

**THE INFLUENCE OF FATHERS ON ADOLESCENT BOYS' AND GIRLS'
DISORDERED EATING**

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MASTER OF SCIENCE

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ABSTRACT

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Because eating disorders and body dissatisfaction are significant problems in adolescence, it is important to study the sociocultural influences that may be associated with these attitudes and behaviors. Researchers have been thorough in studying maternal influences on adolescents' disordered eating attitudes and behaviors; however, fathers have not been examined in sufficient detail as to their potential influence on the development of such issues. This study explored the role fathers play in the development of disordered eating attitudes and behaviors among middle-school aged boys and girls. In particular, this study sought to find out how fathers' own dieting behaviors, teasing behaviors, feedback regarding weight, and encouragement to lose weight (e.g., actively promoting weight loss or persuasion to lose weight, regardless of whether or not the adolescent was at a healthy body weight) affected disordered eating in adolescent males and females.

Self-report questionnaires were collected from 62 girls and 63 boys, who were in seventh to ninth grades. We used independent sample t-tests to examine gender differences, Pearson correlations to examine associations among fathers' behaviors and adolescents' disordered eating, and multiple regression analyses to examine which father behaviors most influenced adolescents' disordered eating. Although boys received slightly more encouragement to lose weight and feedback about appearance from fathers, and girls reported slightly more teasing and father engagement in dieting behaviors, none of these differences were statistically significant. Fathers' encouragement to lose weight was significantly related to both females' and males' disordered eating. Fathers' feedback

about weight was significantly related to females' disordered eating, whereas teasing behaviors were significantly related to males' disordered eating. Both girls and boys were most influenced by fathers' encouragement to lose weight, when compared to other paternal behaviors. It is vital that fathers are included in the discussion, education, and research surrounding adolescents' disordered eating attitudes and behaviors. As suggested in this study, it is essential for researchers, clinicians, and educators to be aware of fathers' influence on adolescents' disordered eating attitudes and behaviors. By discussing the vital role that fathers play in their adolescents' lives, more open communication and knowledge can be uncovered to allow for future efforts in preventing disordered eating attitudes and behaviors in adolescents.

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TABLE OF CONTENTS

| | |
|---|------|
| ABSTRACT..... | iii |
| ACKNOWLEDGMENTS | v |
| LIST OF TABLES..... | viii |
| OVERVIEW | 1 |
| Disordered Eating in Girls and Boys | 1 |
| The Role of Parents..... | 3 |
| The Role of Fathers vs. Mothers..... | 8 |
| Fathers’ Influence on Girls’ Disordered Eating Attitudes and Behaviors | 11 |
| Fathers’ Influence on Boys’ Disordered Eating Attitudes and Behaviors | 15 |
| Present Study..... | 18 |
| METHOD | 21 |
| Participants..... | 21 |
| Procedure..... | 21 |
| Measures | 22 |
| Analysis Plan..... | 24 |
| RESULTS | 26 |
| Descriptive Statistics and Gender Differences..... | 26 |
| Correlations Between Father Variables and Adolescents’ Disordered Eating..... | 27 |
| Fathers’ Effects on Adolescents’ Disordered Eating | 28 |

DISCUSSION..... 30

 Summary of Findings..... 30

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH..... 38

CONTRIBUTIONS AND CLINICAL IMPLICATIONS..... 41

REFERENCES 45

APPENDIX A..... 58

APPENDIX B..... 61

LIST OF TABLES

| <u>Table</u> | <u>Page</u> |
|--|-------------|
| 1. Means, (Standard Deviations), and T-tests for Gender Differences..... | 27 |
| 2. Correlations Among Study Variables for Male and Female Participants..... | 28 |
| 3. Separate Multiple Regression Analyses for Father Variables Predicting Adolescents' Disordered Eating | 29 |

OVERVIEW

Eating disorders and body dissatisfaction are common during adolescence (Attie & Brooks-Gunn, 1989; Phares, Steinberg, & Thompson, 2004; Rodgers, Faure, & Chabrol, 2009). Females have the highest risk of developing an eating disorder, with an estimated 15% of young women living with an eating disorder (Park, 2005). Additionally, 40% of new cases involving a diagnosis of anorexia nervosa occur in females between the ages of 15 and 19 (Stice & Whitenton, 2002). Females develop eating disorders more frequently than males; however, 5 to 15% of patients with anorexia and bulimia nervosa are, in fact, males (Muise, Stein, & Arbess, 2003). Body dissatisfaction is also highly prevalent during adolescence, with approximately 60% of females and 30% of males having a desire to change their body size (Presnell, Bearman, & Stice, 2004). Due to these large numbers, it is important to explore factors that may negatively impact middle school girls' and boys' weight-related behaviors and attitudes. Research has pointed to sociocultural factors, especially the role of parents, in influencing disordered eating patterns during adolescence (Dixon, Gill, & Adair, 2003; Gross & Nelson, 2000; Keel, Heatherton, Harnden, & Hornig, 1997; Wertheim, Martin, Prior, Sanson, & Smart, 2002; Wertheim, Mee, & Paxton, 1999). This study looked specifically at the influence of fathers, an often neglected focus, in adolescent girls' and boys' development of disordered eating attitudes and behaviors.

Disordered Eating in Girls and Boys

Many adolescent girls are dissatisfied with their bodies, with concerns regarding size, shape, appearance, and weight. For example, approximately 30% to 40% of middle school aged females report concern about their weight and appearance (Stice & Whitenton, 2002). Further, research has found that only 12% of adolescent girls are the size they wish

to be (Ricciardelli & McCabe, 2001b) and that approximately 90% of adolescent females want to decrease their body size (Keel, Fulkerson, & Leon, 1997). Additionally, it is estimated that 20% of adolescent females will participate in disordered eating behaviors such as restrictive diets, bingeing and purging, and extreme amounts of exercise to alter their bodies (Archibald, Graber, & Brooks-Gunn, 1999). This research suggests that adolescence is a period of time when females experience significant and potentially harmful levels of dissatisfaction with their bodies. During adolescence, girls are exposed to society's beliefs regarding thinness and the cultural view that beauty equates to being thin. Attitudes and opinions in Western culture reject and often discard those who are overweight (Field, Camargo, Taylor, Berkey, Roberts, & Colditz, 2001; Haworth-Hoepfner, 2000). Thinness is considered to be ideal and attractive, and is associated with success for females (Hawkins, Richards, Granley, & Stein, 2004). Therefore, it is vital that we attempt to understand the factors associated with girls' desires to alter appearance and body size.

Due to the fact that the majority of eating disorder cases involve females, research has not been thorough in the examination of disordered eating in adolescent boys. It is important to include boys in research as boys do report body dissatisfaction, engage in disordered eating behaviors, and are also susceptible to developing eating disorders (Field et al., 2001; Garcia-Grau, Fuste, Miro, Saldana, Bados, 2004; Wertheim, Martin, Prior, Sanson, & Smart, 2002). In fact, in current research in which boys were included, body dissatisfaction was shown to be a concern among most adolescent males (Bearman, Presnell, Martinez, & Stice, 2006). For instance, 12% to 26% of adolescent males reported feeling dissatisfied with their bodies (Stice & Whitenton, 2002), and only 16.6% reported

being at the body size they wanted (Ricciardelli & McCabe, 2001). Furthermore, Rolland, Farnill, and Griffiths (1997) discovered that 33% of males whose average age was 10 years old desired to be thinner, and 24% of those males had attempted to lose weight.

Adolescent boys are exposed to a cultural view which suggests that large muscles and a lean body are required for physical attractiveness. Boys will often go to extreme lengths to achieve that muscular ideal and may cause harm to their bodies in the process (Cafri, van den Berg, & Thompson, 2006; Giles & Close, 2008; Moore, 1990; Ricciardelli & McCabe, 2004). Thus, while the incidence of eating disorders is higher in females, the rates of disordered eating and body dissatisfaction are also serious in males, particularly during the period of adolescence (Garcia-Grou et al., 2004).

The previous statistics propose the importance of an in-depth examination of disordered eating in adolescent boys, yet comprehensive research has not been done. Research has indicated that for both adolescent males and females, the desire to change body shape, size, appearance, and weight is very common (Ricciardelli & McCabe, 2001b); therefore, boys' disordered eating attitudes and behaviors need to be examined more closely. Furthermore, we need to understand the factors associated with disordered eating among both sexes.

The Role of Parents

Parents are important sources of support and encouragement for adolescents. When parents are warm and encouraging, provide the adolescent with opportunities for independence, and are cooperative and engaging, they help to promote healthy development in the adolescent (Granic, Dishion, & Hollenstein, 2006). Many researchers have found that when a family environment is positive, the adolescent is more likely to

have high self-esteem, confidence, and achievement in school (Granic et al., 2006). Similarly, when adolescents experience positive relationships with mothers and fathers, fewer disordered eating behaviors or weight concerns result (Ata, Ludden, & Lally, 2007).

