

THE INFLUENCE OF APPEARANCE-RELATED TEASING BY PARENTS,
SIBLINGS, AND PEERS ON ADOLESCENTS' BODY IMAGE WITH APPEARANCE-
RELATED SOCIAL COMPARISON AS A MEDIATOR

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The Influence of Appearance-Related Teasing by Parents, Siblings, and Peers on Adolescents'

Body Image with Appearance-Related Social Comparison as a Mediator

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ABSTRACT

Schaefer, Mallary Kay, M.S., Department of Human Development and Family Science, College of Human Development and Education, North Dakota State University, November 2011. The Influence of Appearance-Related Teasing by Parents, Siblings, and Peers on Adolescents' Body Image with Appearance-Related Social Comparison as a Mediator. Major Professor: Dr. Elizabeth Blodgett Salafia

Body image refers to how individuals experience and perceive their bodies and can be affected by many factors, including peers and family members. Adolescence is a time when body image concerns are emphasized due to the bodily changes of puberty as well as increased internalization of cultural ideals and pressure to adhere to those ideals.

Appearance-related teasing is one particular sociocultural factor that is gaining attention in the research field due to the emphasis placed on appearance during adolescence. The

current study examined how appearance-related teasing by peers, parents, and siblings affected young adolescents' body image both directly and indirectly via social comparison.

Further, because body image is a multidimensional construct and can include body

dissatisfaction and drive for muscularity, the present study examined both of these

constructs separately. I collected self-report questionnaires from 73 adolescent girls and 67

boys in middle school. I used Pearson correlations, linear regression, and mediation

analyses to examine these hypotheses. First, I hypothesized that adolescents who were

teased about their appearance by at least one of their parents would also have siblings who

teased them. I found significant correlations between both fathers' and mothers' teasing

and siblings' teasing, suggesting that parents are modeling teasing behaviors to their

children. Second, I hypothesized that appearance-related teasing by fathers, mothers, peers,

and siblings would each be associated with body dissatisfaction for girls and drive for

muscularity for boys. My findings indicated that mothers', fathers', peers', and siblings'

teasing predicted girls' body dissatisfaction and that mothers' and fathers' teasing predicted boys' drive for muscularity. Therefore, appearance-related teasing appears to be detrimental behavior that negatively influences adolescents' body image. Third, I hypothesized that appearance-related social comparison would mediate the relationship between appearance-related teasing from all sources and body dissatisfaction among girls and drive for muscularity among boys. Appearance-related social comparison fully mediated the relationship between fathers' teasing and girls' body dissatisfaction and the relationship between mothers' teasing and boys drive for muscularity. My findings suggest that boys and girls who were teased about their appearance were more likely to engage in social comparison, which negatively impacted their body image. Therapists need to be aware of the role family members' and peers' appearance-related teasing play in the development of adolescents' body image in order to address the occurrence and negative effects of teasing. In addition, researchers will need to conduct future studies further investigating appearance-related teasing by family members and peers and design intervention and prevention programs to address teasing and social comparison among the family and peer contexts.

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INTRODUCTION

Body image is a multidimensional construct that refers to how individuals experience and perceive their bodies and the attitudes they form about their bodies, especially in regards to appearance (Rieves & Cash, 1996). Body image concerns may begin as early as age 6 for both males and females (Spitzer, Henderson, & Zivian, 1999; Thelen, Lawrence, & Powell, 1992), with an increase occurring during the adolescent years (Archibald, Graber, & Brooks-Gunn, 2006). A common aspect of body image is body dissatisfaction, which is a negative attitude about the body. Among adolescents, 24% to 60% of girls and 12% to 30% of boys have reported being dissatisfied with their bodies (Presnell, Bearman, & Stice, 2004; Ricciardelli, & McCabe, 2001; Stice & Whitenton, 2002). However, body dissatisfaction is only one dimension of body image, and attention should be given to differences between males and females as cultural expectations differ, with males expected to have muscular bodies and females expected to have thin bodies (McCabe & Ricciardelli, 2004; Stanford & McCabe, 2005). Indeed, research has shown that the most common source of body image concern among adolescents is muscularity for boys and thinness for girls (Hargreaves & Tiggeman, 2006; Jones & Crawford, 2005; McCabe & Ricciardelli, 2001b). Body dissatisfaction and drive for muscularity have received attention lately in the professional health field due to the increased prevalence and associations with emotional distress, preoccupation with appearance, cosmetic surgery, excessive exercise, steroid use, and eating disorders (McCreay & Sasse, 2000; Paxton, Eisenberg, & Neumark-Sztainer, 2006; Ricciardelli & McCabe, 2003a; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999).

An adolescent's body image is impacted by a number of factors including gender, puberty, evaluation of self, messages from the media, and support and/or pressure from family and peers. One particular factor that may strongly contribute to the development of a negative body image is appearance-related teasing. Thus, the present study will examine the direct effects of appearance-related teasing on adolescents' body image when received from parents, siblings, and peers as well as the indirect effects of such teasing through the mechanism of social comparison.

The following sections will take a closer look at how pubertal changes, cultural ideals for each gender, the media, and support and/or pressure from family and peers influence body image. Once each factor's relationship with body image has been explored, the focus will shift to reviewing the research on the specific effects of appearance-related teasing on body image when perpetrated by siblings, peers or parents as well as the potential role of social comparison.

LITERATURE REVIEW

Pubertal Changes

Adolescence is a time that consists of many emotional, cognitive, and physical changes as a result of puberty. Puberty sets the stage for an increase of concerns about body image, weight, and muscularity due to the body undergoing external physical changes (Ata, Ludden, & Lally, 2007). For example, at this time, girls' bodies develop adipose tissue while boys' bodies develop muscle (Archibald et al., 2006). Middle school-aged girls who mature early may have an exceptionally difficult time with the weight changes of puberty (Archibald et al., 2006). Early maturing girls often gain weight during a time when other girls their age still have childlike appearances, causing early maturing girls to have lower self-esteem, especially in regards to their body image (Archibald et al., 2006). Adolescent boys who reach puberty before their pre-pubertal counterparts are prone to spend more time engaging in exercise to increase muscle mass (O'Dea & Abraham, 1999). Further, McCabe and Ricciardelli (2004) found that late maturing boys are more likely to use food supplements to build muscle mass. Although both late-maturing and early-maturing boys are likely to be concerned with their muscle mass and engage in strategies to increase muscle size, the type of strategy to increase muscle mass might differ (McCabe & Ricciardelli, 2004).

The physical changes, especially pubertal weight gain, experienced by adolescent girls can result in a negative body image because these changes in their bodies start to veer away from the Western culture ideal, thin shape. Unlike adolescent girls, the physical changes that adolescent boys' bodies undergo resemble the Western culture ideal, muscular shape. As a result, boys may experience pubertal changes more favorably than girls due to

moving towards the muscular ideal, thereby reducing the likelihood of boys possessing a negative body image (Hargreaves & Tiggeman, 2006). However, not all boys are satisfied with the physical changes of their bodies due to not gaining an ideal amount of muscle mass. Therefore, the physical changes of puberty can lead to body image concerns among both girls and boys (Jones & Crawford, 2005).

Adolescence, especially during the middle school years, is a crucial time to focus on the development of body image due to the rapid physical changes the body experiences due to puberty. As a result of pubertal changes, girls gain weight moving their bodies further away from the ideal body, and while boys experience positive changes that move their bodies towards the ideal, not all boys are necessarily satisfied with the amount of change or lack of change. How adolescents perceive their own bodies is influenced not only by these physical changes associated with puberty, but also by internalizing the cultural ideal with which they compare themselves.

Internalization of the Thin or Muscular Ideals

As adolescents start to mature emotionally and physically, they begin to identify with their same-gender stereotypes (Bearman, Presnell, Martinez, & Stice, 2006). These same-gender stereotypes stress the importance of physical attractiveness, which is associated with thinness for females and muscularity for males, in Western culture (Bearman et al., 2006). Boys and girls are exposed to these stereotypes from various sources, including the media.

The media is a major source of information and images regarding same-gender stereotypes for adolescents; in fact, scholars have often dubbed the media as a “super peer” (Brown, Halpern, & L’Engle, 2005). During adolescence, usage of the media increases

dramatically. Adolescents engage in media usage on an average of five hours per day with the most common sources of media being television/movies, video games, internet, books, and magazines (Marshall, Gorely, & Biddle, 2006). Thus, the media plays an important role in relaying cultural ideals and the importance of these ideals to adolescents. According to Wertheim and colleagues (1997), the strongest source of pressure for 15- year-old girls to be thin was the presentation of the thin ideal by the media. With increased exposure to the media, adolescent girls begin to compare their bodies to other women, most often thin peers and images of thin women displayed in the media (Schutz, Paxton, & Wertheim, 2002). Unlike girls, adolescent boys tend not to compare themselves regularly to media images; instead, they consider it more important to have an appearance similar to their peers (Hargreaves & Tiggeman, 2006).

Adolescent girls. Body dissatisfaction is more commonly reported among adolescent females than adolescent males, and this is likely the result of not meeting societal expectations about what is attractive (McCabe & Ricciardelli, 2001a; Vincent & McCabe, 2000). The thin ideal is represented by an unrealistically thin body, with nearly no fat, that is obtainable only for a very small proportion of the female population. The thin ideal is far from representative of the average size and shape of the female body, and internalization of the thin ideal has been identified as a key factor in the development of body dissatisfaction (Sands & Wardle, 2003). The internalization of the thin ideal by females usually begins in early adolescence and increases throughout adolescence (Bearman et al., 2006).

The thin ideal is portrayed throughout the media in television shows, movies, and magazines. As stated previously, the influence of the media intensifies during adolescence

due to the increased use of media as a source of information. Girls begin to have a strong interest in fashion magazines, utilizing them for appearance-related advice. Fashion magazines directed towards girls are ten times more likely to have articles and advertisements depicting what is beautiful and promoting ways to achieve cultural ideals than any other type of magazine (Polivy, Herman, Mills, & Wheeler, 2006). Thus, it is not surprising that girls become more likely to internalize the thin ideal at this age.

The increasing internalization of the thin ideal may cause adolescent girls to engage in social comparison, comparing themselves to media images or peers that represent the thin ideal, which can in turn ultimately lead to negative self-evaluations of the body (van den Berg et al., 2007). This negative self-evaluation occurs because girls form an ideal shape, which is similar to media images, and an actual shape of their bodies (Bearman et al., 2006; Jones, Vigfusdottir, & Lee, 2004; Keery, van den Berg, & Thompson, 2004). When a difference between the ideal shape and the actual shape exists, adolescent girls become dissatisfied with their bodies and pursue a thinner body (Jones, 2001; Schutz et al., 2002).

The difference between the ideal shape and the actual shape is magnified during and after puberty because the increases in weight and body size push girls even farther away from the thin ideal (Bearman et al., 2006). As adolescent girls' bodies deviate more and more from the thin ideal, they become more likely to have a negative body image. Negative body image is very common among adolescent females, who generally desire to be thinner even if they are already average weight or underweight (Polivy et al., 2006).

The media not only portrays a thin ideal for females but often suggests that women's bodies are sexual objects used to please others (Harper & Tiggeman, 2008). The

process of viewing women being treated as a sexual object results in females adopting a third-person perspective of their bodies, which is referred to as self-objectification (Fredrickson & Roberts, 1997). Self-objectification causes women to view their own bodies as objects that need to be considered attractive and sexy by others (Fredrickson & Roberts, 1997). Because the desire to have a sexy, thin body is continually reinforced by societal messages and expectations, when women fall short of these expectations, the result tends to be dissatisfaction with their bodies (Harper & Tiggeman, 2008).

Adolescent boys. While body dissatisfaction is more common among females and has received the majority of attention in research, males also experience body image concerns but in a slightly different way (McCabe, Ricciardelli, & Finemore, 2002). Males are divided between those who want to lose weight (12.5% to 26%) and those who want to gain weight (21.2% to 47%) (McCabe & Ricciardelli, 2001b; McCreary & Sasse, 2002; Ricciardelli & McCabe, 2003b). Adolescent boys wanting to gain weight are commonly concerned about increasing muscle mass. A study conducted by Smolak and colleagues (2005) found that over 50% of 6th to 8th grade boys exercised or lifted weights to increase muscle mass. Overall, boys are more satisfied with their bodies than girls, but concerns often arise regarding the size of their bodies and the amount of muscle mass (Hargreaves & Tiggeman, 2006; McCabe & Ricciardelli, 2001b).

While the thin ideal exists for females and could apply to some males, males are more likely to experience a drive for muscularity. The desire for a muscular body forms between the ages of six and seven years and peaks between early adolescence and adulthood (Spitzer et al., 1999). The desire to create a muscular body has developed as a central issue associated with male body image due to the gender expectations of being

strong, physically fit, and athletically successful (McCreary & Sasse, 2000; Ricciardelli & McCabe, 2004). The desire to be muscular and physically fit may not always lead to negative results because of the health benefits associated with being in shape and active. However, such interest can become dangerous if boys develop muscle dysmorphia, the preoccupation of muscularity, or if they engage in dangerous practices, such as excessive exercise, food supplements, or steroids (Smolak, Murnen, & Thompson, 2005).

Similar to the thin ideal, the media portrays a muscular ideal for males. Males are expected to have muscular, v-shape bodies that are achieved by exercising and/or using supplements (Ata et al., 2007). Comparable to the thin ideal for girls, internalization of the muscular ideal is related to body dissatisfaction and the drive for muscularity (Jones, 2004). The drive for muscularity is greatest during adolescence as a result of identifying with the male stereotype and the pubertal changes the body undergoes (Bearman et al., 2006). Although males' bodies undergo the change of gaining muscle mass during adolescence, some males may not gain as much muscle mass as others (Archibald et al., 2006). Adolescent boys who are underweight and do not gain a lot of muscle mass are likely to be concerned about their muscularity. This concern can lead to adolescents engaging in healthy (e.g., exercise) and/or unhealthy (e.g., steroid use) weight gain and muscle tone strategies due to the desire to meet cultural ideals (Falkner et al., 2001; McCabe & Ricciardelli, 2001a; Ricciardelli, & McCabe, 2003a).

Research has shown mixed results in regard to the media's impact on boys' drive for muscularity. For instance, Smolak and Stein (2006) found that adolescents who used the media as a source of information about appearance had an increased drive for muscularity. Boys who perceive the media as transmitting strong messages to conform to the ideal

placed greater importance on body image, which is associated with muscle building strategies (Riccardelli & McCabe, 2003a). In contrast to this finding, other research has shown that body comparison to media images among adolescent boys is not associated with body dissatisfaction (Hargreaves & Tiggeman, 2006; Jones, 2004; Keery et al., 2004; McCabe & Ricciardelli, 2001a; van den Berg et al., 2007). An explanation for the differences between these findings might be that males are reluctant to admit that the media provides them with information about achieving the muscular ideal or to admit that they are dissatisfied with their bodies, since body dissatisfaction is mainly seen as a “woman’s problem” (Bardone-Cone, Cass, & Ford, 2008). The difference between the previous findings can also be explained by the effect that social comparison has on the relationship between media influences and the drive for muscularity.

