

CONNECTIONS BETWEEN PARENTAL EATING BEHAVIORS AND ADOLESCENTS'
DISORDERED EATING ATTITUDES AND BEHAVIORS: OPTIMAL PARENTING STYLE
AS A MEDIATOR

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Connections between Parental Eating Behaviors and Adolescents' Disordered
Eating Attitudes and Behaviors: Optimal Parenting Style as a Mediator

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ABSTRACT

An optimal parenting style consists of high warmth and low overprotection, and can influence the development of adolescents' eating attitudes and behaviors. Evidence suggests that parental eating behaviors influence their children's eating attitudes and behaviors. In the current study, the link between parental eating behaviors and disordered eating attitudes and behaviors was assessed among 224 adolescent boys and girls in middle and high school via bivariate linear regression. Additionally, optimal parenting style as a mediator between parental eating behaviors and adolescents' disordered eating attitudes and behaviors was assessed with a mediation model that used bivariate and multiple linear regression. I found significant associations between parental eating behaviors and adolescents' disordered eating attitudes and behaviors for boys and girls, and partial mediation was found for girls. However, there was no mediation found for boys as optimal parenting was not significantly related to boys' disordered eating attitudes and behaviors.

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CHAPTER ONE. INTRODUCTION

Adolescence is an important developmental stage in an individual's life, filled with new experiences and a heightened potential for challenges. In particular, adolescence is a vulnerable period for the development of disordered eating attitudes and behaviors (Smolak & Levine, 1996). Disordered eating attitudes and behaviors cover a range of body shape and weight concerns and body dissatisfaction (Goldschmidt, Aspen, Sinton, Tanofsky-Kraff, & Wilfley, 2008). These disordered eating attitudes and behaviors can include negative appraisals of one's weight, overall shape, and/or certain aspects of one's shape, a discrepancy between one's actual and ideal body shape, and moderate to inappropriate or harmful attempts at influencing one's eating and shape or weight (Goldschmidt et al., 2008). The prevalence of problematic eating- and body-related behaviors and attitudes are increasing particularly rapidly among adolescents (U.S. Department of Health and Human Services, 2000). For example, approximately a half million adolescents from across the United States struggle with disordered eating (National Eating Disorders Association, 2011).

There are several studies suggesting that a specific type of parenting (i.e., authoritative parenting) during adolescence is advantageous in supporting adolescents' healthy development; such a style of parenting is warm, involved, rational, and receptive to the adolescent's communication with disciplinary methods that are supportive rather than punitive (Baumrind, 1985). This is comparable to the optimal bonding style of high care and low overprotection that Parker et al. (1979) suggest in the development of the Parental Bonding Instrument. Such a parenting style has been associated with improved competence, well-being, and compliance among adolescents (Longmore, Manning, & Giordano, 2013).

Parents shape children's experiences with food and eating, and have the potential to act as powerful socialization agents around eating patterns (Savage, Fisher, & Birch, 2007). More specifically, parents can be responsible for shaping the development of adolescents' disordered eating via their own eating styles (Scaglioni, Salvioni, & Galimberti, 2008). This led me to hypothesize that parents' parenting styles, as well as their eating- and weight-related behaviors, would influence the adolescent and his or her disordered eating attitudes and behaviors. The aim of my study, therefore, was twofold: to examine the direct connections between mothers' and fathers' eating behaviors and adolescent boys' and girls' disordered eating attitudes and behaviors, as well as to identify whether optimal parenting style plays a mediating role in these relationships. My study also examined the similarities and differences between each parent-adolescent dyad as I believed that gender would play a role in how these constructs were related.

Parenting and Adolescent Adjustment

There is a long history of research and theory on parenting and adolescent well-being going back to the earliest recognition of adolescence as a unique life stage (see Longmore, et al., 2013). During adolescence, challenges may arise in the parent-adolescent relationship that are most commonly associated with parents and adolescents adapting to adolescents' biological maturation, social life transitions, role shifts, and changes in self-identities (Longmore, et al., 2013), as well as the adolescents' individuation and autonomy-striving (Steinberg & Morris, 2001). A substantial number of parents report difficulties adjusting to the changes in the parent-adolescent relationship, which could also have implications for adolescents' development (Steinberg & Morris, 2001). The need for parental control during adolescence is well established in the literature as parenting practices that emphasize support and control play a powerful role in the management of adolescent behaviors (Longmore, et al., 2013). Deficiencies in both the

quantity and quality of support from parents have been linked with a host of psychosocial concerns for adolescents (Bearman, Presnell, Martinez, & Stice, 2006). A secure base for an adolescent should thus be seen in a strong relationship with parents that nevertheless permits and encourages adolescents' strivings for cognitive and emotional autonomy (Allen, et al., 2003).

Baumrind (1991) discusses four different types of parenting styles based on whether the parents are high or low on demandingness and responsiveness: authoritarian, permissive, disengaged, and authoritative. The definitions of these four parenting styles are reflective of the parental bonding dimensions of care and overprotection that are described by Parker and colleagues (1979). The dimension of care that was derived in Parker et al.'s (1979) study was defined by a presence or absence of affection, emotional warmth, empathy, and closeness or emotional coldness, indifference and neglect. The dimension of overprotection was defined by a presence or absence of control, overprotection, intrusion, excessive contact, and prevention of independent behavior or allowance of independence and autonomy (Parker, et al., 1979). Similar to Baumrind's levels of responsiveness and demandingness to determine parenting styles, Parker and colleagues' parental bonding dimensions are based on varying levels of care and overprotection: high care and low overprotection (conceptualized as optimal bonding), low care and low overprotection (conceptualized as absent or weak bonding), high care and high overprotection (conceptualized as affectionate constraint), and low care and high overprotection (conceptualized as affectionless control) (Parker, et al., 1979). In Parker's parental bonding dimensions, care and overprotection are similar to warmth and control, respectively, which are described in Baumrind's parenting styles.

Adolescents whose parents use an authoritative, or optimal, parenting style – warm and firm – showed higher levels of competence and psychosocial maturity than those who had been

raised by parents who were permissive, authoritarian, or disengaged (Steinberg & Morris, 2001). Prior research has consistently shown that authoritative parenting is associated with a wide range of psychological and social advantages in adolescence (Steinberg & Morris, 2001). Some authors (i.e., Gray & Steinberg, 1999) have suggested that authoritative parenting facilitates adolescents' feelings of psychological well-being, promotes confidence, and leads to social and academic competence (Galambos, Barker, & Almeida, 2003). In addition, adolescents who have been optimally regulated by parents have been found to be more socially competent, high in empathy and prosocial behavior, and low in adjustment difficulties and behavior problems (Cui, Morris, Criss, Houlberg, & Silk, 2014).

Other studies have utilized dimensions of warmth and control to determine parenting styles and evaluate the parent-adolescent relationship quality. For example, Lobera et al. (2011), found that low levels of parental care and overprotection were related to low self-esteem and higher risk for disordered eating patterns. According to Blodgett Salafia, Gondoli, Corning, McEnergy and Grundy (2007), parents of adolescents who exhibit disordered eating behaviors have difficulty in promoting healthy individuation within their families and often fail to balance consistent acceptance with appropriate promotion of independence. Furthermore, patients with anorexia nervosa reported significantly lower levels of parental care than a student control group and used a more negative and avoidant coping style (Swanson, et al., 2010). Other research has reported that poor parental bonds predicted negative self-concept, which in turn predicted subclinical eating disturbance (e.g., Cheng & Mallinckrodt, 2009).

From a family systems theoretical perspective, families are systems of interconnected parts, such that all family members influence the way each member functions (Kerr, 1981). One of the tenets of family systems theory suggests that the location of a problem is not within an

individual, but rather the family or system in which he or she is a part of is dysfunctional (Smith & Hamon, 2012). For example, problems in the parent-parent subsystem have the potential to spillover and impact the parent-child subsystem, which could also lead to neglectful parenting (Longmore, et al., 2013). This interpersonal perspective considers all behavior to be a part of ongoing, interactive, and recurring events (Smith & Hamon, 2012). Smith and Hamon (2012) give the example of an adolescent girl's eating disorder potentially being due in part to her parents' tendency to control her behavior. One study found support that disordered eating attitudes and behaviors may be response and/or coping strategies for those from dysfunctional family systems (Lundholm & Waters, 1991). In sum, family systems theory suggests that the attitudes and behaviors of each family member influences the dynamics and relationships within that family unit, which in turn has the potential to influence each family member's well-being and development.

