION and MATERNAL CAREGIVER mean scores for PERMISSIVE,

AUTHORITATIVE, and AUTHORITARIAN parenting styles at the second level was found to be significant, explaining 19% of the variance in participants' use of *restrictive control* with their oldest daughters [$F$ (4, 25) = 4.91, $p \leq .01$]. More specifically, MATERNAL CAREGIVER RESTRICTIVE CONTROL was found to be significant predictor of participants' use of *restrictive control* with their oldest daughter ($\beta = .521$, $p \leq .01$), in that participants were more likely to use restriction with their oldest daughters when their maternal caregivers used restriction with them. Additionally, MATERNAL CAREGIVER mean score of AUTHORITARIAN parenting style was a significant predictor of participants' use of restrictive control with their oldest daughter ($\beta = .390$, $p \leq .05$), in that participants who had maternal caregivers who were authoritarian parents were more likely to use restriction with their oldest daughters. Entry of PARTICIPANT mean scores of PERMISSIVE, AUTHORITATIVE, and AUTHORITARIAN parenting styles at the third level were not found to be significant in its explanation of the variance in participants' use of *restrictive control* with their oldest daughters [$F$ (3, 22) = .673, NS]. Finally, entry of two-way interaction terms at the fourth step of the model were not significant in its explanation of the variance in participants use of *restrictive control* with their oldest daughters [$F$ (3, 19) = .530, NS].

Table 7 Hierarchical Regression for **Restrictive Control**

Summary of Hierarchical Regression Analysis for Frequency of Participant Restrictive Control (N = 47)

| | | Coefficients | | Standardized Regression | | | |
|---|---|---|---|---|---|---|---|
| Predictor Variables | Adj $R^2$ | $R^2$ Change | F Change | Step 1 $\beta$ | Step 2 $\beta$ | Step 3 $\beta$ | Step 4 $\beta$ |
| **Covariates** | .190 | .490 | 1.636 | | | | |
| Maternal Caregiver Race | | | | -.102 | -.138 | -.122 | -.166 |
| Oldest Daughter Race | | | | -.146 | -.117 | -.164 | -.149 |
| Participant BMI | | | | .160 | .086 | .025 | .006 |
| Maternal Caregiver BMI | | | | -.182 | -.047 | -.085 | -.103 |
| Oldest Daughter BMI | | | | -.044 | .002 | -.040 | .074 |
| Participant SES | | | | -.191 | -.163 | -.113 | -.106 |
| Maternal Caregiver SES | | | | -.030 | -.135 | -.176 | -.230 |
| Participant Health Concerns: Health Reasons | | | | .204 | .001 | .007 | .006 |
| Participant Health Concerns: Overweight | | | | .155 | .200 | .141 | .136 |
| Participant Health Concerns: Personal Preference | | | | -.093 | -.072 | .005 | .018 |
| Maternal Caregiver Health Concerns: Health Reasons | | | | .243 | .084 | .110 | .157 |
| Maternal Caregiver Health Concerns: Overweight | | | | -.198 | -.013 | -.049 | -.022 |
| Maternal Caregiver Health Concerns: Personal Preference | | | | .024 | .197 | .214 | .236 |
| Oldest Daughter Health Concerns: Health Reasons | | | | -.250 | -.271 | -.302 | -.279 |
| Oldest Daughter Health Concerns: | | | | -.424 | -.240 | -.229 | -.298 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Overweight | | | | | | | |
| Oldest Daughter Health Concerns: Participant Personal Preference | | | | .187 | -.415* | -.408* | -.437* |
| Oldest Daughter Health Concerns: Oldest Daughter Personal Preference | | | | .168 | .266 | .231 | .296 |
| **Simple Effects** | | | | | | | |
| **Maternal Caregiver Variables** | .474 | .224 | 4.907** | | | | |
| Maternal Caregiver Restriction Control | | | | | .521** | .515* | .517* |
| Maternal Caregiver mean Permissive | | | | | -.201 | -.341 | -.353 |
| Maternal Caregiver mean Authoritative | | | | | .109 | .008 | -.009 |
| Maternal Caregiver mean Authoritarian | | | | | .390* | .470 | .498 |
| **Participant Variables** | .452 | .024 | .673 | | | | |
| Participant mean Permissive | | | | | | .222 | .224 |
| Participant mean Authoritative | | | | | | .003 | .100 |
| Participant mean Authoritarian | | | | | | -.189 | -.078 |
| **Two-Way Interaction Terms** | .415 | .020 | .530 | | | | |
| Participant mean Permissive x Maternal Caregiver mean Permissive | | | | | | | .158 |
| Participant mean Authoritative x Maternal Caregiver mean Authoritative | | | | | | | -.122 |
| Participant mean Authoritarian x Maternal Caregiver mean Authoritarian | | | | | | | .124 |

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

***Participant Pressure to Eat Control.*** This model (Table 8) was not statistically significant [$F$ (17, 29) = 1.70, NS] in its explanation of the variance in participants' use of *pressure to eat control* with their oldest daughters at the first step. Among the covariates, no variables were significant. Entry of the simple effects of MATERNAL CAREGIVER PRESSURE TO EAT CONTROL and MATERNAL CAREGIVER mean scores for PERMISSIVE, AUTHORITATIVE, and AUTHORITARIAN parenting styles at the second level was not found to be significant in its explanation of the variance in participants' use of *pressure to eat control* with their oldest daughters [$F$ (4, 25) = 2.09, NS]. Entry of PARTICIPANT mean scores of PERMISSIVE, AUTHORITATIVE, and AUTHORITARIAN parenting styles at the third level were not found to be significant in its explanation of the variance in participants' use of *restrictive control* with their oldest daughters [$F$ (3, 22) = .972, NS]. Finally, entry of two-way interaction terms at the fourth step of the model were not significant in its explanation of the variance in participants' use of *restrictive control* with their oldest daughters [$F$ (3, 19) = 1.39, NS].

Table 8 Hierarchical Regression for **Pressure to Eat Control**

Summary of Hierarchical Regression Analysis for Frequency of Participant Pressure to Eat Control (N = 47)

| | | | | Coefficients | | | Standardized Regression |
|---|---|---|---|---|---|---|---|
| Predictor Variables | Adj $R^2$ | $R^2$ Change | F Change | Step 1 $\beta$ | Step 2 $\beta$ | Step 3 $\beta$ | Step 4 $\beta$ |
| **Covariates** | .206 | .499 | 1.701 | | | | |
| Maternal Caregiver Race | | | | -.102 | -.135 | -.141 | -.296 |
| Oldest Daughter Race | | | | .136 | .323 | .449 | .295 |
| Participant BMI | | | | .156 | .328 | .380 | .315 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Maternal Caregiver BMI | | | | -.265 | -.201 | -.260 | -.396* |
| Oldest Daughter BMI | | | | -.379 | -.325 | -.226 | -.404 |
| Participant SES | | | | -.252 | -.361* | -.347* | -.514* |
| Maternal Caregiver SES | | | | .020 | .219 | .251 | .195 |
| Participant Health Concerns: Health Reasons | | | | .236 | .232 | .196 | .199 |
| Participant Health Concerns: Overweight | | | | .006 | .038 | .216 | .042 |
| Participant Health Concerns: Personal Preference | | | | .047 | -.228 | -.371 | -.256 |
| Maternal Caregiver Health Concerns: Health Reasons | | | | .263 | .074 | .107 | .156 |
| Maternal Caregiver Health Concerns: Overweight | | | | -.285 | -.121 | -.051 | -.238 |
| Maternal Caregiver Health Concerns: Personal Preference | | | | .149 | .141 | .065 | .130 |
| Oldest Daughter Health Concerns: Health Reasons | | | | -.182 | -.210 | -.241 | -.315 |
| Oldest Daughter Health Concerns: Overweight | | | | -.054 | .190 | .186 | .076 |
| Oldest Daughter Health Concerns: Participant Personal Preference | | | | .154 | .046 | .095 | .087 |
| Oldest Daughter Health Concerns: Oldest Daughter Personal Preference | | | | .169 | .290 | .179 | .200 |
| **Simple Effects** | | | | | | | |
| **Maternal Caregiver Variables** | .310 | .126 | 2.091 | | | | |
| Maternal Caregiver Pressure To Eat Control | | | | | .154 | .240 | .061 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Maternal Caregiver mean Permissive | | | | | .035 | .096 | -.071 |
| Maternal Caregiver mean Authoritative | | | | | .599* | .521* | .606* |
| Maternal Caregiver mean Authoritarian | | | | | -.041 | -.282 | .123 |
| **Participant Variables** | .307 | .044 | .972 | | | | |
| Participant mean Permissive | | | | | | .143 | .175 |
| Participant mean Authoritative | | | | | | .280 | .221 |
| Participant mean Authoritarian | | | | | | .168 | -.035 |
| **Two-Way Interaction Terms** | .342 | .060 | 1.391 | | | | |
| Participant mean Permissive x Maternal Caregiver mean Permissive | | | | | | | .373 |
| Participant mean Authoritative x Maternal Caregiver mean Authoritative | | | | | | | -.208 |
| Participant mean Authoritarian x Maternal Caregiver mean Authoritarian | | | | | | | -.308 |

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

For the revised hypothesis six (H6) it is hypothesized that authoritarian participants and authoritarian maternal caregivers will be most predictive of oldest daughters cognitive restraint, uncontrolled eating, and emotional eating behavioral patterns. To test hypothesis six (H6), a series of regressions were performed for each of the following outcome variables: *oldest daughter cognitive restraint, oldest daughter uncontrolled eating,* and *oldest daughter emotional eating behavioral patterns.* At the first step of the model, a series of covariates were entered. These included participants'

and oldest daughters' race, maternal caregivers' and participants' socioeconomic status, maternal caregivers', participants', and oldest daughters' health concerns, and maternal caregivers', participants', and oldest daughters' BMI. At the second step of the model, the z-scored simple effects terms of the predictive variable of the MATERNAL CAREGIVER mean scores of AUTHORITARIAN, AUTHORITATIVE, and PERMISSIVE parenting styles were respectively entered. At the third step of the model, the z-scored simple effects terms of the predictive variable of the PARTICIPANT mean scores of AUTHORITARIAN, AUTHORITATIVE, and PERMISSIVE parenting styles were respectively entered. At the fourth step of the model, the following interaction terms were entered: PARTICIPANT MEAN SCORE AUTHORITARIAN x MATERNAL CAREGIVER MEAN SCORE AUTHORITARIAN, PARTICIPANT MEAN SCORE AUTHORITATIVE x MATERNAL CAREGIVER MEAN SCORE AUTHORITATIVE, and PARTICIPANT MEAN SCORE PERMISSIVE x MATERNAL CAREGIVER MEAN SCORE PERMISSIVE.