The tripartite model developed by Thomspson and colleagues (1999) proposes that comparing one's appearance to others' may mediate the relationship between the media's portrayal of ideals and individual body dissatisfaction. Social comparison accounts for the different effects that the media has on adolescent boys' desire to be muscular because not all boys exposed to the media internalize and assign importance to the muscular ideal. For example, Smolak and colleagues (2005) found that social comparison partially mediated the relationship between media influences and the use of muscle building practices among middle-school boys. Adolescent boys use social comparison slightly differently than girls in that boys tend to compare themselves to appearances of a different population. Instead of comparing themselves to media images, boys are more likely to use the media as a source of information and for techniques to build muscle mass (Hargreaves & Tiggeman, 2006). In

addition, boys are more likely to compare themselves to other sources like sport stars and peers rather than images of models (van den Berg et al., 2007).

Other factors outside of the media can reinforce and intensify the importance of thinness and muscularity among girls and boys, and these relationships can also be mediated by social comparison (Thompson et al., 1999). Other sociocultural factors that reinforce and convey the importance of the cultural ideals include peers and family members. The following section will focus on the perceived social pressure from peers and family members to conform to the ideals.

Perceived Social Pressure

The pressure to conform to the thin ideal and muscular ideal comes not only from the media but is also conveyed by parents, siblings, and peers (Presnell et al., 2004). Parents, siblings, and peers are exposed to the same pressures as adolescents to conform to societal ideals regarding attractiveness. In particular, all women receive the message from society that thinness is deemed more beautiful than other body types (Gilbert & Thompson, 1996). Therefore, women understand the importance of being thin, the perceived positive qualities associated with it, such as happiness and success, and the stereotypical consequences associated with not meeting the thin ideal, such as laziness and ugliness (Gilbert & Thompson, 1996). While society has and continues to emphasize the importance of meeting the thin ideal for women, society has also recently began to apply that same emphasis and pressure to men and the muscular ideal (Smolak et al., 2005). Thus, both men and women, especially those who have experienced many years being exposed to these pressures, such as parents, not only experience perceived social pressure to meet societal ideals but also exert these pressures onto others as a result of understanding and

experiencing the negative consequences associated with not conforming to the ideals (Gilbert & Thompson, 1996).

Not all adolescents exposed to media messages develop a negative body image; instead, it is the reinforcement of these messages by peers and family members that likely leads to the formation of a negative body image (Keery et al., 2004; Vincent & McCabe, 2000). Perceived pressure to be thin from adolescents' social environment has been shown to predict the development of and increases in body dissatisfaction among girls (Field et al., 2001; Stice & Bearman, 2001; Stice & Whitenton, 2002). For example, girls who reported experiencing high levels of pressure to be thin were four times more likely to develop body dissatisfaction than girls who reported lower or no levels of pressure (Stice & Whitenton, 2002). In regards to adolescent boys, perceived pressure from sociocultural factors to build muscles predicted the development of and importance of muscularity concerns (Ricciardelli & McCabe, 2001; Ricciardelli, & McCabe, 2003a; Smolak et al., 2005). These findings indicate the importance of thoroughly understanding the social pressure adolescents experience to resemble cultural ideals.

Researchers have not come to an agreement about whether peer pressure or parental pressure to be thin is more influential on body image, and only a limited amount of research has focused on siblings' influence. Some studies have found that perceived pressure from peers to be thin was more related to increases in body dissatisfaction among adolescents over time than perceived pressure from family members or the media (e.g. Blodgett Salafia & Gondoli, 2011; Presnell et al., 2004). On the other hand, other research indicates that parental pressure to be thin was more strongly correlated with body dissatisfaction among adolescents than peer pressure (e.g. Field et al., 2001; Ricciardelli &

McCabe, 2001). The differences in findings might be due to the age variation of participants between studies. Early adolescents may still perceive parents to be influential and important, whereas late adolescents tend to be more concerned about peers' opinions and meeting those expectations. Regardless of which source of pressure is more influential in the development of negative body image, it is important to fully explore and understand the effect of parent, peer, and sibling sources of pressure.

Parents. Parents can influence adolescents' body images through perceived pressure to be thin or muscular, which can include direct and indirect methods. Examples of direct methods include feedback or comments about adolescents' appearance and encouragement to lose weight or build muscle; indirect methods may include parental modeling of weight-loss or muscle-building behaviors. Adolescents who report experiencing these pressures to be thin or muscular are more likely to perceive their actual bodies as being very different than their ideal bodies, therefore resulting in a negative body image (Ata et al., 2007). However, all parental pressure to be thin or muscular may not have negative effects on adolescents' body image. In particular, positive feedback about appearance, encouragement to lose weight or build muscles, and modeling of appropriate dieting behaviors can have a positive effect on adolescents' body image (Herbozo & Thompson, 2006). This difference is often dependent on the type of feedback and parents' encouragement and modeling of healthy eating patterns and physical activities (Savage, DiNallo, & Downs, 2009). However, any feedback, whether negative or positive, directed towards adolescents' bodies draws attention to appearance, thereby reinforcing the importance of societal ideals (Herbozo & Thompson, 2006).

Parental encouragement and modeling of healthy eating patterns and physical activities may be beneficial for adolescents who are overweight or obese (Herbozo & Thompson, 2006). That being said, parental encouragement to lose weight or build muscle and modeling of dieting is not exclusively being transmitted to adolescents who are overweight. The majority of adolescents who engage in dieting are average weight, therefore discounting the idea that dieting can be healthy and beneficial in all cases (Patton et al., 1997). Because of this, it is important to investigate the influence of parental pressure to lose weight or build muscle on all adolescents' body image especially when parental encouragement and dieting are not portraying healthy behaviors.

Comments and feedback. Adolescent girls and boys differ in their perception of parental messages regarding weight and shape (Ata et al., 2007; Presnell et al., 2004; Rodgers, Faure, & Chabrol, 2009). Girls reported receiving more overall appearance comments from their mothers and more negative comments from their fathers while boys reported receiving more comments from their fathers in general (Field et al., 2008; Rodgers et al., 2009). Fathers' criticism about adolescents' size and shape of body is associated with dieting behaviors and negative body image among both boys and girls (McCabe & Ricciardelli, 2001a; Rodgers et al., 2009). When adolescent boys receive negative comments from their mothers, they are more likely to desire a thinner body (Rodgers et al., 2009). Appearance-related negative feedback from both parents is more strongly related with girls' body dissatisfaction than boys', but mothers contributed more to girls' body dissatisfaction and fathers contributed more to boys' dissatisfaction (McCabe & Ricciardelli, 2001a; McCabe, & Ricciardelli, 2003; Rodgers et al., 2009). Parents generally place greater importance on daughters' appearances than sons', with mothers focusing on

the shape and weight of their daughters' bodies (Rodgers et al., 2009). Overall, gender differences exist in both parents and adolescents regarding the effect of comments and feedback about appearance; however, regardless of gender, both parents influence adolescent girls' and boys' body image.

While parental feedback about appearance tends to focus on weight and thinness for girls, parental feedback for boys focuses more on the shape and muscle mass of their bodies. In addition, mothers' and fathers' feedback about their sons' appearance has different influences on the type of body boys strive for. Fathers have more influence than mothers on boys' concerns and desires to increase muscle mass (McCabe & Ricciardelli, 2003). On the other hand, mothers who make negative comments about the shape of their sons' bodies increase the likelihood of drive for thinness and body dissatisfaction among boys (Rodgers et al., 2009; Stanford & McCabe, 2005; Wertheim, Martin, Prior, Sanson, & Smart, 2002). While both parents' comments and feedback influence adolescent boys' body image, fathers appear to encourage the development of a muscular body more often than mothers, in turn reinforcing adolescent boys' drive for muscularity (Ricciardelli & McCabe, 2003b; Smolak et al., 2005).

Parental feedback and comments about adolescents' weight, shape, and muscular build are not the only way parents can influence body image among adolescents. Often, when parents provide direct appearance-related feedback to their adolescents, they are also likely to encourage their adolescents to lose weight or engage in muscle-building activities.

Encouragement to lose weight/build muscle. Parental pressure to lose weight has been found to be a significant predictor of negative body image among adolescents, especially girls (Ata et al., 2007; McCabe & Ricciardelli, 2003). A study conducted by

Neumark-Sztainer and colleagues (2010) found that 50% of 9th through 12th grade girls had been encouraged to diet by their mothers, and 40% had been encouraged to diet by their fathers. Mothers' encouragement of adolescents to diet has been more thoroughly explored and documented than fathers' encouragement. However, in one study that involved fathers, both encouragement to lose weight by fathers and engaging in dieting discussion with fathers were associated with body dissatisfaction among 6th grade girls (Blodgett Salafia & Gondoli, 2011). Fathers' encouragement to diet has also been associated with dieting behaviors among their adolescent daughters and exercise behaviors among their adolescent sons (Dixon, Adair, & O'Connor, 1996; Ricciardelli & McCabe, 2001; Ricciardelli, McCabe, & Banfield, 2000). Engagement in exercise behaviors among boys due to fathers' pressure to lose weight results in body dissatisfaction due to boys perceiving that their bodies do not meet their fathers' expectations and ideals (Ricciardelli & McCabe, 2001).

Mothers' dieting encouragement has effects on both boys and girls. For example, mothers' encouragement to diet has been significantly associated with boys' desire to be thin, concern about weight gain, changes in eating habits, and the importance of weight and shape (Fulkerson et al., 2002; Ricciardelli et al., 2000). Girls who reported being encouraged by their mothers to diet were more likely to worry about controlling their weight and be dissatisfied with their bodies than girls who were not encouraged (Blodgett Salafia & Gondoli, 2011; Fulkerson et al., 2002) In a study conducted by McCabe and Ricciardelli (2001a), mothers reported encouraging their daughters to lose weight in order to attain bodies more similar to the thin ideal. In fact, in another study, mothers were found to be the most influential sociocultural agent on body dissatisfaction among both boys and girls due to being the primary source of messages regarding adolescents' appearance and

weight loss strategies (Ricciardelli & McCabe, 2001). Being encouraged to diet by their mothers reinforces the cultural value of thinness, resulting in adolescent girls' formation of body dissatisfaction due to not resembling the ideal.

Encouragement to diet occurs more often between mothers and daughters because mothers are more likely to engage in appearance-related conversations with daughters than with sons (Vincent & McCabe, 2000). Mothers and daughters frequently have discussions about their own appearances and ways that they can diet to lose weight. Appearance-related conversations between mothers and daughters tend to entail complaining about negative aspects of their bodies that they would like to change (Neumark-Sztainer et al., 2010). Such discussion about appearance, ways to diet, and complaints about bodies lead to an increase in body dissatisfaction among adolescent girls (Neumark-Sztainer et al., 2010).

Parental encouragement to build muscle similarly predicted strategies to increase muscle mass, particularly among boys (Riccaridelli & McCabe, 2003a). Mothers have less influence on boys' engagement in muscle building, suggesting encouragement to build muscles is mostly implemented by fathers (Riccaridelli & McCabe, 2001). Adolescent boys who perceive messages from their fathers about muscles and using exercise to increase muscle mass experience higher levels of body dissatisfaction than boys who do not report these types of messages from their fathers (Stanford & McCabe, 2005). Messages about muscles from fathers are consistently associated with body image, which suggests that fathers may be transmitting their own ideals and values about muscle mass to their adolescent sons as well as reinforcing the cultural ideal (Stanford & McCabe, 2005).

Modeling. Another way that parents may transfer their own beliefs about weight and appearance to adolescents is through the modeling of dieting behaviors or muscle

building activities. However, it is important to specify the types of dieting behaviors being modeled as “dieting” can have many definitions, both positive and negative. Dieting can be considered engaging in healthy eating patterns, such as eating a balanced diet, and modeling of this diet can have positive effects on adolescents’ body image (Rodgers & Chabrol, 2009). In contrast, the dieting that is of most concern involves restrictive eating patterns, such as only consuming specific types of food, or disordered eating patterns, such as skipping meals (Rodgers & Chabrol, 2009).

Both adolescent girls and boys who observe their mothers’ frequent dieting habits are more likely to be concerned with their weight and appearance (Field et al., 2001; Fulkerson et al., 2002; Keery, Eisenberg, Boutelle, Neumark-Sztainer, & Story, 2006; Vincent, & McCabe, 2000). Mothers’ dieting behaviors are significantly related to girls’ reports of worrying about weight gain and dieting, thereby suggesting evidence of the transmission of beliefs from mother to daughter (Fulkerson et al., 2002). Mothers’ dieting behaviors display the importance that they place on their own appearance, which is then associated with their daughters’ desires to be thinner (Rodgers et al., 2009). While mothers’ dieting behaviors and appearance beliefs are influential, fathers may have a stronger influence on adolescents’ development of the importance of thinness (Field et al., 2001).

Of the research that has been conducted investigating the influence of fathers on adolescents’ body image, findings show that fathers indeed have a significant impact. While mothers’ eating habits are associated only with adolescent girls’ negative body images, fathers’ eating habits are associated with both adolescent girls’ and boys’ negative body images (Canals, Sancho, & Arija, 2009). Not only do fathers’ eating habits influence both boys’ and girls’ body images, but both boys and girls considered their weight to be

important to their fathers (Field et al., 2001). In a study conducted by Dixon and colleagues (1996), fathers' dieting behavior was associated with a variety of dieting behaviors, including crash dieting, purging, and vomiting among their 13 to 14-year-old daughters. In a later study conducted by Dixon and colleagues (2003), findings demonstrated that fathers of adolescent girls reported that they perceived thin girls to be more attractive than larger girls, sending this message to their daughters. The daughters of fathers who placed importance on appearance were significantly more likely to engage in severe dieting behaviors, such as vomiting, to attain a thin body (Dixon, Gill, & Adair, 2003).

Paternal modeling influences may also affect adolescent boys' body image through fathers' own muscularity concerns and engagement in muscle building activities (McCabe & Ricciardelli, 2003). However, Rodgers and colleagues (2009) found that adolescent boys' perceptions of their fathers' concerns and efforts regarding their own shape and weight were not a predictor of body dissatisfaction for boys. Similarly, Vincent and McCabe (2000) did not find an association between paternal modeling and boys' body dissatisfaction. This finding may suggest that boys' comparisons to their fathers' muscle building behaviors and attitudes are more positive, thereby resulting in less body dissatisfaction. Contrary to these findings, Ricciardelli and colleagues (2000) found that fathers do indeed act as role models for their sons, transmitting their beliefs and behaviors about muscle building strategies and emphasizing the importance of body image. The difference between whether fathers' modeling of muscle building activities is positive or negative may be accounted for by the importance the adolescent boy places on body image. When adolescent boys believe body image is important, they are more likely to be concerned about muscularity; therefore, fathers' modeling can lead to boys having a greater

drive for muscularity (Riccardelli et al., 2000). Although both parents are clearly influential on the development of adolescents' body image, it is also necessary to consider peers' influences.

Peers. Adolescence is a time period when individuals desire to be accepted by peers, which may strengthen the influence of peers on body image (Archiabld et al., 2006; Cafri et al., 2005). Adolescents become more peer-oriented with age and rely on the support and approval of their peers. The shift from parental influence to peer influence occurs due to adolescents spending a large portion of their days with their peers during and after school (Shroff & Thompson, 2006). When adolescents spend most of their time with peers, they may start to turn to their peers, rather than their parents, for advice and to discuss weight loss and other related topics about appearance. Clearly, adolescents' friendships can play a large role in shaping adolescents' social contexts and lives through a desire to be accepted, criticism, and appearance-related discussions (Jones et al., 2004).