A wealth of previous research has shown that adolescent adjustment is influenced in part by parents and their parenting styles. Previous research has also provided evidence that suggests certain parenting attitudes and behaviors could potentially lead to adolescents' own disordered eating attitudes and behaviors. Thus, it is important to focus on the influence of parenting styles of both mothers and fathers on adolescent boys and girls, especially with regard to their disordered eating attitudes and behaviors.

Disordered Eating

Disordered eating can be defined as behaviors such as drive for thinness, dieting, food restriction, bingeing, and purging that do not meet the diagnostic criteria for a full-blown eating disorder (Blodgett Salafia, Schaefer, & Haugen, 2013). Historically, research has focused heavily on females because of the dramatic rise of girls' body dissatisfaction associated with puberty and

the greater societal emphasis on appearance and thinness among this population (Bearman et al., 2006). However, the focus has more recently shifted to also include boys because current studies have shown that body dissatisfaction is a concern for them as well (Bearman et al., 2006).

According to the National Eating Disorders Association, over one half of adolescent girls and one-third of adolescent boys have weight concerns and use unhealthy weight control behaviors such as skipping meals, fasting, and vomiting (2011). In addition, a national survey of 11,467 high school students revealed that 44% of adolescent girls and 15% of adolescent boys were attempting to lose weight (National Eating Disorders Association, 2011).

There are often two stereotypes that preoccupy adolescents' body image attitudes: muscularity as masculine and thinness as feminine (Tata, Fox, & Cooper, 2001). For adolescent girls who believe that achieving the thin-ideal will result in psychosocial benefits, dieting may serve as a strategy for altering their physique (Bearman et al., 2006). According to Bearman et al. (2006), self-reported attempts to restrict caloric intake actually predicted weight gain, increasing girls' frustration. According to the National Eating Disorders Association (2011), 35-57% of adolescent girls engage in crash dieting, fasting, self-induced vomiting, or taking diet pills.

Recent research has begun to focus on body dissatisfaction as also being a substantial concern among adolescent boys as well. In comparison to adolescent girls, adolescent boys are split between those who wish to lose weight and those who wish to gain weight (Bearman, et al., 2006). Research suggests that some boys subscribe to an ideal that values muscularity over thinness (Smolak, Levine, & Thompson, 2001). In addition, one study found that these appearance ideals were a strong predictor of changes in body dissatisfaction for boys (Jones, 2004). For many boys, changes in diet might reflect an attempt to increase lean muscle mass and increase the risk for body dissatisfaction by experiencing the dietary failure and weight gain that

has been associated with self-reported dieting in girls (Bearman, et al., 2006). Thus, it is important to acknowledge the similarities and differences between adolescent boys and girls in their eating attitudes and behaviors.

It is also important to acknowledge the differences that may be found between mothers and girls, mothers and boys, fathers and girls, and fathers and boys in our results for the current study. Research suggests that closeness varies from one adolescent and one parent-adolescent relationship to another (Collins & Laursen, 2004). According to Steinberg and Silk (2002), fathers are viewed as relatively distant figures to be consulted for information and material support, whereas sons and daughters have similarly warm relationships with mothers. Some research has found that sons are typically closer to fathers than daughters are (Collins & Laursen, 2004). One study also found that girls in the tenth grade tended to perceive their relationships with mothers to be more supportive than did boys (Furman & Buhrmester, 1992). Both findings are consistent with previous work that suggests that parents are more responsive to same-sex children (Baumrind, 1971).

Research has shown that parents can play a significant role in the optimal development and well-being of adolescents, and a parenting style which involves a combination of warmth and protection is most beneficial. Scholars have also suggested that the phenomenon of disordered eating attitudes and behaviors is on the rise among adolescents. I will now review the literature on the influence that mothers and fathers have on girls and boys in each of these relationships.

Mothers and Girls

From the family systems perspective, adolescents' adjustment difficulties and behaviors are often explained by examining the role an individual's family may play. Historically, much

attention has been focused on the influence mothers have on adolescent development. There is a substantial body of literature on the mother-daughter relationship alone, with attention on problems in the mother-daughter relationship, support in the mother-daughter relationship, and mother-daughter relationships during adolescence (see Russell & Saebel, 1997).

Mothers are most often seen as a primary role model and as powerful influences on daughters (Canals, Sancho & Arija, 2009). Mothers are also often the ones who are held to an unequal standard for the actions, behavior, health, and well-being of their children in ways that fathers are not (Jackson & Mannix, 2004). There are societal expectations that mothers should be deeply involved in their children's lives. Many women often carry the burden of societal disapproval, either because they do not fit society's idealized view of motherhood or because they behave in ways that are not considered appropriate for mothers (Jackson & Mannix, 2004). In addition, mothers are typically viewed as being the most prominent source of influence in girls' lives (Jacobs & Eccles, 1992). This has led to mothers being scrutinized and blamed more frequently for certain behaviors that their children exhibit (Jackson & Mannix, 2004). While the research focus has started shifting to include the role that fathers play in child and adolescent development, there is still an abundance of research regarding mothers' influence in adolescent adjustment.

A large body of research has focused on the influence of mothers on girls/women who struggle with disordered eating behaviors. For example, in one study, disordered eating behaviors were found to be correlated to low maternal care and high maternal control among patients who were being treated for an eating disorder (Swanson, et al., 2010). In another study, young women struggling with eating disorders reported significantly less care offered by their mothers (Mallinckrodt, McCreary, & Robertson, 1995). High school girls' perceptions of low

maternal care and maternal overprotection have been associated with disordered eating attitudes and behaviors, such as body dissatisfaction and extreme weight control behaviors (Turner, Rose, & Cooper, 2005). According to Barker and Galambos (2003), greater perceived maternal acceptance (e.g., warmth, empathy, and child-centeredness) was associated with lower levels of perceived body dissatisfaction among girls in junior high and high school. In addition, adolescent girls' perceptions of greater acceptance and emotional support from mothers predicted lower levels of maladaptive eating problems (Blodgett Salafia, et al., 2007). Past research has clearly provided support for the notion that mothers play a role in the development of girls' disordered eating attitudes and behaviors.

Mothers and Boys

The literature that focuses specifically on mother-son relationships is relatively scarce as compared to the literature on mother-daughter relationships. Mother-son relationships are frequently discussed in the literature on divorce and single parenting, and some have written on the role of mothers in the making of men (see Russell & Saebel, 1997). The relationship between women and their sons is intense and passionate (Rowland & Thomas, 1996), as mothers work to raise and support their sons in order to promote strong and secure identities (O'Reilly, 2001). Some suggest that disconnect in mother-son relationships can be psychologically harmful for sons and emphasize the need to foster connection between mothers and sons (O'Reilly, 2001).

Some research focuses on the influence of family relations on boys' psychological well-being and disordered eating. One study that examined the association between family cohesion, expressiveness, and conflict (as reported by mothers and fathers) and adolescents' internalizing symptoms found that higher levels of mother-rated family expressiveness was associated with higher levels of boys' depressive symptoms, with family cohesion being the best predictor

(Queen, Stewart, Ehrenreich-May, & Pincus, 2013). Family stress has also been linked to disordered eating attitudes and behaviors. For example, perceived failure to meet parental expectations has been found to be associated with disordered eating behaviors such as compulsive eating, dieting, and body dissatisfaction in boys (Blodgett Salafia & Lemer, 2011). Maternal psychological control has also been established as a link between mothers and their sons' disordered eating attitudes and behaviors as one study found that maternal psychological control led to lowered self-competence among adolescents, which in turn predicted bulimic symptoms in boys (Blodgett Salafia, Gondoli, Corning, Bucchianeri, & Godinez, 2009).

The perceptions of pressures to be consistent with gender body-ideals, such as boys appearing more likely to adopt strategies to increase muscle, are also important to highlight (Rodgers & Chabrol, 2009). Research has shown that a perceived pressure from mothers to adopt strategies to remain consistent with gender body-ideals has been reported to be the strongest predictor of body dissatisfaction for adolescent boys (Knauss, Paxton, & Alsaker, 2007). Fulkerson, McGuire, Neumark-Sztainer, Story, French, and Peery (2002) also reported strong associations between maternal encouragement to diet and body shape and disordered eating outcomes among adolescent boys. These studies have helped to provide some empirical support for links between mothers and boys' disordered eating attitudes and behaviors.