Parents have been thought of as highly influential role models in the communication of what is appropriate and expected by society and culture (Dunkley, Wertheim, & Paxton, 2001). Parents serve as information sources during adolescence, especially regarding the messages they send adolescent males and females concerning weight, eating behaviors, body size, as well as stereotypes associated with gender (Rodgers et al., 2009; Spees & Zimmerman, 2002). Research has shown that a home environment that highlights the importance of appearance and body size and shape may produce an outcome where the adolescent takes on those concerns as well, believing that they are valid (Dixon et al., 2003; Hill, Oliver, & Rogers, 1992; Paxton, Eisenberg, & Neumark-Sztainer, 2006). In addition, when parents promote an environment with stereotypical views on gender and how males and females should behave or what is appropriate for each gender, negative attitudes and behaviors may develop. Even at young ages, males and females are conditioned to play and think a certain way according to what is appropriate in society. For example, boys are typically encouraged to be active, to strive for independence, and participate in masculine activities, such as football, weightlifting, or activities that are considered more independent, whereas girls are persuaded to participate in cooperative activities, less independent activities, and activities that are less athletic and more nurturing and sensitive (Spees & Zimmerman, 2002).

Attitudes regarding weight and body shape imposed by family members tend to support societal views on attractiveness, and may thereby include weight loss strategies and

diet encouragement, two risk factors in the development of body dissatisfaction and eating disorders (Paxton et al., 2006). Stice, Schipak-Neuberg, Shaw, and Stein (1994) suggest that messages adolescent girls receive from family regarding the importance of a thin body become internalized and lead to decreased body satisfaction. Higher levels of body dissatisfaction increase the likelihood of the development of disordered eating behaviors (Duemm, Adams, & Keating, 2003). Recent studies further validate the theory that pressures deriving from family members to be thin lead to the internalization of the thin-ideal, body dissatisfaction, dietary restraint, and bulimic symptoms among females (Stice, Shaw & Nemeroff, 1998; Stice et al., 1994). Negative and harmful behaviors may also occur when adolescent males are encouraged by family members to increase muscle mass in order to look like the ideal, muscular male figure (McCabe & Ricciardelli, 2005). By increasing muscle mass, males are thought to be exhibiting strength, dominance, and masculinity, which are culturally valued attributes for boys and men (Mussap, 2008).

Parents can directly and indirectly communicate opinions about body shape, weight, and physical appearance. Direct discussions parents have with their adolescent daughters and sons could include appearance-related feedback in the form of remarks and observations (McCabe, Ricciardelli, & Ridge, 2006), teasing about weight and body shape (Ata et al., 2007), encouragement to lose weight (e.g., actively promoting weight loss in sons and daughters or persuasion to lose weight, often in a negative manner; Vincent & McCabe, 2000; Wertheim et al., 2002), and criticism about an adolescent's body shape (Vincent & McCabe, 2000). In addition to more discussion about body shape, weight, and appearance, parents may place greater pressure upon their daughters to be thin (Rodgers et al., 2009). Regarding indirect influences, parents may affect their adolescents' eating

attitudes and behaviors by exhibiting their own disordered eating behaviors and body dissatisfaction (Gross & Nelson, 2000). For example, adolescent girls tend to observe dieting behaviors and be more conscious of disordered eating patterns and attitudes (Rodgers et al., 2009).

Both parents are influential in communicating information and influencing their adolescent's weight and appearance (Streigel-Moore & Kearney-Cooke, 1994). Wertheim et al. (1999) reported that when both parents communicate ideas and opinions about dieting and image, their children are at a much higher risk of developing an eating disorder. In a study by Keel et al. (1997), they discovered that when parents comment or discuss observations about their adolescent's weight, image, or body shape, those adolescents were much more likely to engage in food restriction and struggle with dissatisfaction with weight. In fact, 13% of mothers helped their adolescent diet and 10% of fathers helped the adolescent diet (Streigel-Moore & Kearney-Cooke, 1994). Furthermore, 40% of parents stated that they have encouraged weight loss in their adolescent daughter, regardless of her weight (Wertheim et al., 1999). Several studies have found that when mothers reported that they wished their daughter was thinner or encouraged their daughter to lose weight and begin a diet, the adolescent girls had a higher frequency of dietary restriction (Moreno & Thelen, 1993; Pike & Rodin, 1991; Thelen & Cormier, 1995; Wertheim et al., 1999). Direct encouragement from parents to lose weight and begin a diet was found to be more influential than an adolescent beginning a diet or participating in restrictive behaviors due to observation of parental dieting or restriction (Wertheim et al., 1999).

Encouragement from parents to lose weight has predicted adolescents' food restriction as well as symptoms of bulimia nervosa, regardless of whether or not the

adolescent was overweight or of a larger body size (Wertheim et al., 1999). Parental encouragement may occur due to the adolescent having a body size larger than peers; however, several studies have found that encouragement from parents for their children to diet or lose weight is not always associated with the child being overweight (Benedikt, Wertheim, & Love, 1998; Kluck, 2010; Thelen & Cormier, 1995). These studies suggest that parental encouragement to diet or lose weight is not always due to concern for adolescents to lose weight in order to be healthy, but to communicate the importance of thinness and parental values of maintaining a slim figure. Further, Wertheim et al. (1999) found that encouragement by parents is often interpreted as criticism by adolescents.

Much of the research on adolescents' disordered eating and body dissatisfaction has tended to blame mothers because studies have primarily involved mothers and daughters and the way that mothers' beliefs are conveyed and passed on to adolescent girls (Vincent & McCabe, 2000). Mothers may be more likely to communicate ideas and beliefs about appearance and dieting to their adolescent daughters because as women, mothers are exposed to society's belief that beauty is defined by thinness (Wertheim et al., 1999). As a consequence of exposure to sociocultural beliefs about beauty, mothers may perceive dieting to be a helpful behavior and communicate those values and beliefs to their adolescent daughters (Wertheim et al., 1999). Due to the focus on mothers and daughters, sons have often been overlooked in research on dieting behaviors and body dissatisfaction (Keel et al., 1997; Garcia-Grau et al., 2004; Rodgers et al., 2009; Vincent & McCabe, 2000).

In addition to a lack of research on boys' disordered eating attitudes and behaviors, research on fathers' impact on adolescent boys' and girls' disordered eating has also been

limited. Mothers are typically the primary focus when studying disordered eating patterns in adolescents (McCabe & Ricciardelli, 2003). Fathers have generally been left out of research and may have more influence on their children than research has shown thus far. Due to the potential importance of fathers' influence on adolescents, this study focused primarily on fathers.

While there have been studies in the past that have focused on mothers and fathers as a combined unit (Stice et al., 1998; Stice, Ziemba, Margolis, & Flick, 1996) rather than two separate influences on their adolescent sons and daughters, some studies have explored the impact of mothers and fathers individually (Baker, Whisman, & Brownell, 2000; McCabe & Ricciardelli, 2005; McCabe et al., 2006; Thelen & Cormier, 1995). This approach is essential in order to be able to determine similarities and differences regarding parenting style and influences on adolescent adjustment. Thus, we present empirical findings that examine maternal and paternal influences separately.

The Role of Fathers vs. Mothers

Fathers are seldom regarded as potent influences in the development of issues with body image, disordered eating, weight concerns, as well as other eating behaviors (Wertheim, Paxton, Schutz, & Muir, 1997). Not only is it essential for fathers to be included in the literature and research on this topic, they should be recognized as a likely contributor in the development of body-related concerns among their children (Keel et al., 1997). A minimal amount of research has connected fathers with adolescents' body image and/or dieting behaviors, and these studies indicate that there is reason to examine fathers' potential role in the development of eating disorders, body image concerns, or dieting behaviors (McCabe et al., 2006; Rodgers et al., 2009).

Fathers and mothers have individual influences on their adolescent children. Each parent has a unique way of interacting with his or her child, and both mothers and fathers can contribute to the progression of eating patterns, beliefs about body shape, and feelings adolescents develop about their bodies (Rodgers et al., 2009). Interactions between mothers and adolescents consist of more caregiving and intimate communication as well as more time spent alone with the adolescent (Collins & Russell, 1991; Williams & Kelly, 2005). There are high expectations from society for mothers to be deeply involved in their children's lives. Mothers are typically viewed as the primary caregiver and expected to be predominantly responsible for their children (Ainsworth, Blehar, Waters, & Wall, 1978; Haddock, Zimmerman, Current, & Harvey, 2002). In addition, mothers tend to act as a model of appropriate behaviors to socialize their children and expose their children to a more equal system in the division of household duties as well as work and education responsibilities (Davis & Wills, 2010).