Social acceptance. Appearance is one of the routes to acceptance and popularity among peers during adolescence (Jones, 2001). In a study conducted by Jones (2004) with 9th and 10th grade individuals, both girls and boys considered height, weight, and facial characteristics important features of attractiveness among girls and height and shape/build among boys. Adolescent girls are likely to believe that being thin and beautiful results in popularity among same-sex and opposite-sex peers (Gerner & Wilson, 2005; McCabe et al., 2002; Stice & Whitenton, 2002). For example, Gerner and Wilson (2005) found that adolescent females considered their relationships with males, compared to females, to be more dependent upon males' perceptions of their bodies. Therefore, adolescent females who perceive lower peer acceptance and social support may engage in a pursuit of the ideal

thin body to gain social acceptance, which results in dieting behaviors and negative perceptions of the body (Gerner & Wilson, 2005; McCabe et al., 2002).

Similar to girls, adolescent boys also believe that having a more muscular body that demonstrates physical strength and athletic success is related to greater peer acceptance and popularity (Cafri et al., 2005; Ricciardelli & McCabe, 2003a). This belief is related to increased attempts to build muscle mass among adolescent boys (McCabe et al., 2002; Ricciardelli & McCabe, 2003a). Although social acceptance contributes to adolescent boys' drive for muscularity, other factors may be more influential due to the tendency of boys having higher perceptions of popularity than girls (McCabe et al., 2002). Therefore, it is important to consider other, more direct ways that peers influence body image.

Criticism/feedback. Direct pressure from peers to be thin could be executed in a variety of ways, including appearance-related criticism. Adolescents are often the target of appearance criticism from peers, which emphasizes the importance of cultural ideals by reinforcing the value of appearance and stressing specific desirable physical characteristics (Jones et al., 2004). Reinforcing cultural ideals by emphasizing certain desirable physical characteristics can in turn lead to the internalization of those ideals and the formation of body dissatisfaction and drive for muscularity (Jones et al., 2004; McCabe & Ricciardelli, 2001a; Stanford & McCabe, 2005).

Gender differences are present in the occurrence of appearance criticism from peers. For instance, male adolescents report more criticism about shape than females, which is possibly a result of boys not experiencing it as early or as commonly as girls; therefore, boys might be more likely to report it or perceive it as extremely negative (Jones et al., 2004; Vincent & McCabe, 2000). While peers appear to provide more criticism to

boys about body shape, peers tend to provide more criticism to girls in regards to losing weight (McCabe & Ricciardelli, 2001a). Such criticism and encouragement to lose weight is strongly associated with body dissatisfaction (Blodgett Salafia & Gondoli, 2011; Jones et al., 2004). It is important to note that female friends' criticisms are reported as the most important and influential factor on body image for both boys and girls (McCabe & Ricciadelli, 2003; Stanford & McCabe, 2005).

Perceived peer criticism by adolescent boys tends to be more associated with pressure to gain weight and build muscles than to lose weight (Riccaridelli & McCabe, 2004). Peer criticism about muscle mass enforces the cultural ideal of having a muscular, lean body, which has been found to increase adolescent boys' engagement in strategies to build muscle mass (McCabe & Ricciardelli, 2001a; Ricciardelli & McCabe, 2003a; Stanford & McCabe, 2005). While the criticism of female peers may be the strongest predictor of body image and body change strategies, male peers have also been found to influence the muscle building behaviors of adolescent boys (Ricciardelli & McCabe, 2001; Stanford & McCabe, 2005). Although peer criticism is an important factor in the development of body dissatisfaction and muscularity concerns among adolescents, peer criticism includes only negative feedback from peers. Appearance-related conversations, on the other hand, can involve the transmission of cultural ideals through more positive or neutral interactions with peers.

Appearance-related conversations. During adolescence, friendship cliques start to form, consisting of members with similar characteristics and concerns who engage in conversations related to appearance. Appearance-related conversations among peers draw attention to appearance-related issues, reinforce the value and importance of cultural ideals,

and promote the desire to meet the cultural ideals (Jones et al., 2004). Encouragement from both male and female peers to lose weight is associated with eating problems, weight loss behaviors, and body dissatisfaction (Stanford & McCabe, 2005; Vincent & McCabe, 2000). When friendship cliques involve appearance-related conversations, individuals within the clique tend to share similar levels of body image concern (Paxton, Schutz, Wertheim, & Muir, 1999). Cliques with higher levels of body image concerns are more likely to talk about weight loss and dieting with friends, compare their bodies to others, be teased about weight and shape from friends, and perceive friends to be preoccupied with dieting and weight concerns (Paxton et al., 1999).

Appearance-related conversations with friends become increasingly common throughout adolescence. For example, Levine and Smolak (1992) found that 41.5% of middle school girls reported talking about weight, shape, and dieting with friends. Appearance-related conversations among adolescent girls often involve girls complaining about being fat, commenting on body parts they disliked, and sharing of desired amounts of weight loss (Wertheim, Paxton, Schutz, & Muir, 1997). Engaging in appearance-related conversations is associated with the internalization of cultural ideals, body dissatisfaction, and a greater concern about weight among adolescent girls and boys (Jones et al., 2004; Jones & Crawford, 2005; Paxton et al., 1999). For instance, among early adolescent girls, discussions with peers about dieting were significantly related to later body dissatisfaction (Blodgett Salafia & Gondoli, 2011; Paxton et al., 1999). Adolescent girls who engage in appearance-related conversations are also likely to compare themselves to the appearance of others, which heightens attention to their own appearance faults or deficits and

contributes to greater body dissatisfaction (Jones, 2004; Paxton et al., 1999; Wertheim et al., 1997).

Appearance-related conversations have a different role in the development of body image concerns for boys, as their conversations tend to focus more around muscle building instead of weight loss (Jones et al., 2004). Adolescent boys who frequently engage in conversations with peers about muscle building are more likely to have muscularity concerns and higher levels of body dissatisfaction (Jones, 2004; Jones & Crawford, 2005). Boys who report a peer context that focuses on and reinforces appearance concerns are more likely to have a greater concern about weight (Jones & Crawford, 2005). Appearance-related conversations direct attention to appearance-related issues and reinforce the cultural ideal and the importance to conform to it, which can lead to drive for muscularity among boys (Jones et al., 2004).

Modeling. Not only do peers' direct comments about adolescents' appearances and weight influence body image, but their own body image concerns and eating habits or muscle building also influence adolescents' concerns and behaviors (Lieberman, Gauvin, Bukowski, & White, 2001; Paxton et al., 2006). For instance, Paxton and colleagues (2006) found that friends' dieting predicted increases in body dissatisfaction among early adolescent girls. Similarly, Ricciardelli and colleagues (2000) found that male peers influenced adolescent boys' muscle building behaviors by modeling muscle building strategies. Adolescent boys whose male friends are interested in muscle building are more prone to engage in muscle building strategies themselves (Smolak et al., 2005).

Perceived pressure to be thin from parents and peers has been well documented throughout the literature, and both sources clearly contribute to adolescents' body

dissatisfaction and drive for muscularity. A possible source of perceived pressure to be thin that has received considerably less attention includes the siblings of adolescent boys and girls. The role of siblings in the development of body dissatisfaction and drive for muscularity may be particularly important due to adolescents viewing siblings, mostly older siblings, as role models.

Siblings. Siblings may have an effect on adolescents' body image, but only a limited amount of research has included siblings. The research that has focused on siblings' influences examined only the effects on adolescent girls. For example, Vincent and McCabe (2000) found that discussion with siblings about weight loss predicted dieting attitudes and behaviors among adolescent girls. Similarly, sisters have been found to have similar levels of body dissatisfaction and internalization of the thin ideal (Tsiantas & King, 2001). In a study by Rieves and Cash (1996), women reported engaging in social comparison with their siblings during adolescence, which was found to be related to body dissatisfaction in adulthood. Social comparison with a more attractive sibling tends to lead to a negative evaluation of the self, and comparison with a less attractive sibling may lead to a positive evaluation of the self (Rieves & Cash, 1996). In regards to appearance-based social comparison among sisters during adolescence, younger sisters experienced more body dissatisfaction than older sisters when older sisters were viewed as being more physically attractive (Tsiantas, & King, 2001). Social comparisons among sisters may result in similar levels of body dissatisfaction due to sisters' communication of dissatisfaction with body parts, which can in turn influence how the other feels about her body. Similar levels of internalization of the thin ideal may be the result of sisters communicating the thin ideal to their younger sisters (Tsiantas, & King, 2001).

Parents', peers', and siblings' influences are all important in the development of body image concerns among adolescents. Clearly, peers and family members can influence body image in different ways; thus, it is important to continue to study their influences on adolescent girls and boys. Regardless of the type of method used to reinforce the importance of cultural ideals, it is essential to be concerned about the content of information that parents, peers, and siblings are communicating and the effects it has on adolescents' body image. While weight-related comments, encouragement to diet/build muscle, modeling of dieting/muscle building, criticism, social acceptance, and appearance-related conversations affect adolescents' body image, perhaps appearance-related teasing is the most influential.

Appearance-Related Teasing

Appearance-related teasing by peers and family members is widespread and common among adolescents (Eisenberg, Neumark-Sztainer, & Story, 2003). The most common characteristics subjected to being teased are facial features and weight (Kostanski & Gullone, 2007). Teasing can be either negative or positive but is typically considered to be negative with the sole purpose of hurting, humiliating, or harassing another (Kruger, Gordon, & Kuban, 2006). Although some individuals engage in teasing to flirt, socialize, and express affection and love, these individuals often interpret the teasing differently than do the individuals whom they tease. A study conducted by Kruger and colleagues (2006) found that individuals who were teased rated the teasing more negatively than the perpetrators, friends and family, of the teasing. In addition, Kruger and colleagues (2006) found that the difference between perceptions about whether the teasing was negative or positive was larger when the teasing targeted appearance.

While teasing may be a benign experience for some adolescents, for many it can have an extremely negative impact although it is commonly misconceived by the perpetrator as harmless and lighthearted (Kostanski & Gullone, 2007; Thompson, Fabian, Moulton, Dunn, & Altabe, 1991a). Even supposed “good-natured” teasing often evolves into ridiculing or exploiting another’s presumed weakness (Thompson et al., 1991a). Teasing can become particularly harmful when it is directed at personal features associated with physical appearance, as this is an important feature in Western culture (Thompson et al., 1991a). Any reinforcement and attention given to appearance, especially in the form of teasing, draws attention to an individual’s appearance, the importance of it, and encourages social comparison to others based on physical attributes (Jones, 2004).

A study conducted by Neumark-Sztainer and colleagues (2002) found that approximately 25% of adolescent girls and 22% of adolescent boys in the last year had been teased about their weight at least a few times. Of those who reported being teased, weight-teasing by peers was reported by 30% of adolescent girls and 24% of adolescent boys, and weight teasing by family members was reported by 28% of adolescent girls and 16% of adolescent boys (Neumark-Sztainer et al., 2002) Further, a study conducted with middle school aged children found that 19% of girls had experienced appearance-related teasing by their fathers and 13% experienced it from their mothers (Keery, Boutelle, Berg, & Thompson, 2005). Of these same girls, 29% also reported being teased about their appearance by their siblings (Keery et al., 2005). Based on these findings, appearance-related teasing is obviously a prevalent problem among youth. Although appearance-related teasing can be performed by parents, siblings, or peers, most of the research has focused on appearance-related teasing by parents and peers.

Adolescent girls who experience appearance-related teasing from family members are more likely to participate in unhealthy weight control behavior (e.g., severe dieting and exercising and eating disturbances), have a higher level of body dissatisfaction, and are more invested in achieving thinness (Jones & Newman, 2005; Keery et al., 2005; Neumark-Sztainer et al., 2010). Among adolescent boys, weight-related teasing by parents tends to be directed at physical build, which is associated with body dissatisfaction (Jones & Newman, 2005). Further, Smolak and colleagues (1999) found that teasing perpetrated by mothers had a greater influence on girls' attitudes and behaviors than teasing by fathers. Maternal teasing was associated with weight loss attempts, concerns with being overweight, and body image (Smolak, Levine, & Schermer, 1999). Appearance-related teasing by parents increases adolescents' body dissatisfaction by supporting societal values of appearance and emphasizing cultural ideals (Jones et al., 2004).

Appearance-related teasing by parents can have direct effects and indirect effects on adolescents' body image. Direct effects of appearance-related teasing include perceiving the self to be overweight when it is not the case and believing that appearance is related to social acceptance (Fabian & Thompson, 1989). Adolescents who are teased about their appearance tend to overestimate the size of their bodies, perceiving themselves to be bigger than they really are (Fabian & Thompson, 1989). Parental teasing can have indirect effects through siblings, as the modeling of parents' teasing behaviors, particularly fathers', is associated with higher levels of sibling teasing (Keery et al., 2005). In one study, Neumark-Sztainer and colleagues (2002) found that adolescents who reported being teased by family members reported the highest level of teasing came from siblings followed by fathers then mothers.

The siblings most commonly reported by adolescents that engaged in appearance-related teasing tended to be older brothers (Keery et al., 2005). Teasing by an older brother is correlated with the highest levels of negative body image (Keery et al., 2005). In a study conducted by Rieves and Cash (1996) among college women, 79% of women who had brothers reported being teased by their brothers during adolescence. Brothers were identified as the worst teasers by 33% of the women who had one or more brothers, whereas sisters were identified as the worst teasers by only 8% (Rieves & Cash, 1996). To this date, however, only a few studies have examined the effects of appearance-related teasing by siblings; therefore, it is important to gain a better understanding of sibling effects on body dissatisfaction among adolescents.

Appearance-related teasing by peers appears to have a strong influence on the development of eating and weight concerns among adolescents (Phares, Steinberg, & Thompson, 2004). In early adolescence, appearance-related teasing by peers is associated with an increase in body dissatisfaction among both girls and boys (Paxton et al., 2006). Teasing by peers during adolescence asserts the norms of attractiveness, disapproval, criticism, and rejection in relation to appearance (Paxton et al., 2006). In a study conducted by Neumark-Sztainer and colleagues (2002), results showed that both adolescent girls and boys reported being teased about their appearance more by peers than family members. However, girls experience appearance-related teasing more frequently and are more negatively affected by it than boys (Neumark-Sztainer et al., 2002). Such appearance-related teasing by peers is a predictor of body dissatisfaction among adolescents as it is associated with higher levels of internalization of the thin ideal and social comparison (Paxton et al., 2006; Shroff & Thompson, 2006).

The relationship between appearance-related teasing and body dissatisfaction has been found to be the strongest among girls, with boys experiencing less body dissatisfaction or a weaker association between teasing and body dissatisfaction (Eisenberg et al., 2003; Jones, 2004; Neumark-Sztainer et al., 2002). The relationship between drive for muscularity and appearance-related teasing among adolescent boys has recently become a topic of research studies, yet the relationship has not been well-established. Of the research that has focused on appearance-related teasing and drive for muscularity, most of the studies have combined teasing with other sociocultural factors (McCabe & Ricciardelli, 2003; Smolak et al., 2005; Stanford & McCabe, 2005) or found either no relationship or a weak relationship (Smolak & Stein, 2006). Additionally, no known study to date has examined the influence of teasing by siblings on drive for muscularity among adolescent boys.