Fathers and Girls

Previous research has focused more on the role of mothers and has not thoroughly examined the unique, important roles of fathers in adolescents' development. Although fathers have typically been perceived and judged by their breadwinning or provisioning, fathers fill other roles and have other influences as well (Lamb & Tamis-LeMonda, 2004). Girls are assumed to learn feminine behavior by interacting with their father and complementing his masculine

behavior (Russell & Saebel, 1997). In addition, the father-daughter relationship has been noted as being distinct due to the sense of distance and difference that is characteristic of father-daughter relationships (Russell & Saebel, 1997).

Research on the father-daughter relationship has attempted to establish links between fathers' parenting characteristics and disordered eating. Similar to the effect of warmth and acceptance perceived from mothers, adolescent girls' perceptions of acceptance and emotional support from fathers also predicted lower levels of dieting (Bastiani Archibald, Graber, & Brooks-Gunn, 1999). Additionally, paternal weight satisfaction and comments about daughter's weight have been associated with daughter's weight satisfaction (Keel, Heatherton, Harnden, & Hornig, 1997).

Fathers who support the cultural standard of thin for women and girls may be contributing to their daughter's disordered eating attitudes and behaviors or the possible development of an eating disorder (Maine, 2004). Paternal influences that affect a daughter's dieting attitudes and behaviors have become increasingly more important to understand as research has shown that young girls who initiate dieting are at a higher risk for the development of disordered eating attitudes and behaviors (Fernandez-Cosgrove, 2008). Dixon, Adair, and O'Connor (1996) found that paternal encouragement of dieting was significantly associated with extreme dieting behaviors (i.e., laxatives, fasting, and diet pills). Additionally, Dixon, Gill, and Adair (2003) found that fathers who believed strongly in the importance of physical appearance had daughters who engaged in dangerous weight control measures, possibly in an effort to conform to their fathers' ideals. These findings support the recently growing literature that paternal attitudes can be related to adolescent girls' eating attitudes and behaviors.

Fathers and Boys

Literature on fathers and their sons may not be as abundant as mothers and adolescents, but there is growing research that suggests a link between fathers and their sons' development. However, research has noted distinct features of the father-son dyad from other parent-child dyads due to sons often learning from the parent of the same sex (Russell & Saebel, 1997). Additionally, fathers tend to act as mentors or give guidance to sons more often than daughters (Davis & Wills, 2010). Russell and Saebel (1997) point out that a key element in the formation of boys' relationships is the relationship between son and father.

Vogt and Sirridge (1991) suggest that the model of the father-son relationship influences everything in a boy's life, from the way he sees himself on the inside to the way he sees all other people and his vision of the natural world. More specifically, researchers have provided an argument for boys acquiring masculine characteristics from their fathers (Russell & Saebel, 1997). Other researchers suggest that the quality of the father-child relationships was more important than the masculinity of the father (Lamb & Tamis-LeMonda, 2004). According to Lamb and Tamis-LeMonda (2004), paternal warmth or closeness appears to be more beneficial for boys' psychosocial adjustment and achievement than paternal masculinity. It has been presumed that boys want to resemble their fathers when they are liked and respected and with whom their relationships are warm and positive (Lamb & Tamis-LeMonda, 2004).

Prior research findings have established support for the link between fathers and their sons' disordered eating attitudes and behaviors. One study found that a high level of concern with weight and negative comments about weight by fathers were both significant predictors of starting to binge eat among adolescent boys (Field, et al., 2008). Other studies have found that encouragement to lose weight by fathers has been associated with body dissatisfaction, strategies

to lose weight, extreme weight-loss, drive for muscularity, dieting, and eating and weight concerns amongst boys (e.g., Wertheim, Martin, Prior, Sanson, & Smart, 2002; Smolak & Stein, 2006). In addition, perceived pressure to be muscular from fathers has been associated with adolescent boys' pursuits of muscularity (Shomaker & Furman, 2010). These research findings suggest that adolescent boys are not only greatly influenced by their fathers in how they interact with and view the world, but also in regards to their attitudes and behaviors about their physical appearance and eating.

Parental Eating Behaviors

Parents are responsible for shaping the development of adolescents' eating attitudes and behaviors, which can be modeled not only by the foods they make accessible to their children, but also by their own eating styles (Scaglioni, et al., 2008). By definition, modeling is the acquisition or demonstration of a new skill or behavior by observing and imitating the behavior being performed by another individual (Fritscher, 2014). These parental eating behaviors can also have a negative influence (Fritscher, 2014), such as parents passing on disordered eating attitudes and behaviors.

The social context in which adolescents' eating patterns develop becomes important because the eating behavior of people in that environment, specifically their parents, serves as a model (Birch & Fisher, 1998). Models, or parents for the purposes of this study, can have powerful effects on food selection, especially when the model is similar to the observer or seen as particularly powerful (Birch & Fisher, 1998). According to Birch and Fisher (1998), parental eating behaviors may also play a role in the emergence of dieting behaviors in adolescence. It has been reported that adolescents who resort to dieting have parents who report dietary disinhibition and problems in controlling their own eating (Birch & Fisher, 1998). In one study,

it was also reported that both maternal and paternal eating habits and attitudes were significantly related to self-reported body satisfaction for girls but that only paternal eating habits were related to body satisfaction for boys (Canals, et al., 2009). In my study, I would like to examine whether optimal parenting styles mediate the association between mothers' and fathers' eating behaviors and adolescent boys' and girls' disordered eating attitudes and behaviors.

Parental Eating Behaviors' Influence on Adolescent Disordered Eating

Research suggests that positive relationships between parents and adolescents will make adolescents more prone to wanting to be like their parents. This may also mean that adolescents could model negative eating attitudes and behaviors from parents, which in turn could lead to their own disordered eating attitudes and behaviors. Many researchers agree that adolescents' disordered eating attitudes and behaviors result from these susceptible individuals being in environments that model or promote such behavior (Birch & Fisher, 1998). Rodgers and Chabrol (2009) hypothesize that the influence of parents' eating behaviors on disordered eating attitudes and behaviors amongst adolescent boys and girls may be due to this population being exposed to their parents' eating styles for longer than younger children.

Parents act as strong communicators of messages in regards to eating attitudes and behaviors and can have a great impact on adolescents' body concerns and eating behaviors (Rodgers & Chabrol, 2009). Among adolescent girls and boys, their identification with their parents of the same sex might make their parents' negative eating attitudes and behaviors to be particularly important in the development of adolescents' own disordered eating attitudes and behaviors (Rodgers, Faure, & Chabrol, 2009). According to Rodgers and colleagues (2009), parents play a considerable role not only in establishing and building healthy relationships with

their children, but also as transmitters of their own messages in regards to disordered eating attitudes and behaviors.

Disordered eating attitudes and behaviors among adolescent girls and boys have been found to be associated with the perception of maternal disordered eating attitudes and behaviors (Vincent & McCabe, 2000). Furthermore, maternal weight concerns are one of the strongest predictors of weight-control practices and maladaptive eating behaviors among adolescents (Neumark-Sztainer, Wall, Story, & Perry, 2003). Many studies have specifically provided support for the link between perceived maternal dieting and adolescent girls' disordered eating attitudes and behaviors, perhaps because of the emphasis our society places on female body shape (Rodgers, et al., 2009). Research suggests that mothers who are preoccupied with their own weight and eating also make more attempts to influence their children's weight and eating (Birch & Fisher, 2000). In another study, mothers' comments were found to have had a strong influence on the body image of adolescent boys (McCabe & Ricciardelli, 2001).

Researchers have also worked to establish support for the influence of fathers' eating attitudes and behaviors on adolescent girls and boys. For example, Dixon et al. (1996) found that father's dieting behaviors were associated with their daughters and sons skipping meals and crash dieting. Another study found that fathers' interest and efforts regarding their own shape and weight was a negative predictor of body dissatisfaction among adolescent boys, indicating that fathers who are perceived to care about their shape and weight provide a positive comparison point for their adolescent sons (Rodgers, et al., 2009). Others have reported a contradictory positive association between perceived paternal eating attitudes and behaviors and adolescent boys' disordered eating attitudes and behaviors (e.g., Baker, C. W., Whisman, M. A., & Brownell, K. D., 2000). Whether the impact is positive or negative, these studies provide

support for the notion that parental eating attitudes and behaviors do have an influence on adolescents' disordered eating attitudes and behaviors. Previous research also suggests that both mothers and fathers can send powerful messages regarding disordered eating attitudes and behaviors, which can be more readily received by adolescents if there is a warm, positive relationship between parent and adolescent.