Fathers tend to interact with their adolescent children in ways that typically teach the adolescent a specific task or skill focused on achievement (Chodorow, 1978; Collins & Russell, 1991; Lamb, 2004). Fathers often have fewer expectations from society to be actively involved with their children and have been thought to have a decision in whether they want to be involved in the caretaking of their children, whereas mothers are expected to be involved in caretaking of their children (Williams & Kelly, 2005). Significant components of parenthood include involvement in caretaking and participation in raising children, as well as developing a feeling of emotional connectedness with children; these behaviors are often not considered to be socially expected of fathers, as they are more likely viewed as fathers' personal choice (Williams & Kelly, 2005). Typically, fathers tend

to act as a mentor or give guidance to sons more often than daughters (Chodorow, 1978; Greenberger & Goldberg, 1989; Harris & Morgan, 1991; Davis & Wills, 2010).

In the past, fathers were often thought of as responsible for working outside of the home and less responsible for caregiving and nurturing their children. More recently, fathers have been found to be more directly involved in caregiving and parenting in the form of nurturance, leisure activities and play, and providing their children with support, discipline, and guidance (Cabrera, Tamis-LeMonda, Bradley, Hofferth, & Lamb, 2000). Time spent with children has increased for fathers in married homes (Sayer, Bianchi, & Robinson, 2004). This is especially true in families where both parents are employed (Pleck & Masciadrelli, 2004). Fathers often contribute more to socialization for their sons and also have been shown to be involved more with their sons than daughters (Bulanda, 2004; Collins & Russell, 1991). However, involved fathers have been found to be as valuable and helpful for daughters as they are for sons (King, Harris, & Heard, 2004). These various interaction styles and beliefs about gender may influence how fathers and mothers communicate beliefs and ideas about body image and dieting differently.

Research has indicated that fathers and mothers can affect their adolescents' eating attitudes and behaviors. For instance, Thelen and Cormier (1995) discovered that when both mothers and fathers encouraged their adolescent daughters to lose or control their weight, the girls wanted to be thinner than their current size, their actual weight was impacted, and they were more likely to participate in dieting behaviors. However, the results of the study indicated that when body weight was controlled, the only relationship that was maintained was the relationship between the adolescent daughters' dieting behaviors and fathers' support for dieting and weight-loss (Thelen & Cormier, 1995).

These findings are crucial as they show the influence of fathers in adolescent females' lives. Studies have also found that both mothers and fathers (McCabe & Ricciardelli, 2001; McCabe & Ricciardelli, 2003) are influential in the development of negative body image in adolescent males. Further, in their study of both mothers and fathers, Field et al. (2001) found that when fathers expressed desire for their sons to not be overweight, the adolescent boys displayed a higher likelihood of continuous dieting behaviors. Additionally, when adolescents perceived thinness to be important to their fathers, it was more significant to them than their perception of the importance of thinness to mothers (Field et al., 2001). These findings clearly show the importance of not only mothers, but fathers as well, in adolescent males' and females' disordered eating attitudes and behaviors.

In summary, few studies have included both mothers and fathers as potential influences to adolescent male and female dieting behaviors and body dissatisfaction. However, the studies that incorporate fathers find that fathers do have a significant influence in the development of their sons' and daughters' eating attitudes and appearance-related issues. The following two sections discuss the sole influence fathers have on adolescent females' disordered eating as well as adolescent males' disordered eating.

Fathers' Influence on Girls' Disordered Eating Attitudes and Behaviors

Research that has been done in the past has often failed to include fathers as key factors in the development of disordered eating attitudes and behaviors among adolescent females. Fathers need to be included in the research, however, in order to establish a comprehensive literature base on the impact of both parents in the development of girls' disordered eating. Frequently researchers presume that fathers have little influence over their daughters' dieting behaviors, attitudes, or body image due to the fact that males are

thought to be less preoccupied with their own body shape and weight (Rozin & Fallon, 1988). However, Thelen and Cormier (1995) found that 73% of fathers desired to be thinner. This high percentage suggests the importance of including fathers in studies regarding weight, body image, disordered eating attitudes, and dieting behaviors among adolescent girls.

One important reason that fathers should be involved in the research is due to the fact that fathers may provide an adolescent female with her first experience of a male viewpoint on beauty and thinness. Gross and Nelson (2000) stated that adolescent females may learn what males view as acceptable by hearing criticism of their mothers' weight from their fathers. This indirect communication from fathers could be teaching young girls that they need to maintain a thin body shape in order to be accepted by romantic partners and to avoid potential criticism from males (Field et al., 2001; Gross & Nelson, 2000; Kluck, 2010). When fathers communicate opinions regarding weight, eating behaviors, and physical appearance to mothers, the daughters are more likely to become concerned about their appearance and body weight (Gross & Nelson, 2000; Kluck, 2010). When fathers spoke about the mother's weight in front of their adolescent daughters, the girls had increased levels of eating disturbance when compared to girls who did not have fathers communicating with mothers about weight and eating behaviors (Gross & Nelson, 2000). Through the critique of their mothers' weight, girls may learn that they should maintain a slim figure so as to be accepted by males (Gross & Nelson, 2000; Kluck, 2010). Although the fathers' comments and critiques were directly made to mothers, the adolescent female was still indirectly impacted. When an adolescent female hears negativity regarding

appearance and weight, she can begin to view her own body as unsatisfactory to herself and others (Field et al., 2001; Gross & Nelson, 2000; Kluck, 2010).

Another indirect way in which adolescent girls may be affected by their fathers is if their fathers express dissatisfaction with their own bodies or engage in dieting behaviors. When fathers experienced dissatisfaction with their own body weight and commented more frequently on their daughters' weight, the adolescent girls dealt with more weight and body dissatisfaction than dieting behaviors (Dixon et al., 2003; Field et al., 2001; Gross & Nelson, 2000). Additionally, Streigel-Moore and Kearney-Cooke (1994) found that when fathers were dieting and dissatisfied with their own shape, they reported also helping their daughter lose weight or diet. Researchers have found that weight and body-related concerns parents have about their own bodies are often passed on to their children (Field et al., 2001). Girls may be impacted by their fathers' dieting due to observations of fathers' heightened worry over weight and frequent discussion about body size and shape. In line with Social Cognitive Theory (Bandura, 1985), an essential factor in promoting weight loss behaviors is by observing a parent or family member participating in a behavior (i.e., food restriction or weight loss technique).

As previous research has indicated, fathers can have an indirect influence on the disordered eating attitudes and behaviors of their adolescent daughters. Additionally, fathers may impact girls directly, through direct comments about weight, encouragement to lose weight, or teasing about weight. For example, Dixon et al. (2003) discovered that fathers' encouragement for weight loss or to begin a diet as well as teasing about appearance were associated with dieting behaviors in adolescent females. These researchers found that comments originating from fathers are especially important in

influencing adolescent girls to begin dieting. Further, Keel and colleagues (1997) discovered that fathers' comments to their daughters about their body weight led to an increase in their adolescent daughters' body weight dissatisfaction. Additionally, in a study completed by Vincent and McCabe (2000), fathers were found to play an important function in the development of weight loss and dieting behaviors among adolescent girls. Fathers who provided negative feedback or comments to their daughters were more likely to have daughters who took part in extreme weight loss behaviors (Vincent & McCabe, 2000). In summary, when fathers present direct feedback about weight or appearance, adolescent females are more likely to take part in harmful dieting and weight loss behaviors.

Fathers tend to hold strong beliefs about how their adolescent daughters should look and present themselves. In a study by Dixon et al. (2003), fathers believed that being slim influenced many aspects of their daughters' lives. Having a slim body was seen by fathers as essential to the happiness of their daughters, how successful their daughters were, health, attractiveness level, how many friends the females had, the quantity of dates the girls went on, as well as how able the daughters were to get what they wanted (Dixon et al., 2003). In this study, 60% of fathers believed that girls were thought to be more attractive when they were thin, and 80% of fathers believed that females should be more attentive to what they eat and the quantity of what they eat (Dixon et al., 2003). Further, 76% of fathers believed that their adolescent daughters should watch what they eat consistently, and 74% reported that they would be concerned if their daughters weighed more than a normal body weight (Dixon et al., 2003). Based on the results of this research, fathers have clear opinions on the way females should look, what and how much girls should eat, and that being thin is

very important. These beliefs are frequently conveyed to adolescent daughters and may be harmful.

Put together, these research findings suggest that fathers may transmit messages to their daughters indirectly or directly, through their own body dissatisfaction or dieting behaviors, appearance-related feedback, encouragement to lose weight, body-related comments, and teasing about the adolescent female's weight. As stated previously, these messages may become internalized by adolescent girls and lead to disordered eating attitudes and behaviors. We now turn our discussion to the possible effects fathers may have on their sons.