The following presented findings from each regression performed for each of the criterion variables of *oldest daughters' cognitive restraint, oldest daughters' uncontrolled eating,* and *oldest daughters' emotional eating behavioral patterns* did not provide support for Hypothesis 6, such that authoritarian parenting was not found to be a significant predictor of any of the three disordered eating behavioral patterns in children. However, interesting findings were discovered related to dieting and authoritative parenting. More specifically, when oldest daughters were dieting based on their own personal preference they were more likely to restrict their food intake and when their

mothers were dieting due to personal preference, oldest daughters were less likely to overeat. Findings also showed that maternal caregivers who used authoritative parenting were more likely to have granddaughters who engaged in more emotional eating. However, oldest daughters with high BMI's were less likely to engage in emotional eating.

***Oldest Daughter Cognitive Restrained Eating Behavioral Pattern.*** This model (Table 9) was statistically significant [$F$ (17, 30) = 4.81, $p \leq .001$], explaining 73.2% of the variance in *oldest daughter cognitive restraint eating behavioral patterns* at the first step. Among the covariates, OLDEST DAUGHTER HEALTH CONCERNS, in the form of being on a diet due to her personal preference, was a significant predictor of *oldest daughters' cognitive restraint eating behavioral patterns*. More specifically, oldest daughters who were on a diet due to their personal preference were more likely to engage in *cognitive restraint* ($\beta = .971$, $p \leq .001$). Entry of the simple effects of MATERNAL CARGEIVER mean scores for AUTHORITARIAN, AUTHORITATIVE, and PERMISSIVE parenting styles at the second level were not found to be significant in its explanation of the variance in *oldest daughters' cognitive restraint eating behavioral patterns* [$F$ (3, 27) = 1.47, NS]. Entry of PARTICIPANT mean scores of AUTHORITARIAN, AUTHORITATIVE, and PERMISSIVE parenting styles at the third level were not found to be significant in its explanation of the variance in *oldest daughters' cognitive restraint eating behavioral patterns* [$F$ (3, 24) = 1.39, NS]. Finally, entry of two-way interaction terms at the fourth step of the model were not significant in

its explanation of the variance in *oldest daughters' cognitive restraint eating behavioral patterns* [$F$ (3, 21) = 1.40, NS].

Table 9 Hierarchical Regression for Oldest Daughter **Cognitive Restraint**
Summary of Hierarchical Regression Analysis for Frequency of Oldest Daughter Cognitive Restrained Eating Behavioral Pattern (N = 48)

| | | | Coefficients | | | | Standardized Regression |
|---|---|---|---|---|---|---|---|
| Predictor Variables | Adj $R^2$ | $R^2$ Change | F Change | Step 1 $\beta$ | Step 2 $\beta$ | Step 3 $\beta$ | Step 4 $\beta$ |
| **Covariates** | .580 | .732 | 4.814*** | | | | |
| Participant Race | | | | -.060 | -.053 | -.094 | -.067 |
| Oldest Daughter Race | | | | .089 | .020 | .043 | .012 |
| Maternal Caregiver SES | | | | -.220 | -.258 | -.271 | -.231 |
| Participant SES | | | | -.004 | -.034 | .014 | -.108 |
| Maternal Caregiver Health Concerns: Health Reasons | | | | -.060 | -.105 | -.009 | -.090 |
| Maternal Caregiver Health Concerns: Overweight | | | | -.001 | -.068 | -.081 | -.116 |
| Maternal Caregiver Health Concerns: Personal Preference | | | | -.047 | -.015 | -.038 | -.061 |
| Participant Health Concerns: Health Reasons | | | | .068 | .032 | .023 | -.005 |
| Participant Health Concerns: Overweight | | | | -.159 | -.194 | -.157 | -.168 |
| Participant Health Concerns: Personal Preference | | | | -.244 | -.176 | -.187 | -.229 |
| Oldest Daughter Health Concerns: Health Reasons | | | | -.043 | .045 | .025 | -.059 |
| Oldest Daughter Health Concerns: | | | | -.242 | -.196 | -.192 | -.150 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Overweight | | | | | | | |
| Oldest Daughter Health Concerns: Participant Personal Preference | | | | .041 | .027 | .092 | .017 |
| Oldest Daughter Health Concerns: Oldest Daughter Personal Preference | | | | .971*** | .989*** | .943*** | .912*** |
| Maternal Caregiver BMI | | | | .125 | .154 | .100 | .033 |
| Participant BMI | | | | .043 | .012 | -.064 | .010 |
| Oldest daughter BMI | | | | -.171 | -.205 | -.203 | -.201 |
| **Simple Effects** | | | | | | | |
| **Maternal Caregiver Variables** | .598 | .038 | 1.467 | | | | |
| Maternal Caregiver mean Authoritarian | | | | | .311 | .221 | .376 |
| Maternal Caregiver mean Authoritative | | | | | .145 | -.065 | .110 |
| Maternal Caregiver mean Permissive | | | | | -.143 | -.176 | -.246 |
| **Participant Variables** | .615 | .034 | 1.392 | | | | |
| Participant mean Authoritarian | | | | | | -.065 | -.189 |
| Participant mean Authoritative | | | | | | .217 | .121 |
| Participant mean Permissive | | | | | | .206 | .236 |
| **Two-Way Interaction Terms** | .634 | .033 | 1.401 | | | | |
| Participant mean Authoritarian x Maternal Caregiver mean Authoritarian | | | | | | | -.281 |
| Participant mean Authoritative x Maternal Caregiver mean Authoritative | | | | | | | .004 |
| Participant mean Permissive x Maternal Caregiver mean Permissive | | | | | | | .074 |

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

***Oldest Daughter Uncontrolled Eating Behavioral Pattern.*** This model (Table 10) was not statistically significant [$F$ (17, 31) = 1.14, NS] in its explanation of the variance in *oldest daughters uncontrolled eating behavioral patterns* at the first step. Among the covariates, only PARTICIPANTS HEALTH CONCERNS, in the form of being on a diet due to personal preference, was a significant predictor of *oldest daughters' uncontrolled eating*. More specifically, participants who were on a diet due to their personal preference were at less likely to have oldest daughters who engaged in *uncontrolled eating* ($\beta$ = -.465, $p \leq .05$). Entry of the simple effects of MATERNAL CAREGIVER mean scores for AUTHORITARIAN, AUTHORITATIVE, and PERMISSIVE parenting styles at the second level were not found to be significant in its explanation of the variance in *oldest daughters' uncontrolled eating behavioral patterns* [$F$ (3, 28) = 1.027, NS]. Entry of PARTICIPANT mean scores of AUTHORITARIAN, AUTHORITATIVE, and PERMISSIVE parenting styles at the third level were not found to be significant in its explanation of the variance in *oldest daughters' uncontrolled eating behavioral patterns* [$F$ (3, 25) = .639, NS]. Finally, entry of two-way interaction terms at the fourth step of the model were not significant in its explanation of the variance in *oldest daughters' uncontrolled eating behavioral patterns* [$F$ (3, 22) = .787, NS].

Table 10 Hierarchical Regression for Oldest Daughter **Uncontrolled Eating**

Summary of Hierarchical Regression Analysis for Frequency of Oldest Daughter Uncontrolled Eating Behavioral Pattern (N = 49)

| | | Coefficients | | Standardized Regression | | | |
|---|---|---|---|---|---|---|---|
| Predictor Variables | Adj $R^2$ | $R^2$ Change | F Change | Step 1 $\beta$ | Step 2 $\beta$ | Step 3 $\beta$ | Step 4 $\beta$ |
| **Covariates** | .046 | .384 | 1.138 | | | | |
| Participant Race | | | | .196 | .171 | .125 | .079 |
| Oldest Daughter Race | | | | .186 | .318 | .309 | .279 |
| Maternal Caregiver SES | | | | .021 | .157 | .115 | .064 |
| Participant SES | | | | .029 | .038 | .056 | -.005 |
| Maternal Caregiver Health Concerns: Health Reasons | | | | -.271 | -.249 | -.143 | -.069 |
| Maternal Caregiver Health Concerns: Overweight | | | | .055 | .153 | .111 | .057 |
| Maternal Caregiver Health Concerns: Personal Preference | | | | .134 | .098 | .111 | .104 |
| Participant Health Concerns: Health Reasons | | | | -.148 | -.084 | -.082 | -.088 |
| Participant Health Concerns: Overweight | | | | .159 | .205 | .167 | .120 |
| Participant Health Concerns: Personal Preference | | | | -.465* | -.605* | -.610* | -.579* |
| Oldest Daughter Health Concerns: Health Reasons | | | | -.092 | -.199 | -.176 | -.212 |
| Oldest Daughter Health Concerns: Overweight | | | | .044 | .079 | .064 | -.041 |
| Oldest Daughter Health Concerns: Participant Personal Preference | | | | .268 | .275 | .328 | .360 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Oldest Daughter Health Concerns: Oldest Daughter Personal Preference | | | | .204 | .163 | .183 | .241 |
| Maternal Caregiver BMI | | | | -.255 | -.267 | -.263 | -.346 |
| Participant BMI | | | | .053 | .139 | .034 | .000 |
| Oldest daughter BMI | | | | -.065 | -.001 | -.051 | -.112 |
| **Simple Effects** | | | | | | | |
| **Maternal Caregiver Variables** | .049 | .061 | 1.026 | | | | |
| Maternal Caregiver mean Authoritarian | | | | | -.404 | -.454 | -.337 |
| Maternal Caregiver mean Authoritative | | | | | -.006 | -.104 | -.131 |
| Maternal Caregiver mean Permissive | | | | | .173 | .233 | .136 |
| **Participant Variables** | .011 | .040 | .639 | | | | |
| Participant mean Authoritarian | | | | | | -.121 | -.177 |
| Participant mean Authoritative | | | | | | .118 | .151 |
| Participant mean Permissive | | | | | | -.083 | .005 |
| **Two-Way Interaction Terms** | -.015 | .050 | .787 | | | | |
| Participant mean Authoritarian x Maternal Caregiver mean Authoritarian | | | | | | | -.057 |
| Participant mean Authoritative x Maternal Caregiver mean Authoritative | | | | | | | -.263 |
| Participant mean Permissive x Maternal Caregiver mean Permissive | | | | | | | .215 |

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

***Oldest Daughter Emotional Eating Behavioral Pattern.*** This model (Table 11) was not statistically significant [$F$ (17, 30) = 1.49, NS] in its explanation of the variance

in child emotional eating behavioral patterns at the first step. Among the covariates, only oldest daughters' BMI was a significant predictor of child emotional eating, in that oldest daughters with higher BMI's were at less risk for emotional eating ($\beta$ = -.504, $p \leq .05$). Entry of the simple effects of MATERNAL CAREGIVER mean scores for AUTHORITARIAN, AUTHORITATIVE, and PERMISSIVE parenting styles were statistically significant [$F$ (3, 27) = 3.36, $p \leq .05$] and accounted for 60.5% of the total variance. At the second step, MATERNAL CARGIVER mean score of AUTHORITATIVE parenting style was a significant predictor of *oldest daughters' emotional eating behavioral patterns*, in that higher scores of maternal caregiver authoritative parenting were associated with higher oldest daughters' emotional eating ($\beta$ = .476, $p \leq .05$). Entry of participant mean scores of authoritarian, authoritative, and permissive parenting styles at the third level were not found to be significant in its explanation of the variance in child emotional eating behavioral patterns [$F$ (3, 24) = 2.09, NS]. Finally, entry of two-way interaction terms at the fourth step of the model were not significant in its explanation of the variance in child emotional eating behavioral patterns [$F$ (3, 21) = .808, NS].