Parental Eating Behaviors and Parenting Style

In order to fully understand how parental eating behaviors relate to parenting styles, we must first remember the variations in parenting styles as examined by Parker and colleagues (1979). These authors examined four types of parental bonding based on levels of care and overprotection: optimal bonding (high care and low overprotection), absent or weak bonding (low care and low overprotection), affectionate constraint (high care and high overprotection), and affectionless control (low care and high overprotection) (Parker, et al., 1979). The warmth that is experienced between a parent and child with an optimal parenting style provides a foundation of positive affect and regard (Collins & Laursen, 2004). An important question to answer in this section is how parents' eating behaviors could influence their style of parenting.

Adolescence is a time when children begin to make their own decisions about what to eat and when to eat, but are still in the transition process from parental to peer influence (Melbye, et al., 2013). Parents do select, for the most part, the foods of the family diet, serve as models of eating that children learn to emulate, and use feeding practices to encourage the development of culturally appropriate eating patterns and behaviors (Savage, et al., 2007). In addition, parents' own food preferences are influential, and eating together as a family provides a valuable opportunity for parents to model good eating habits (Scaglioni, et al., 2008). Feeding practices represent parents' approach to maintain or modify children's eating behaviors, and can

interestingly even be categorized into three “feeding styles” that correspond with Baumrind’s parenting styles: authoritarian feeding (i.e. strict controlling practices such as restricting certain foods), permissive/neglectful feeding (i.e. little or no structure and control; allowing the child to eat whatever s/he wants at whatever quantities s/he wants), and authoritative feeding (i.e. a balance between the controlling style and the unstructured style) (Melbye, et al., 2013).

Parents can influence an adolescent’s weight through specific food practices and perhaps more broadly through their parenting style (Rhee, 2008). The more global influence of parenting style provides a framework in which specific parent behaviors, such as eating attitudes and behaviors, can be exhibited and interpreted by adolescents (Rhee, 2008). For example, researchers found that an authoritative parenting style was most effective in lessening adolescents’ consumption of sugar-sweetened beverages (Van der Horst, et al., 2007). In another study, researchers found that the relationship between parental eating attitudes and behaviors and adolescents’ dietary habits was moderated by parenting style, particularly as parental responsiveness increased (Wen & Hui, 2012). These findings were a result of parenting style changing the nature of the parent-child interaction, and that respectful parent-child relationships may encourage adolescents to eat healthier (Wen & Hui, 2012).

It may be that parents who struggle with their own eating problems are not able to focus as much on maintaining an optimal parenting style because their own struggles take away from the attention they can provide to their children. This does not necessarily mean that parents who have less than optimal parenting are doing so on purpose or that this is what they want, but their own struggles with eating may be greater than their abilities to parent effectively. For example, Arcelus, Haslam, Farrow, and Meyer (2013) found that those who engage in disordered eating behaviors tend to either avoid expressing their feelings to others or are more focused on negative

interactions and conflicts with others. Often times, parental disordered eating can be confounded by other struggles such as depression or anxiety. These mental health struggles can also impact parenting style and may accompany the problems associated with eating. Clearly, disordered eating behaviors can affect people's interpersonal interactions and satisfaction with personal relationships (Arcelus, et al., 2013), such as a parent's interaction with his or her adolescent.

Research Questions

Clearly, parents play an important role in the development and maintenance of adolescents' health, specifically in the development of disordered eating attitudes and behaviors. Based on previous research, I hypothesized that mothers' and fathers' own disordered eating behaviors would be associated with higher levels of adolescent girls' and boys' disordered eating attitudes and behaviors. I also hypothesized that parenting style would mediate, or explain, the relationships between parental eating behaviors and adolescents' disordered eating attitudes and behaviors such that parents who engage in higher levels of disordered eating would have lower levels of optimal parenting, which would then lead to higher levels of adolescents' disordered eating attitudes and behaviors (see Figure 1). Given the prominent role that parents play in the development of adolescents' eating attitudes and behaviors as well as promoting a warm, safe, and loving environment, I believe the bond between the parent and the adolescent can help us to better understand the connection between parents' and adolescents' eating behaviors. Parents who experience their own eating problems may not have the capacity to convey an optimal parenting style. I hypothesized that this decrease in optimal parenting would significantly impact adolescents' disordered eating attitudes and behaviors. I also thought it would be important to look at boys and girls separately, as well as mothers and fathers, as previous literature provides evidence for how different the relationship between each parent-adolescent dyad can be, which I

believed would also apply specifically to adolescents' disordered eating attitudes and behaviors as gender may contribute to similarities or differences in the influence of parental eating behaviors and optimal parenting.

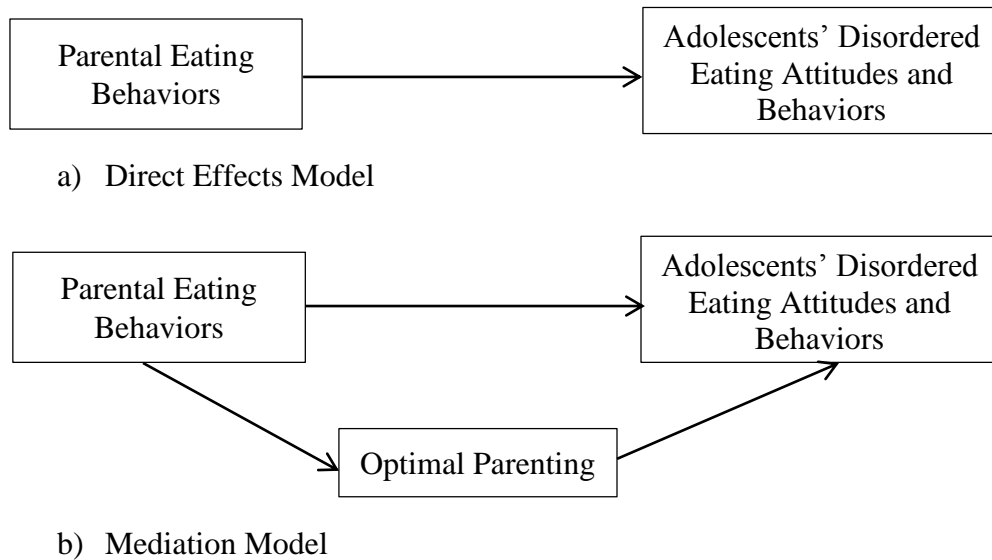


Figure 1. Models Investigating whether Optimal Parenting Style Mediates the Relationship between Parental Eating Behaviors and Adolescents' Disordered Eating Attitudes and Behaviors.

CHAPTER TWO. METHODS

The data to be analyzed in the present study were collected as part of a larger project reviewed and approved by the university's Institutional Review Board. The aim of the larger study was to investigate factors associated with adolescents' disordered eating behaviors and body image.

Participant Recruitment and Sample Description

In the current sample, there were 224 adolescent boys and girls in middle school ($n = 175$) or high school ($n = 49$) in a small city in the Midwestern United States. There were 90 adolescent boys in middle school ($n = 86$) or high school ($n = 4$), and 134 adolescent girls in middle school ($n = 89$) or high school ($n = 45$). All interested students at the middle school received information regarding the study from a guidance counselor, whereas only students taught by one particular teacher were recruited from the high school.

Participants ranged in age from 12 to 19 years ($M = 14.40$, $SD = 1.53$) and were in grades 7-12. Similar to the ethnic composition of the city and school district, most of the sample identified themselves as White (91.5%). Additionally, 4% identified as Native American, 0.9% identified as Black, 1.3% identified as Hispanic, and 1.8% identified as other. Using participants' self-reported height and weight, the average Body Mass Index (BMI) for boys was calculated to be 22.03 ($SD = 5.66$), and the average BMI for girls was calculated to be 21.60 ($SD = 4.78$), which were both in the normal range (≤ 18.49 is underweight, 18.5-24.99 is normal weight, 25-29.99 is overweight, and ≥ 30 is obese, according to national standards set by the U.S. Center for Disease Control and Prevention, 2011).

Procedure

Participants were recruited from flyers and parental consent forms distributed to students at a Midwestern middle school and high school over a period of one year. Individuals under the age of eighteen who returned parental consent forms were then invited to complete assent forms and a packet of surveys. Individuals aged eighteen or older did not complete parental consent forms, but filled out their own consent forms and surveys. The middle schoolers completed their forms after school, and the high schoolers completed their forms before school. The middle schoolers were all in an auditorium together when completing their forms, whereas the high schoolers were in a classroom. Participants took between one and two hours to complete their survey packets. In compensation for their participation, adolescents received a \$25 gift card to a local mall.