Fathers' Influence on Boys' Disordered Eating Attitudes and Behaviors

Fathers can be an important source of weight and body-related information for their sons since they represent the typical male physique. During adolescence, boys are experiencing the effects of puberty, including growth in height, weight, and muscle mass (Mishkind, Rodin, Silberstein, & Streigel-Moore, 1986), which makes them more likely to resemble their fathers. Because of this, boys may be particularly susceptible to indirect and direct messages from their fathers about body size, shape, and appearance. Some studies have attempted to investigate the indirect and direct ways in which fathers can influence their sons' development of such attitudes and behaviors at this time.

There are few studies that have explored the indirect ways that fathers impact the development of disordered eating and body dissatisfaction in their adolescent sons. Adolescent sons tend to observe behaviors from their fathers that signify concern and care for their own appearance, including eating behaviors and attitudes regarding body shape and size (Baker et al., 2000). In their study, Baker et al. (2000) investigated fathers'

modeling of dieting and behaviors, which are indicative of dedication and care to physical appearance, and found paternal modeling to be an important predictor in the development of body dissatisfaction in boys (Rodgers et al., 2009). Furthermore, when fathers were interested in their own weight and body shape, it was found to be a significant predictor of body dissatisfaction in adolescent sons (Rodgers et al., 2009). These studies indicate that the indirect messages fathers send through modeling have a negative impact on adolescent sons' body satisfaction.

Not only do fathers indirectly communicate to boys, but also directly via encouragement to lose weight, teasing behaviors, comments about body shape and weight, and verbalized expectations regarding the appearance of the male body. For example, Ricciardelli, McCabe, and Banfield (2000) found that adolescent boys responded to direct messages of encouragement to alter body shape and comments from their fathers with regard to the ideal masculine body. Adolescent boys who had received encouragement from their fathers to change body shape and size engaged in more exercise with the goal of modifying their body size, weight, and increase in muscle mass (McCabe & Ricciardelli, 2005; Ricciardelli et al., 2000). In another study, fathers were found to be a strong influence on adolescent boys' weight loss techniques as well as strategies to increase muscle (McCabe & Ricciardelli, 2005). By increasing muscle mass, adolescent boys are not only expressing their need to look attractive but possibly their need to display strength and dominance, as well as the absence of feminine features (Mussap, 2008). For example, Morrison, Morrison, and Hopkins (2003) found that males' reasons for attempting to achieve the male muscular ideal include an overall sense of being masculine, being athletic, and being popular with their peers. Additionally, fathers were found to be highly

influential in their son's socialization and participation in sports (Delaney & Madigan, 2009). Fathers who were physically active and fit were more likely to support their children in participation in sports as well as determinations of which sports are considered masculine, such as football and baseball, rather than dance or other sports that are viewed as feminine (Delaney & Madigan, 2009).

Fathers who encouraged weight loss in their adolescent sons were more likely to have sons who participated in weight loss strategies that were considered extreme, including bingeing and purging behaviors as well as laxative use (Cafri et al., 2006; Giles & Close, 2008; Moore, 1990; Ricciardelli & McCabe, 2004; Vincent & McCabe, 2000). Researchers have also found that comments and feedback from fathers regarding weight and body size were the highest predictors of body dissatisfaction in boys (Rodgers et al., 2009). Additionally, appearance-related teasing has a significant and negative impact on males' body satisfaction. Adolescent males who experience teasing focused on body shape or weight have higher levels of body dissatisfaction (Eisenberg, Neumark-Sztainer, Haines, & Wall, 2006).

Although limited, these studies indicate that fathers are influential in their sons' lives, indirectly and directly communicating ideas about body and weight. These messages can ultimately lead to disordered eating among boys. Therefore, it is vital to investigate the influences fathers have on the disordered eating attitudes and behaviors of both adolescent sons and daughters. In particular, it is important to assess multiple influences from fathers rather than one single behavior, and to also address the relative strength that each behavior has on adolescents' disordered eating.

Present Study

The purpose of the present study was to explore the influence fathers exert on middle-school aged boys' and girls' disordered eating attitudes and behaviors. A strong and vast research base has been developed regarding the impact mothers have on adolescent girls' disordered eating; however, research is minimal in the area of father's influence on both sons and daughters. Furthermore, studies that have included fathers typically focused on one father behavior (e.g., teasing) and did not include multiple father behaviors in the same study. Therefore, in this study, we examined the individual contributions of four father behaviors as well as the effects of these behaviors when considered simultaneously. Specifically, this study sought to assess how fathers' own dieting behaviors, teasing behaviors, feedback regarding weight, and encouragement to lose weight contributed to adolescent males' and females' disordered eating. In this study, we operationalized fathers' dieting behaviors to mean participation in dietary restraint in order to lose weight. Teasing behaviors meant partaking in jokes or taunts targeted at adolescents' weight or appearance, feedback regarding weight meant any comments made by fathers about an adolescent's body shape or size, and encouragement to lose weight meant encouragement from fathers to the adolescent to eat less and lose weight, regardless of whether or not the adolescent was at a healthy body weight.

The hypotheses for this study were three-fold. First, regarding gender differences, we hypothesized that girls would experience more negative feedback from fathers and more encouragement to lose weight than boys based on findings that fathers believe that their daughters should maintain a thin body shape and appropriate weight (Dixon et al., 2003; Gross & Nelson, 2000). However, boys would have higher incidences of teasing

about appearance and weight from fathers than girls, as fathers tend to socialize their sons more, engage in certain styles of communication which may include teasing, and teach their sons that the male figure should look a certain way (McCabe & Ricciardelli, 2005) and be very muscular so as to achieve a masculine, dominant physique (Massup, 2008).

Second, we hypothesized that fathers' feedback, teasing, own dieting behaviors, and encouragement to lose weight would be associated with higher rates of disordered eating in both boys and girls based on the limited number of studies that have shown that fathers have a considerable influence on adolescents' eating-related behaviors and attitudes about the body and weight (e.g., Dixon et al., 2003; Field et al., 2001; Gross & Nelson, 2000; Kluck, 2010; McCabe & Ricciardelli, 2005). These paternal behaviors are likely to influence both boys and girls since research has found that boys and girls experiencing weight-related comments and feedback from their fathers have a higher likelihood of becoming regular dieters (Smolak & Levine, 1993). Furthermore, adolescents who perceive that weight and appearance are important to their fathers tend to experience body dissatisfaction and weight concerns (Field & Kitos, 2010).

Third, we hypothesized that the father behavior that girls would be most negatively influenced by, when compared to other father behaviors, would be fathers' encouragement to lose weight, as fathers hold strong beliefs about the appropriate shape and weight a female should be and tend to communicate those beliefs to their daughters (Dixon et al. 2003, Vincent & McCabe, 2000). Boys, in contrast, would be most negatively influenced by fathers' feedback when compared to other father behaviors, as it has been shown to be a particularly strong predictor of body dissatisfaction in males (Rodgers et al., 2009). In addition, male expectations to obtain a muscular, lean body could impact the level of

feedback boys experience if they do not look a certain way or have not achieved the male masculine ideal (Mussap, 2008).

METHOD

Participants

The data used in the present study came from a larger study investigating sociocultural influences on adolescents' eating patterns and body image. Participants (N = 125, 62 girls and 63 boys) included seventh through ninth grade students, aged 12 to 15 from a middle school in a medium-sized community in the Midwest. The majority of the sample identified themselves as Caucasian (92.8%), with 4% identifying as Native American and 3.2% identifying as "other." The highest education levels attained for fathers ranged from grade school (.8%), some high school (5.6%), high school graduate (24.8%), some college (18.4%), college graduate (43.2%), to advanced degree (5.6%).

Body mass index (BMI) was calculated using participants' self-reports of height and weight. Based on those self-reports, the average BMI for all participants was obtained. Body mass index was calculated by dividing the adolescent's weight by the adolescent's height squared (Gallagher, Visser, Sepulveda, Pierson, Harris, & Heymsfield, 1996). Adolescent male participants had an average BMI of 22.6, and the average BMI for adolescent female participants was 20.7, both in the normal range. According to the Centers for Disease Control and Prevention (2010), a normal range for BMI is between 18.5 and 24.9.

Procedure

Flyers and parental consent forms were sent home with all interested students at the middle school. Surveys were then administered after school to the adolescents who had returned the parental consent forms. The survey was administered in a large group setting with each adolescent signing an assent form and completing an individual questionnaire.

Researchers remained in the auditorium to assist with the survey and answer any questions the participants had. For compensation, the adolescents received a \$25 gift card to a local mall.