Table 11 Hierarchical Regression for Oldest Daughter **Emotional Eating**
Summary of Hierarchical Regression Analysis for Frequency of Oldest Daughter Emotional Eating Behavioral Pattern (N = 48)

| | | | Coefficients | | | Standardized Regression | |
|---|---|---|---|---|---|---|---|
| **Predictor Variables** | **Adj $R^2$** | **$R^2$ Change** | **F Change** | **Step 1 $\beta$** | **Step 2 $\beta$** | **Step 3 $\beta$** | **Step 4 $\beta$** |
| **Covariates** | .151 | .458 | 1.491 | | | | |
| Participant Race | | | | .102 | .038 | -.028 | -.012 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Oldest Daughter Race | | | | .240 | .361 | .352 | .319 |
| Maternal Caregiver SES | | | | -.110 | .155 | .085 | .122 |
| Participant SES | | | | -.021 | -.068 | -.009 | -.131 |
| Maternal Caregiver Health Concerns: Health Reasons | | | | -.018 | -.078 | .101 | .044 |
| Maternal Caregiver Health Concerns: Overweight | | | | .138 | .169 | .139 | .103 |
| Maternal Caregiver Health Concerns: Personal Preference | | | | .058 | .074 | .066 | .035 |
| Participant Health Concerns: Health Reasons | | | | -.048 | .054 | .043 | .017 |
| Participant Health Concerns: Overweight | | | | -.076 | -.083 | -.117 | -.137 |
| Participant Health Concerns: Personal Preference | | | | -.114 | -.247 | -.262 | -.298 |
| Oldest Daughter Health Concerns: Health Reasons | | | | -.041 | -.059 | -.055 | -.138 |
| Oldest Daughter Health Concerns: Overweight | | | | .017 | .311 | .252 | .283 |
| Oldest Daughter Health Concerns: Participant Personal Preference | | | | .061 | -.041 | .103 | .044 |
| Oldest Daughter Health Concerns: Oldest Daughter Personal Preference | | | | .328 | .241 | .272 | .247 |
| Maternal Caregiver BMI | | | | -.024 | .085 | .050 | -.020 |
| Participant BMI | | | | -.118 | .063 | -.133 | -.080 |
| Oldest daughter BMI | | | | -.504* | -.454* | -.541** | -.544** |
| **Simple Effects** | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Maternal Caregiver Variables** | .313 | .147 | 3.364* | | | | |
| Maternal Caregiver mean Authoritarian | | | | | -.111 | -.195 | -.046 |
| Maternal Caregiver mean Authoritative | | | | | .476* | .251 | .353 |
| Maternal Caregiver mean Permissive | | | | | -.149 | -.111 | -.177 |
| **Participant Variables** | .387 | .082 | 2.087 | | | | |
| Participant mean Authoritarian | | | | | | -.233 | -.363 |
| Participant mean Authoritative | | | | | | .252 | .160 |
| Participant mean Permissive | | | | | | .049 | .095 |
| **Two-Way Interaction Terms** | .372 | .032 | .808 | | | | |
| Participant mean Authoritarian x Maternal Caregiver mean Authoritarian | | | | | | | -.268 |
| Participant mean Authoritative x Maternal Caregiver mean Authoritative | | | | | | | -.046 |
| Participant mean Permissive x Maternal Caregiver mean Permissive | | | | | | | .076 |

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

For Hypothesis 7 (H7) a series of three regressions were performed for each of the following outcome variables: *child cognitive restraint, child uncontrolled eating,* and *child emotional eating behavioral patterns.* At the first step of the model, a series of covariates were entered. These included participants' and oldest daughters' race, maternal caregivers' and participants' socioeconomic status, maternal caregivers', participants',

and oldest daughters' health concerns, and maternal caregivers', participants', and oldest daughters, BMI. At the second step of the model, the z-scored simple effects terms of the predictive variables of MATERNAL CAREGIVER PRESSURE TO EAT, MONITORING, RESTRICTION, and STRUCTURE AND RULES CONTROL and PARTICIPANT PRESSURE TO EAT, MONITORING, RESTRICTION, AND STRUCTURE AND RULES CONTROL were respectively entered. At the third step of the model, the z-scored simple effects terms of the predictive variables of the MATERNAL CAREGIVER MODELING and PARTICIPANT MODELING were respectively entered. At the fourth step of the model, the following interaction terms were entered: MATERNAL CAREGIVER PRESSURE TO EAT CONTROL x MATERNAL CAREGIVER MODELING, MATERNAL CAREGIVER MONITORING CONTROL x MATERNAL CAREGIVER MODELING, MATERNAL CAREGIVER RESTRICTION CONTROL x MATERNAL CAREGIVIER MODELING, MATERNAL CAREGIVER STRUCTURE AND RULES CONTROL x MATERNAL CAREGIVER MODELING, PARTICIPANT PRESSURE TO EAT CONTROL x PARTICIPANT MODELING, PARTICIPANT MONITORING x PARTICIPANT MODELING, PARTICIPANT RESTRICTION CONTROL x PARTICIPANT MODELING, PARTICIPANT STRUCTURE AND RULES CONTROL x PARTICIPANT MODELING.

The predictor variables were entered into the regression model from least expected predictor to most expected predictor, for each of the three criterion variables in an effort to partial out the variance of the earlier predictive variables. Thus, the entry of the model was guided by the premise that parental modeling would more strongly predict

child eating behavioral patterns, above and beyond parental control based on the literature.

The following presented findings from each regression performed for each of the criterion variables of *oldest daughters' cognitive restraint, oldest daughters' uncontrolled eating,* and *oldest daughters' emotional eating behavioral patterns* did not provide support for Hypothesis 7, such that there were no significant findings suggesting that parental modeling was more predictive of eating behavioral patterns when compared to parental control.

***Oldest Daughter Cognitive Restrained Eating Behavioral Pattern.*** This model (Table 12) was statistically significant [$F$ (17, 27) = 4.23, $p \leq .001$], explaining 72.7% of the variance in *oldest daughters' cognitive restraint eating behavioral patterns* at the first step. Among the covariates, OLDEST DAUGHTERS HEALTH CONCERNS, in the form of being on a diet due to her personal preference, was a significant predictor of *oldest daughters' cognitive restraint eating behavioral patterns* ($\beta = .971$, $p \leq .001$). More specifically, oldest daughters who were on a diet due to their personal preference were more likely to engage in *cognitive restraint.* Entry of the simple effects of MATERNAL CARGEIVER and PARTICIPANT PRESSURE TO EAT, MONITORING, RESTRICTION, and STRUCTURE AND RULES CONTROL at the second level were not found to be significant in its explanation of the variance in *oldest daughters' cognitive restraint eating behavioral patterns* [$F$ (8, 19) = 1.24, NS]. Entry of MATERNAL CAREGIVER and PARTICIPANT MODELING at the third level were not found to be significant in its explanation of the variance in *oldest daughters'*

*cognitive restraint eating behavioral patterns* [$F$ (2, 17) = 1.91, NS]. Finally, entry of two-way interaction terms at the fourth step of the model were not significant in its explanation of the variance in *oldest daughters' cognitive restraint eating behavioral patterns* [$F$ (8, 9) = .433, NS].

Table 12 Hierarchical Regression for Oldest Daughter Cognitive Restraint

Summary of Hierarchical Regression Analysis for Frequency of Oldest Daughter Cognitive Restrained Eating Behavioral Pattern (N = 45)

| | | Coefficients | | Standardized Regression | | | |
|---|---|---|---|---|---|---|---|
| **Predictor Variables** | **Adj $R^2$** | **$R^2$ Change** | **F Change** | **Step 1 $\beta$** | **Step 2 $\beta$** | **Step 3 $\beta$** | **Step 4 $\beta$** |
| **Covariates** | .555 | .727 | 4.228*** | | | | |
| Participant Race | | | | -.032 | .029 | -.026 | .019 |
| Oldest Daughter Race | | | | .089 | -.038 | .014 | .026 |
| Maternal Caregiver SES | | | | -.200 | -.045 | -.084 | -.233 |
| Participant SES | | | | -.007 | -.102 | -.163 | -.016 |
| Maternal Caregiver Health Concerns: Health Reasons | | | | -.065 | .063 | .106 | .080 |
| Maternal Caregiver Health Concerns: Overweight | | | | -.003 | -.202 | -.204 | -.266 |
| Maternal Caregiver Health Concerns: Personal Preference | | | | -.055 | -.207 | -.146 | -.323 |
| Participant Health Concerns: Health Reasons | | | | .067 | .222 | .230 | .250 |
| Participant Health Concerns: Overweight | | | | -.149 | -.414 | -.335 | -.274 |
| Participant Health Concerns: Personal Preference | | | | -.246 | -.048 | -.121 | -.033 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Oldest Daughter Health Concerns: Health Reasons | | | | -.043 | .188 | .121 | .082 |
| Oldest Daughter Health Concerns: Overweight | | | | -.245 | -.194 | -.250 | -.360 |
| Oldest Daughter Health Concerns: Participant Personal Preference | | | | .044 | .308 | .338 | .378 |
| Oldest Daughter Health Concerns: Oldest Daughter Personal Preference | | | | .981*** | .912*** | .943*** | .949** |
| Maternal Caregiver BMI | | | | .117 | .047 | .004 | .027 |
| Participant BMI | | | | .049 | -.057 | .041 | .082 |
| Oldest daughter BMI | | | | -.160 | -.340 | -.376 | -.449 |
| **Simple Effects** | | | | | | | |
| **Control Variables** | .584 | .093 | 1.235 | | | | |
| Maternal Caregiver Pressure to Eat Control | | | | | -.011 | -.011 | -.056 |
| Maternal Caregiver Monitoring Control | | | | | .146 | .177 | -.329 |
| Maternal Caregiver Restriction Control | | | | | -.446 | -.377 | -.064 |
| Maternal Caregiver Structure and Rules Control | | | | | -.272 | .320 | -.326 |
| Participant Pressure to Eat Control | | | | | -.181 | -.210 | -.393 |
| Participant Monitoring Control | | | | | -.386 | -.398 | -.093 |
| Participant Restriction Control | | | | | .494 | .392 | .221 |
| Participant Structure and Rules Control | | | | | .252 | .215 | .124 |
| **Modeling Variables** | .620 | .033 | 1.913 | | | | |
| Maternal Caregiver Modeling | | | | | | .044 | .056 |
| Participant Modeling | | | | | | .216 | .012 |
| **Two-Way Interaction Terms** | .640 | .073 | 1.116 | | | | |
| Maternal Caregiver Pressure to Eat x | | | | | | | .020 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Maternal Caregiver Modeling | | | | | | | |
| Maternal Caregiver Monitoring x Maternal Caregiver Modeling | | | | | | | -.484 |
| Maternal Caregiver Restriction x Maternal Caregiver Modeling | | | | | | | .433 |
| Maternal Caregiver Structure and Rules x Maternal Caregiver Modeling | | | | | | | .072 |
| Participant Pressure to Eat x Participant Modeling | | | | | | | -.029 |
| Participant Monitoring x Participant Modeling | | | | | | | .640 |
| Participant Restriction x Participant Modeling | | | | | | | -.494 |
| Participant Structure and Rules x Participant Modeling | | | | | | | -.269 |