Measures

I have chosen widely-used, well-established measures that have demonstrated evidence of reliability and validity in previous work. Some data will be excluded from analysis if a participant did not complete measures about either his or her mother or father (or both). The adolescent may not have any contact with his or her parent(s) or the parent(s) was (were) deceased.

Parental Eating Behaviors

To assess abnormal eating behaviors by parents as perceived by the adolescent, 10 items from the 25-item Bulimic Modeling Scale (BMS; Stice, 1998) were used. The BMS measures family, peer, and media modeling of abnormal eating behaviors and includes items regarding dietary restraint, preoccupation with body dimensions, extreme weight-control behaviors (e.g., excessive exercise and laxative abuse), binge eating, and vomiting for weight-control purposes

(Stice, 1998). Additional items were created specifically for mothers and fathers and were used in this study. Sample items (see Appendix B) included, “My mother has fasted, exercised excessively, or used laxatives or diuretics, to lose weight” and “My father has gone on out-of-control eating binges (eaten huge amounts of food in a short period)”. Adolescents responded to each item on a 5-point scale ranging from 0 (*Never*) to 4 (*Often*). Higher scores indicated more modeling behaviors.

Reliability and validity of the BMS was established in prior work, as a study by Stice (1998) with 218 adolescent girls yielded a 2 week test-retest coefficient of .82. Similarly, a test of convergent validity showed negative correlations (average $r = -.26$) between the BMS and the body esteem scale (Stice, 1998). In the same study, Cronbach’s alpha was .78 for this scale (Stice, 1998). In the present study, Cronbach’s alpha was .77 for fathers and .72 for mothers as reported by boys, and .45 for fathers and .63 for mothers as reported by girls.

Optimal Parenting

Participants were asked to complete the 25-item Parental Bonding Instrument (PBI; Parker, et al., 1979). The PBI (see Appendix A) measures children’s subjective experiences of the level and type of bonding between parent and child and is divided into two subscales: Care and Overprotection. The Care subscale (12 items) measures parents’ warmth and involvement versus indifference, coldness, and rejection, and the Overprotection subscale (13 items) measures parents’ control and intrusion versus encouragement of independence (Parker, et al., 1979). Sample items included, “My father appeared to understand my problems and worries” (Care) and “My mother tried to make me feel dependent on her” (Overprotection). Adolescents were asked to respond to how much each of these statements was like or unlike their given parent on a 4-point scale ranging from 0 (*Very Unlike*) to 3 (*Very Like*). Overprotection items were reverse-

coded, and the Care and Overprotection subscales were combined into one overall scale. Thus, higher scores on this measure indicated a more optimal parenting style.

Concurrent validity of the PBI was determined by Parker and colleagues (1979) by correlating the raters' (Parker & Tupling) perceived levels of care and overprotection with the scores determined by the scales themselves. The Pearson correlation for the two care measures were .78 and .78 for the two raters (Parker & Tupling), and .48 and .51 for the two overprotection measures among a sample of 150 participants between the ages of 17 and 40 (Parker, et al., 1979).

Parker and colleagues (1979) determined test-retest reliability as .76 for the Care subscale of the PBI and .63 for the Overprotection subscale. A study of 10-year test-retest reliability also found a consistency of maternal care, maternal overprotection, paternal care, and paternal overprotection ($r = .63, .68, .72, \text{ and } .56$, respectively) among 170 women and men with a mean age of 23 years (Wilhelm, Niven, Parker, & Hadzi-Povlovic, 2004). Additionally, Parker, et al. (1979) reported a split-half reliability of .88 for the Care subscale and .74 for the Overprotection subscale. In the present study, Cronbach's alpha for the combination of the Care and Overprotection subscales was .85 for fathers and .88 for mothers as reported by boys, and .90 for fathers and .92 for mothers as reported by girls.

Adolescents' Disordered Eating Attitudes and Behaviors

Participants reported on the 26-item Children's Version of the Eating Attitudes Test (ChEAT; Maloney, McGuire, & Daniels, 1988) to assess disordered eating attitudes and behaviors. This measure was chosen in order to assess a wide range of disordered eating patterns, including dieting behaviors, food preoccupation, bulimic symptoms, and concerns about being overweight (Maloney, McGuire, Daniels, & Specker, 1989). Sample items for the ChEAT (see

Appendix C) included, “Do you stay away from eating when you are hungry?” and “Do you have the urge to vomit after eating?” Adolescents responded to each of these items on a 6-point scale ranging from 0 (*Never*) to 5 (*Always*). Higher scores indicated higher levels of disordered eating attitudes and behaviors.

Concurrent validity for the ChEAT was established by Sancho, Asorey, Arija, and Canals (2005) by finding correlations between the weight ($r = -.39$) and waist ($r = -.38$) items of the Body Areas Satisfaction Scale for girls and boys aged 10-12. Internal consistency reliability of the ChEAT ranged from .70 to .81 at different assessment time points, with a test-retest estimate of .81 among 44 adolescents who were randomly assigned to either a multiple component behavioral weight control intervention or a single session of physician weight counseling (Saelens, et al., 2002). Sancho, et al. (2005) also established a test-retest reliability of .56 among 1,336 Spanish students in the 5th and 6th grades. In the present study, Cronbach’s alpha was .87 for boys and .88 for girls.

CHAPTER THREE. RESULTS

In this study, I examined the relationship between parents' disordered eating attitudes and behaviors and adolescents' disordered eating attitudes and behaviors, as well as whether optimal parenting style mediates, or explains, this relationship. The most general description of a mediation hypothesis, as described by Baron and Kenny (1986), recognizes that a particular construct, such as optimal parenting in this case, "accounts for the relation between the predictor [parental eating behaviors] and the criterion [adolescents' disordered eating attitudes and behaviors]" (p. 1176). In addition, mediators speak more clearly as to how or why certain effects occur (Baron & Kenny, 1986).

The analyses of these data attempted to determine if optimal parenting mediated, or explained, the relationship between parental eating behaviors and adolescents' disordered eating attitudes and behaviors. The analyses also attempted to determine if there were significant differences in this relationship between girls and mothers, girls and fathers, boys and mothers, and boys and fathers. Relationships among the constructs of parental eating behaviors, optimal parenting, and adolescents' disordered eating attitudes and behaviors were assessed separately for each parent-child relationship using a mediation model with bivariate and multiple regressions.

First, I used bivariate linear regression to examine the direct effects between parental eating behaviors and adolescents' disordered eating attitudes and behaviors. Next, I examined the relationship between parental eating behaviors and optimal parenting. Third, I examined the relationship between optimal parenting and adolescents' disordered eating attitudes and behaviors. Lastly, I used multiple linear regression to examine the connections between parental eating behaviors and optimal parenting in regards to adolescents' disordered eating attitudes and

behaviors. Separate analyses were conducted for girls and boys; separate models were also conducted for mothers and fathers. This yielded a total of four sets of mediation models: 1) mothers and girls, 2) mothers and boys, 3) fathers and girls, 4) fathers and boys. Figure 1 depicts how I expected parental eating behaviors to impact adolescents' disordered eating attitudes and behaviors by way of optimal parenting.

Model Testing

A mediation analysis was conducted to assess whether the relationship between parental eating behaviors and adolescents' disordered eating attitudes and behaviors could be explained by optimal parenting. The bivariate and multiple regressions were first conducted for girls and mothers.

Mothers and Girls

First, analyses revealed that the relationship between mothers' eating behaviors and girls' disordered eating attitudes and behaviors was significant ($\beta = .36, p < .05$), indicating a direct effect such that higher levels of mothers' eating problems were associated with higher levels of girls' disordered eating. Next, the relationship between mothers' eating behaviors and optimal parenting was found to be significant ($\beta = -.18, p = .05$), such that higher levels of mothers' eating problems were associated with less optimal parenting. Third, the relationship between optimal parenting and girls' disordered eating attitudes and behaviors was also found to be significant ($\beta = -.32, p < .05$), such that less optimal parenting was associated with higher levels of girls' disordered eating. Last, while direct effect was reduced in value, mothers' eating behaviors and optimal parenting were still found to be statistically significant as related to girls' disordered eating attitudes and behaviors, ($\beta = .29, p < .05$), suggesting evidence of partial mediation (Table 1).

Table 1.