Measures

Disordered eating. To measure disordered eating, the Children's Eating Attitudes Test (ChEAT; Maloney, McGuire, Daniels, & Specker, 1989) was used. The ChEAT is a 26-item self-report survey that evaluates adolescents' bulimic symptoms, worries about being overweight, dieting behaviors, and preoccupation with food and eating. Each question on the ChEAT has six answer options, ranging from "never" to "always." Questions on the ChEAT include such items as "Do you think about food a lot?", "Do you feel guilty after eating?", and "Do you think about having fat on your body?" Higher scores indicated more disordered eating attitudes and behaviors. The ChEAT has demonstrated evidence of high internal reliability ($\alpha = .76 - .87$) and concurrent validity in previous work with children in grades three through six (Maloney et al., 1989; Smolak & Levine, 1993). See Appendix A.

Father behaviors. Items from the Perceived Sociocultural Influences on Body Image and Body Change Questionnaire (McCabe & Ricciardelli, 2001b) were used to explore adolescents' perceptions of fathers' feedback about their weight, fathers' own dieting behaviors, fathers' encouragement to lose weight, and fathers' weight-related teasing behaviors. The response choices on the scale range from "extremely negative" to "extremely positive" with five potential answer options. The Perceived Sociocultural Influences on Body Image and Body Change Questionnaire has shown high levels of internal consistency reliability ($\alpha = .67 - .84$) among adolescent samples of boys ages 12 to

14 (Stanford & McCabe, 2005) and high levels of internal consistency reliability ($\alpha = .84$) in a sample of adolescent males and females, in grades 7-10 (McCabe & Ricciardelli, 2001b). See Appendix B.

Fathers' feedback about weight. The 3-item feedback portion of the Perceived Sociocultural Influences on Body Image and Body Change Questionnaire assesses the type of feedback adolescents receive from their fathers regarding weight and body size. Questions on the scale include assessments of feedback from fathers regarding body size and shape (e.g., "What type of feedback do you receive from your father about your body size and shape?"), feedback from fathers concerning eating patterns (e.g., "What type of feedback do you receive from your father about your eating patterns to change your body size and shape?"), and feedback from fathers involving level of exercise to alter size and shape of the body (e.g., "What type of feedback do you receive from your father about your level of exercise to change your body size and shape?"). Higher scores reflected more negative feedback from fathers.

Fathers' encouragement to lose weight. The 2-item encouragement to lose weight portion of the questionnaire evaluates how fathers encourage their adolescent to lose weight. Questions used in the scale ask specifically about the frequency of fathers' encouragement to lose weight (e.g., "How often does your father encourage you to lose weight?") and the rate at which fathers encourage their adolescent sons and daughters to eat less (e.g., "How often does your father encourage you to eat less?"). Higher scores indicated more encouragement from fathers to lose weight.

Fathers' teasing behaviors regarding weight. Two questions on the scale involving fathers' teasing behaviors evaluate the occurrence of teasing about body size and weight.

The questions were designed to find out how prevalent fathers' teasing is about weight gain (e.g., "How often does your father tease you about gaining weight?") as well as teasing about overeating (e.g., "How often does your father tease you about eating too much?"). Higher scores indicated more teasing behaviors from fathers.

Fathers' own dieting behaviors. Finally, one question on the scale assesses whether fathers participate in their own dieting behaviors in order to lose weight. The scale specifically asks about the frequency of the adolescents' fathers' dieting (e.g., "How often does your father diet to lose weight?"). Higher scores reflected more frequent dieting patterns in fathers.

Analysis Plan

First, we hypothesized that adolescent females would have higher rates of feedback regarding appearance and body size from their fathers than males. Adolescent females would also have higher levels of encouragement from their fathers to lose weight. In contrast, adolescent males would have higher rates of teasing from their fathers. We used independent samples t-tests in order to evaluate these hypotheses.

Second, we hypothesized that fathers' feedback, teasing, own dieting behaviors, and encouragement to lose weight would all be associated with higher rates of disordered eating in girls. Similarly, we hypothesized that fathers' behaviors would be significantly associated with higher rates of disordered eating among boys. We used Pearson correlations to investigate these hypotheses.

Third, we hypothesized that adolescent females would be most influenced by fathers' encouragement to lose weight. In contrast, we predicted that adolescent males would be most influenced by fathers' feedback about weight and dieting. We used

multiple regression analyses to determine which variables were better predictors of adolescent male and female disordered eating patterns.

For all statistical analyses, we set our alpha level at .05. The PASW 18.0 program was used for all analyses.

RESULTS

Descriptive Statistics and Gender Differences

Independent samples t-tests were performed to compare rates of fathers' dieting, encouragement to lose weight, feedback, and teasing as well as adolescent' disordered eating between boys and girls. Descriptive statistics and t-test results for gender differences are reported in Table 1.

When an independent samples t-test was conducted to determine if boys and girls differed in the amount of encouragement to lose weight that they received from their fathers, the results showed that boys had slightly higher rates of father encouragement ($M = 1.52$, $SD = 2.47$) than girls ($M = 1.15$, $SD = 1.57$). While there was a difference between boys and girls, it was not significant ($t(123) = 1.02$, $p = .31$). In regards to feedback about appearance, boys received slightly more negative feedback from fathers ($M = 3.86$, $SD = 2.91$) than girls ($M = 3.63$, $SD = 2.49$). Although boys had higher rates of father feedback, the difference was not significant ($t(123) = 1.39$, $p = .64$). Additionally, girls had similar, although slightly higher, rates of teasing from fathers ($M = .58$, $SD = 1.26$) than boys ($M = .56$, $SD = 1.51$), yet the difference was not significant ($t(123) = .04$, $p = .92$). Lastly, fathers of girls had slightly higher rates of dieting ($M = .87$, $SD = 1.02$) than fathers of boys ($M = .60$, $SD = .91$), but the results were not significant ($t(123) = 1.02$, $p = .12$).

An independent samples t-test was then performed to determine whether or not boys and girls differed in their rates of disordered eating attitudes and behaviors. Girls were found to have higher rates of disordered eating ($M = 8.60$, $SD = 6.57$) than boys ($M = 7.30$, $SD = 6.24$). While there was a difference between males and females regarding their disordered eating, the difference was not significant ($t(123) = -1.13$, $p = .26$).

Table 1

Means, (Standard Deviations), and T-tests for Gender Differences

| Variable | Gender | | Gender Differences |
|--|-------------|-------------|------------------------|
| | Girls | Boys | |
| 1. Fathers' Dieting Behaviors | .87 (1.02) | .60 (.91) | t(123)= -1.56, p = .12 |
| 2. Feedback From Fathers | 3.63 (2.49) | 3.86 (2.91) | t(123)= .47, p = .64 |
| 3. Encouragement to Lose Weight From Fathers | 1.15 (1.57) | 1.52 (2.47) | t(123)= 1.02, p = .31 |
| 4. Teasing From Fathers | .58 (1.26) | .56 (1.51) | t(123)= -.10, p = .92 |
| 5. Disordered Eating | 8.6 (6.57) | 7.3 (6.24) | t(123)= -1.13, p = .26 |

*Note. *p < .05*

Correlations Between Father Variables and Adolescents' Disordered Eating

Pearson correlations were conducted to determine which father variables were associated with disordered eating in both adolescent females and males. The results are presented in Table 2. First, regarding girls, correlations showed that fathers' encouragement to lose weight ($r = .42$) was significantly related to female adolescents' disordered eating, and fathers' feedback ($r = .24$) was also significantly related to girls' disordered eating. However, fathers' dieting ($r = .20$), and fathers' teasing behaviors ($r = .11$) were not significantly correlated with female adolescents' disordered eating. Second, for boys, correlations showed that fathers' encouragement to lose weight ($r = .43$) was significantly related to male adolescents' disordered eating, and fathers' teasing behaviors ($r = .24$) were also significantly related to boys' disordered eating. In contrast, fathers' dieting behaviors ($r = -.11$) and fathers' feedback ($r = .14$) were not significantly correlated with male adolescents' disordered eating.

Table 2

Correlations Among Study Variables for Male and Female Participants

| Variable | 1 | 2 | 3 | 4 | 5 |
|--|------|------|------|------|------|
| 1. Fathers' own dieting | --- | -.14 | .33* | .29* | .20 |
| 2. Fathers' feedback | .08 | --- | .24 | .16 | .24* |
| 3. Fathers' encouragement to lose weight | .37* | .23 | --- | .28* | .42* |
| 4. Fathers' teasing behaviors | .34* | .02 | .49* | --- | .11 |
| 5. Disordered eating | -.11 | .14 | .43* | .24* | --- |

Note. * $p < .05$. Correlations for females appear above the diagonal line; correlations for males appear below the diagonal line.