Research has shown that appearance-related teasing by family members and peers is significantly correlated with body dissatisfaction, unhealthy weight control behaviors, and drive for thinness among adolescents which all are associated with the development of eating disorders (Eisenberg et al., 2003; Wertheim, Koerner, & Paxton, 2001). In a study conducted by Neumark-Sztainer and colleagues (2010), adolescent girls who had been teased about their appearance were ten times more likely to binge eat than adolescent girls who had not been teased. Appearance-related teasing can not only lead to eating disorders but also contributes to the development of low self esteem, depressive symptoms, and even suicidal ideation and attempts (Ata et al., 2007; Eisenberg et al., 2003). Additionally, not only does teasing influence adolescents during the time it occurs, but the effects of appearance-related teasing can last into adulthood and beyond (Ata et al., 2007; Fabian &

Thompson, 1989). For instance, a study conducted with college women found that women who had been teased about their weight and appearance during childhood and adolescence were unhappier with their body image in adulthood (Rieves & Cash, 1996). Because of the serious impact and potential long-lasting effects of teasing on adolescents, it is essential to thoroughly examine the perpetrators of teasing and both the direct and indirect effects these individuals have on a particularly vulnerable age group.

The Role of Social Comparison

Social comparison is the process of comparing oneself to others in order to make a judgment about self characteristics (Smolak et al., 2005). Social comparison is commonly used to gather information about highly valued attributes, societal expectations, and norms, especially in regards to appearance (Jones, 2001). Although social comparison can be either negative or positive, research indicates that the results tend to be negative, suggesting that adolescents compare themselves to more attractive targets rather than less or equally attractive targets (Smolak et al., 2005). During adolescence, the features rated by adolescents that constitute attractiveness are height, weight, and facial characteristics for girls and height and shape/build for boys (Jones, 2001). Girls engage in appearance-related social comparison more frequently than boys, likely as a result of girls tending to be uncertain of their appearance and placing more importance on their appearance (Halliwell & Harvey, 2006; Jones, 2001). Boys and girls both compare themselves to images in the media, especially sports stars for muscular build and models and actresses for weight, respectively (Jones, 2001; Ricciardelli et al., 2000). Despite this, peers tend to be frequent targets of social comparison for both boys and girls in regards to general appearance (Hargreaves & Tiggeman, 2006; van den Berg et al., 2007).

Given that appearance is one of the perceived routes to acceptance and popularity during adolescence, social comparison becomes an important method for learning about appearance-related expectations among peers and for evaluating oneself based on those standards (Jones, 2001). Therefore, adolescents who receive any type of feedback about their appearance, in particular teasing, may be more likely to engage in appearance-related social comparison in order to determine the characteristics of their bodies that are not meeting expectations and what they need to change in order to meet expectations (Shroff & Thompson, 2006). In addition, adolescents who are uncertain about their appearance, consider appearance to be important, and have low self-esteem are more likely to engage in social comparison, thereby amplifying the “negative” features of their appearance or features that are not meeting expectations (Jones, 2004). However, body dissatisfaction itself does not increase the frequency of social comparison. Rather, it is the social context, such as teasing, that encourages appearance-related social comparison leading to body dissatisfaction (Jones, 2004).

The majority of research on social comparison and appearance-related teasing has involved adult women, however (e.g., Thompson, Heinberg, & Tantleff, 1991b). For instance, Stormer and Thompson (1996) found that appearance-related teasing leads to social comparison among undergraduate females. Of the research that has investigated the relationship between appearance-related teasing and social comparison among adolescent girls, social comparison was found to be associated with appearance-related teasing by peers and parents, but the teasing measure was combined with other scales measuring different variables such as criticism, modeling, preoccupation with appearance, and appearance conversations (Keery et al., 2004; Shroff & Thompson, 2006).

Engaging in appearance-related social comparison is consistently linked with body dissatisfaction and muscularity concerns among adolescent girls and boys, respectively (Jones, 2004; Schutz et al., 2002; Smolak & Stein, 2006). Adolescents who use appearance-related social comparison to evaluate their bodies and determine whether their bodies meet expectations are more likely to focus on the features of their bodies that do not meet expectations (Myers & Crowther, 2009). Focusing on these features, whether related to weight or muscle mass, often leads to negative evaluations of the body resulting in adolescents becoming dissatisfied with their bodies (Myers & Crowther, 2009).

Social comparison is not only directly associated with teasing and body image, but may also serve as an indirect link between the two. Thus, it is possible that social comparison may actually explain why teasing and body image are connected. For example, the relationship between combined pressure from parents, peers, and the media to be thin and body dissatisfaction among middle-school girls was mediated by appearance-related social comparison (Keery et al., 2004; Shroff & Thompson, 2006). Specifically regarding teasing behaviors, social comparison partially mediated, or explained, the link between media influence, peer influence, and parental appearance-related teasing and muscle-building among adolescent boys, suggesting that boys who are teased about their appearance are more likely to engage in social comparison which increases their engagement in muscle-building behaviors (Smolak et al., 2005). However, Jones (2004) found that social comparison did not play a mediating role between sociocultural influences and muscle building. Additionally, Thompson and colleagues (1999) found that social comparison mediated the relationship between appearance-related teasing and body image among adult women. Despite these findings, it is important to investigate the connections

among appearance-related teasing, appearance-related social comparison, and body image among middle-school adolescents, especially girls, because younger girls are more negatively affected by social comparisons than undergraduate women (Myers & Crowther, 2009). Adolescent girls tend to be more affected by social comparison because adolescence is a time period when social comparisons are a key part of the social process and pubertal changes lead to unfavorable comparisons with media images and peers (Myers & Crowther, 2009).

In summary, only a few studies have examined the individual and mediating relationships between appearance-related teasing, social comparison, and body image among adolescents. In fact, many of these studies have looked separately at either boys or girls, but not both. Further, few, if any, studies have examined the effects of both mothers and fathers separately or even included siblings. Studies have often combined the influence of mothers and fathers into an overall parental composite, or included parents, peers, and the media as one overarching sociocultural influence. Therefore, it is essential to investigate the influences of fathers, mothers, peers, and siblings individually on both social comparison and body image.

Present Study

Appearance-related teasing by parents may be linked to the occurrence of appearance-related teasing by siblings. Parents who engage in teasing their adolescent children may model these behaviors to the adolescents' siblings who then are also likely to engage in the teasing. Little research to date has focused on the effects of appearance-related teasing by siblings on adolescents' body image and how it may be related to parental teasing. Thus, Hypothesis 1 states that adolescent girls and boys who have parents

who engage in appearance-related teasing will also have siblings who engage in teasing behaviors.

Past research has suggested that both parents and peers can influence adolescents' body image. However, no known studies have focused on both parents and peers while also investigating the effects of siblings. Furthermore, as past research has tended to focus on the combined influence of mothers and fathers and the influence of peers, the present study focused on fathers, mothers, peers, and siblings as separate independent variables. In addition, although appearance-related teasing has been associated with body dissatisfaction among adolescents, body dissatisfaction is only one component of body image. The present study focused on both body dissatisfaction and drive for muscularity as components of body image, which significantly contributes to the literature. Hypothesis 2 states that teasing by mothers, fathers, peers, and siblings will individually be associated with higher levels of body dissatisfaction among girls and a greater drive for muscularity among boys.

Appearance-related social comparison has been identified as a potential mediating factor between sociocultural influences, such as appearance-related teasing by family members and peers, and body image. However, social comparison has only received a minimal amount support for its mediating role between appearance-related teasing and body image, specifically among young adolescents. Hypothesis 3 states that appearance-related social comparison will mediate the relationship between appearance-related teasing from all sources and body dissatisfaction among girls and drive for muscularity among boys. Appearance-related teasing will lead to increased social comparison to determine and evaluate the bodily aspects that are not meeting cultural ideals, which will then lead to

higher body image concerns as a result of placing more emphasis on negative bodily characteristics.

METHOD

Participants

Participants in the present study were 140 7th ($n = 32$), 8th ($n = 64$), and 9th ($n = 44$) grade students recruited from a middle school in a Midwestern city. City statistics indicated that the majority of the residents identified as White and 11.7% of the population had a socioeconomic status below the poverty line. In addition, the percentage of students within the city school district that qualified for free or reduced meals was 23.6%, which reflected socioeconomic status of the students' families.

The present sample consisted of 67 adolescent males and 73 adolescent females. Participants' ages ranged from 12 to 15 years ($M = 13.69$, $SD = .87$). Consistent with the ethnic composition of the city, adolescent boys and girls mostly identified themselves as White (92.9%); fewer identified as Black (0.7%), Native American (3.6%), or other (2.9%). The average weight was 137.59 pounds (*range*: 238, $SD = 44.89$) for boys and 121.27 pounds (*range*: 200, $SD = 32.12$) for girls. The average height for boys was 65.77 inches (*range*: 18, $SD = 3.92$) and 63.38 inches (*range*: 13, $SD = 2.60$) for girls. Average body mass index (BMI), was calculated using this information to be 22.09 ($SD = 5.59$) for boys and 21.22 ($SD = 5.09$) for girls. Based on classifications of the BMI index, a BMI score below 18.5 is classified as underweight, normal weight consists of a BMI score between 18.5 and 24.9, and a BMI score above 25 is classified as overweight. Based on these indexes, both boys' and girls' average BMI scores were classified as normal weight.

Procedure

Flyers and parental consent forms were sent home with interested students by the school counselor. Those who returned their parental forms filled out assent forms and the

surveys in an auditorium after school. In compensation for their participation in the study, participants were given a \$25 giftcard to the local mall.

Measures

Body image. Body image was measured with two scales to assess both the drive for muscularity and body dissatisfaction. The Drive for Muscularity Scale is a fifteen-item questionnaire that measures attitudes and behaviors that reflect the degree of the respondent's preoccupation with increasing his/her muscularity (McCreary & Sasse, 2000). Each item is scored on a 6-point scale ranging from 0 (never) to 5 (always). A sample item is "I wish that I were more muscular". In the present study, the drive for muscularity scale was used not only to measure attitudes and behaviors towards muscularity, but to also measure how satisfied individuals were with their muscle mass and appearance. The scores of the fifteen items were summed, with higher scores indicating a greater concern to become more muscular. Internal consistency (Cronbach's alpha) was previously determined for the scale as .84 for adolescent boys (McCreary & Sasse, 2000). In the present study, internal consistency (Cronbach's alpha) was .97 for boys. See Appendix A for the complete scale. The entire scale was utilized due to the past and present high estimates of internal consistency and because of my desire to measure overall muscularity concerns consisting of both behavioral and attitudinal components.

The Body Dissatisfaction Scale is a 9-item questionnaire concerning individuals' satisfaction with particular body parts (e.g., weight, waist, legs) (Stice, Schupak-Neuberg, Shaw, & Stein, 1994). Each item is scored on a 5-point scale ranging from 0 (extremely dissatisfied) to 4 (extremely satisfied). A sample item is "How satisfied are you with your waist?" Answers were summed and coded such that higher scores represented greater body

dissatisfaction. Internal consistency (Cronbach's alpha) was previously determined for the scale as .91 among a sample of undergraduate females (Stice et al., 1994). In the present study, internal consistency (Cronbach's alpha) was .85 for girls. See Appendix B for the complete scale.

Appearance-related teasing. Appearance-related teasing was measured using items from the Perceived Sociocultural Pressure Scale (Stice, Ziemba, Margolis, & Flick, 1996). This scale includes items assessing teasing by mothers, fathers, and peers; an additional item was added to the scale in order to measure teasing by siblings. A single item was used for each source to measure teasing. Participants reported the perceived amount of appearance-related teasing they experienced on a 5-point scale ranging from 0 (none) to 4 (a lot). A sample item is "My mother teases me about my weight or body shape"; corresponding items were used for fathers, peers, and siblings. Higher scores indicated more perceived experience of being teased. See Appendix C for the items used from this scale.

Social comparison. Social comparison was measured using 4 items from the Physical Appearance Comparison Scale, which is a scale measuring the tendency to compare one's own appearance to that of other individuals (Thompson, Heinberg et al., 1991). Each item is scored on a 5-point scale ranging from 0 (never) to 4 (always). A sample item is "At parties or other social events, I compare my physical appearance to the physical appearance of others." Answers were coded and summed such that higher scores indicated more frequent engagement in social comparison. Internal consistency (Cronbach's alpha) was previously determined as .76 among a sample of undergraduate females (Thompson, Fabian et al., 1991). In the present study, internal consistency

(Cronbach's alpha) reliability for the 4 items was estimated at .86 for girls and .85 for boys. See Appendix D for the complete scale.

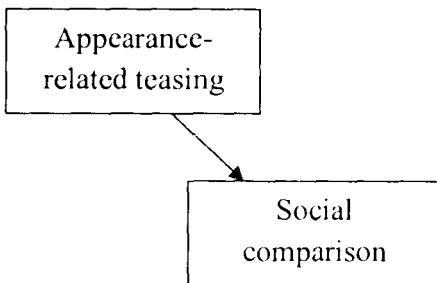
Analysis Plan

Hypotheses for the present study were tested using Pearson's correlations, linear regressions, and mediation analyses involving multiple regressions. Hypothesis 1 was tested using Pearson's correlations to determine whether parental appearance-related teasing was correlated with siblings' engagement in appearance-related teasing. Hypothesis 2 was tested using linear regressions to investigate if teasing by mothers, fathers, peers, and siblings was individually associated with higher levels of body dissatisfaction for girls and a greater drive for muscularity for boys. Hypothesis 3 was tested using mediation analyses, involving linear and multiple regressions, to determine if appearance-related social comparison mediated the relationships between appearance-related teasing from all sources and body dissatisfaction among girls and drive for muscularity among boys. According to Baron and Kenny (1986), mediational analysis involves the examination of the direct pathway between predictor and outcome variables as well as indirect pathways to and from a third, mediator variable. If a significant direct effect was found between teasing and body image, two linear regression analyses were conducted to examine the indirect pathways between teasing and social comparison and social comparison and body image. If the indirect pathways were significant, a multiple regression was conducted to examine the simultaneous effects of teasing and social comparison on body image. See Figure 1. If the indirect pathways remained significant while the direct pathway either became less significant or no longer significant, mediation was evident (Baron & Kenny, 1986). All

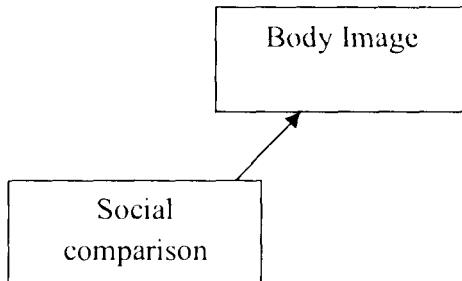
analyses were conducted with an alpha level of .05 to determine if relationships were significant. All analyses were conducted using the program SPSS 19.0.



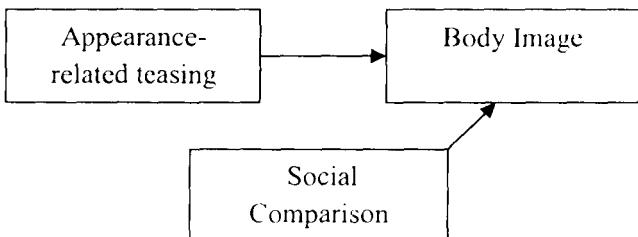
a) Model 1: Direct Effects Model of Teasing on Body Image



b) Model 2: Indirect Effects Model of Teasing on Social Comparison



c) Model 3: Indirect Effects Model of Social Comparison on Body Image



d) Model 4: Mediation Model of Teasing and Social Comparison on Body Image

Figure 1. Models of direct and indirect pathways of the relations among appearance-related teasing, appearance-related social comparison, and body image.