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

***Oldest Daughter Uncontrolled Eating Behavioral Pattern.*** This model (Table 13) was not statistically significant [$F$ (17, 28) = 1.14, NS] in its explanation of the variance in *oldest daughters uncontrolled eating behavioral patterns* at the first step. Among the covariates, only PARTICIPANTS' HEALTH CONCERNS, in the form of being on a diet due to personal preference, was a significant predictor of *oldest daughters' uncontrolled eating*. More specifically, participants who were on a diet due to their personal preference were less likely to have oldest daughters who engaged in *uncontrolled eating* ($\beta$ = -.465, $p \leq .05$). Entry of the simple effects of MATERNAL CAREGIVER and PARTICIPANT PRESSURE TO EAT, MONITORING,

RESTRICTION, and STRUCTURE AND RULES CONTROL at the second level were not found to be significant in its explanation of the variance in *oldest daughters' uncontrolled eating behavioral patterns* [$F$ (8, 20) = 1.52, NS]. Entry of MATERNAL CAREGIVER and PARTICIPANT MODELING at the third level were not found to be significant in its explanation of the variance in *oldest daughters' uncontrolled eating behavioral patterns* [$F$ (2, 18) = .236, NS]. Finally, entry of two-way interaction terms at the fourth step of the model were not significant in its explanation of the variance in *oldest daughters' uncontrolled eating behavioral patterns* [$F$ (8, 10) = 2.15, NS].

Table 13 Hierarchical Regression for Oldest Daughter **Uncontrolled Eating**
Summary of Hierarchical Regression Analysis for Frequency of Oldest Daughter Uncontrolled Eating Behavioral Pattern (N = 46)

| | | | | Coefficients | | | Standardized Regression |
|---|---|---|---|---|---|---|---|
| **Predictor Variables** | **Adj $R^2$** | **$R^2$ Change** | **F Change** | **Step 1 $\beta$** | **Step 2 $\beta$** | **Step 3 $\beta$** | **Step 4 $\beta$** |
| **Covariates** | .050 | .409 | 1.138 | | | | |
| Participant Race | | | | .263 | .314 | .347 | .376 |
| Oldest Daughter Race | | | | .194 | .054 | .085 | -.393 |
| Maternal Caregiver SES | | | | .071 | .038 | -.010 | -.091 |
| Participant SES | | | | .028 | -.002 | .010 | .100 |
| Maternal Caregiver Health Concerns: Health Reasons | | | | -.295 | -.196 | -.250 | .048 |
| Maternal Caregiver Health Concerns: Overweight | | | | -.012 | -.275 | -.224 | -.466 |
| Maternal Caregiver Health Concerns: Personal Preference | | | | .118 | -.022 | -.053 | -.573 |
| Participant Health Concerns: Health | | | | -.153 | .013 | .010 | .024 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Reasons | | | | | | | |
| Participant Health Concerns: Overweight | | | | .208 | .151 | .171 | -.087 |
| Participant Health Concerns: Personal Preference | | | | -.466* | -.430 | -.434 | .017 |
| Oldest Daughter Health Concerns: Health Concerns | | | | -.073 | .008 | .044 | .216 |
| Oldest Daughter Health Concerns: Overweight | | | | .037 | -.198 | -.238 | -.402 |
| Oldest Daughter Health Concerns: Participant Personal Preference | | | | .331 | .463 | .474 | .765* |
| Oldest Daughter Health Concerns: Oldest Daughter Personal Preference | | | | .215 | .246 | .213 | .166 |
| Maternal Caregiver BMI | | | | -.271 | -.434 | -.443 | -.279 |
| Participant BMI | | | | .090 | .190 | .267 | .020 |
| Oldest daughter BMI | | | | -.010 | -.108 | -.135 | -.337 |
| **Simple Effects** | | | | | | | |
| **Control Variables** | .173 | .224 | 1.522 | | | | |
| Maternal Caregiver Pressure to Eat Control | | | | | .077 | .152 | .122 |
| Maternal Caregiver Monitoring Control | | | | | -.114 | -.176 | -1.273* |
| Maternal Caregiver Restriction Control | | | | | -.570 | -.637 | -.420 |
| Maternal Caregiver Structure and Rules Control | | | | | .196 | .305 | .424 |
| Participant Pressure to Eat Control | | | | | .049 | .098 | -.209 |
| Participant Monitoring Control | | | | | .076 | -.003 | .667 |
| Participant Restriction Control | | | | | -.153 | -.059 | -.157 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Participant Structure and Rules Control | | | | | -.176 | -.209 | -.362 |
| **Modeling Variables** | .104 | .009 | .236 | | | | |
| Maternal Caregiver Modeling | | | | | | -.169 | -.256 |
| Participant Modeling | | | | | | .119 | -.169 |
| **Two-Way Interaction Terms** | .408 | .227 | 2.153 | | | | |
| Maternal Caregiver Pressure to Eat x Maternal Caregiver Modeling | | | | | | | -.661 |
| Maternal Caregiver Monitoring x Maternal Caregiver Modeling | | | | | | | -1.349* |
| Maternal Caregiver Restriction x Maternal Caregiver Modeling | | | | | | | .508 |
| Maternal Caregiver Structure and Rules x Maternal Caregiver Modeling | | | | | | | .594 |
| Participant Pressure to Eat x Participant Modeling | | | | | | | -.402 |
| Participant Monitoring x Participant Modeling | | | | | | | 1.103 |
| Participant Restriction x Participant Modeling | | | | | | | -.010 |
| Participant Structure and Rules x Participant Modeling | | | | | | | -1.089* |

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

***Oldest Daughter Emotional Eating Behavioral Pattern.*** This model (Table 14) was not statistically significant [$F$ (17, 27) = 1.63, NS] in its explanation of the variance in *oldest daughters' emotional eating behavioral patterns* at the first step. Among the covariates, OLDEST DAUGHTERS' BMI was a significant predictor of *oldest*

*daughters' emotional eating behavioral patterns.* More specifically, oldest daughters with higher BMI's were found to engage in less emotional eating ($\beta$ = -.486, $p \leq .05$). Entry of the simple effects of MATERNAL CAREGIVER and PARTICIPANT PRESSURE TO EAT, MONITORING, RESTRICTION, and STRUCTURE AND RULES CONTROL at the second level were not found to be significant in its explanation of the variance in *oldest daughter's emotional eating behavioral patterns* [$F$ (8, 19) = 1.42, NS]. Entry of MATERNAL CAREGIVER and PARTICIPANT MODELING at the third level were not found to be significant in its explanation of the variance in *oldest daughters' emotional eating behavioral patterns* [$F$ (2, 17) = .453, NS]. Finally, entry of two-way interaction terms at the fourth step of the model were not significant in its explanation of the variance in *oldest daughters' emotional eating behavioral patterns* [$F$ (8, 9) = .450, NS].

Table 14 Hierarchical Regression for Oldest Daughter **Emotional Eating**

Summary of Hierarchical Regression Analysis for Frequency of Oldest Daughter Emotional Eating Behavioral Pattern (N = 45)

| | | | Coefficients | Standardized Regression | | | |
|---|---|---|---|---|---|---|---|
| **Predictor Variables** | **Adj $R^2$** | **$R^2$ Change** | **F Change** | **Step 1 $\beta$** | **Step 2 $\beta$** | **Step 3 $\beta$** | **Step 4 $\beta$** |
| **Covariates** | .197 | .507 | 1.633 | | | | |
| Participant Race | | | | .219 | .082 | .028 | -.012 |
| Oldest Daughter Race | | | | .277 | .169 | .197 | .267 |
| Maternal Caregiver SES | | | | -.045 | .156 | .142 | -.006 |
| Participant SES | | | | -.057 | .106 | .060 | .095 |
| Maternal Caregiver Health Concerns: Health Reasons | | | | -.039 | .079 | .128 | .158 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Maternal Caregiver Health Concerns: Overweight | | | | .154 | -.086 | -.103 | -.297 |
| Maternal Caregiver Health Concerns: Personal Preference | | | | .001 | .884 | .102 | -.063 |
| Participant Health Concerns: Health Reasons | | | | -.059 | .038 | .043 | .107 |
| Participant Health Concerns: Overweight | | | | -.011 | -.067 | -.016 | -.124 |
| Participant Health Concerns: Personal Preference | | | | -.168 | .036 | -.014 | .177 |
| Oldest Daughter Health Concerns: Health Reasons | | | | -.033 | .092 | .031 | .081 |
| Oldest Daughter Health Concerns: Overweight | | | | .013 | .199 | .179 | .008 |
| Oldest Daughter Health Concerns: Participant Personal Preference | | | | .085 | .200 | .213 | .328 |
| Oldest Daughter Health Concerns: Oldest Daughter Personal Preference | | | | .367 | .018 | .044 | .355 |
| Maternal Caregiver BMI | | | | .000 | .076 | .050 | .126 |
| Participant BMI | | | | -.088 | -.172 | -.126 | -.346 |
| Oldest daughter BMI | | | | -.486* | -.395 | -.408 | -.378 |
| **Simple Effects** | | | | | | | |
| **Control Variables** | .285 | .184 | 1.415 | | | | |
| Maternal Caregiver Pressure to Eat Control | | | | | -.527* | -.553* | -.498 |
| Maternal Caregiver | | | | | -.070 | -.027 | -.386 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Monitoring Control | | | | | | | |
| Maternal Caregiver Restriction Control | | | | | -.229 | -.152 | .221 |
| Maternal Caregiver Structure and Rules Control | | | | | .387 | .316 | -.014 |
| Participant Pressure to Eat Control | | | | | .336 | .305 | .094 |
| Participant Monitoring Control | | | | | .293 | .312 | .632 |
| Participant Restriction Control | | | | | .025 | -.080 | -.419 |
| Participant Structure and Rules Control | | | | | -.411 | -.429 | -.118 |
| Modeling Variables | .241 | .016 | .453 | | | | |
| Maternal Caregiver Modeling | | | | | | .086 | .250 |
| Participant Modeling | | | | | | .118 | -.283 |
| **Two-Way Interaction Terms** | .269 | .144 | 1.083 | | | | |
| Maternal Caregiver Pressure to Eat x Maternal Caregiver Modeling | | | | | | | -.069 |
| Maternal Caregiver Monitoring x Maternal Caregiver Modeling | | | | | | | -.940 |
| Maternal Caregiver Restriction x Maternal Caregiver Modeling | | | | | | | .571 |
| Maternal Caregiver Structure | | | | | | | .504 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| and Rules x Maternal Caregiver Modeling | | | | | | | |
| Participant Pressure to Eat x Participant Modeling | | | | | | | -.353 |
| Participant Monitoring x Participant Modeling | | | | | | | .133 |
| Participant Restriction x Participant Modeling | | | | | | | -.125 |
| Participant Structure and Rules x Participant Modeling | | | | | | | -.081 |

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

## DISCUSSION

### *Summary of Findings*

It was hypothesized that the current study would assist in illuminating the generational effects of *parenting style* and parental use of *control* and *modeling* on child *eating behavioral patterns*. Previous research conducted primarily focuses on the effects of these variables separately on child outcomes and do not examine the effects across generations. As eating disorder and obesity prevalence rates continue to rise in children, it is important to examine the caregivers' relationship with food and their children's relationship with food, while also looking for any transgenerational effects that may be contributing to the increasing trend in obesity and eating disorders (US Department of Health and Human Services, 2013; Rosen, 2010).