Fathers' Effects on Adolescents' Disordered Eating

Separate multiple regression analyses were conducted for girls and boys in order to evaluate which father variables were stronger predictors of their disordered eating. Results are displayed in Table 3. After completing the multiple regression analysis for girls, which included fathers' own dieting behaviors, fathers' feedback, fathers' encouragement to lose weight, and fathers' teasing behaviors, only fathers' encouragement to lose weight was a significant predictor of female adolescents' disordered eating ($\beta = .34$). For boys, of all of the father variables, only fathers' encouragement to lose weight was a significant predictor of male adolescent disordered eating ($\beta = .48$).

Table 3

Separate Multiple Regression Analyses for Father Variables Predicting Adolescents' Disordered Eating

| Model | Variable | b | Std. Error | β |
|--------------------------------|---------------------------------------|-------|------------|---------|
| <u>BOYS</u> | | | | |
| ¹ Disordered eating | Fathers' own dieting | -2.27 | .85 | -.33 |
| | Fathers' feedback | .11 | .25 | .05 |
| | Fathers' encouragement to lose weight | 1.21 | .35 | .48* |
| | Fathers' teasing behaviors | .48 | .54 | .12 |
| <u>GIRLS</u> | | | | |
| ² Disordered eating | Fathers' own dieting | .82 | .86 | .13 |
| | Fathers' feedback | .49 | .33 | .19 |
| | Fathers' encouragement to lose weight | 1.44 | .56 | .34* |
| | Fathers' teasing behaviors | -.28 | .66 | -.05 |

Notes: * $p < .05$.

¹ $R^2 = .28$, $p = .005$

² $R^2 = .21$, $p = .000$

DISCUSSION

The present study examined the influence that fathers have on middle-school aged boys' and girls' disordered eating. The specific purpose of the study was to illustrate that fathers' behaviors about food, weight, and body image have an impact on the development of disordered eating attitudes and behaviors in adolescent girls and boys. Thus, we examined the role of fathers' encouragement to lose weight, teasing, appearance-related feedback, and fathers' own dieting behaviors.

Summary of Findings

For our first hypothesis, we predicted that girls would experience more negative feedback and more encouragement to lose weight from fathers than boys. Based on the findings in our study, boys reported slightly, but not significantly, higher rates of encouragement to lose weight from fathers than girls, which is surprising, as fathers have been found to have clear opinions on what body types are appropriate for an adolescent female (Dixon et al., 2003). At the same time, however, fathers tend to communicate more with their sons than with their daughters; thus, direct encouragement to lose weight is likely to occur for boys (Bulanda, 2004; Collins & Russell, 1991). Put together, this research may explain why we found such similar levels of encouragement to lose weight among girls and boys.

Additionally, contrary to our hypotheses, boys received slightly, but not significantly, more negative feedback about appearance than girls did. This finding was unexpected as girls have been found to receive more negative feedback regarding their appearance from fathers than boys in past research (Schwartz, Phares, Tantleff-Dunn, & Thompson, 1999). However, Ricciardelli, McCabe, and Banfield (2000) found that many

boys experienced feedback from their fathers regarding exercise in order to change body shape and size, resulting in decreased body satisfaction, perhaps due to fathers' strong role in the socialization of their sons (Delaney & Madigan, 2009). Thus, it is not surprising that both boys and girls receive feedback about their weight and body from fathers.

We also predicted that boys would have higher rates of teasing from fathers than girls. However, we found that boys and girls actually reported very similar rates of teasing from their fathers. In past research, boys reported high levels of teasing from fathers, which resulted in higher incidences of disordered eating (Field, Javaras, Aneja, Kitos, Camargo, Barr Taylor, & Laird, 2008). Fathers tend to communicate with their adolescent sons by teasing (McCabe & Ricciardelli, 2005). Similar levels of teasing by fathers to girls could be due to the changes girls are experiencing within themselves, their bodies during puberty, and in their relationships with their fathers. During puberty, fathers tend to express less affection towards their daughters and spend less time with their daughters in comparison to when the girls are younger (Balter, 2000). Fathers commonly focus on solving problems and less on emotional connectedness with their daughters (Balter, 2000). Due to the changes that occur between fathers and daughters during puberty, communication may become more difficult for fathers, which may result in teasing behaviors due to an uncertainty of how to interact with their daughters. It is likely that both girls and boys experience teasing by their fathers because this is a common method of communication during adolescence, whether due to playfulness or awkwardness.

For our second hypothesis, we predicted that fathers' feedback, teasing behaviors, own dieting behaviors, and encouragement to lose weight would all be associated with higher rates of disordered eating in both adolescent boys and girls. Fathers' encouragement

to lose weight was found to be significantly related to females' disordered eating as well as fathers' feedback about weight and body shape and size. These findings are consistent with past research that has shown that when fathers encouraged their daughters to lose weight or to diet, the girls expressed a desire to be smaller than their current shape, and the girls were also more prone to take part in dieting and weight loss behaviors (Thelen & Cormier, 1995). In addition, girls who had fathers who made comments about their body size or weight were more likely to participate in diets on a regular basis (Smolak & Levine, 1993). Parents have a strong influence during adolescence in communicating what is expected by society in terms of weight, body size, and eating behaviors (Dunkley et al., 2001; Rodgers et al., 2009; Spees & Zimmerman, 2002). In fact, fathers have particular views about what females should look like (e.g., thin) and are likely to directly communicate these beliefs to their daughters (Dixon et al., 2003). As a result, girls may become unsatisfied with their bodies if they do not meet paternal expectations and engage in disordered eating behaviors in an attempt to become thinner.

However, fathers' own dieting and teasing behaviors were not significantly correlated with females' disordered eating attitudes and behaviors, which is in contrast to previous empirical findings. For instance, when adolescent girls perceived weight and body size to be important to their fathers, they experienced higher levels of weight and body dissatisfaction (Field & Kitos, 2010). Similarly, fathers are more likely to help their daughters diet and lose weight when they were dissatisfied with their own body size or shape (Striegel-Moore & Kearney-Cooke, 1994). Additionally, teasing behaviors by fathers have led to an increase in dieting behaviors in adolescent girls (Dixon et al., 2003). Given that there are many changes occurring in adolescent girls' relationships with their

fathers during adolescence, making the relationship strained and less interactive (Balter, 2000), girls may not be affected by their fathers' teasing behaviors at this time. Although girls may indeed be exposed to teasing from their fathers, they may not internalize the messages, thereby making it less likely that teasing will affect their eating attitudes and behaviors. Additionally, because girls are becoming more feminine in their shape and appearance due to the effects of puberty, they tend to resemble their mothers at this time. Therefore, girls may be more likely to model maternal dieting behaviors rather than paternal behaviors.

We found that adolescent boys were impacted by two of the four variables assessed in our study. Fathers' encouragement to lose weight and their teasing behaviors were significantly related to males' disordered eating, though fathers' dieting and feedback were not. In support of our findings, past research has indicated that adolescent boys respond to encouragement from their fathers to change body shape or size by engaging in more exercise or other behaviors in order to increase muscle mass and look like the ideal male figure (McCabe & Ricciardelli, 2005; Ricciardelli et al., 2000). Additionally, fathers were found to encourage their adolescent sons to build larger muscles in order for their sons to look like the ideal male figure (McCabe & Ricciardelli, 2005). Thus, fathers may be encouraging their sons to lose weight or gain more muscles in order to more closely resemble the ideal male figure. Internalization of the ideal shape is likely to lead to more eating problems and distorted body image. Further, results from our study relating to teasing behaviors are consistent with previous research as males experience increased levels of body dissatisfaction when they were exposed to weight-related teasing by their fathers (Rodgers et al., 2009). Due to the body dissatisfaction that occurs for boys when

they are exposed to paternal teasing based on weight or body shape, boys may respond in harmful ways by participating in disordered eating behaviors. It is possible that fathers are uncertain as to how to best communicate with their sons regarding weight loss or muscularity; as a result, fathers may use teasing as a way to discuss these issues.

Fathers' own dieting behaviors and appearance-related feedback were not significantly related to boys' disordered eating. This is in contrast to a study by Baker et al. (2000) who found that when adolescent boys were exposed to fathers' modeling of weight control and dieting behaviors, boys reported more body dissatisfaction. While our study did not find these paternal behaviors to impact boys' disordered eating attitudes and behaviors, there are certain factors that can provide explanation for these findings. For example, perhaps the boys who participated in our study did not have a positive relationship with their fathers; thus, boys would be unlikely to model paternal behaviors if they did not have a good relationship with or view their fathers positively. Similarly, the boys would not be likely to take appearance-related feedback the father exhibited seriously if the relationship was strained. Additionally, during adolescence, egocentrism is prominent. Therefore, it is plausible that boys may not have noticed any behaviors their fathers exhibited, instead focusing on themselves and their own concerns. Furthermore, peers are extremely important during adolescence, and boys may turn to peers to discuss weight and body shape or look to peers as models of eating and dieting practices.