RESULTS

The sample size for each analysis varied due to missing data. A number of participants did not provide data for certain variables either as a result of not having contact with a particular family member or overlooking questions. Participants with missing data were not dropped from the study as they provided information for other variables. Descriptive statistics for the study variables are provided in Table 1. Overall, low levels of teasing were reported by adolescents, suggesting that teasing may not be occurring frequently. However, mean levels of teasing for peers were higher, suggesting that adolescents experience appearance-related teasing most often from peers. Surprisingly, siblings' teasing was reported more frequently than teasing from mothers or fathers. Girls reported higher levels of body dissatisfaction than drive for muscularity, and boys reported higher levels of drive for muscularity than body dissatisfaction, thereby supporting the current measurements of body image for boys and girls. The following section will first present correlations among mothers', fathers', and siblings' teasing. Next, data will be provided from the linear regressions between appearance-related teasing and body image. Lastly, data from linear and multiple regressions testing mediation will be presented.

Correlations of Appearance-Related Teasing

First, I hypothesized that adolescent girls and boys who reported being teased about their appearance by their parents would also report being teased about their appearance by their siblings. Pearson correlations were used to determine if appearance-related teasing by mothers and fathers was associated with appearance-related teasing by siblings. Among adolescent girls', both mothers' and fathers' appearance-related teasing were significantly correlated with siblings' appearance-related teasing, $r = .65, p < .05$;

Table 1

Descriptive Statistics of Study Variables

Variable	<i>M</i>	<i>SD</i>	<i>Range</i>
<i>Girls</i>			
Mothers' Teasing	.22	.70	4
Fathers' Teasing	.14	.52	3
Peers' Teasing	.74	1.11	4
Siblings' Teasing	.41	1.07	4
Drive for Muscularity	11.11	9.30	42
Body Dissatisfaction	17.58	10.38	36
Social Comparison	5.32	3.61	16
<i>Boys</i>			
Mothers' Teasing	.28	.76	4
Fathers' Teasing	.21	.57	3
Peers' Teasing	.69	1.22	4
Siblings' Teasing	.40	.95	4
Body Dissatisfaction	12.64	8.90	36
Drive for Muscularity	19.95	11.90	64
Social Comparison	3.19	2.86	11

Note. Range scores refer to the range between reported scores.

.05; $r = .30$, $p < .05$, respectively. Among adolescent boys, both mothers' and fathers' appearance-related teasing were significantly correlated with siblings' appearance-related teasing, $r = .34$, $p < .05$; $r = .29$, $p < .05$, respectively. Correlations among mothers',

fathers', and siblings' teasing along with correlations among all study variables are reported in Table 2.

Table 2

Correlations Among Study Variables for Boys and Girls

Variable	1	2	3	4	5	6	7
1. Mothers' Teasing	---	.78*	.31*	.34*	.23	.35*	.33*
2. Fathers' Teasing	.46*	---	.45*	.29*	.23	.54*	.46*
3. Peers' Teasing	.27*	.09	---	.37*	.39*	.23	.25*
4. Siblings' Teasing	.65*	.30*	.28*	---	.27*	.17	-.10
5. Body Dissatisfaction	.37*	.29*	.31*	.33*	---	.26*	.22
6. Drive for Muscularity	-.02	-.01	.29*	.05	.01	---	.39*
7. Social Comparison	.30*	.36*	.26*	.11	.29*	.23	---

Note. Correlations for boys ($n = 67$) are presented above the diagonal, and correlations for girls ($n = 73$) are presented below the diagonal. * $p < .05$.

Appearance-Related Teasing Direct Effects

Second, I hypothesized that teasing by mothers, fathers, peers, and siblings would individually be associated with higher levels of body dissatisfaction among girls and a greater drive for muscularity among boys. Separate bivariate regressions were conducted to determine whether appearance-related teasing from each source directly predicted higher levels of body dissatisfaction among girls and drive for muscularity among boys. Results for all analyses are reported in Table 3.

Analyses indicated that mothers' appearance-related teasing was significantly associated with girls' body dissatisfaction ($\beta = .37$, $p < .05$), with approximately 13% of the variance of body dissatisfaction accounted for by mothers' appearance-related teasing.

Table 3

Results of Linear Regression Analyses of Appearance-Related Teasing and Body Dissatisfaction Among Girls and Drive for Muscularity Among Boys

Variable	B	SE B	β	R^2
<i>Body Dissatisfaction Among Girls</i>				
Mothers' Teasing	5.32	1.63	.37*	.13
Fathers' Teasing	5.91	2.33	.29*	.09
Peers' Teasing	2.87	1.06	.31*	.09
Siblings' Teasing	3.18	1.09	.33*	.11
<i>Drive for Muscularity Among Boys</i>				
Mothers' Teasing	5.36	1.85	.35*	.12
Fathers' Teasing	11.02	2.23	.54*	.29
Peers' Teasing	2.21	1.19	.23	.05
Siblings' Teasing	2.03	1.53	.17	.03

Note. * $p < .05$.

Analyses also indicated that fathers' appearance-related teasing was significantly associated with girls' body dissatisfaction ($\beta = .29$, $p < .05$), with approximately 9% of the variance of body dissatisfaction accounted for by fathers' appearance-related teasing. Peers' appearance-related teasing was significantly associated with girls' body dissatisfaction ($\beta = .31$, $p < .05$), with approximately 9% of the variance of body dissatisfaction accounted for by peers' appearance-related teasing. Lastly, analyses indicated that siblings' appearance-related teasing was significantly associated with girls' body dissatisfaction ($\beta = .33$, $p < .05$), with approximately 11% of the variance of body dissatisfaction accounted for by siblings' appearance-related teasing.

Among boys, analyses indicated that mothers' appearance-related teasing was significantly associated with boys' drive for muscularity ($\beta = .35$, $p < .05$), with approximately 12% of the variance of drive for muscularity accounted for by mothers' appearance-related teasing. Analyses also indicated that fathers' appearance-related teasing was significantly associated with boys' drive for muscularity ($\beta = .54$, $p < .05$), with approximately 29% of the variance of drive for muscularity accounted for by fathers' appearance-related teasing. Peers' appearance-related teasing and siblings' appearance-related teasing were not significantly associated with boys' drive for muscularity ($\beta = -.23$, $p > .05$; $\beta = .17$, $p > .05$, respectively).

In summary, all sources of teasing were significantly associated with girls' body dissatisfaction. For boys, mothers' and fathers' teasing were significantly associated with their drive for muscularity. However, teasing only accounted for a small amount of variance in girls' body dissatisfaction and boys' drive for muscularity, suggesting other factors contributed to adolescents' body image. Model testing for mediation continued for significant patterns of relations.

Mediation of Appearance-Related Social Comparison

Mediation analyses were conducted based on the afore-mentioned six significant direct effects of appearance-related teasing on girls' body dissatisfaction and boys' drive for muscularity. Mediation analyses were carried out by examining four sets of regressions, including direct and indirect connections among appearance-related teasing, appearance-related social comparison, and body image (See Figure 1). Results from mediation analyses for girls are reported in Table 4, and results from mediation analyses for boys are reported in Table 5.

Table 4

Results of the Mediating Effect of Social Comparison and Appearance-Related Teasing on Girls' Body Dissatisfaction

Model	B	Std. Error	β
<i>Mediating Effects of Social Comparison on the Relation Between Mothers' Teasing and Girls' Body Dissatisfaction</i>			
Model 1			
Outcome: Body Dissatisfaction			
Predictor: Mothers' Teasing	5.32	1.63	.37*
Model 2			
Outcome: Social Comparison			
Predictor: Mothers' Teasing	1.46	.56	.30*
Model 3			
Outcome: Body Dissatisfaction			
Predictor: Social Comparison	.83	.33	.29*
Model 4			
Outcome: Body Dissatisfaction			
Predictor: Mothers' Teasing	4.70	1.71	.32*
Mediator: Social Comparison	.42	.35	.14
<i>Mediating Effects of Social Comparison on the Relation Between Fathers' Teasing and Girls' Body Dissatisfaction</i>			
Model 1			
Outcome: Body Dissatisfaction			
Predictor: Fathers' Teasing	5.91	2.33	.29*
Model 2			
Outcome: Social Comparison			
Predictor: Fathers' Teasing	2.49	.77	.36*
Model 3			
Outcome: Body Dissatisfaction			
Predictor: Social Comparison	.83	.33	.29*
Model 4			
Outcome: Body Dissatisfaction			
Predictor: Fathers' Teasing	4.04	2.44	.20
Mediator: Social Comparison	.75	.36	.26*

(Table 4 continued)

Mediating Effects of Social Comparison on the Relation Between Peers' Teasing and Girls' Body Dissatisfaction

Model 1

Outcome: Body Dissatisfaction			
Predictor: Peers' Teasing	2.87	1.06	.31*

Model 2

Outcome: Social Comparison			
Predictor: Peers' Teasing	.84	.38	.26*

Model 3

Outcome: Body Dissatisfaction			
Predictor: Social Comparison	.83	.33	.29*

Model 4

Outcome: Body Dissatisfaction			
Predictor: Peers' Teasing	2.32	1.08	.25*
Mediator: Social Comparison	.65	.33	.23

Mediating Effects of Social Comparison on the Relation Between Siblings' Teasing and Girls' Body Dissatisfaction

Model 1

Outcome: Body Dissatisfaction			
Predictor: Siblings' Teasing	3.18	1.09	.33*

Model 2

Outcome: Social Comparison			
Predictor: Siblings' Teasing	.36	.40	.11

Note. * $p < .05$.

The first set of mediational analyses examined the role of appearance-related social comparison as a mediator of the relationship between appearance-related teasing from mothers and body dissatisfaction among adolescent girls. Based on the direct effect results between mothers' teasing and girls' body dissatisfaction, regressions examining the potential indirect pathways of appearance-related social comparison were conducted. I found significant relationships between mothers' appearance-related teasing and appearance-related social comparison ($\beta = .30$, $p < .05$) and between appearance-related

Table 5

Results of the Mediating Effect of Social Comparison and Appearance-Related Teasing on Boys' Drive for Muscularity

Model	B	Std. Error	β
<i>Mediating Effects of Social Comparison on the Relation Between Mothers' Teasing and Boys' Drive for Muscularity</i>			
Model 1			
Outcome: Drive for Muscularity			
Predictor: Mothers' Teasing	5.36	1.85	.35*
Model 2			
Outcome: Social Comparison			
Predictor: Mothers' Teasing	1.26	.44	.33*
Model 3			
Outcome: Drive for Muscularity			
Predictor: Social Comparison	1.64	.49	.39*
Model 4			
Outcome: Drive for Muscularity			
Predictor: Mothers' Teasing	3.68	1.89	.24
Mediator: Social Comparison	1.30	.51	.31*
<i>Mediating Effects of Social Comparison on the Relation Between Fathers' Teasing and Boys' Drive for Muscularity</i>			
Model 1			
Outcome: Drive for Muscularity			
Predictor: Fathers' Teasing	11.02	2.23	.54*
Model 2			
Outcome: Social Comparison			
Predictor: Fathers' Teasing	2.26	.54	.46*
Model 3			
Outcome: Drive for Muscularity			
Predictor: Social Comparison	1.64	.49	.39*
Model 4			
Outcome: Drive for Muscularity			
Predictor: Fathers' Teasing	8.78	2.52	.43*
Mediator: Social Comparison	.95	.53	.22

Note. * $p < .05$.

social comparison and girls' body dissatisfaction ($\beta = .29, p < .05$). Due to these significant relationships, a multiple regression was conducted to examine the simultaneous effects of mothers' appearance-related teasing and appearance-related social comparison on girls' body dissatisfaction. The relationship between appearance-related social comparison and girls' body dissatisfaction no longer remained significant; therefore, there was no evidence of true mediation.

The second set of mediational analyses examined the role of appearance-related social comparison as a mediator of the relationship between appearance-related teasing from fathers and body dissatisfaction among adolescent girls. Based on the direct effect results between fathers' teasing and girls' body dissatisfaction, regressions examining the potential indirect pathways of appearance-related social comparison were conducted. I found significant relationships between fathers' appearance-related teasing and appearance-related social comparison ($\beta = .36, p < .05$) and between appearance-related social comparison and girls' body dissatisfaction ($\beta = .29, p < .05$). Due to these significant relationships, a multiple regression was conducted to examine the simultaneous effects of fathers' appearance-related teasing and appearance-related social comparison on girls' body dissatisfaction. The relationship between appearance-related social comparison and girls' body dissatisfaction remained significant. Furthermore, there was evidence of full mediation as the direct effect between fathers' appearance-related teasing and body dissatisfaction among adolescent girls was no longer significant ($\beta = .20, p > .05$).

The third set of mediational analyses investigated the role of appearance-related social comparison as a mediator of the relationship between peers' appearance-related teasing and body dissatisfaction among girls. Based on the direct effect results between

peers' teasing and girls' body dissatisfaction, regressions examining the potential indirect pathways of appearance-related social comparison were conducted. I found significant relationships between peers' appearance-related teasing and appearance-related social comparison ($\beta = .26$, $p < .05$) and between appearance-related social comparison and girls' body dissatisfaction ($\beta = .29$, $p < .05$). Due to these significant relationships, a multiple regression was conducted to examine the simultaneous effects of peers' appearance-related teasing and appearance-related social comparison on girls' body dissatisfaction. The relationship between appearance-related social comparison and girls' body dissatisfaction was no longer significant; therefore, there was no evidence of true mediation.

The fourth set of mediational analyses examined the role of appearance-related social comparison as a mediator of the relationship between appearance-related teasing from siblings and body dissatisfaction among girls. Based on the direct effect results between siblings' teasing and girls' body dissatisfaction, regressions examining the potential indirect pathways of appearance-related social comparison were conducted. Because results indicated that the relationship between siblings' appearance-related teasing and appearance-related social comparison was not significant ($\beta = .11$, $p > .05$), mediation did not occur and appearance-related social comparison did not explain the relationship between siblings' appearance-related teasing and girls' body dissatisfaction.

The fifth set of mediational analyses investigated the role of appearance-related social comparison as a mediator of the relationship between appearance-related teasing from mothers and boys' drive for muscularity. Based on the direct effect results between mothers' teasing and boys' drive for muscularity, regressions examining the potential indirect pathways of appearance-related social comparison were conducted. Results

indicated significant relationships between mothers' appearance-related teasing and appearance-related social comparison ($\beta = .33$, $p < .05$) and between appearance-related social comparison and boys' drive for muscularity ($\beta = .39$, $p < .05$). Due to these significant relationships, a multiple regression was conducted to examine the simultaneous effects of mothers' appearance-related teasing and appearance-related social comparison on boys' drive for muscularity. Results indicated that the relationship between appearance-related social comparison and boys' drive for muscularity remained significant. Appearance-related social comparison fully mediated the relationship between mothers' appearance-related social comparison and drive for muscularity among boys as the direct effect between mothers' appearance-related teasing and boys' drive for muscularity was no longer significant ($\beta = .24$, $p > .05$).

