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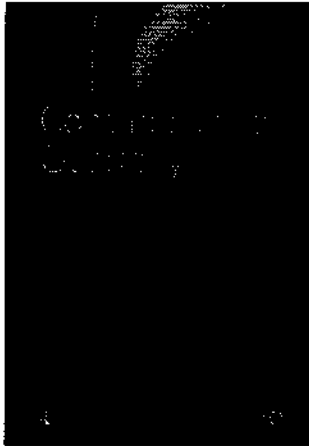
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### Understanding the Process: How Mediated and Peer Norms Affect Young Women's Body Esteem

Marina Krmar \*; Steve Giles \*; Donald Helme \*  
\* Wake Forest University,

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# Understanding the Process: How Mediated and Peer Norms Affect Young Women's Body Esteem

Marina Krcmar, Steve Giles, & Donald Helme

*This study examined the contribution of interpersonal and mediated perceived norms to young women's body esteem among first-year college women. In addition, we examined the role of social comparison as a mediator for the relationship between norms and body esteem. Several findings were notable. First, interpersonal norms do have a significant relationship with esteem. Young women who perceived that their peers and parents valued thinness, and that parents made comments about body appearance, had lower body esteem. In addition, mediated norms also were related to lower appearance and weight esteem. Specifically, exposure to fashion, celebrity and fitness magazines had a negative effect on young women's appearance esteem; however, this relationship was mediated by social comparison, suggesting that comparison is the mechanism by which esteem is lowered. However, for fitness magazines, the relationship between exposure and esteem was direct and held up even when social comparison was controlled for.*

*Keywords:* Body Esteem; Interpersonal Norms; Media Norms; Social Comparison

Norms for female thinness in American culture derive from many sources, although few would argue that media norms and peer norms play a role (Harrison, 2000). These excessively thin norms have also been found to be related to another variable associated with problematic outcomes such as eating disorders: body dissatisfaction (Joiner, Wonderlich, Metalsky, & Schmitt, 1995). Body dissatisfaction is frequently implicated as a major contributor to eating disorders in young women (Harrison, 2000; Harrison & Cantor, 1997; Wiederman & Pryor, 2000). In both clinical

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Marina Krcmar (PhD, University of Wisconsin, 1995) is an associate professor, Steve Giles (PhD, University of Kentucky, 1998) is an assistant professor, and Donald Helme (PhD, University of Kentucky, 2000) is an assistant professor, all at Wake Forest University. *Correspondence:* Marina Krcmar, Department of Communication, Wake Forest University, 1834 Wake Forest Road, Winston-Salem, NC 27106. E-mail: Krcmarm@wfu.edu

(e.g., Strober & Katz, 1988) and non-clinical (e.g., Wilcox & Sattler, 1996) samples, the importance of body satisfaction has been emphasized. Whereas body dissatisfaction contributes to anorexia nervosa and bulimia nervosa (Garfinkel, 1995), it is also associated with other health-related problems, most notably, psychological depression (Hinz & Williamson, 1987). In fact, in a sample of both college students and a matched clinical sample, body dissatisfaction was associated with depression, even apart from its association with eating disorders such as bulimia nervosa (Joiner, Wonderlich, Metalsky, & Schmitt, 1995). On the other hand, body satisfaction is associated with a more optimistic view of life in general (Fulkerson, Keel, Leon, & Dorr, 1999). Therefore, it is important to examine the factors that contribute to body dissatisfaction itself, especially among young women who are at a higher risk for depression (Stice, Hayward, Cameron, Killer, & Taylor, 2000), eating disorders (Drewnowski, Yee, Kruth, & Krahn, 1994), and body dissatisfaction than are their young, male counterparts.

In fact, eating disorders affect approximately 2% of the female population (Garfinkel, 1995), and depression affects nearly one in five women with the higher incidence of depression in women arising during adolescence. These results are important because they suggest that body dissatisfaction, even apart from its demonstrated association with eating disorders, should be examined in non-clinical samples who may or may not be at risk for developing eating disorder symptoms, but who might also be at risk for developing other related problems such as depression (Stice et al., 2000). In other words, it is important to explore the precursors of body dissatisfaction because this variable may be pivotal in the steps leading to a myriad of health problems in young women.

What contributes to body dissatisfaction in young women? Researchers have identified several factors, both interpersonal and mediated, that seem to contribute to weight concerns, dieting concerns, and general body dissatisfaction; however, little research has examined both interpersonal norms and mediated norms simultaneously. For example, regarding interpersonal influences, in children as young as eight years old, parental input has been found to affect the body satisfaction of children, especially girls (Smolak, Levine, & Shermer, 1999). As children get older, parents are likely to increase their comments about children's appearance (Striegel-Moore & Kearney-Cooke, 1994). In particular, parents who make negative comments about their children's bodies, weight, and eating habits are likely to have children who are themselves less satisfied with their bodies (Heinberg, 1996). In addition, body dissatisfaction in mothers is associated with the body dissatisfaction of their female, but not male, children (Hill, Weaver, & Blundell, 1990).

In addition to norms set by parents, peers may also directly and indirectly create environments that encourage body dissatisfaction. Several studies suggest that young women whose peers encourage thinness through direct criticism of weight gain or alternately through praise for weight loss are more likely to experience body dissatisfaction (McCabe & Ricciardelli, 2001). In addition to explicit statements about weight and body, peers may contribute to a young woman's body dissatisfaction by simply modeling their own body dissatisfaction (Field, 2000).