For our third hypothesis, we expected that girls would be most influenced by fathers' encouragement to lose weight when compared to other father behaviors, and our study found that the only variable that was a significant predictor of females' disordered eating was indeed fathers' encouragement to lose weight. This finding was consistent with

previous research. For instance, Thelen and Cormier (1995) found that adolescent daughters were more frequent dieters when their fathers encouraged them to lose weight, and Dixon et al. (2003) discovered that encouragement to lose weight from fathers was related to dieting and weight control behaviors in females. Research has shown that fathers' encouragement to begin a diet or for weight loss is associated with dieting and weight loss behaviors in females (Dixon et al., 2003). Fathers' encouragement to lose weight has also led to increased body dissatisfaction in their adolescent daughters (Keel et al., 1997), which may be a precursor to disordered eating. Adolescence is an impressionable period of time, and fathers' encouragement for girls to lose weight may have been particularly influential as fathers are providing girls with a male viewpoint that our culture values beauty and thinness in females (Gross & Nelson, 2000; Kluck, 2010). Furthermore, it makes sense that encouragement to lose weight would be the most significant contributor to girls' disordered eating attitudes and behaviors because it was the most direct method of communication about ideal shape, weight, and size from fathers examined in this study.

We also predicted that boys would be most influenced by fathers' feedback in comparison to other father behaviors, yet our study found that fathers' encouragement to lose weight was a significant predictor of males' disordered eating. Although this finding was contrary to our hypothesis, it was consistent with previous research as encouragement from parents has been a predictor of adolescents' restriction of food intake as well as bulimia nervosa (Wertheim et al., 1999). Furthermore, when fathers' focus was on weight loss, boys were more likely to participate in extreme and harmful behaviors so as to lose weight, such as bingeing, purging, and laxative use (Cafri et al., 2006; Giles & Close,

2008; Moore, 1990; Ricciardelli & McCabe, 2004; Vincent & McCabe, 2000). It is possible that while boys are not as likely as girls to be subjected to discussions about weight or pressures from society to lose weight, when boys do experience encouragement to lose weight, it has a considerable influence on their disordered eating attitudes and behaviors. Perhaps this is due to a connection with muscularity concerns, with the weight loss message being closely entwined with becoming more muscular. By losing weight and increasing muscle mass, adolescent boys may be displaying a need to fit in with their peers, look attractive, and exhibit strength (Mussap, 2008). The lack of a lean, muscular shape could be seen as not adhering to cultural norms, which is detrimental for adolescent boys and likely to result in disordered eating attitudes and behaviors. Additionally, and similar to our conclusions regarding girls, fathers' encouragement to lose weight was the most direct method of communication about size, weight, and shape that we investigated. Thus, it makes sense that this particular form of communication would be most influential on boys' disordered eating attitudes and behaviors.

The findings of our study bring to light that fathers are important in the development of middle-school aged boys' and girls' disordered eating attitudes and behaviors. Past research has been extensive in the discussion of mothers' roles in disordered eating attitudes and behaviors in adolescent females and males. While research may have included fathers in a handful of studies regarding disordered eating attitudes and behaviors, those particular studies were limited in that they did not incorporate numerous variables, instead focusing on a single variable such as appearance-related teasing (Kostanski & Gullone, 2007) or feedback concerning appearance (Schwartz et al., 1997). Our study provided information about fathers' role in males' and females' disordered

eating attitudes and behaviors by including four important variables (i.e. encouragement to lose weight, feedback regarding appearance, teasing behaviors, and fathers' own dieting behaviors) in one study.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Some limitations of this study must be noted. First, our study was composed of primarily white participants from middle-class backgrounds. Therefore, the findings do not generalize to other ethnicities or cultures. Additionally, more diversity in the form of socioeconomic status could have been included in our study. Further, diversity within the family should be considered. Family structure, including families headed by single parents, gay and lesbian couples, adoptive families, extended family members, etc., could potentially influence the development of disordered eating attitudes and behaviors in middle-school aged boys and girls. For instance, in divorced families, many stressors occur with regard to adjustment to new environments and situations. With stressors such as single-parenting and a possible workload increase, parents may, as a result, interact with their children differently, leading to adjustment difficulties for both the parents and the children (Dreman & Shemi, 2004). These changes can lead to a decrease in communication and positive interactions within the family, both of which are highly important in maintaining a sense of self-worth in a child (Dreman & Shemi, 2004). For instance, Ata, Ludden, and Lally (2007) found that when children and adolescents are involved in positive relationships with their mothers and fathers, fewer weight concerns, dieting behaviors, and disordered eating patterns resulted. Additionally, information regarding the influence of both parents being employed and how busy, fast-paced lifestyles impact a family's relationship quality as well as disordered eating in adolescent boys and girls could be obtained.

Second, we recommend that future research include the context of conversations that take place between fathers and their adolescent sons and daughters. For example, in

some father-adolescent relationships, teasing may be playful or used as a way to connect and bond, rather than as hurtful or negative communication. Qualitative data could be obtained in order to contextualize father-adolescent conversations. For example, qualitative data would allow us to explore the methods that fathers use to encourage their adolescents to lose weight, make comments about their bodies, and communicate in general. It would be especially important in order to determine whether a father is encouraging his teenage son or daughter to lose weight in a helpful way (e.g., not by nagging), particularly if the adolescent was overweight or obese. Because our sample had average BMI scores that were in the normal range, it is possible that we may see different effects of father behaviors on overweight or obese adolescents' disordered eating attitudes and behaviors, especially if our sample already had a generally positive body image.

Third, this study only included surveys completed by adolescents. Parental participation in the surveys may have allowed us to view differences in perceptions of encouragement to lose weight, teasing, appearance-related feedback, and dieting behaviors. In order to obtain a more comprehensive report, a study that involves both adolescents' and parents' responses may be beneficial and allow more accurate information to be obtained. Further, our study was limited by its unidirectional approach, and future research should be bidirectional so as to explore the adolescents' effects on fathers as well. Having both father and adolescent reports on behaviors and conversations would allow for a more thorough, bidirectional approach to studying father-adolescent relations.

Fourth, our study did not discuss protective factors and risk factors, especially regarding encouragement for adolescents to lose weight. Encouragement to lose weight from fathers can often be positive, particularly if the adolescent is overweight or obese and

needs to begin losing weight in order to be healthy. Encouragement could be a helpful and supportive way to communicate weight loss and promote positive body image (Ricciardelli, McCabe, & Banfield, 2000). Not only should future research examine protective factors, but it would also be interesting to determine those factors associated with healthy eating behaviors. Thus, we encourage researchers to examine positive attitudes and behaviors, both as predictors and outcome variables.

Lastly, our study only discussed variables related to diet, food, and image. It may be important to look at more general family variables, such as father-adolescent relationship quality, communication methods, and parenting style in order to explore their impact on the development of disordered eating attitudes and behaviors. Future studies should include older adolescents in order to investigate father-adolescent relationships during high school, which can differ from those relationships during middle school. Furthermore, in older age groups, the role of sports and extracurricular involvement should be examined, as participation and competition increase in intensity during this time. Such participation would give fathers more opportunity to discuss weight and body image, thereby likely increasing fathers' impact on adolescents' disordered eating attitudes and behaviors. Although our study was an important step in examining the role of fathers in adolescent development, it is clear that more research is needed.

CONTRIBUTIONS AND CLINICAL IMPLICATIONS

Despite limitations, the present study made a number of contributions. First, in comparison to previous research that has explored parental influences on disordered eating attitudes and behaviors in adolescents, this study included the role of fathers, which has been a neglected focus in past research. Second, this study investigated the impact of multiple paternal variables on adolescents' disordered eating attitudes and behaviors in one study rather than examining only one variable (e.g., Eisenberg, Neumark-Sztainer, Haines, & Wall, 2006; Keery, Boutelle, van den Berg, & Thompson, 2004; Schwartz et al., 1997). Specifically, we assessed the impact of fathers' own dieting, teasing behaviors, encouragement to lose weight, and feedback about weight and appearance. Third, we considered how each paternal behavior affected both adolescent boys and girls. Previous studies have primarily centered on females' disordered eating attitudes and behaviors (e.g., Dixon et al., 2003; Field et al., 2001; Gross & Nelson, 2000; Keel et al., 1997; Vincent & McCabe, 2000). Lastly, our study focused on a middle school aged sample. Much research on disordered eating has been completed on later adolescence and early adulthood while early adolescence has often been overlooked (e.g., Eisenberg et al., 2006; Kluck, 2010).