Regression Results for the Mediating Effects of Optimal Parenting Style on the Relationship between Parental Eating Behaviors and Adolescents' Disordered Eating Attitudes and Behaviors for Mothers and Girls

Model	B	Standard Error	β
Model 1			
Outcome: Adolescents' Disordered Eating Attitudes and Behaviors			
Predictor: Parental Eating Behaviors	1.79	.43	.36*
Model 2			
Outcome: Optimal Parenting Style			
Predictor: Parental Eating Behaviors	-.76	.39	-.18*
Model 3			
Outcome: Adolescents' Disordered Eating Attitudes and Behaviors			
Predictor: Optimal Parenting Style	-.39	.11	-.32*
Model 4			
Outcome: Adolescents' Disordered Eating Attitudes and Behaviors			
Predictor: Parental Eating Behaviors	1.46	.43	.29*
Mediator: Optimal Parenting Style	-.35	.10	-.29*

Note. * $p < .05$.

Mothers and Boys

Analyses revealed that the direct relationship between mothers' eating behaviors and boys' disordered eating attitudes and behaviors was significant ($\beta = .37, p < .05$), such that higher levels of mothers' eating problems were associated with higher levels of boys' disordered eating. Next, the relationship between mothers' eating behaviors and optimal parenting was

found to be significant ($\beta = -.34, p < .05$), such that higher levels of mothers' eating problems were associated with less optimal parenting. The relationship between optimal parenting and boys' disordered eating attitudes and behaviors was not found to be statistically significant ($\beta = -.15, p = .18$). Thus, model testing was discontinued, as mediation could not occur due to the lack of a significant relationship between these constructs (Table 2).

Table 2.

Regression Results for the Mediating Effects of Optimal Parenting Style on the Relationship between Parental Eating Behaviors and Adolescents' Disordered Eating Attitudes and Behaviors for Mothers and Boys

Model	B	Standard Error	β
Model 1			
Outcome: Adolescents' Disordered Eating Attitudes and Behaviors			
Predictor: Parental Eating Behaviors	1.77	.48	.37*
Model 2			
Outcome: Optimal Parenting Style			
Predictor: Parental Eating Behaviors	-1.25	.40	-.34*
Model 3			
Outcome: Adolescents' Disordered Eating Attitudes and Behaviors			
Predictor: Optimal Parenting Style	-.21	.15	-.15

Note. * $p < .05$.

Fathers and Girls

Analyses revealed that the relationship between fathers' eating behaviors and girls' disordered eating attitudes and behaviors was significant ($\beta = .37, p < .05$), such that higher levels of fathers' eating problems were associated with higher levels of girls' disordered eating.

The relationship between fathers' eating behaviors and optimal parenting was approaching statistical significance ($\beta = -.17, p = .07$), such that higher levels of fathers' eating problems were associated with less optimal parenting. The relationship between fathers' optimal parenting and girls' disordered eating attitudes and behaviors was significant ($\beta = -.34, p < .05$), such that less optimal parenting was associated with higher levels of girls' disordered eating. Finally, the mediation analysis to assess whether fathers' optimal parenting mediated the relationship between fathers' eating behaviors and girls' disordered eating attitudes and behaviors was found to be significant ($\beta = .34, p < .05$), suggesting evidence of partial mediation (Table 3).

Table 3.

Regression Results for the Mediating Effects of Optimal Parenting Style on the Relationship between Parental Eating Behaviors and Adolescents' Disordered Eating Attitudes and Behaviors for Fathers and Girls

Model	B	Standard Error	β
Model 1			
Outcome: Adolescents' Disordered Eating Attitudes and Behaviors			
Predictor: Parental Eating Behaviors	2.81	.66	.37*
Model 2			
Outcome: Optimal Parenting Style			
Predictor: Parental Eating Behaviors	-.99	.54	-.17†
Model 3			
Outcome: Adolescents' Disordered Eating Attitudes and Behaviors			
Predictor: Optimal Parenting Style	-.44	.12	-.34*
Model 4			
Outcome: Adolescents' Disordered Eating Attitudes and Behaviors			
Predictor: Parental Eating Behaviors	2.59	.66	.34*
Mediator: Optimal Parenting Style	-.36	.11	-.28*

Note. * $p < .05$, † $p < .10$

Fathers and Boys

Analyses revealed that the relationship between fathers' eating behaviors and boys' disordered eating attitudes and behaviors was significant ($\beta = .53$, $p < .05$), such that higher levels of fathers' eating problems were associated with higher levels of boys' disordered eating. Next, the relationship between fathers' eating behaviors and optimal parenting as reported by

boys was approaching significance ($\beta = -.20, p = .08$), such that higher levels of fathers' eating problems were associated with less optimal parenting. However, because the relationship between optimal parenting and boys' disordered eating attitudes and behaviors was not found to be significant ($\beta = -.14, p = .23$), no further mediation analyses were conducted (Table 4).

Table 4.

Regression Results for the Mediating Effects of Optimal Parenting Style on the Relationship between Parental Eating Behaviors and Adolescents' Disordered Eating Attitudes and Behaviors for Fathers and Boys

	Model	B	Standard Error	β
Model 1				
Outcome: Adolescents' Disordered Eating Attitudes and Behaviors				
Predictor: Parental Eating Behaviors		3.14	.54	.53*
Model 2				
Outcome: Optimal Parenting Style				
Predictor: Parental Eating Behaviors		-.91	.52	-.20†
Model 3				
Outcome: Adolescents' Disordered Eating Attitudes and Behaviors				
Predictor: Optimal Parenting Style		-.18	.15	-.14

Note. * $p < .05$, † $p < .10$

CHAPTER FOUR. DISCUSSION

The aim of this study was to explore how parental eating behaviors may be influencing adolescents' disordered eating attitudes and behaviors through optimal parenting style. The primary areas of research that were addressed were, 1) to what extent parents' own eating behaviors influence adolescents' disordered eating attitudes and behaviors, and 2) whether optimal parenting styles mediate, or explain, the connection between parental eating behaviors and adolescents' disordered eating attitudes and behaviors. The relationships between these constructs were also looked at separately for mothers and girls, mothers and boys, fathers and girls, and fathers and boys. Exploring the various ways that adolescents' eating attitudes and behaviors may be influenced is essential in better understanding why the period of adolescence is such a vulnerable period for the development of disordered eating attitudes and behaviors. Discussions of the study findings, limitations, and implications will be explored in the following sections.

Mothers

I expected that parents' disordered eating behaviors would be associated with boys' and girls' disordered eating attitudes and behaviors. For mothers, I found that mothers' eating behaviors were positively related to girls' and boys' disordered eating attitudes and behaviors. This means that higher levels of disordered eating behaviors for mothers were associated with higher levels of girls' and boys' disordered eating attitudes and behaviors. This finding is similar to previous studies that have established a link between maternal eating/dieting behaviors and adolescents' disordered eating attitudes and behaviors. For example, Neumark-Sztainer and colleagues (2003) found that maternal weight concern was one of the strongest predictors of disordered eating behaviors among adolescents, particularly adolescent girls. In addition,

previous literature has shown that adolescents who perceive that their mother is frequently trying to lose weight are more likely to become highly concerned with their own weight (Field, et al., 2001). There is quite an emphasis in our society on the importance of being thin for females, which suggests that mothers and girls may experience heightened pressure to be thin and engage in disordered eating behaviors as a result. Boys may also become more aware of the emphasis society places on female body shape and look to their mothers as sources of information for how to mirror their own body image ideals.

I also found that mothers' disordered eating behaviors were negatively related to optimal parenting, such that higher levels of mothers' disordered eating were associated with lower levels of optimal parenting. This supports my hypothesis that mothers who engage in eating problems may have a diminished capacity for displaying an optimal parenting style. This finding is similar to a study by Haycraft and Blisset (2010) who found that mothers who self-reported eating disorder symptoms were either too controlling or withdrew from stressful interactions with their children. It may be that mothers' preoccupations with their own shape and weight concerns distract them from fully engaging with their adolescent children and even blur their ideas of appropriate ways to interact with and parent their children. For example, mothers who do not have clear limits or rules around their own eating may not be able to set clear boundaries and consequences for their children. Another possible explanation is that as mothers become more focused on their own shape and weight concerns they may be quicker to provide feedback about their adolescent children's shape and weight, which may be perceived as being more cold and strict rather than warm and supportive.