When examining parenting styles related to eating, much of the previous research on parenting styles and child eating and weight outcomes suggest that authoritarian

parenting may put children at higher risk for becoming overweight or obese and engaging in low consumption of healthy foods (Kelley, 2014). Research on permissive parenting shows that this style tends to lead to a lack of self-regulation and overeating (Bredehoft, et al.,1998). However, authoritative parenting tends to have more optimal outcomes, such as higher consumption of healthy food and great child autonomy Patrick, et al., 2005). Based on what is known about the advantages and disadvantages of particular parenting styles, it is important to know how parenting styles develop and if they are passed down through generations.

When examining the transfer of parenting styles across generations, the findings of the current study showed that mothers who were raised by permissive maternal caregivers were most likely to adopt a similar parenting style. The findings also suggest that mothers raised by authoritarian parents were more likely to adopt parenting styles that were more authoritative. Although the latter finding is not what was hypothesized, a possible reason for this finding may be that individuals who experienced a more rigid and highly structured childhood upbringing may prefer to provide a less stringent and more supportive environment for their children. However, it is noteworthy that the overwhelming majority of participants from the present study identified as authoritative parents. There was a small amount of permissive parents and zero authoritarian parents. Therefore, it may be difficult to generalize these results to a wider population and results may differ if the sample was more evenly distributed. Additionally, as previous research shows, authoritative parenting has been linked with significant benefits for raising children, including greater consumption of healthy foods, increased autonomy and self-

reliance, academic success, and decreased risk for depression, anxiety, and delinquent behaviors (Patrick, et al., 2005; Steinberg, et al., 1991). Therefore, a possible rational for the lack of diversity in parenting styles may be due to the increased knowledge of the benefits of authoritative parenting and parents becoming more educated on parenting styles.

The present study also examined disordered eating behavioral patterns across generations. These patterns include cognitive restraint (limiting one's food intake), uncontrolled eating (the extent to which one overeats), and emotional eating (eating when driven by an emotional state) (Karlsson, 2010). Previous research on each individual disordered eating behavioral patterns and BMI shows that children, adolescents, and adult females who engage in cognitive restrained eating tend to have higher BMI's (Angle, et al., 2009; Elfhag & Linne, 2005). Research also indicates that children, adolescents, and female adults who engage in emotional eating tend to have higher BMI's (Angle, et al., 2009; Elfhag & Linne, 2005). Previous research on emotional eating also shows that increased parental modeling tends to play a role in increased emotional eating behavioral patterns in children (Dickens & Ogden, 2014; Brown & Ogden, 2004) whereas, increased parental control has been shown to increase uncontrolled eating in children (Birch, et al., 2003; Faith, et al., 2004; Brown & Ogden, 2004).

The findings of the present study tend to be fairly congruent with previous findings. The present study hypothesized that these disordered eating patterns would be passed down across generations, suggesting a component of parental modeling: grandmothers (the maternal caregivers) who engaged in cognitive restrained eating where

likely to have daughters (the participants) who engaged in cognitive restrained eating, grandmothers (the maternal caregivers) who engaged in uncontrolled eating were likely to have daughters (the participants) who engaged in uncontrolled eating; and grandmothers (the maternal caregivers) who engaged in emotional eating were likely to have daughters (the participants) who engaged in emotional eating. This suggests that when examining eating behaviors passed down from maternal caregivers to adult daughters, modeling plays a role in the adoption of all three of the disordered eating behavioral patterns. Additionally, it was found that grandmothers (the maternal caregivers) who engaged in uncontrolled eating were more likely to have daughters (the participants) who engaged in emotional eating and grandmothers (the maternal caregivers) who engaged in emotional eating were more likely to have daughters (the participants) who engaged in uncontrolled eating. When examining the findings of the present study in relation to similarities of grandmothers (the maternal caregivers) eating behavioral patterns and granddaughters (the oldest daughters) eating behavioral patterns, it was found that grandmothers (the maternal caregivers) who modeled uncontrolled eating and emotional eating were likely to have granddaughters (the oldest daughters) who adopted each disordered eating behavioral pattern. It was also found that grandmothers who engaged in cognitive restraint had granddaughters who engaged in uncontrolled eating, grandmothers who engaged in uncontrolled eating had granddaughters who engaged in emotional eating, and grandmothers who engaged in emotional eating had granddaughters who engaged in uncontrolled eating.

These findings suggest that there are transgenerational modeling effects on the likelihood of children adopting similar disordered eating behavioral patterns, especially with respect to uncontrolled eating and emotional eating. Mothers who engaged in cognitive restraint and uncontrolled eating were more likely to have daughters who adopted the same disordered eating behavioral patterns. Additionally, it was found that mothers who engaged in cognitive restraint also had daughters who were more likely to adopt other disordered eating patterns such as emotional eating.

Although cognitive restraint involves restriction and emotional eating involves being driven to eat by emotional states, this trend of restriction accompanied with emotional eating may be similar to what is seen in trends related to common difficulties experienced by those with eating disorders such as bulimia. For example, bulimia, defined as binging and purging with feelings of distress and being out of control (Parritz & Troy, 2013), often involves both restriction and binge-eating, which may be driven by emotional states. Therefore, engaging in restriction as well as emotional eating may be similar to these extremes seen in dieting behaviors. Finally, based on the results that indicate that parental modeling of certain disordered eating behavioral patterns can also lead to an increase in likelihood of children adopting other disordered eating behavioral patterns, the results also warrant future studies, including research on if an individual is more susceptible to other unhealthy eating patterns if he/she engages in a disordered eating behavioral pattern.

Much of the previous research on parental control and child eating behavioral patterns show that parental use of *control* in the form of *restriction* tends to increase child

*emotional and uncontrolled* eating behavioral patterns (Birch, et al., 2003; Faith, et al., 2004; Brown & Ogden, 2004) whereas, parental use of *control* in the form of *pressure to eat*, tends to increase child *cognitive restrained* eating behavioral patterns (Fisher, et al., 2002; Galloway, et al., 2006). The results of the present study in this domain showed some findings that were consistent with previous literature and some that were inconsistent. It was found that mothers who applied more *pressure to eat control* were more likely to have daughters who engaged in *cognitive restrained* eating behavioral patterns. This finding is highly consistent with the previous literature, suggesting that when caretakers apply pressure on their children to eat their food or eat certain foods, they tend to be less likely to eat those foods or to eat higher quantities of food in general Fisher et al., 2002; Galloway, et al., 2006). However, findings of the present study related *restrictive control* and eating behavioral patterns was not consistent with the majority of the literature and was not as hypothesized. The present study showed that parents applying *control* in the form of *restriction*, or limiting their child intake of certain foods, did not increase the risk of *emotional* or *uncontrolled eating*. One possible rational for these findings may be the absence of *authoritarian* participants. Research shows that *authoritarian* parenting, which is high in control and demandingness (Baumrind 1967, 1971) is positively associated with *restrictive control* (Hubbs-Tait et al. (2008). Therefore, results related to restrictive control may be different if the sample included more *authoritarian* parents. In fact, when the present study examined *authoritarian* parenting as a possible predictor of *control*, results indicated that when maternal

caregivers used *authoritarian* parenting styles, their daughters were more likely to use *restrictive control* with their own daughters.

One finding that is not consistent with the previous literature and that is somewhat perplexing is the results of the present study that indicated that maternal caregivers who used authoritative parenting styles were more likely to have granddaughters who engage in more emotional eating. This is a puzzling finding as authoritative parenting has a great deal of research that points to the benefits it provides, specifically related to children having fewer incidents of depression and anxiety, greater self-reliance, and consuming more healthy foods. One possible factor is in the present study is that it is not known what specific foods the oldest daughter is consuming. So it may be conceivable that even if she is engaging in emotional eating, it may include healthy foods. This finding is also interesting as it suggests that the maternal caregivers had more influence on the granddaughter than did the mother. However, one thing that should not be overlooked is the possibility that this finding was affected by the small sample size of the present study.

Lastly, there were no findings that indicated that parental modeling was more predictive of eating behavioral patterns than parental control. This may also have been affected by sample size and the fact that the parental control scales used were more in depth and had stronger psychometric properties as compared to the measure used to asses modeling.

***Contributions***

The findings of the present study vary in consistency with previous literature, in that some findings remain very consistent with the literature and some findings are incongruent. One finding that is consistent includes authoritarian parenting being predictive of use of restrictive control, parental modeling playing a role in child emotional eating, and control in the form of *pressure to eat* leading to child *cognitive restrained* eating behavioral patterns. Incongruent findings include the results that control in the form of restriction was not found to be predictive of the disordered eating behavioral patterns of emotional and uncontrolled eating. Another unexpected finding was authoritative grandmothers being predictive of emotional eating in their granddaughters.

Overall, the present study makes several contributions to the literature, specifically in the realm of the transgenerational effects of *parenting styles*, *parental control*, and *parental modeling* on the development of child eating behavioral patterns. Given that much of the previous research conducted focuses predominantly on the effects of parenting on children, the current study offers a unique look at this domain across three generations, grandmothers, mothers, and daughters. The present study illuminates that there is some support of *parenting styles*, parental modeling, use of *control*, and *eating behavioral patterns* being transferred across generations. This was most evident in that findings that showed disordered eating behavioral patterns being transferred across generations. Not only were similar disordered *eating behavioral patterns* adopted, but dissimilar disordered *eating behavioral patterns* as well. These findings may suggest that

there is a powerful unconscious *modeling* of maladaptive *eating behavioral patterns* that gets transmitted across generations in terms of women's relationship with food as coping mechanisms. Therefore, although the present study did not find any significant results when examining *parental control* versus *parental modeling* in the development of disordered *eating behavioral patterns*, *parental modeling* may in fact be an influential component in such development. The lack of significant findings in the present study when examining *parental control* versus *parental modeling* and the development of disordered *eating behavioral patterns* may be explained by the low sample size. Overall, the findings related to the transgenerational effect of eating behavioral patterns are very important findings, which may aid in reducing future transfer of disordered *eating behavioral patterns* to youth and across subsequent generations. Additionally, it may lead to future examination of disordered *eating behavioral patterns*, examining whether modeling of one disordered *eating behavioral pattern* may not only make future generations vulnerable to developing that disordered *eating behavioral pattern*, but other *disordered eating behavioral patterns* as well.