The sixth set of mediational analyses examined the role of appearance-related social comparison as a mediator of the relationship between appearance-related teasing from fathers and boys' drive for muscularity. Based on the direct effect results between fathers' teasing and boys' drive for muscularity, regressions examining the potential indirect pathways of appearance-related social comparison were conducted. Analyses indicated that there were significant relationships between fathers' appearance-related teasing and appearance-related social comparison ($\beta = .46$, $p < .05$) and between appearance-related social comparison and drive for muscularity among boys ($\beta = .39$, $p < .05$). Due to these significant relationships, a multiple regression was conducted to examine the simultaneous effects of fathers' appearance-related teasing and appearance-related social comparison on boys' drive for muscularity. Results indicated that the relationship between appearance-

related social comparison and boys' drive for muscularity was no longer significant; therefore, true mediation did not occur.

In summary, appearance-related social comparison fully mediated the relationships between fathers' appearance-related teasing and girls' body dissatisfaction and the relationship between mothers' appearance-related teasing and boys' drive for muscularity. Appearance-related social comparison did not serve as a mediator for the relationships between mothers' appearance-related teasing and girls' body dissatisfaction, peers' appearance-related teasing and girls' body dissatisfaction, siblings' appearance-related teasing and girls' body dissatisfaction, and fathers' appearance-related teasing and boys' drive for muscularity.

Moderation of Body Mass Index

Body mass index (BMI) was not initially proposed to be examined as a moderator between the relationship of appearance-related teasing and body image and although the average BMI scores of the participants were in the normal range, I deemed it important to consider in the present study due to the significant amount of research that indicates BMI as a predictor of body image (Stice, 2002). Previous research proposes that individuals who are overweight are more likely to be dissatisfied with their bodies than individuals who are average weight or underweight (Stice, 2002). Therefore, it is possible that predictors of body image, such as teasing, may be particularly salient only for overweight individuals.

The majority of previous research examining the effects of appearance-related teasing on adolescents' body image has either investigated the possible role of BMI or controlled for BMI in relation to the relationship between appearance-related teasing and body image (e.g., Keery et al., 2005; Smolak et al., 2006; Stice, 2001). Smolak and

colleagues (2006) found that BMI was not significantly related to drive for muscularity among adolescent boys suggesting that boys in general, regardless of weight, have a desire to be more muscular. However, McCabe and Ricciardelli (2003) found that BMI significantly predicted adolescent boys' strategies to decrease weight and the use of food supplements. In the same study, BMI significantly predicted levels of body satisfaction among adolescent girls (McCabe & Ricciardelli, 2003). Conversely, Keery and colleagues (2005) found that BMI did not have an influence on the relationship between mothers' and fathers' teasing and girls' body dissatisfaction. Additionally, Blodgett Salafia and Gondoli (2011) found that BMI did not moderate the relationships between mothers' encouragement to lose weight and adolescent girls' disordered eating patterns. Because the results have been conflicting on whether BMI influences the relationship between parents' pressure and adolescents' body image and eating behaviors, I decided to examine its potential role as a moderator of the relationships between appearance-related teasing and adolescents' body image (See Figure 2). A moderator is a variable that affects the direction and/or strength of the relation between an independent and dependent variable (Baron & Kenny, 1986). Moderation is tested by examining if the predictor variable and the potential moderator variable interact to affect the outcome variable (Baron & Kenny, 1986). Due to BMI being classified by four categories, I coded BMI as underweight, average weight, overweight, and obese to coincide with classification.

Regression analyses indicated that BMI did not moderate any of the relationships between mothers', fathers', peers, and siblings' appearance-related teasing and boys' drive for muscularity. In addition, analyses indicated that BMI did not serve as a moderator between the relationships of mothers', fathers', peers', and siblings' appearance-related

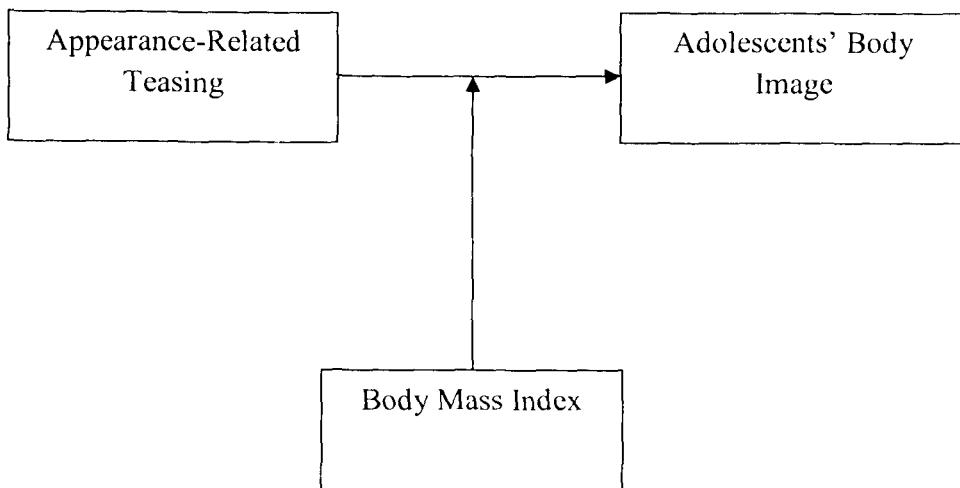


Figure 2. Model investigating whether body mass index moderates the relationship between appearance-related teasing and body image.

teasing and girls' body dissatisfaction. Results for all moderation analyses are reported in Table 6 for boys and Table 7 for girls.

Table 6

Regression Results for the Moderating Effects of BMI on the Relationship Between Appearance-Related Teasing and Adolescent Boys' Drive for Muscularity

Step and Variable	B	Std. Error	β
<i>Mothers' Teasing</i>			
Step 1			
BMI	-.77	1.79	-.05
Mothers' Teasing (z-score)	6.97	5.46	.63
Step 2			
BMI x Teasing	-1.30	2.20	-.29
<i>Fathers' Teasing</i>			
Step 1			
BMI	-1.77	1.65	-.12
Fathers' Teasing (z-score)	8.70	4.94	.75
Step 2			
BMI x Teasing	-.87	1.87	-.20
<i>Peers' Teasing</i>			
Step 1			
BMI	-1.27	1.98	-.09
Peers' Teasing (z-score)	1.62	3.65	.15
Step 2			
BMI x Teasing	.46	1.50	.11
<i>Siblings' Teasing</i>			
Step 1			
BMI	-1.24	1.92	-.09
Siblings' Teasing (z-score)	12.94	6.41	1.06*
Step 2			
BMI x Teasing	-4.28	2.47	-.90

Note. BMI coded as 1 for underweight, 2 for average weight, 3 for overweight, and 4 for obese. * $p < .05$.

Table 7

Regression Results for the Moderating Effects of BMI on the Relationship Between Appearance-Related Teasing and Adolescent Girls' Body Dissatisfaction

Step and Variable	B	Std. Error	β
<i>Mothers' Teasing</i>			
Step 1			
BMI	6.09	1.36	.46*
Mothers' Teasing (z-score)	5.22	2.39	.50*
Step 2			
BMI x Teasing	-1.01	1.10	-.21
<i>Fathers' Teasing</i>			
Step 1			
BMI	7.27	1.34	.54*
Fathers' Teasing (z-score)	5.85	1.17	.52*
Step 2			
BMI x Teasing	-1.26	1.17	-.23
<i>Peers' Teasing</i>			
Step 1			
BMI	6.37	1.45	.50*
Peers' Teasing (z-score)	2.88	2.59	.28
Step 2			
BMI x Teasing	-.38	1.11	-.09
<i>Siblings' Teasing</i>			
Step 1			
BMI	6.37	1.29	.50*
Siblings' Teasing (z-score)	4.33	2.41	.45
Step 2			
BMI x Teasing	-.80	1.09	-.18

Note. BMI coded as 1 for underweight, 2 for average weight, 3 for overweight, and 4 for obese. * $p < .05$.

DISCUSSION

The purpose of the present study was to examine the role of appearance-related teasing by family members and peers in the development of body image concerns among adolescent girls and boys. Based on previous research examining the influence of appearance-related teasing on the development of body image among adolescents (e.g., Keery et al., 2005; Shroff & Thompson, 2006; Smolak & Stein, 2006; Smolak et al., 2005), I predicted that mothers', fathers', peers', and siblings' appearance-related teasing would individually contribute to the development of adolescent girls' body dissatisfaction and adolescent boys' drive for muscularity. This study is unique in that it examined fathers, mothers, peers, and siblings individually and examined the possible role of appearance-related comparison as a mediator between all four sources and body image.

Parents' and Siblings' Appearance-Related Teasing

The present study proposed that adolescents who experienced appearance-related teasing from either their mothers or fathers would also experience appearance-related teasing from their siblings. Similar to findings from a study conducted by Keery and colleagues (2005), I found that both mothers' and fathers' appearance-related teasing were significantly correlated with siblings' appearance-related teasing among adolescent girls. In addition, I found that both mothers' and fathers' appearance-related teasing significantly correlated with siblings' appearance-related teasing among adolescent boys, thereby extending Keery and colleagues' (2005) previous findings. Thus, mothers' and fathers' appearance-related teasing has the potential to have an indirect, negative impact on adolescents through effects on the amount of teasing by siblings. Mothers and fathers are likely modeling appearance-related teasing behaviors, resulting in their children learning

and engaging in similar behaviors. In addition, parents are emphasizing the importance to meet cultural expectations of attractiveness to their children by engaging in teasing which draws attention to the significance of appearance. Therefore, siblings are also likely to convey the importance of appearance to one another through teasing behaviors. Future research is needed to expand upon and determine the direction and strength of the relationship between parental teasing and sibling teasing.

Appearance-Related Teasing and Girls' Body Dissatisfaction

The current study expanded upon previous research examining the combined effects of family members' and peers' appearance-related teasing on girls' body dissatisfaction (e.g., Keery et al., 2004; Neumark-Sztainer, 2002; Shroff & Thompson, 2006) by investigating teasing by mothers, fathers, peers, and siblings as separate variables. I found that mothers', fathers', peers', and siblings' appearance-related teasing all significantly predicted adolescent girls' body dissatisfaction. The relationship between mothers' appearance-related teasing and adolescent girls' body dissatisfaction is consistent with findings from previous research (Keery et al., 2004; Neumark-Sztainer et al., 2010). Some studies have not found mothers' appearance-related teasing as a significant predictor of adolescent girls' body dissatisfaction but rather a predictor of other disordered eating attitudes and behaviors, such as binge eating (Keery et al., 2005; McCabe & Ricciardelli, 2003; Neumark-Sztainer et al., 2002). However, these attitudes and behaviors have been shown to be significantly predicted by body dissatisfaction, suggesting that the difference in findings may be explained by assuming mothers' appearance-related teasing has an indirect effect on appearance-related attitudes and behaviors through body dissatisfaction (Blodgett Salafia & Gondoli, 2011; Stice & Whitenton, 2002; Stice & Bearman, 2001).

Further research needs to be conducted to determine the possible mediating role that body dissatisfaction has between mothers' appearance-related teasing and adolescent girls' weight-related behaviors and attitudes.

The significant relationship between mothers' appearance-related teasing and adolescent girls' body dissatisfaction is not surprising due to mothers and girls identifying with similar gender roles and cultural expectations to meet the thin ideal. Thus, mothers and daughters may share similar viewpoints and pressures regarding the ideal body weight and shape. Girls may designate mothers as role models and experts pertaining to appearance-related attitudes and behaviors (Pike & Rodin, 1991). In addition, mothers and daughters have been found to have similar levels of body dissatisfaction, likely as a result of mothers' modeling their own weight and body shape concerns (Pike & Rodin, 1991). Mothers' teasing may also be a reflection of their own body dissatisfaction, which may lead mothers' to unknowingly engage in teasing due to possibly not knowing how to engage in a healthy and positive discussion about body image. However, the best possible explanation of mothers' significant influence on girls' body dissatisfaction may be due to mothers' understanding of the importance to meet the thin ideal; mothers may become invested in their daughters' appearance in hopes to prevent their daughters from experiencing the negative societal consequences associated with not meeting the ideal.

The significant association between appearance-related teasing by fathers' and adolescent girls' body dissatisfaction is consistent with a previous research conducted by Keery and colleagues (2005). Although fathers do not personally identify with the feminine role and the appearance-related aspects associated with it, they still contribute to girls' body image concerns. Other research has also highlighted the important role of fathers in

contributing to girls' body dissatisfaction during early adolescence (Blodgett Salafia & Gondoli, 2011). As girls transition from childhood to adolescence in the middle school years, they become more concerned about their appearance and perceive attractiveness to be important to boys, especially within the realm of dating. Fathers likely serve as models of interactions with the opposite sex, providing feedback about which aspects of appearance are important. Therefore, negative feedback, such as teasing, from fathers may be particularly harmful, especially during this vulnerable period (Keery et al., 2005). Fathers may also portray the importance for girls to meet the thin ideal through their own preferences in regards to females' bodies. Adolescent girls may observe their fathers commenting on women's bodies in the media, public, or within the household. In particular, girls may witness their fathers providing appearance-related feedback to their wives or partners. Not only does feedback towards wives or partners influence girls' perceptions of the importance of appearance, but if girls notice these adult women engaging in behaviors as a result of the negative feedback, it may reinforce girls' beliefs about the importance of a man's opinion about appearance.

The relationship between peers' appearance-related teasing and adolescent girls' body dissatisfaction is consistent with findings from other research studies (Neumark-Sztainer et al., 2002; Paxton et al., 2006; Shroff & Thompson, 2006). During middle school, adolescents may become more orientated towards their peers' opinions and the importance of their opinions. Due to the importance placed on peers during this time, adolescent girls may be more likely to be influenced by any feedback, especially regarding appearance. In fact, other studies have noted that peers may be more important contributors

to girls' body dissatisfaction than parents during adolescence (Blodgett Salafia & Gondoli, 2011).

Because appearance is perceived as a route to greater peer acceptance and popularity, negative appearance-related feedback, such as teasing, is likely to negatively affect the way girls view and experience their bodies (Jones, 2001). In addition, peers' appearance-related teasing may signify a lack of acceptance or popularity, causing girls to be more aware of their bodies and evaluate themselves negatively. Another possible explanation of the relationship between peers' teasing and girls' body dissatisfaction may be related to the conversations girls' engage in with their peers, especially other girls. Due to the perceived pressure to meet the thin ideal, girls frequently engage in conversations regarding their appearance (Jones et al., 2004). These conversations likely involve both girls complaining and commenting about characteristics they are dissatisfied with and discussing ways to lose weight. When girls complain about their own bodies, they may be more likely to comment about the appearance of other girls in an attempt to assist them in achieving the thin ideal; however, these comments may be perceived as teasing, which leads to girls' body dissatisfaction. Similar to fathers', male peers may reinforce the importance to meet the thin ideal in order to be attractive to the opposite sex. Because male peers' opinions about appearance become are likely to become important during adolescence due to the beginning of romantic relationships, teasing from boys may highlight the aspects they deem unattractive, resulting in girls being dissatisfied with their bodies.

The significant association between siblings' appearance-related teasing and adolescent girls' body dissatisfaction is consistent with the findings from a study conducted

by Keery and colleagues (2005) that included siblings. However, the present study specifically asked about the occurrence of appearance-related teasing while Keery and colleagues (2005) measured teasing as “saying or doing something that makes one feel bad about his or her appearance,” which is similar to other sociocultural influences such as pressure to be thin or negative feedback. In addition, the significant relationship between siblings’ appearance-related teasing and adolescent girls’ body dissatisfaction together with the significant correlations between parents’ appearance-related teasing and siblings’ appearance-related teasing indicates a strong possibility that parents are modeling these behaviors. Therefore, siblings who observe one parent or both parents engage in teasing are likely learning and emulating those behaviors. The significant relationship between siblings’ appearance-related teasing and girls’ body dissatisfaction is an important contribution to the field of research on body image as the present study is one of the few studies to include and address siblings as a powerful influence on girls’ development of body dissatisfaction.