I also hypothesized that a decrease in optimal parenting would significantly impact adolescents' disordered eating attitudes and behaviors. This hypothesis was partially supported

as I found that lower levels of optimal parenting were related to higher levels of girls' disordered eating attitudes and behaviors but not boys'. One explanation for finding this significant relationship for girls is that mothers who are more focused on their own eating problems and have a diminished capacity for optimal parenting as a result may not spend as much time monitoring their own adolescents' eating attitudes and behaviors. For example, Golan and Crow (2004) discussed how parents who are more permissive typically allow their children to make their own decisions with minimal punishment if things go wrong.

Fathers

Similar to mothers, the relationship between fathers' eating behaviors and adolescents' disordered eating attitudes and behaviors was positively related. This finding is supported by previous research that has highlighted the important influence that fathers have on the development of girls' and boys' disordered eating attitudes and behaviors. For example, fathers' weight satisfaction has been found to be associated with their daughters' weight satisfaction (Keel, et al., 1997), and encouragement of dieting from fathers has been found to be associated with daughters' dieting behaviors (Dixon, et al., 1996). In addition, a high level of concern about weight from fathers was associated with boys resorting to extreme dieting behaviors (Field, et al., 2008). Constant dieting among boys has also been predicted by their perception of the importance of thinness to their fathers (Rodgers & Chabrol, 2009). Girls and boys may begin to view their fathers as opposite-sex and same-sex role models, respectively, for appropriate eating behaviors and how to conform to body image ideals.

The relationship between fathers' eating behaviors and optimal parenting was approaching statistical significance, indicating that higher levels of fathers' eating problems were associated with less optimal parenting. This could mean that fathers who struggle with their own

eating problems become consumed with them and are not able to create or maintain a warm, positive environment for their children. Similar to mothers, fathers' focus on their own eating problems could lead to a diminished capacity to provide unconditional support and care to their adolescents.

In addition, fathers' lower levels of optimal parenting were associated with higher levels of girls' disordered eating attitudes and behaviors. However, this relationship was not found to be significant for boys. Previous studies have found that girls who perceive their fathers as being more warm and accepting experienced lower levels of dieting (e.g., Bastiani Archibald, et al., 1999). It may be that girls who experience a positive relationship with their fathers do not worry as much about whether their fathers approve of their weight or appearance, whereas girls who experience more critique from their fathers may feel as though their weight or appearance is never good enough. Other researchers have also revealed that support from fathers may help to promote healthy eating attitudes among adolescent girls (Swarr & Richards, 1996). It appears that higher levels of involvement from fathers is associated with preventing the worsening of eating attitudes among adolescent girls as they are able to experience unconditional support from their fathers (McVey, Pepler, Davis, Flett, & Abdoell, 2002). These findings provide further support for how important the role of fathers is in adolescent girls' lives, but more specifically how important it is for fathers to foster a warm, positive relationship with their daughters.

Optimal Parenting as a Mediator

For girls, I saw evidence of partial mediation, which indicates that there was a remaining effect of parental eating behaviors, such that parental eating behaviors had such a strong influence on girls' disordered eating attitudes and behaviors that optimal parenting could not fully explain the connection between the two. These findings demonstrate the important

influence of mothers' and fathers' eating behaviors on girls' disordered eating attitudes and behaviors, which is consistent with previous literature (Attie & Brooks-Gunn, 1989). It is also worth mentioning again that mothers' and fathers' eating behaviors also have a strong influence on boys' disordered eating attitudes and behaviors, so much so that this connection cannot be explained by optimal parenting. Woolley and colleagues (1998) discussed how mothers' extreme preoccupations with eating, body shape, and weight may result in inadvertently transferring these attitudes to their adolescent children through over-concern and critique of their adolescents' eating habits, body shape, and appearance. The same could be said for fathers as their own eating problems may become so encompassing that they inadvertently transmit these messages of body dissatisfaction or weight and shape concern to their adolescents. Another possible explanation for why mothers' and fathers' eating behaviors are so salient is that perhaps action is more important than words for adolescents; for example, adolescents may be most greatly influenced by the behaviors they see their parents actively engaging in, above and beyond parenting style or other possible mediators.

An interesting distinction to explore is why optimal parenting had a significant influence on girls' disordered eating attitudes and behaviors but not boys'. These findings indicate that girls may perceive the quality of the parent-adolescent relationship to be more important than boys do, especially when it comes to eating attitudes and behaviors. Given the emphasis that is placed on adolescent girls' appearance, they may experience more pressure to conform to body image ideals, which may skew their ideas about appropriate eating attitudes and behaviors. These body image ideals are very limiting in terms of how girls should look and what is considered to be physically attractive. In addition, boys and girls may begin exhibiting different behavioral patterns in their relationships, with boys stressing more independence and freedom from parental

influence and girls emphasizing relatedness (Gorrese & Ruggieri, 2012). While this difference in relationship patterns may be seen in various aspects of adolescents' lives, it seems as though girls take into consideration their parents' influence more than boys, specifically as it relates to eating behaviors. In addition, the emphasis that girls place on relationships with others, specifically their parents, could mean that they are more attuned to various parenting styles and in turn more susceptible to parental eating behaviors than boys are.

The development of disordered eating attitudes and behaviors during adolescence has become a critical phenomenon to address, and it is important to explore what could possibly contribute to this development. The findings of this study support the link that has been established in previous research regarding the influence parental eating behaviors have on the development of adolescents' disordered eating attitudes and behaviors. In addition, this study brings to light the influence that the quality of the parent-adolescent relationship as perceived by the adolescent can have on the relationship between parental eating behaviors and adolescents' disordered eating attitudes and behaviors. The role of mothers in the development of adolescents' disordered eating attitudes and behaviors has been explored extensively in past research, and this study provides support for the importance of the role that fathers play in this development as well. Because optimal parenting was not found to be as significant of an influence for boys' disordered eating attitudes and behaviors as it was for girls, it makes me wonder about how differently adolescent boys and girls may view the importance of the parent-adolescent relationship and the influence it can have on their eating attitudes and behaviors. Future research on this topic is vital and should continue to explore the influence of mothers' and fathers' parenting styles and eating behaviors on adolescents' disordered eating attitudes and behaviors.

This would facilitate treatments and interventions for adolescents and their families and move towards strengthening adolescents' views of themselves and their bodies.

Limitations and Future Directions

One limitation of this study was the homogeneity of the sample, given that the majority of participants were white. This speaks to the population from which the sample was taken, but makes it difficult to generalize the findings to other ethnicities. As much as possible, it would be beneficial for future research to further diversify its sample. In addition, diversity within the family structure was not known in our sample and should be considered. Adolescents may have resided in households headed by single parents, adoptive families, blended families, or gay and lesbian couples, which could significantly impact the way in which adolescents responded to the questions that were being asked.

Some methodological limitations of this study were its cross-sectional nature and the fact that the constructs were measured by adolescents' perceptions of parents, including parental eating behaviors and parenting style. It would have been interesting to consider parental reports of their own eating behaviors and those of the adolescents in order to compare between reporters, and future research could work to accommodate both of these perspectives. An adolescent who experiences disordered eating attitudes and behaviors may not perceive their parents as being warm or supportive even when they are or may have different ideas about what warm and supportive parenting looks like. Adolescents who struggle with their own disordered eating may also interpret their parents' support and care as encouraging them to eat or not eat, depending on the eating attitudes and behaviors with which they struggle. However, in the case of assessing adolescent development, it may be his or her own perception of parenting behaviors that are most important. While surveying parents about parenting style and parental eating behaviors may lead

to different results, parents may experience self-reporting bias in not wanting to admit that they struggle with eating problems or anything other than an optimal parenting style. Wolfradt, Hempel, and Miles (2003) argue that the adolescent perspective is most important in studying parenting styles rather than trying to seek out more objective measures.

Another limitation is that the questions that were used regarding eating attitudes and behaviors are geared more towards body dissatisfaction, drive for thinness, and bulimic symptoms. In this study, the findings for girls were stronger, and this could be explained by the content of the questions being more relevant to girls. For example, perceived pressure to be muscular through an emphasis on exercise or meal supplements may be a more important body concern for boys (Shomaker & Furman, 2010). Future research could include questions that pertain to the drive for muscularity.