In this study, we shed light on the important role of fathers in adolescents' development of disordered eating attitudes and behaviors. Eating problems in children have typically been associated with mothers' problems, and there has been a consistent societal trend to blame mothers for these issues. However, both boys and girls can be strongly influenced by their relationships with fathers. While relationships may change and be challenged throughout adolescence, fathers should become aware of those possible

changes and strive to maintain a positive relationship with their adolescent. Fathers can potentially strengthen the relationship with their adolescent by being open and communicative. The adolescent's sense of self-worth and acceptance could be enhanced if the father-adolescent relationship is comfortable, supportive, and open to listening and communication (Gecas & Schwalbe, 1986; Nielsen & Metha, 1994). In addition, fathers should make efforts to be included in family discussions about food, weight, appearance, teasing, body image, and self-esteem.

It is essential that fathers be included in treatment and intervention efforts in families with adolescents engaging in disordered eating behaviors. Clinicians can offer families an opportunity to discuss the emotions, experiences, behaviors, and interactions that have occurred within the family (Duhig, Phares, & Birkeland, 2002; Phares & Lum, 1997), which is especially helpful to families who are dealing with stress or worry regarding disordered eating patterns. More specifically, therapists can provide education and involve fathers in discussions surrounding their beliefs on their role in the family (Cohen, 2006; Duhig et al., 2002), their own views on eating and dieting, as well as how they can be a positive support for their child during adolescence. Family members, including fathers, can be encouraged by therapists to be open to looking inward and realizing the impact they may have had on the development of their child's disordered eating behaviors, whether it is direct or indirect (Cohen, 2006). Further, family members can be encouraged to develop healthy eating strategies together and participate in physical activities together so as to enhance a healthy environment, rather than focus on discussions about body size or shape.

Clinicians are also helpful in allowing families to discuss the stress involved with disordered eating and how each member of the family can be understanding and supportive (Cohen, 2006). It is important for therapists to educate the family on the power of negative thinking that has potentially been inflicted on the adolescent and the views around eating and body image that likely consume the adolescent. The family would benefit from opportunities to discuss ideas that will enhance positive self-esteem, offer ways to cope, as well as develop ways to find relaxation and an environment that is not focused on negative thoughts or stress. Family therapy can be extremely beneficial in helping families learn to be communicative and welcoming to the expression of feelings in all environments, especially the home (Duhig et al., 2002).

In addition to intervention and therapy, fathers need to be involved in prevention efforts in order to learn how to prevent disordered eating attitudes and behaviors, as well as how to combat the beliefs society holds about beauty and thinness. Fathers can help to strengthen the value and positive beliefs of their adolescent children by focusing on what the adolescent is involved in, what the adolescent enjoys, and who the adolescent is friends with (Gecas & Schwalbe, 1986), rather than focusing on weight or appearance. As another preventative effort, fathers can work with other fathers to increase awareness of disordered eating and body image issues and be cognizant of other influences the adolescent is exposed to that could potentially be harmful to self-esteem and sense of worth. Fathers can also be involved at school or with other parents to begin efforts to confront media influences that instill insecurity within adolescent boys and girls, to attempt to end the harmful advertisements adolescents see, and to challenge society's beliefs that boys and girls should look a certain way in order to be attractive. Fathers can be supportive by

showing their adolescent child that they respect the child's uniqueness and urge the child to love who he/she is and discourage behaviors that could be harmful and damaging.

As shown in this study, fathers have a significant effect on their adolescents' attitudes and behaviors. Thus, fathers need to be continually involved in research so as to discover how their influence does, in fact, impact adolescents in both positive and negative ways. As suggested, fathers with adolescent sons and daughters should be involved in therapy, intervention, and prevention work in order to provide support, promote healthy eating attitudes, as well as discourage behaviors that are harmful for their adolescent.

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APPENDIX A

The Children's Version of the Eating Attitudes Test (ChEAT) Maloney, McGuire, & Daniel, 1988

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

| How often.... | Never | Rarely | Sometimes | Often | Usually | Always |
|---|-------|--------|-----------|-------|---------|--------|
| 1. Are you scared about becoming overweight? | 0 | 1 | 2 | 3 | 4 | 5 |
| 2. Do you stay away from eating when you are hungry? | 0 | 1 | 2 | 3 | 4 | 5 |
| 3. Do you think about food a lot? | 0 | 1 | 2 | 3 | 4 | 5 |
| 4. Have you gone on binges where you feel that you might not be able to stop? | 0 | 1 | 2 | 3 | 4 | 5 |
| 5. Do you cut your food into small pieces? | 0 | 1 | 2 | 3 | 4 | 5 |
| 6. Are you aware of calorie content in foods that you eat? | 0 | 1 | 2 | 3 | 4 | 5 |
| 7. Do you stay away from carbohydrates (e.g., breads, potatoes, rice)? | 0 | 1 | 2 | 3 | 4 | 5 |
| 8. Do you feel that others want you to eat more? | 0 | 1 | 2 | 3 | 4 | 5 |
| 9. Do you vomit after eating? | 0 | 1 | 2 | 3 | 4 | 5 |
| 10. Do you feel guilty after eating? | 0 | 1 | 2 | 3 | 4 | 5 |
| 11. Do you think about wanting to be thinner? | 0 | 1 | 2 | 3 | 4 | 5 |

| | Never | Rarely | Sometimes | Often | Usually | Always |
|---|-------|--------|-----------|-------|---------|--------|
| 12. Do you think about burning energy (calories) when you exercise? | 0 | 1 | 2 | 3 | 4 | 5 |
| 13. Do others think you're too thin? | 0 | 1 | 2 | 3 | 4 | 5 |
| 14. Do you think about having fat on your body? | 0 | 1 | 2 | 3 | 4 | 5 |
| 15. Do you take longer than others to eat? | 0 | 1 | 2 | 3 | 4 | 5 |
| 16. Do you stay away from foods with sugar in them? | 0 | 1 | 2 | 3 | 4 | 5 |
| 17. Do you eat diet foods? | 0 | 1 | 2 | 3 | 4 | 5 |
| 18. Do you think that food controls your life? | 0 | 1 | 2 | 3 | 4 | 5 |
| 19. Can you show self-control around food? | 0 | 1 | 2 | 3 | 4 | 5 |
| 20. Do you feel that others pressure you to eat? | 0 | 1 | 2 | 3 | 4 | 5 |
| 21. Do you give too much time and thought to food? | 0 | 1 | 2 | 3 | 4 | 5 |
| 22. Do you feel uncomfortable after eating sweets? | 0 | 1 | 2 | 3 | 4 | 5 |
| 23. Have you been dieting? | 0 | 1 | 2 | 3 | 4 | 5 |
| 24. Do you like your stomach to be empty? | 0 | 1 | 2 | 3 | 4 | 5 |

| | Never | Rarely | Sometimes | Often | Usually | Always |
|---|-------|--------|-----------|-------|---------|--------|
| 25. Do you enjoy trying new rich foods? | 0 | 1 | 2 | 3 | 4 | 5 |
| 26. Do you have the urge to vomit after eating? | 0 | 1 | 2 | 3 | 4 | 5 |

APPENDIX B

The Perceived Sociocultural Influences on Body Image and Body Change Questionnaire McCabe & Ricciardelli, 2001

Please circle the answer that best fits how you perceive feedback from your *father*. If you do not have contact with your father, please skip these questions.

| | Extremely Negative | Negative | Neutral | Positive | Extremely Positive |
|--|-----------------------|----------|---------|----------|-----------------------|
| What type of feedback do you receive from your father about your body size and shape? | 0 | 1 | 2 | 3 | 4 |
| What type of feedback do you receive from your father about your eating patterns to change your body size and shape? | 0 | 1 | 2 | 3 | 4 |
| What type of feedback do you receive from your father about your level of exercise to change your body size and shape? | 0 | 1 | 2 | 3 | 4 |

Please circle the answer that best fits how often certain things happen with your *father*. If you do not have contact with your father, please skip these questions.

| How often.... | Never | Rarely | Sometimes | Often | Always |
|--|-------|--------|-----------|-------|--------|
| Does your father encourage you to lose weight? | 0 | 1 | 2 | 3 | 4 |
| Does your father encourage you to eat less? | 0 | 1 | 2 | 3 | 4 |

| How often.... | Never | Rarely | Sometimes | Often | Always |
|---|-------|--------|-----------|-------|--------|
| Does your father tease you about gaining weight? | 0 | 1 | 2 | 3 | 4 |
| Does your father tease you about eating too much? | 0 | 1 | 2 | 3 | 4 |
| Does your father diet to lose weight? | 0 | 1 | 2 | 3 | 4 |