Siblings’ role in shaping adolescent girls’ body image is likely due to the nature of a long history of interactions, companionship, and being sources of information regarding the social context (Deater-Deckard, Dunn, & Lussier, 2002). Sisters report similar levels of sociocultural messages regarding the value of a thin body, body dissatisfaction, and eating behaviors; thus, adolescent girls and sisters both may desire to attain the thin ideal and experience body image concerns when they do not (Bliss, 2000; de Leeuw, Snock, van Leeuwe, van Strien, & Engels, 2007; Tsiantas & King, 2001). Within the family, sisters have been identified as the most important modelers of weight concerns and dieting behaviors as well as influential targets of social comparison, in turn affecting adolescents’

body dissatisfaction (Bliss, 2000; Coomber & King, 2008; Vincent & McCabe, 2000).

Sisters are likely to engage in appearance-related teasing due to experiencing similar pressure to be thin and understanding the importance of thinness within society.

Consequently, sisters' teasing is likely to influence adolescent girls' dissatisfaction with their bodies.

Although the majority of research investigating the influence of siblings on girls' body dissatisfaction has focused on sisters, a few studies have examined the role of brothers. Brothers were identified as the most frequent source of teasing among adolescent girls and as the worst source of teasing during adolescence among college-aged women (Cash, 1995; Keery et al., 2005). Similar to sisters, brothers likely serve as sources of information about the social context by providing a male perspective about what aspects of girls' bodies are attractive. Thus, negative feedback in regards to appearance from these male figures may be particularly harmful and influential on girls' body image, especially during adolescence (Keery et al., 2005). Based on previous findings regarding brothers and sisters, it is no surprise that siblings' appearance-related teasing predicted adolescent girls' body dissatisfaction. Therefore, the inclusion of siblings in future studies examining factors that contribute to girls' body dissatisfaction is essential. Furthermore, I suggest that future research attempt to uncover specific patterns of behavior for sisters versus brothers and their respective influences on body image.

Although the average occurrence of appearance-related teasing was relatively low for most sources and accounted for only a small amount of variance of body dissatisfaction, appearance-related teasing was still found to significantly predict girls' body dissatisfaction. Clearly, other factors are likely to contribute to girls' body dissatisfaction

and warrant further attention. However, even though appearance-related teasing may not occur on a regular basis, when it does occur, the effects of it are strong and detrimental enough to impact the level of girls' body dissatisfaction.

Appearance-Related Teasing and Boys' Drive for Muscularity

The majority of studies examining the effects of appearance-related teasing on adolescent boys' body image have either measured boys' dissatisfaction with their bodies or boys' engagement in body change techniques (e.g., McCabe & Ricciardelli, 2003; Smolak et al., 2005; Stanford & McCabe, 2005). The present study is unique in that it is one of the few studies to examine the relationship between appearance-related teasing and adolescent boys' drive for muscularity. Males tend to be more concerned about their shape and muscle mass than their weight, suggesting that boys face an increasing likelihood of experiencing a drive for muscularity during adolescence. A drive for muscularity can be associated with extreme and often dangerous body change behaviors including the use of steroids; therefore, it is important to focus on drive for muscularity among boys. The current study is the only study to examine mothers', fathers', siblings', and peers' appearance-related teasing individually and separately, finding that mothers' and fathers' teasing were significantly associated with adolescent boys' drive for muscularity. In the present study, I expand upon previous work that found parents' appearance-related teasing to be correlated with boys' drive for muscularity (Smolak & Stein, 2006) by establishing mothers' and fathers' teasing as significant predictors, therefore determining the strength of the relationship between teasing and boys' drive for muscularity. In addition, I specifically measured drive for muscularity while other studies have measured body change techniques,

which could either be to gain muscle or lose weight, or satisfaction with muscularity separately (Ricciardelli & McCabe, 2003a; Stanford & McCabe, 2005).

Both mothers' and fathers' appearance-related teasing significantly predicted adolescent boys' drive for muscularity. Previous research has indicated that mothers' messages tend to focus on losing weight while fathers' messages tend to be directed towards body shape and size and being more muscular (McCabe & Ricciardelli, 2003; Stanford & McCabe, 2005). The messages being transmitted from parents may stem from their own body goals and body change strategies, suggesting that parental attitudes and beliefs pertaining to their own bodies may in turn be communicated to their children, resulting in parents acting as role models and important sources of appearance-related information (Stanford & McCabe, 2005). Similar to girls, both mothers and fathers may be engaging in appearance-related teasing due to their own body image problems, specifically dissatisfaction with their body type and how it compares to the thin and muscular ideals. Mothers and fathers may also not have the knowledge to engage in conversation about appearance without reinforcing the ideals or criticizing one's appearance.

Regardless of the focus or source of the message (e.g., lose weight or increase muscles), it appears that any message directed towards boys' appearance predicts their drive for muscularity. Although mothers' and fathers' appearance-related teasing may possibly target different areas and aspects of the body, both contribute to boys' drive for muscularity, which is a result unlike other studies that have found mothers' influence to affect only boys' eating behaviors (Ricciardelli et al., 2000; Stanford & McCabe, 2005). A possible explanation for this finding may be that parents are still an important source of information regarding appearance during middle school, and mothers may be

communicating similar messages to boys and girls in regards to meeting cultural ideals. Due to mothers' own pressure to meet the thin ideal and understanding the importance associated with meeting societal expectations of appearance, the subject of mothers' messages may be to lose weight or simply to meet societal expectations that are appropriate for males and females (Ricciardelli et al., 2000; Vincent & McCabe, 2000). Because the current study did not examine the specific areas and aspects of the body that were targets of teasing, I suggest that further research explore the difference between the aspects and features of boys' bodies that mothers' and fathers' appearance-related teasing targets.

Fathers' appearance-related teasing was found to be the strongest predictor, suggesting that boys may be most concerned about and influenced by their fathers' attitudes and behaviors. Fathers may be presenting their own ideals and values, based on the cultural muscular ideal, regarding the importance of muscles and serving as same-sex role models to their adolescent sons (McCabe & Ricciardelli, 2003). The majority of messages received from fathers include direct encouragement to engage in more exercise, which is, in turn, associated with increased exercise behaviors to change body shape and size of muscles among boys (Ricciardelli et al., 2000). Fathers' appearance-related teasing may be particularly influential due to adolescents' perceiving their fathers as having expertise in regards to muscle building techniques. In addition, middle school-aged boys may still be more parent-orientated than peer-orientated; therefore, their fathers' opinions and actions are quite influential, especially in regards to expectations associated with the gender role. Expectations associated with being a male intensify during adolescence as a result of the body changes associated with puberty, directing boys towards an important male figure in their lives, their fathers.

Contrary to the findings for adolescent girls, peers' appearance-related teasing did not significantly impact boys' body image. A possible explanation for this discrepancy between boys and girls might be due to girls perceiving appearance as a route to acceptance and popularity among peers and boys perceiving other factors, such as athletics, as a route to acceptance and popularity among peers. In addition, boys are less likely to be orientated to the importance of appearance possibly due to less societal pressure to maintain a certain body type. Worth and success are associated with appearance among women whereas men's worth and success are typically determined based on other factors, such academic or occupational success (Gilbert & Thompson, 1996). Therefore, appearance-related teasing from peers may be less likely to affect boys' drive for muscularity due to appearance not being regularly associated with success or acceptance. Boys may be less likely to engage in appearance-related conversations than girls due to not placing a strong importance on appearance and experiencing less pressure to meet the muscular ideal. Due to having fewer conversations about appearance, appearance-related teasing may seem benign when it does occur, as it could be construed as just typical boy behavior. Lastly, pubertal timing may explain why peers' appearance-related teasing does not predict boys' drive for muscularity. Due to boys often experiencing puberty at an older age, middle school-aged boys may be less likely to be concerned about their muscle mass. Therefore, the amount of muscle may not become important until boys experience the physical changes of puberty, leading them to notice muscularity among other boys and themselves.

Siblings' role in the development of boys' drive for muscularity has received very little attention in the research field. Even though I did not find siblings' appearance-related teasing to significantly predict boys' drive for muscularity, my findings still contribute to

the field by simply including siblings. Siblings' appearance-related teasing did predict girls' body dissatisfaction; however, it is not associated with drive for muscularity among boys.

Similar to peers, this discrepancy may be explained by boys placing less importance on appearance. Another possible explanation may be that siblings also do not perceive appearance among boys to be important, making them less likely to engage in appearance-related teasing. Siblings likely experience similar messages from society in regards to appearance and that appearance is more important for girls than boys. Therefore, siblings may provide feedback to boys about other characteristics or talents, such as athletics or academic success. Another possible explanation may be that boys do not consider their siblings' opinions to be important and therefore disregard any appearance-related teasing they may experience from siblings. Or, the teasing behaviors regarding appearance may not carry much meaning if the boys regularly engage in teasing with their siblings. Unlike girls, boys are less likely to be orientated towards relationships with others, especially siblings. Boys may perceive their relationships with their siblings as unimportant or childish, leading them to perceive any feedback from their siblings as insignificant.

Lastly, gender and age of the sibling may impact whether appearance-related teasing influences boys' drive for muscularity. Younger siblings or female siblings may be less likely to influence boys' drive for muscularity due to boys' perceptions in regards to their expertise and personal experience. Younger siblings are likely not experiencing similar pressures as adolescent boys; therefore, boys may perceive their feedback as unimportant. In addition, boys may perceive female siblings to have a lack of knowledge in regards to muscularity, causing boys to be less influenced by their feedback. However, the

present study did not examine the age and gender of adolescents' siblings; therefore, future research should examine the effects of appearance-related teasing by younger and older siblings and female and male siblings.

Similar to girls, the average occurrence of appearance-related teasing was relatively low for most sources and accounted for a small amount of variance in boys' drive for muscularity. This indicates that other factors are likely to affect boys' body image. However, appearance-related teasing from mothers and fathers was still found to significantly predict boys' drive for muscularity. While appearance-related teasing may not occur on a regular basis for boys, when it does occur, the effects of it are strong and detrimental enough to impact their perceptions of muscularity.

Appearance-Related Social Comparison as a Mediator

Appearance-related social comparison was proposed as a possible mediator in the present study based on previous findings, indicating a relationship between appearance-related social comparison and adolescents' body image. Appearance-related social comparison has been found to directly influence adolescent girls' body dissatisfaction and adolescent boys' drive for muscularity (Jones, 2004; Schutz et al., 2002; Smolak & Stein, 2006). In addition, appearance-related social comparison has been found to serve as a mediator between sociocultural factors, such as appearance-related conversations and modeling of dieting behaviors, and adolescent body image (Keery et al., 2004; Shroff & Thompson, 2006; Smolak et al., 2005). The current study expands on this work by examining social comparison as a mediator between appearance-related teasing from multiple familial and peer sources and adolescents' body image. Specifically, I tested whether teasing would lead to engagement in social comparison, which in turn would be

associated with body image concerns among girls and boys. Only sources of teasing that had significant effects on adolescents' body image were included in mediational analyses.

Appearance-related social comparison did not serve as a mediator between appearance-related teasing from mothers, peers, or siblings and adolescent girls' body dissatisfaction. In previous studies examining social comparison as a mediator, appearance-related teasing was combined with other factors, such as appearance-related conversations and encouragement to be thin (Keery et al., 2004; Shroff & Thompson, 2006). Thus, in this previous work, perhaps social comparison either mediated the relationship between those other individual factors and girls' body dissatisfaction or mediated the relationship between the combined effects of all factors and girls' body dissatisfaction. My findings suggest that social comparison does not explain the relationship between appearance-related teasing from mothers, peers, and siblings, as one factor by itself, and girls' body dissatisfaction.

Appearance-related teasing more strongly affects girls' body image directly than indirectly through appearance-related social comparison. Regardless of whether girls engage in social comparison or not, they are likely to be dissatisfied with their bodies as a result of being teased by mothers, peers, and siblings about their appearance. Adolescent girls may be already engaging in social comparison before experiencing any appearance-related teasing; therefore, the teasing likely does not draw attention to any aspects of appearance that girls are not already aware of. In addition, due to vast and intense sociocultural pressure for girls to be thin, adolescent girls are likely to experience body dissatisfaction regardless if they engage in appearance-related social comparison or not (Jones, 2004). If the target of social comparison is perceived as less or equally attractive, girls may be less likely to negatively evaluate themselves due to sharing similar

characteristics or perceiving their own characteristics to be more attractive (Myers & Crowther, 2009). It is possible that girls might be less dissatisfied with their bodies depending on the source of comparison, explaining why social comparison did not serve as a mediator.

Appearance-related social comparison fully mediated the relationship between fathers' appearance-related teasing and girls' body dissatisfaction. Therefore, girls who are teased by their fathers are likely to engage in social comparison to either identify which aspects of their bodies are not meeting expectations or gather information on what is considered acceptable and attractive. Perhaps a reason why fathers' teasing led to social comparison was because fathers provide girls with a male perspective of what is attractive. If a girl's father is teasing her about appearance, she may internalize these messages to mean that she is unattractive. She may therefore look to her peers for feedback and comparison regarding how girls her age should look. Comparing one's body to another highlights the perceived negative aspects of girls' bodies, which then leads to body dissatisfaction. In addition, fathers' appearance-related teasing draws attention towards girls' bodies, causing girls to be more aware of and place more importance on their appearance. Fathers' appearance-related teasing may not be specific in regards to certain body characteristics; instead, fathers' teasing may be more aimed at overall appearance. Hence, girls have to engage in appearance-related social comparison to determine the specific characteristics of their bodies that are perceived as unattractive or not meeting expectations according to their fathers. Further research needs to be conducted to determine whether fathers' teasing is aimed more at overall appearance or whether it targets specific aspects.

Appearance-related social comparison also served as a mediator between mothers' appearance-related teasing and boys' drive for muscularity. Thus, teasing from mothers led to boys' engagement in appearance-related social comparison with others, which then led to an increased drive for muscularity. This was an interesting finding, as it mirrors results for girls, suggesting that teasing from the opposite-sex parent is most likely to encourage engagement in social comparison, which then affects body image. Mothers and fathers are likely to send different messages to adolescent boys about appearance. Fathers' messages about body shape and size tend to focus on being more muscular while mothers' messages tend to focus on losing weight (Stanford & McCabe, 2005). The difference in content of messages between mothers and fathers may likely explain why mothers' appearance-related teasing affects boys' drive of muscularity through social comparison. Due to mothers' messages being more focused on weight and less on muscularity, boys may engage in social comparison to determine exactly which characteristics are not meeting expectations. In addition, and similar to my rationale for the findings regarding girls, perhaps mothers are providing boys with a female perspective on what boys should look like. If a mother is teasing her son about appearance, the boy may look to his friends in order to gain perspective on how boys should look and what it means to be attractive.

Social comparison did not mediate the relationship between fathers' teasing and boys' drive for muscularity. Fathers may be perceived as role models and experts on muscularity; therefore, fathers' teasing is likely to influence boys' drive for muscularity regardless if boys' engage in social comparison. Again, mothers and fathers tend to provide their sons with different messages about the body, with fathers providing direct commentary regarding muscularity. Because of this, boys may not need to engage in social

comparison regarding muscles. Instead, teasing from fathers about appearance, particularly about muscularity, would be most likely to directly impact their body image.