Noting the limitations of this study allows us to think more about the possibilities for future research in this area. The findings from this study highlight the importance of exploring other influences on adolescents' disordered eating attitudes and behaviors, such as peers' eating behaviors or the media's emphasis on body image ideals, especially given that optimal parenting only partially explained the connection between parental eating behaviors and adolescents' disordered eating attitudes and behaviors for girls and mediation could not be established for boys. Stice (2002) suggests that peer and media influence can contribute to an overvaluation of the importance of appearance, and that elevated pressure to achieve body image ideals can lead to body dissatisfaction. It would also be interesting for future studies to incorporate both adolescents' and parents' perspectives about these constructs. Furthermore, it is essential that future work replicate this study with longitudinal data in order to keep track of what ways these constructs may change or remain the same over time.

Implications

Despite limitations, this study contributes significantly to existing literature. First, the present study established a link between parents' eating behaviors and adolescents' disordered eating attitudes and behaviors. The current study also provides support for the importance that both mothers' and fathers' eating behaviors have on adolescents' disordered eating attitudes and behaviors. In addition, this study is the first that I know of to look at optimal parenting as a mediator between parental eating behaviors and adolescents' disordered eating attitudes and behaviors. Some of the findings from the current study indicate that a relationship that is high in care and low in overprotection partially explains how parental eating behaviors contribute to adolescents' disordered eating attitudes and behaviors. More generally, these findings contribute to the importance on parents being able to foster warm, positive, and supportive relationships with their children. The understanding gained from this study has led to many implications for the lives of parents and adolescents, specifically related to treatment programs, parent education, and therapy.

This research provides valuable information for treatment programs that work with adolescents exhibiting disordered eating attitudes and behaviors. Whether in an intensive care facility or outpatient program, the findings from this study can be used to provide support for the inclusion of parents in treatment plans and intervention efforts. This may involve weekly meetings with parents to keep them updated on their adolescents' progress or having parents sit in on meetings with the treatment team in order to coordinate care with the professionals working with the adolescent (e.g., psychologist, case worker, medical doctor). Involving parents in treatment plans at facilities such as eating disorder clinics could help to promote adolescents' physical health and well-being. On one hand, it may be that adolescents who are struggling with

disordered eating may not perceive their parents' encouragement to eat healthy and appropriately as being warm and supportive because of their own mental and physical health struggles. Other studies have suggested that involving parents in programs that aim to improve adolescents' views of themselves and their bodies would be beneficial and help in the prevention of disordered eating attitudes and behaviors (e.g., O'Dea & Abraham, 2000). When involving parents, it would be important to remind them that adolescents may not be accepting of their support right away but to not let that discourage them from the goal of helping them achieve accepting views of themselves and their bodies.

It has been found in previous research that parents may also need encouragement to get their own support, educate themselves about disordered eating attitudes and behaviors, and to support their children who may be struggling with disordered eating attitudes and behaviors (Rome, et al., 2003). Given the importance of parental eating behaviors on adolescents' disordered eating attitudes and behaviors, this information could inspire parents to seek out their own education or treatment opportunities for their eating behaviors. In addition, it would be important for parents to seek out education resources such as parenting classes in order to convey more of an optimal parenting style towards their adolescents. For example, parenting programs such as Love and Logic aim to teach parents how to model healthy behavior and provide logical consequences in a warm, empathic way (Cline & Fay, 1993). Specifically, Love and Logic encourages parents to set limits in loving ways without anger or threats and express genuine empathy when their adolescents come to them with concerns (Cline & Fay, 1993).

Lastly, the findings from this study could be relevant for therapists working with families where an adolescent, and potentially one or both parents, are exhibiting disordered eating attitudes and behaviors. Therapists can help to begin conversation around how to be

understanding and supportive of the struggles surrounding disordered eating attitudes and behaviors (Cohen, 2006). It is also important for therapists to be aware of the powerful influence that parental eating behaviors and perceived care and overprotection from parents can have on adolescents' own eating attitudes and behaviors, as well as the mental health struggles that often accompany disordered eating attitudes and behaviors that may confound the eating problems. One team of researchers found that adolescents exhibiting disordered eating attitudes and behaviors who participated in conjoint family therapy with their parents experienced more warmth from parents as a result (Eisler, et al., 2000). In addition, therapists can talk with adolescents about how they know they are loved and what they perceive as being support from their parents in order for parents to more effectively communicate that love and support to their children. Therapists can then work more specifically with parents on how to foster a relationship with their children that promotes love, safety, and warmth. Conversations with parents may also revolve around how they can improve their own sense of themselves and their bodies. Family therapy and individual therapy with parents would provide an opportunity to inform parents of the power of their influence, as well as how they can work to maintain a warm, positive relationship with their adolescents and exhibit appropriate eating attitudes and behaviors.

Conclusion

Research has clearly shown that the development of disordered eating attitudes and behaviors has become a prominent concern during adolescence. This study aimed to further explore and determine the potential influences that contribute to the development of adolescents' disordered eating attitudes and behaviors and found that while parental eating behaviors have a strong influence, there are differences between adolescent girls and boys in how optimal parenting influences their disordered eating attitudes and behaviors. The current study provides

further support for how parents' eating behaviors and optimal parenting contribute to the ways in which adolescents view themselves and their bodies. Further research on this topic is essential in helping parents to better understand the powerful influence they have in adolescents' lives, strengthen the parent-adolescent relationship, and ultimately improve parents' and adolescents' eating attitudes and behaviors.

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This questionnaire lists various attitudes and behaviors of parents. As you remember your *father*, please circle the most appropriate answer. If you do not have contact with your father, please skip these questions. As you remember your *mother*, please circle the most appropriate answer. If you do not have contact with your mother, please skip these questions.

1. Spoke to me in a warm and friendly voice.
2. Did not help me as much as I needed.
3. Let me do those things I liked doing.
4. Seemed emotionally cold to me.
5. Appeared to understand my problems and worries.
6. Was affectionate to me.
7. Liked me to make my own decisions.
8. Did not want me to grow up.
9. Tried to control everything I did.
10. Invaded my privacy.
11. Enjoyed talking things over with me.
12. Frequently smiled at me.
13. Tended to baby me.
14. Did not seem to understand what I needed or wanted.
15. Let me decide things for myself.
16. Made me feel I wasn't wanted.
17. Could make me feel better when I was upset.
18. Did not talk with me very much.

19. Tried to make me feel dependent on him/her.
20. Felt I could not look after myself unless he/she was around.
21. Gave me as much freedom as I wanted.
22. Let me go out as often as I wanted.
23. Was overprotective of me.
24. Did not praise me.
25. Let me dress in any way I pleased.

APPENDIX B. BULIMIC MODELING SCALE; STICE, 1998

Please indicate the frequency of each of the following occurrences. If you do not have contact with your mother, father, or siblings, please skip those particular sections.

1. My mother has dieted to lose weight
2. My mother has felt bad about herself because of her weight
3. My mother has fasted, exercised excessively, or used laxatives or diuretics to lose weight
4. My mother has gone on out-of-control eating binges (eaten huge amounts of food in a short period)
5. My mother has vomited to lose weight
6. My father has dieted to lose weight
7. My father has felt bad about himself because of his weight
8. My father has fasted, exercised excessively, or used laxatives or diuretics to lose weight
9. My father has gone on out-of-control eating binges (eaten huge amounts of food in a short period)
10. My father has vomited to lose weight

APPENDIX C. CHILDREN'S VERSION OF THE EATING ATTITUDES TEST; MALONEY,
MCGUIDE & DANIEL, 1988

Please circle the answer that best fits how often you do certain things.
How often....

1. Are you scared about becoming overweight?
2. Do you stay away from eating when you are hungry?
3. Do you think about food a lot?
4. Have you gone on binges where you feel that you might not be able to stop?
5. Do you cut your food into small pieces?
6. Are you aware of calorie content in foods that you eat?
7. Do you stay away from carbohydrates (e.g., breads, potatoes, rice)?
8. Do you feel that others want you to eat more?
9. Do you vomit after eating?
10. Do you feel guilty after eating?
11. Do you think about wanting to be thinner?
12. Do you think about burning energy (calories) when you exercise?
13. Do others think you're too thin?
14. Do you think about having fat on your body?
15. Do you take longer than others to eat?
16. Do you stay away from foods with sugar in them?
17. Do you eat diet foods?
18. Do you think that food controls your life?
19. Can you show self-control around food?

- 20. Do you feel that others pressure you to eat?
- 21. Do you give too much time and thought to food?
- 22. Do you feel uncomfortable after eating sweets?
- 23. Have you been dieting?
- 24. Do you like your stomach to be empty?
- 25. Do you enjoy trying new rich foods?
- 26. Do you have the urge to vomit after eating?