The present study also contributes interesting findings related to possible transgenerational effects *of eating behavioral patterns* being passed from grandmothers (the maternal caregivers) to granddaughters (the oldest daughters). Findings indicated that grandmothers who used *authoritative* parenting tended to have granddaughters who engaged in more *emotional eating*. As this finding is unexpected and highly inconsistent with previous literature, this offers a new look at how across generations and *parenting styles* may effect development of eating behavioral patterns differently than once

suspected. Additionally, it was shown that grandmothers' *modeling* of disordered *eating behavioral patterns* does, in fact, have an effect on the development of disordered *eating behavioral patterns* in their granddaughters. This shows that although it is important to focus child disordered eating preventative and treatment efforts on the child and their immediate caregivers (i.e., parents), it is also important to look further into the family and extend efforts across to extended family members (i.e., grandparents).

Additionally, much of the current research examines either parental *control* or parental *modeling* on its own, whereas the current study looks at parental *control* and *modeling* together, and compares the effects of both on child *eating behavioral patterns*. In regards to control and modeling, the present study did not find any significant findings of parental modeling being more predictive of child eating behavioral patterns over parental control. However, there was not extensive research looking at this domain previously, and the literature that is available had mixed results. Therefore, this will hopefully lead to future studies examining parental control and parental modeling together and the effects on eating behavioral patterns in children and across generations.

Overall, the results of the present study will hopefully assist in informing future parenting strategies. The findings of the present study offer contributions that can be useful in helping parents make educated decisions regarding the feeding practices they choose to use with their children.

***Limitations***

Although the present study makes certain contributions to the literature, there are some notable limitations. First is the use of an all-female sample responding with data regarding themselves, their maternal caregivers, and their oldest daughters. The study did not collect data regarding male participants, paternal caregivers, or male children. This is a limitation because it is unclear if the participants' oldest daughters' *eating behavioral patterns* were affected by their paternal caregivers *parenting styles*, *eating behavioral patterns*, and use of *control* and *modeling*. Additionally, it is unclear how paternal influence may transmit across generations in the realm of *eating behavioral patterns* (i.e., transgenerational effects from grandfathers, to fathers, to sons). Further, recent findings show that there has been an increase in eating disorders among male children (Rosen, 2010). Therefore, it will be important for future research to continue to study males as well as females and their eating behavioral patterns in childhood and across the lifespan.

Another limitation is that the present study is retrospective. Participants were asked to recall information from their past experiences and report responses based on their memories and perspective. This is a limitation because it is possible that participants would not be able to accurately or fully recall all information. This limitation could be a reason for the high survey incompletion rate and high dropout rate of participants in the present study. More specifically, participants may have simply not known or remembered certain or all information regarding their maternal caregiver or oldest daughter and may have left questions blank or discontinued the survey all together. Additionally, participants could be responding from a perspective that is different from the perspective

that another person may hold. For example, the responses gathered from the participants perspective may be different than the responses that may have been gathered if the maternal caregivers and oldest daughters also responded to the survey.

Similar to the previously mentioned limitation regarding recall and perspective, another limitation is the lack of collateral data. More specifically, no data was gathered directly from participants' maternal caregivers or participants' oldest daughters. Therefore, it is unknown if discrepant reports would have been found if data were gathered from these sources in addition to the participants report.

Another limitation is the small sample size. Although nearly 200 people participated in the survey, due to unknown reasons many did not completed the survey in its entirety or did not reported information on their maternal caregivers or oldest daughters. This could be due to not having a maternal caregiver growing up or not having any daughters or not remembering or knowing sufficient information to answer the questions asked about their maternal caregivers and oldest daughters.

Other limitations include the lack of diversity in the sample used in the current study. This pertains mainly to ethnicity and parenting styles. The overwhelming majority of the sample identified themselves as white and using an authoritative parenting style. This lack of diversity may make it difficult to generalize these findings to other populations. Additionally, findings may be somewhat different if there were more diversity in ethnicity as well as parenting styles.

Another limitation is the length of the survey completed by participants to collect data. The survey was lengthy due to the nature of the study, collecting data on three

generations, grandmother, mother, and oldest daughter. However, it is possible that the length of the survey could have led participants to become fatigued and less likely to complete the survey in its entirety. Therefore, the length of the survey likely contributed to the low completion rate and small sample size.

A final limitation is that the questions for participants to answer in relation to their oldest daughters did not provide a time reference. More specifically, participants were not instructed to answer questions about their oldest daughters when they were a specific age or during a specific time period in their childhood. Instead, questions were formatted to be answered according to their oldest daughter during her childhood. Therefore, it is not clear what age participants were referencing when responding to questions about their daughters. It is possible responses would vary if participants were instructed to answer about certain periods during childhood such as early childhood versus adolescence.

### *Future Directions*

Several future directions of the current study have previously been discussed. First, future studies may choose to examine this topic using data collected from males. For example, data may be collected on paternal grandparents, fathers, and sons, as opposed to being limited to females (i.e., maternal grandparent, mothers, and daughters). This may be a beneficial future direction for several reasons. First, most of the literature on eating related issues thus far seems to focus on females. Second, current research including males suggests that eating disorders among this population may be rising (Weltzin, 2012). Lastly, although the majority of stay-at-home parents are mothers,

recent statistics show that the amount of stay-at-home fathers is increasing, 16% in 2016 up from 10% in 1989 (Livingston, 2014). With more fathers becoming stay-at-home caregivers, it would be important to closely examine their influence on eating behaviors in children.

Future studies may also choose to examine this topic from a longitudinal perspective as opposed to studying it only from a retrospective standpoint, following respondents over an extended period of time as opposed to having them respond based on their memory of what occurred. This may be beneficial because it would likely be easier for respondents to answer based on what is occurring currently, instead of having to recall information that may not be as accurate. It may also increase the sample size if participants were not completing the survey due to not remembering certain information.

Lastly, it would be beneficial to gather collateral data from each generation. For example, collecting responses from caretakers, participants, and their children, as opposed to having one respondent (i.e., mothers) respond for their maternal caregivers and their oldest daughters. This could also be done for a study including male participants. Future studies could have all three generations, paternal grandparent, father, and son, respond to their respective portion of the survey. This may show different findings than the present study, as responses will be from different perspectives.

Future research should also consider making certain modifications to the methodology used in the present study. For example, it may be more beneficial to use interview based data collection as opposed to collecting data via a self-report survey. Interviews could be conducted in person or via telephone. This modification may

decrease the amount of missing data and may hold participants more accountable for the information they report. Another possible modification includes abbreviating the survey. This may be done using shorter survey questionnaires or a subset from the survey. This modification would likely decrease the amount of missing data and increase the completion rate.

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Appendix A

**Informed Consent**

You are being asked to participate in a study that will examine the transmission parenting styles, feeding strategies, and eating behaviors across generations. The survey will take approximately 40 minutes. Your participation is completely voluntary and will not subject you to any foreseeable risks other than some slight discomfort when answering survey questions. Additionally, your name will not be recorded. You will be assigned an anonymous code number and your replies will be unknown. We assure you that any reports about this research will contain only data of an anonymous or statistical nature. Your name and/or identifying information will not be used. If you do not wish to participate in this study, you may withdraw your participation at any time.

The goal of this research is to examine the transmission of parenting styles and child feeding behaviors, specifically control and modeling, across generations. Furthermore, the present study aims to examine how these constructs effect adult outcomes such as eating behaviors, body image, and negative psychological states and child outcomes, such as eating behaviors and body image. You will be asked to complete a series of questionnaires that ask questions about demographic information (i.e., age, gender, race). You will be asked questions about your personal parenting style, eating behaviors, and child feeding strategies in relation to usage of control and modeling, body image, anti-fat attitudes, and psychological well-being. You will also be asked the questions in relation to your maternal caregiver about their parenting style, eating behaviors, and child feeding strategies in relation to usage of control and modeling. Finally, you will be asked questions about your child's eating behaviors. Parenting style, eating behaviors, your self-esteem, psychological well-being, anti-fat attitudes, and your current eating behaviors and patterns. Following completion of the survey, you may enter a raffle to win one $25 Visa gift card.

Any questions you have regarding this research may be directed to Felipa Chavez, Ph.D. at edraisingeaters2@gmail.com. Information involving the conduct and review of research involving humans may be obtained from the Dr. Steelman, Chairwoman of the Institutional Review Board of the Florida Institute of Technology, at lsteelma@fit.edu or 321-674-8104.

Continuing with the survey indicates that you agree to participate in this research and that:

1. You have read and understand the information provided above.

2. You understand that participation is voluntary and that refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled; and,

3. You understand that you are free to discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. I have read the preceding information and understand its meaning.

By selecting "YES" I am agreeing to proceed with the survey and participate in the study. However, by choosing "NO" I signify that I do not want to proceed with the survey nor participate in the study.

- Yes, I consent
- No, I do not consent

Appendix B

**Recruitment Letter**

Hello,

My name is Ellen Durham and I am currently in Graduate school at FIT, in the clinical psychology program. I am working on a study at FIT and am reaching out to you to see if you may be interested in helping me promote this study. I am recruiting mothers who have daughters in the community, so I am contacting organizations in the community to see if they would be willing to keep some of my flyers, with the link to the survey, in their office/waiting room, to distribute however is deemed appropriate.

The study is examining parenting styles and how they influence child eating behaviors. I hope the study will be a valuable contribution to the behavioral health literature and provide important information about raising children, healthy eating behaviors, and parental feeding practices. The study is completely anonymous and has received IRB approval (any questions regarding IRB approval may directed to Lisa Steelman at lsteelma@fit.edu). Participants are also offered the option to enter in a raffle, for a $25 Visa gift card, to receive compensation for the participation.

If you are willing to assist my efforts in reaching mothers in the community, I have created fliers about the study that can be distributed as you see fit. The link to the survey is on the bottom of each flier. Any assistance will be deeply appreciated and the results gathered will be a valuable contribution to the literature on raising children.

Any questions you have regarding this research may be directed to Felipa Chavez, Ph.D. and Ellen Durham, M.S. at edraisingeaters2@gmail.com.

Thank you very much for your consideration,

Felipa Chavez and Ellen Durham

Appendix C

**Demographic Questionnaire: Participant**

How did you hear about the study?

- Online Social Media Service (Facebook, Craigslist, FIT Forum, listserv, etc.)
- Daycare Center
- Athletic Center
- Print Media (Magazine, Newspaper, Newsletter, etc.)