BMI and Moderation

Several studies have found body mass index (BMI) to play a significant role in the relationships between sociocultural factors and body image, thereby stressing the importance of BMI in the development of body dissatisfaction among adolescents (Neumark-Sztainer et al., 2002; Neumark-Sztainer et al., 2010; Stice & Whitenton, 2002). Research has suggested that adolescents who are above or below average weight are not only more likely to develop a negative body image but also experience more sociocultural pressures to meet the ideals (Neumark-Sztainer et al., 2002; Stice & Whitenton, 2002). Due to being overweight or underweight, these individuals are more likely to be targets of pressures to meet the expectations of the ideals because they vary the furthest from the ideals (Neumark-Sztainer et al. 2002). Based on the importance of BMI in previous studies, the present study examined the possible role of BMI as a moderator between appearance-related teasing and adolescents' body image.

In this study, I found that BMI did not moderate any of the relationships between mothers', fathers', peers', and siblings' appearance-related teasing and boys' drive for muscularity and girls' body dissatisfaction, suggesting that appearance-related teasing by parents and peers influences body dissatisfaction among girls or drive for muscularity among boys regardless of weight or size. In contrast to previous studies that stress the important role BMI plays in adolescent girls' body dissatisfaction and adolescent boys' drive for muscularity, my findings suggest that being underweight or overweight does not make girls or boys more prone to develop body dissatisfaction or drive for muscularity.

Boys and girls of all shapes and sizes are developing body image issues due to the importance society places on appearance and the perceived pressure to meet the ideals. Therefore, overweight or underweight girls or boys are not any more likely than average weight girls and boys to develop body dissatisfaction or drive for muscularity as a result of being teased about their appearance. Perhaps an interesting addition to the present study would be the inclusion of others' BMIs, as the BMI of the teasing perpetrator may be a factor contributing to the overall amount of teasing being done.

Limitations

Limitations in the present study include both characteristics of the sample and the methodology of the study. The majority of participants in the sample were White; therefore, my findings are not representative of adolescents of other ethnicities. A lack of data on family structure and frequency of contact with mothers, fathers, and siblings serves as another limitation in this study as adolescents may not be living with or have frequent contact with certain family members. The current study also lacked information regarding the gender of peers and siblings engaging in appearance-related teasing. In addition, adolescents' pubertal status was not ascertained, which may influence whether an individual even experienced teasing or the level of body dissatisfaction or drive for muscularity reported. Due to the physical changes associated with puberty and the variability of pubertal timing for both boys and girls, pubertal status would be an important variable to include when examining the effects of teasing on body image (O'Dea & Abraham, 1999). As the physical changes occur, adolescents are more likely to be drawn to the appearance of their bodies resulting in them being more likely to develop a negative body image. Therefore, pubertal status likely affects adolescents' levels of body image as

they may not be concerned about appearance until their bodies physically change (O'Dea & Abraham, 1999). Future research involving appearance-related teasing and social comparison among adolescents should incorporate the role of pubertal timing. Future research should include adolescents from other ethnic backgrounds and obtain data on the structure of the household, frequency of contact, and whether female or male peers and siblings influence body image differently.

The limitations in regards to the methodology of the present study include the scales used to measure certain variables. Teasing from all sources was measured only using one question for each source. Using multiple items would measure teasing more fully and effectively. Furthermore, the current measure of teasing did not assess a particular style of communication or consider teasing geared towards specific body parts. The body dissatisfaction scale did not include breast size or arm size, which are both areas of the body that girls may not be satisfied with. The drive for muscularity scale includes items measuring behaviors that may not necessarily be harmful or predictive of a negative body image among boys. For example, the scale measures engagement in weight lifting to build muscles, which is a common behavior among males and could possibly be beneficial and healthy. Future research may need to be more specific in measuring harmful attitudes and behaviors associated with drive for muscularity. In addition, scales should measure the degree to which boys consider muscularity to be important and the ideal amount of muscle mass. Lastly, two items in the physical appearance comparison scale inquire about comparing one's figure to another's figure. Figure is often associated with a female's body; therefore, boys may have not identified with comparing figures being less likely to indicate whether they engage in appearance-related social comparison.

Implications

This study suggests that both girls and boys experience body image concerns and that these concerns are influenced by teasing. Further, my findings emphasize the negative effects of appearance-related teasing by both family members and peers and identify the sources of teasing who are most influential. I specifically targeted a developmentally “normal” behavior (i.e., teasing) that has negative effects on adolescents as opposed to being a benign and natural experience. In addition, teasing is not just a normative occurrence among peers, but exists within the family subsystem as well. My findings highlight the particularly influential role siblings play in the development of adolescents’ body image concerns, indicating that future research needs to include siblings and explore their influences. Longitudinal research investigating the impact of appearance-related teasing on adolescents’ body image is required to fully establish the role mothers, fathers, siblings, and peers play in the development of body image.

My findings also indicate that boys experience similar pressure in regards to their appearance; however, boys’ concerns focus on muscularity rather than being thin. Drive for muscularity appears to be a more appropriate and accurate measure of boys’ body image than body dissatisfaction. Although boys experience similar pressure to attain an appearance-related ideal, girls are more impacted physically and mentally by societal pressure to conform to the ideal as body dissatisfaction has been significantly associated with low self-esteem and low levels of life satisfaction (Ata et al., 2007; Eisenberg et al., 2003). Drive for muscularity has been associated with low self-esteem among boys (McCreary & Sasse, 2000), yet not on the same consistent basis or level as girls. Because

both girls and boys experience pressures to adhere to cultural ideals, it is important to address and deconstruct both ideals among adolescents.

Addressing and deconstructing cultural ideals involves targeting the media's portrayal of the muscular and thin ideals and the pressure adolescents experience as a result of this portrayal. Due to the physical changes related to puberty, adolescence is a crucial period to teach adolescents about the muscular and thin ideals and the unrealistic expectations associated with each. Teaching adolescents about healthy weight-related behaviors and attitudes is also necessary, as drive for muscularity and body dissatisfaction are both associated with harmful and unhealthy attitudes and behaviors such as steroid use for boys and disordered eating patterns for girls. In addition to educating adolescents, parents and schools need to be aware of the effects of the ideals on adolescents' body image and weight-related behaviors to assist in teaching and preventing adolescents from engaging in harmful behaviors. Future research needs to continue to identify and explore sociocultural factors associated with drive for muscularity and body dissatisfaction and the contributions of the muscular and thin ideals.

I note the important influence of appearance-related social comparison on adolescents' body image by identifying its role as a mediator between appearance-related teasing and adolescents' body image. It is clear that both boys and girls engage in social comparison, indicating that appearance is important to them and that comparing themselves to others impacts their attitudes and behaviors in regards to their bodies and satisfaction with appearance. It is essential to address both girls' and boys' engagement in appearance-related social comparison and teach adolescents more healthy and appropriate ways, that are not based on the muscular and thin ideals or on appearance in general, to evaluate

themselves. Due to social comparison occurring within the peer and family contexts, family members and school employees should also be educated about the role social comparison plays in adolescents' appearance-related attitudes and behaviors and ways that they can encourage adolescents to engage in more healthy and appropriate evaluation processes. Overall, a healthy self-esteem that does not focus on appearance should be promoted among adolescents. Future research is needed to investigate who the targets of comparison tend to be and the bodily characteristics that are being compared.

Health professionals, such as therapists, should be alerted to the strongly negative influence of appearance-related teasing on adolescent girls' body dissatisfaction and boys' drive for muscularity, as both can lead to engagement in unhealthy behaviors. Health professionals need to assess for the presence of appearance-related teasing when working with adolescents and also explore the role of peers and family members. A previous study indicated that the outcomes of appearance-related teasing were worse for adolescents who were teased by a larger percentage of family members (Keery et al., 2005). Therefore, therapists need to include all family members when working with adolescents.

According to the family systems theory, an individual's behavior is shaped by his or her interactions and relationships with others within family members (Cox & Paley, 1997). In addition, families are comprised of smaller subsystems, such as the parent-child relationship, and each subsystem influences the others (Cox & Paley, 1997). Based on these assumptions, all family members must be included in the therapy process regardless of who is perpetrating the teasing because it is the whole family system that affects the adolescent and is affected by the teasing.

Family therapy is essential in the case of appearance-related teasing in order to address the teasing behaviors among all members, prevent modeling of the teasing to siblings, and educate family members on the effects of teasing. Therapists should also address with parents the specific ways that mothers and fathers can educate their children about the muscular and thin ideals, especially keeping in mind the unique relationship that each parent has with his or her child. Due to siblings serving as role models, family therapists can encourage siblings to model and discuss positive aspects of body image and appropriate and healthy weight-loss behaviors.

Therapists should also discuss and address the specific influences of the cultural ideals on each family member and the ways that appearance-related teasing reinforces the importance to meet the ideals. However, it is imperative that therapists address teasing in a way that avoids blaming, as teasing is likely the result of societal ideals and pressures. In addition, therapists may need to work with parents to address their own beliefs about their bodies as these beliefs are likely reflected through their actions, such as teasing. While addressing parents' body image, it remains important to explore the influence of the societal ideals and ways these ideals have contributed to their beliefs about bodies. Family members, especially parents, may be engaging in these teasing behaviors in an attempt to prevent adolescents from experiencing the negative consequences associated with not meeting the expectations of the ideals. Therefore, therapists will need to address parents' engagement in teasing and discuss other ways they can encourage their children to be healthy. Family members may also be engaging in appearance-related teasing due to not knowing how to converse with their adolescent children about body image. Therapists should therefore coach and teach parents appropriate and positive ways to discuss

appearance. Parents' discomfort about discussing appearance with their adolescents may also be due to puberty and the uneasiness parents experience when discussing the physical changes. Therapists will need to normalize the physical changes of puberty and stress the importance to have these conversations with their adolescents.

Prevention and intervention programs need to discuss the occurrence and effects of appearance-related teasing for both boys and girls. In addition, prevention and intervention programs should be directed at families to address the teasing that is occurring within the family system. Educators should focus on teaching family members, in particular parents, about the detrimental effects that appearance-related teasing has on adolescents' body image as well as other negative outcomes, such as depressive symptoms and low self-esteem (Keery et al., 2005). Family members may also not recognize what constitutes as appearance-related teasing; therefore, educators will need to explain and define appearance-related teasing. In addition to incorporating appearance-related teasing in prevention and intervention programs, appearance-related social comparison should also be addressed by informing family members about what it is, who the targets may be, and how it contributes to adolescents' body image directly and indirectly. Researchers will need to specifically explore how family members contribute to adolescents' body image in order to design effective prevention and intervention programs. In addition, researchers will want to further explore the role appearance-related social comparison plays, the context in which it originates, the targets, and family members' influence.

Due to the significant role peers play and the large number of peers that would likely need to be included, perhaps a class format would be more effective and easily implemented when addressing appearance-related teasing and social comparison among

peers. Educators would need to be trained in order to teach boys and girls about the cultural ideals and the ways that teasing and social comparison affects body image. Educators will also need to be trained to detect the occurrence of teasing in order to intervene and stop the teasing. Therefore, it will be vital that future research further investigate appearance-related teasing in order to determine the behaviors and commentary that comprise it, providing educators with a concrete and thorough definition. In addition to focusing on teasing and social comparison, the class could also incorporate other sociocultural factors, such as the role of the media in portraying the ideals and appearance-related conversations, and assist boys and girls in ending their engagement in these factors and developing more positive body images.

As well as educators, school counselors can play a supplementary role in preventing the negative effects of appearance-related teasing and social comparison. School counselors need to be trained in regards to the cultural ideals and the pressure on adolescents to conform to these ideals, allowing them to address weight-related behaviors and attitudes. Additionally, school counselors can assist adolescents in developing a positive body image based on more realistic expectations and identifying other positive aspects unrelated to appearance.

Appearance-related teasing is a detrimental and recurrent behavior that peers and family members direct towards adolescents. The effects of appearance-related teasing contribute to adolescent girls' body dissatisfaction and boys' drive for muscularity directly and indirectly through appearance-related social comparison. Both body dissatisfaction and drive for muscularity have been associated with eating disorders among girls and muscle dysmorphia among boys. Therefore, appearance-related teasing needs to be addressed with

family members and peers through therapy, prevention and intervention programs, and education efforts in order to prevent adolescents from engaging in teasing behaviors, social comparison, and unhealthy weight-related behaviors and attitudes.

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APPENDIX A

Drive for Muscularity Scale (McCreary & Sasse, 2000)

		Never	Rarely	Sometimes	Often	Usually	Always
1.	I wish that I were more muscular	0	1	2	3	4	5
2.	I lift weights to build up muscle	0	1	2	3	4	5
3.	I use protein or energy supplements	0	1	2	3	4	5
4.	I drink weight-gain or protein shake	0	1	2	3	4	5
5.	I try to consume as many calories as I can a day	0	1	2	3	4	5
6.	I feel guilty if I miss a weight-training session	0	1	2	3	4	5
7.	I think I would feel more confident if I had more muscle mass	0	1	2	3	4	5
8.	Other people think I work out too often	0	1	2	3	4	5
9.	I think that I would look better if I gained 10 pounds in bulk	0	1	2	3	4	5
10.	I think about taking steroids	0	1	2	3	4	5
11.	I think that I would feel stronger if I gained a little more muscle mass	0	1	2	3	4	5
12.	I think that my weight-training schedule interferes with other aspects of my life	0	1	2	3	4	5

13. I think that my arms are too small 0 1 2 3 4 5
14. I think that my chest is not broad 0 1 2 3 4 5
enough
15. I think that my legs are not big 0 1 2 3 4 5
enough

APPENDIX B

Body Dissatisfaction Scale (Stice et al., 1994)

How satisfied are you with your: Extremely Moderately Neutral Moderately Extremely

	dissatisfied	dissatisfied	satisfied	satisfied
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1. Weight	0	1	2	3	4
2. Figure	0	1	2	3	4
3. Appearance of stomach	0	1	2	3	4
4. Body build	0	1	2	3	4
5. Waist	0	1	2	3	4
6. Thighs	0	1	2	3	4
7. Buttocks	0	1	2	3	4
8. Hips	0	1	2	3	4
9. Legs	0	1	2	3	4

APPENDIX C

Perceived Sociocultural Pressure Scale (Stice et al., 1996)

	None	Some	A lot
1. My mother teases me about my weight or body shape	0	1	2
2. My father teases me about my weight or body shape.	0	1	2
3. Kids at school tease me about my weight or body shape.	0	1	2
4. My siblings tease me about my weight or body shape.	0	1	2

APPENDIX D

Physical Appearance Comparison Scale (Thompson et al., 1991)

Never Seldom Sometimes Often Always

- | | | | | | |
|--|---|---|---|---|---|
| 1. At parties or other social events, I | 0 | 1 | 2 | 3 | 4 |
| compare my physical appearance to
the physical appearance of others. | | | | | |
| 2. The best way for people to know if | 0 | 1 | 2 | 3 | 4 |
| they are overweight or underweight
is to compare their figure to the figure
of others. | | | | | |
| 3. At parties or other social events, I | 0 | 1 | 2 | 3 | 4 |
| compare how I am dressed to how
other people are dressed. | | | | | |
| 4. In social situations, I sometimes | 0 | 1 | 2 | 3 | 4 |
| compare my figure to the figures of
other people. | | | | | |