Please fill out the following questions about YOURSELF:

1. What is your gender?
   - Male
   - Female
   - Other (please specify) _____

2. Please answer the following questions about your YOURSELF currently.
   - Age (in years)
   - Height (in inches)
   - Weight (in pounds)

3. What is YOUR race/ethnicity?
   - White
   - Black
   - Hispanic
   - Asian
   - American Indian or Alaska Native
   - Native Hawaiian or Pacific Islander
   - Biracial
   - Other (Please Specify) _____

4. What is YOUR marital status?

- Married
- Single
- Divorced
- Separated
- Widowed

5. Please select the description within each category that most applies to YOU.

Occupational Status

- Major executive of large concerns, major professional, and proprietor.
- Lesser professional and proprietor, and business manager.
- Administrative personnel, owner of small business and minor professional.
- Clerical and sales worker, and technician.
- Skilled trade.
- Machine operator and semiskilled worker.
- Unskilled employee.

Educational Status

- Professional (Master's degree, doctorate or professional degree).
- College graduate.
- 1-3 years college or business school.
- High school graduate.
- 10-11 years of schooling.
- 7-9 years of schooling.
- Under 7 years of schooling.

6. Are YOU on a special diet for health reasons (i.e. diabetes, high cholesterol, allergies, etc.)?
   - Yes
   - No

7. Are YOU on a special diet due to being overweight?
   - Yes
   - No

8. Are YOU on a special diet due to YOUR personal preference?
   - Yes
   - No

9. Please indicate any specific food restrictions (i.e. gluten, sodium, sugar, etc.) that you limit in YOUR food intake. If there are not any specific food restrictions, type none.

Appendix D

**Demographic Questionnaire: Maternal Caregiver**

1. Did you have a MATERNAL CAREGIVER during your childhood?
   - Yes
   - No

2. At any point in your life, was your MATERNAL CAREGIVER a stay at home caregiver?
   - Yes
   - No

3. Please indicate for how long your MATERNAL CAREGIVER was a stay at home caregiver.
   - Years
   - Months

4. What is your MATERNAL CAREGIVER'S race/ethnicity?
   - White
   - Black
   - Hispanic
   - Asian
   - American Indian or Alaska Native
   - Native Hawaiian or Pacific Islander
   - Biracial
   - Other (Please Specify) _____

5. What is your MATERNAL CAREGIVER'S marital status?
   - Married
   - Single
   - Divorced
   - Separated
   - Widowed

6. Please select the description within each category that applies to your MATERNAL CAREGIVER'S highest level achieved.

    Occupational Scale
    - Major executive of large concerns, major professional, and proprietor.
    - Lesser professional and proprietor, and business manager.
    - Administrative personnel, owner of small business and minor professional.
    - Clerical and sales worker, and technician.
    - Skilled trade.
    - Machine operator and semiskilled worker.
    - Unskilled employee.

    Educational Scale
    - Professional (Master's degree, doctorate or professional degree).
    - College graduate.
    - 1-3 years college or business school.
    - High school graduate.
    - 10-11 years of schooling.
    - 7-9 years of schooling.
    - Under 7 years of schooling.

7. Please answer the following questions about your MATERNAL CAREGIVER currently.
    - Age
    - Height (in inches)
    - Weight (in pounds)

8. While you were growing up, was your MATERNAL CAREGIVER on a special diet for health reasons (i.e. diabetes, high cholesterol, allergies, etc.)?
    - Yes
    - No

9. While you were growing up, was your MATERNAL CAREGIVER on a special diet due to being overweight?
    - Yes
    - No

10. While you were growing up, was your MATERNAL CAREGIVER on a special diet due to HER personal preference?
    - Yes
    - No

11. Please indicate any specific food restrictions (i.e. gluten, sodium, sugar, etc.) that your MATERNAL CAREGIVER limited herself from when you were growing up. If there were not any specific food restrictions, type none.

12. Please check all applicable parties below who were responsible for preparing YOUR meals during your childhood.
    - Paternal Caregiver
    - Maternal Grandmother
    - Paternal Grandmother
    - Maternal Grandfather
    - Paternal Grandfather
    - Aunt
    - Uncle
    - Sibling(s)
    - Nanny/AU Pier/Babysitter/Maid/Housekeeper/Personal Chef
    - Yourself
    - Other (Please Specify) _____
    - None (Only my maternal caregiver)

13. Other than your MATERNAL CAREGVIER, which identified person above was the most responsible for preparing YOUR meals during childhood?

14. On a scale of 1 to 7, did your MATERNAL CAREGIVER have similar attitudes with this individual regarding meal planning for YOU?
    - 1 (strongly disagree)
    - 2 (Disagree)
    - 3 (Somewhat disagree)
    - 4 (Neutral)
    - 5 (Somewhat agree)
    - 6 (Agree)
    - 7 (Strongly agree)

Appendix E

**Demographic Questionnaire: Oldest Daughter**

1. Do you have any daughters?
   - Yes
   - No

2. How many daughters do you have?

3. You are now going to be asked a series of questions you have seen before, in relation to yourself and your maternal caregiver.

Now we ask that you please answer the next series questions specifically as it relates to your OLDEST DAUGHTER.

1. Please answer the following questions about your OLDEST DAUGHTER.
   - Current Age
   - Current Height (in inches)
   - Current Weight (in pounds)

2. What is the race/ethnicity of your OLDEST DAUGHTER?
   - White
   - Black
   - Hispanic
   - Asian
   - American Indian or Alaska Native
   - Native Hawaiian or Pacific Islander
   - Biracial
   - Other (Please Specify) _____

3. Is/was your OLDEST DAUGHTER on a special diet for health reasons (i.e. diabetes, high cholesterol, allergies, etc.)?
   - Yes
   - No

4. Is/was your OLDEST DAUGHTER on a special diet due to being overweight?
   - Yes
   - No

5. Is/was your OLDEST DAUGHTER on a special diet due to YOUR personal preference?
    - Yes
    - No

6. Is/was your OLDEST DAUGHTER on a special diet due to HER personal preference?
    - Yes
    - No

7. Please indicate any specific food restrictions (i.e. gluten, sodium, sugar, etc.) that are/were limited in your OLDEST DAUGHTER's food intake. If there are/were not any specific food restrictions, type none.

8. Please check all applicable parties below who are/were responsible for preparing your OLDEST DAUGHTER'S meals.
    - Significant Other/Partner
    - Maternal Grandmother
    - Paternal Grandmother
    - Maternal Grandfather
    - Paternal Grandfather
    - Aunt
    - Uncle
    - Sibling(s)
    - Nanny/AU Pier/Babysitter/Maid/Housekeeper/Personal Chef
    - Themselves
    - Other (Please Specify) _____
    - None (Only Myself) (12)

9. Other than YOURSELF, which identified person above is/was the most responsible for preparing your OLDEST DAUGHTER'S meals?

10. On a scale of 1 to 7, do/did you have similar attitudes with this individual regarding meal planning for your OLDEST DAUGHTER?
    - 1 (strongly disagree)
    - 2 (Disagree)
    - 3 (Somewhat disagree)
    - 4 (Neutral)
    - 5 (Somewhat agree)
    - 6 (Agree)
    - 7 (Strongly agree)

Appendix F

**Parenting Style and Dimension's Questionnaire- Short Version (PSDQ-Short): Maternal Caregiver**

*Authoritative parenting style*: Making one rating for each item, please rate how often your MATERNAL CAREGIVER exhibited this behavior with you when you were growing up. [(1) Never, (2) Once in a While, (3) Half the Time, (4) Very Often, (5) Always]:

1. My MATERNAL CAREGIVER was responsive to my feelings and needs
2. My MATERNAL CAREGIVER encouraged me to talk about my troubles
3. My MATERNAL CAREGIVER gave comfort and understanding when I was upset
4. My MATERNAL CAREGIVER gave praise when I was good
5. My MATERNAL CAREGIVER had warm and intimate times together with me.
6. My MATERNAL CAREGIVER explained to me how (she) felt about my good and bad behavior
7. My MATERNAL CAREGIVER emphasized the reasons for the rules
8. My MATERNAL CAREGIVER gave me reasons why rules should be obeyed
9. My MATERNAL CAREGIVER helped me to understand the impact of behavior by encouraging me to talk about the consequences of my own actions
10. My MATERNAL CAREGIVER explained the consequences of my behavior
11. My MATERNAL CAREGIVER took my desires into account before asking me to do something
12. My MATERNAL CAREGIVER encouraged me to freely express myself even when I disagreed with her
13. My MATERNAL CAREGIVER took into account my preferences in making plans for the family
14. My MATERNAL CAREGIVER respected my opinions by encouraging me to express them
15. My MATERNAL CAREGIVER allowed me to give input into family rules

*Authoritarian parenting style*- Making one rating for each item, please rate how often your MATERNAL CAREGIVER exhibited this behavior with you when you were growing up.

1. My MATERNAL CAREGIVER used physical punishment as a way of disciplining me
2. My MATERNAL CAREGIVER spanked me when I was disobedient
3. My MATERNAL CAREGIVER grabbed me when I was being disobedient
4. My MATERNAL CAREGIVER slapped me when I misbehaved
5. My MATERNAL CAREGIVER yelled or shouted when I misbehaved

6. My MATERNAL CAREGIVER exploded in anger towards me
7. My MATERNAL CAREGIVER scolded and criticized to make me improve
8. My MATERNAL CAREGIVER scolded or criticized when my behavior didn't meet her expectations
9. When I asked why I had to conform, My MATERNAL CAREGIVER stated 'because I said so' or 'I am your parent and I want you to'
10. My MATERNAL CAREGIVER punished me by taking privileges away from me with little if any explanations
11. My MATERNAL CAREGIVER used threats as punishment with little or no justification
12. My MATERNAL CAREGIVER punished me by putting me off somewhere alone with little if any explanations.

*Permissive parenting style*- Making one rating for each item, please rate how often your MATERNAL CAREGIVER exhibited this behavior with you when you were growing up.

1. I found it difficult to discipline my OLDEST DAUGHTER.
2. I gave into my OLDEST DAUGHTER when she caused a commotion about something.
3. I threatened my OLDEST DAUGHTER with punishment more often than actually giving it.
4. I stated punishments to my OLDEST DAUGHTER and did not actually do them.
5. I spoiled my OLDEST DAUGHTER.

Appendix G

**Three Factor Eating Questionnaire-Revised 18 Version 2 (TFEQ-R18V2): Maternal Caregiver**

*Cognitive Restraint*- Please answer the following questions in relation to your OLDEST DAUGHTER. [(1) Definitely True, (2) Mostly True, (3) Mostly False, (5) Definitely False]:

1. My MATERNAL CAREGIVER deliberately takes small helpings to control her weight.
2. My MATERNAL CAREGIVER does not eat some foods because they make her fat.
3. My oldest daughter consciously holds back at meals to keep from gaining weight.

*Uncontrolled Eating*- Please answer the following questions in relation to your OLDEST DAUGHTER. [(1) Definitely True, (2) Mostly True, (3) Mostly False, (5) Definitely False]:

1. Sometimes when My MATERNAL CAREGIVER starts eating, she just can't seem to stop.
2. Being with someone who is eating often makes My MATERNAL CAREGIVER want to also eat?
3. My MATERNAL CAREGIVER often gets so hungry that her stomach feels like a bottomless pit.
4. My MATERNAL CAREGIVER is always so hungry that it's hard for her to stop eating before she finishes the food on her plate.
5. When My MATERNAL CAREGIVER smells appetizing food or see's a delicious dish, she finds it very difficulty to keep from eating - even if she just finished a meal.
6. My MATERNAL CAREGIVER was always hungry enough to eat at any time.
7. When my MATERNAL CAREGIVER saw something that looked very delicious, she often got so hungry that she had to eat right away.
8. Did your MATERNAL CAREGIVER go on eating binges even though she was not hungry? [(1) Never, (2) Rarely, (3) Sometimes, (4) At least once a week]
9. How often did your MATERNAL CAREGIVER feel hungry? [(1) Only at mealtimes, (2) Sometimes between meals, (3) Often between meals, (4) Almost always]

*Emotional Eating*- Please answer the following questions in relation to your OLDEST DAUGHTER. [(1) Definitely True, (2) Mostly True, (3) Mostly False, (5) Definitely False]:

1. My MATERNAL CAREGIVER started to eat when she felt anxious.
2. When my MATERNAL CAREGIVER felt sad, she often ate too much.
3. When my MATERNAL CAREGIVER felt tense or "wound up", she often felt she needed to eat.
4. When my MATERNAL CAREGIVER felt lonely, she consoled herself by eating.
5. If my MATERNAL CAREGIVER felt nervous, she tried to calm down by eating.
6. When my MATERNAL CAREGIVER felt depressed, she wanted to eat.

Appendix H

**Three Factor Eating Questionnaire- Revised 18 Version 2 (TFEQ-R18V2): Oldest Daughter**

*Cognitive Restraint*- Please answer the following questions in relation to your OLDEST DAUGHTER. [(1) Definitely True, (2) Mostly True, (3) Mostly False, (5) Definitely False]:

1. My OLDEST DAUGHTER deliberately takes small helpings to control her weight.
2. My OLDEST DAUGHTER does not eat some foods because they make her fat.
3. My oldest daughter consciously holds back at meals to keep from gaining weight.

*Uncontrolled Eating*- Please answer the following questions in relation to your OLDEST DAUGHTER. [(1) Definitely True, (2) Mostly True, (3) Mostly False, (5) Definitely False]:

1. Sometimes when my OLDEST DAUGHTER starts eating, she just can't seem to stop.
2. Being with someone who is eating often makes my OLDEST DAUGHTER want to also eat?
3. My OLDEST DAUGHTER often gets so hungry that her stomach feels like a bottomless pit.
4. My OLDEST DAUGHTER is always so hungry that it's hard for her to stop eating before she finishes the food on her plate.
5. When my OLDEST DAUGHTER smells appetizing food or see's a delicious dish, she finds it very difficulty to keep from eating - even if she just finished a meal.
6. My OLDEST DAUGHTER is always hungry enough to eat at any time.
7. When my OLDEST DAUGHTER see's something that looks very delicious, she often gets so hungry that she has to eat right away.
8. Does your OLDEST DAUGHTER go on eating binges even though she is not hungry? [(1) Never, (2) Rarely, (3) Sometimes, (4) At least once a week]
9. How often does your OLDEST DAUGHTER feel hungry? [(1) Only at mealtimes, (2) Sometimes between meals, (3) Often between meals, (4) Almost always]

*Emotional Eating*- Please answer the following questions in relation to your OLDEST DAUGHTER. [(1) Definitely True, (2) Mostly True, (3) Mostly False, (5) Definitely False]:

1. My OLDEST DAUGHTER starts to eat when she feels anxious.
2. When my OLDEST DAUGHTER feels sad, she often eats too much.

3. When my OLDEST DAUGHTER feels tense or "wound up", she often feels she needs to eat.
4. When my OLDEST DAUGHTER feels lonely, she consoles herself by eating.
5. If my OLDEST DAUGHTER feels nervous, she tries to calm down by eating.
6. When my OLDEST DAUGHTER feels depressed, she wants to eat.

Appendix I

**Child Feeding Questionnaire-Revised (CFQ-Revised): Maternal Caregiver**

*Perceived Parent Overweight (1)*- Using the scale below, to the best of your knowledge please indicate how you would classify your MATERNAL CAREGIVER'S perceived weight at each of these time periods. Please respond with HER PERCEIVED weight. [(1) Markedly Underweight, (2) Underweight, (3) Average, (4) Overweight, (5) Markedly Overweight, (6) I Don't Know, (7) N/A]:

1. Childhood
2. Adolescence
3. 20's
4. Currently

*Participant Perceived Maternal Caregiver Overweight (2)*- Using the scale below, if you have seen pictures please indicate how you would classify YOUR PERCEPTION of your MATERNAL CAREGIVER'S weight at each of these time periods. [(1) Markedly Underweight, (2) Underweight, (3) Average, (4) Overweight, (5) Markedly Overweight, (6) I Don't Know, (7) N/A]:

1. Childhood
2. Adolescence
3. 20's
4. Currently

*Restriction* (REST)- Using the scale below, please chose one description for each item which best corresponds to your MATERNAL CAREGIVER'S views/behaviors while you were growing up. **[(**1) Disagree, (2) Slightly Disagree, (3) Neutral, (4) Slightly Agree, (5) Agree]:

1. My MATERNAL CAREGIVER had to be sure that her child did not eat too many sweets (candy, ice cream, cake, or pastries).
2. My MATERNAL CAREGIVER had to be sure that her child did not eat too many high fat foods.
3. My MATERNAL CAREGIVER had to be sure that her child did not eat too much of their favorite foods.
4. My MATERNAL CAREGIVER intentionally kept some foods out of her child's reach.
5. My MATERNAL CAREGIVER offered sweets (candy, ice cream, cake, pastries) to her child as a reward for good behavior.
6. My MATERNAL CAREGIVER offered her child their favorite foods in exchange for good behavior.
7. My MATERNAL CAREGIVER believed if she did not guide or regulate her child's eating, they would eat too many junk foods.

8. My MATERNAL CAREGIVER believed if she did not guide or regulate her child's eating, they would eat too much of their favorite foods.

*Pressure To Eat* (PRESS)- Using the scale below, please chose one description for each item which best corresponds to your MATERNAL CAREGIVER'S views/behaviors while you were growing up. [(1) Disagree, (2) Slightly Disagree, (3) Neutral, (4) Slightly Agree, (5) Agree]:

1. My MATERNAL CAREGIVER believed children should always eat all of the food on their plate.
2. My MATERNAL CAREGIVER believed she had to be especially careful to make sure her child ate enough.
3. If my MATERNAL CAREGIVER'S child said "I'm not hungry," my MATERNAL CAREGIVER would try to get her to eat anyway.
4. My MATERNAL CAREGIVER believed if she did not regulate her child's eating, they would eat much less than they should.

*Monitoring* (MONIT): Using the scale below, please choose one description for each question which best corresponds to your MATERNAL CAREGIVER'S views/behaviors while you were growing up. [(1) Never, (2) Rarely, (3) Sometimes, (4) Mostly, (5) Always]:

1. How much did your MATERNAL CAREGIVER keep track of the sweets (candy, ice cream, cake, pies, pastries) her child ate?
2. How much did your MATERNAL CAREGIVER keep track of the snack food (potato chips, Doritos, cheese puffs) that her child ate?
3. Now much did your MATERNAL CAREGIVER keep track of the high fat foods that her child ate?

*Concerns about Child Overweight*- Using the scale below, please chose one description for each question which best corresponds to your MATERNAL CAREGIVER'S concerns. Please answer about your OLDEST DAUGHTER. [(1) Unconcerned, (2) Slightly Unconcerned, (3) Neutral, (4) Slightly Concerned, (5) Concerned]:

1. How concerned was your MATERNAL CAREGIVER about her child eating too much when she was not around them?
2. How concerned was your MATERNAL CAREGIVER about her child having to diet to maintain a desirable weight?
3. How concerned was your MATERNAL CAREGIVER about keeping track of the high fat foods that her child ate?

Appendix J

**Parental Dietary Modeling Scale (PDMS): Maternal Caregiver**

*Structure and Rules*- Using the scale below, please chose a description for the following items in relation to your MATERNAL CAREGIVER'S behaviors while you were growing up. [(1) Never, (2) Rarely, (3) Sometimes, (4) Often, (5) Almost Always/Always]:

1. My MATERNAL CAREGIVER limited her child's intake of snacks.
2. My MATERNAL CAREGIVER set rules about her child eating certain foods.

*Modeling*- Using the scale below, please chose a description for the following items in relation to your MATERNAL CAREGIVER'S behaviors while you were growing up. [(1) Never, (2) Rarely, (3) Sometimes, (4) Often, (5) Almost Always/Always]:

1. My MATERNAL CAREGIVER ate food she wanted her child to eat.
2. My MATERNAL CAREGIVER'S child learned to eat snacks from her.
3. When my MATERNAL CAREGIVER showed her child she enjoyed certain foods, they tried them.
4. My MATERNAL CAREGIVER sat with her child at mealtime.

Appendix K

**Debriefing Form**

Thank you for participating. The purpose of the current study is to examine the late effects of early parenting styles and participant's anti-fat attitudes on participant's psychological well-being regarding self-esteem, depression, anxiety, and stress, eating behaviors, disordered eating patterns, and current or future child feeding practices. The study will illuminate whether the parenting style and feeding strategies, specifically parental control and parental modeling, of maternal caregivers are passed down through generations and how subsequently influence and adult eating behaviors, body image, psychological well-being, and child eating behaviors and body image. This study examines three generations including the participant, the participants maternal caregiver, and the participants child. Moreover, the current study's findings will serve as a substantial contribution to the eating behaviors and disorders literature.

If you are interested in entering the raffle for the $25 Visa gift certificate, please email your name and email address to edraisingeaters2@gmail.com and include the code word "Raising Eaters Part 2". In doing so, you will be automatically entered into the raffle. Your email address will not be associated with your answers in the survey, and no other information will be required from you for you to win.

We also realize the potentially sensitive nature of some of the questions being asked. If you find that you are experiencing some psychological difficulties after thinking about some the questions being asked in this survey and would like help, please contact the American Psychological Association referral site (http://apa.org/helpcenter/index.aspx) or www.211brevard.org for resources in Brevard Country.

Any questions you have regarding this research may be directed to the researchers or the chair of the International Review Board (IRB), Dr. Lisa Steelman. Please find the necessary contact information below. Thank you for your participation in this research study. If you wish, a summary of the results will be provided to you, at a later time, by contacting the researchers at the following address.

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