Lastly, the media and its emphasis on what Harrison (2000) refers to as thin-depicting and -promoting characters have been implicated as a major factor in young women's body dissatisfaction. Specifically, more so than television images, magazines have been a predictor of body image and eating disturbances for women. Harrison and Cantor (1997) found that magazine reading was related to college students' body image disturbances. Furthermore, Harrison (2000) has examined exposure to what she refers to as thin-ideal magazines and found that young women who read these were more likely to show eating disorder symptoms. Other researchers have also found that magazines, especially fashion, fitness, and celebrity magazines, can influence adolescent girls (Levine, Smolak, & Hayden, 1994). In fact, thin-ideal magazines contain many weight-loss-promoting advertisements and articles (Andersen & DiDomenico, 1992) and unrealistically thin models (Cusumano & Thompson, 1997).

With its focus on the severely thin body ideal, young women may be faced with a reflected image of themselves that is so thin and yet so idealized, that it may be impossible to obtain. Presented with these images, young women have several options. They might ignore the thin ideal and instead exhibit high body-esteem and satisfaction regardless of their own relative body size. Alternately, they might choose to engage in risky behaviors such as excessive dieting and weight loss (Stice & Shaw, 1994). Third, they might maintain a more healthy body weight, but be dissatisfied with it. Therefore, one possible outcome of exposure to the thin media ideal is for young women to lose self-esteem regarding their bodies and ultimately experience body dissatisfaction when comparing themselves to unrealistic images portrayed by the media. In fact, several scholars have demonstrated the negative effect of thin-depicting media on the disordered eating behaviors of young women (e.g., Botta, 1999; Harrison, 2000; Harrison & Cantor, 1997; McCabe & Ricciardelli, 2001); however, few have simultaneously looked at the effect of parental and peer norms, and what might be referred to as media norms, on body esteem and subsequent dissatisfaction.

This study fills in some of that gap by asking how the mediated and non-mediated norms of body appearance affect body esteem in young women. In this research, a sample of 427 young women were administered a questionnaire to examine the effects of these variables on body esteem. In addition, the role of social comparison is examined in mediating the link between norms and body esteem.

### **The Role of Parent and Peer Norms in Body Satisfaction**

Social norms theory posits that an individual's expression or rationalization of problem behavior may result from their misperceptions of what is acceptable or normal among their peers or other community members (Berkowitz, 2003). Misperceptions may also be related to problem behaviors when individuals overestimate the frequency of risk-taking in others and underestimate the occurrence of healthy behaviors. These perceptions may then lead to an effort to conform to a norm, regardless of its accuracy, through enacting unhealthy behaviors (Berkowitz, 2003).

The discrepancy between what is normal, as reported by others, and what is perceived to be acceptable and normal has been associated with a myriad of problem behaviors, including college alcohol use (Perkins et al., 1999), substance use (Perkins et al., 1999) and cigarette smoking (Sussman et al., 1988). As a consequence, campaigns targeting risk-taking are sometimes aimed at improving the accuracy of social norm perceptions among at-risk groups and decreasing norms of acceptability. In doing so, the ultimate goal is to prevent the occurrence of problem behaviors (e.g., see Haines & Spear, 1996). In the case of eating disorders, then, it is important to explore the perceptions of young women about their own and others' bodies, what they believe to be acceptable in terms of bodies and diet behavior, and how these perceptions contribute to body esteem.

Two types of social norms have been described in the literature (Cialdini, Reno, & Kallgren, 1990). Injunctive norms refer to an individual's perceptions of the extent to which other people agree or disagree with a particular behavior. More specifically, this relates to perceptions of the "rightness" or "wrongness" of a behavior (Neighbors, Lewis, & Larimer, 2004). Conversely, descriptive norms refer to perceptions of other people's behavior. These norms typically address an individual's perceptions of the prevalence of a given behavior.

Injunctive and descriptive norms have both been found to predict the frequency and consequences of problem behavior (e.g., Larimer & Neighbors, 2003). For instance, erroneous social norms have been associated with college alcohol use (Perkins, Meilman, Leichter, Cashin, & Presley, 1999), substance use (Carter & Kahnweiler, 2000), gambling (Larimer & Neighbors, 2003), and cigarette smoking (Perry, Kelder, Murray, & Knut-Inge, 1992). Further, social norms related to thinness may contribute to the establishment of an unrealistic body ideal (Mussell, Binford, & Fulkerson, 2000). For instance, women tend to think of themselves as larger and others as thinner than reality (Fallon, 1987), overestimate the number of peers who have eating disorders (Mann et al., 1997), and think of themselves as being more overweight when in actuality they are underweight or at the normal weight (McCreary & Sadava, 2001). Kusch (2002) found that college women who overestimated what their female and male peers selected as the thin ideal were more likely to be dissatisfied with their body, concerned with appearance, and engaging in disturbed eating. Despite Berkowitz's (2003) own suggestion that social norms theory should be applied in the study of eating behavior and body image issues, little to no research has examined whether misperceptions regarding the prevalence and acceptability of disordered eating behavior may contribute to eating disorder symptoms.

Parents also may contribute to the establishment of social norms by serving as a reference group that communicates moral or behavioral guidelines to their children who are leaving for college (Perkins, 2002). This influence is believed to be small once adolescents reach high school (Beck & Treiman, 1996), though Lo (1995) found parental influence on drinking among first-year college students to be moderate, and higher for females.

Parental influence on eating behavior, even among children who are leaving for college, may be particularly problematic. Research on eating disorders indicates that

parents are instrumental in the development of body image in their children (Mussell et al., 2000). As with alcohol, eating disordered behavior may be modeled (Levine et al., 1994). For example, Pike and Rodin (1991) found that mothers of daughters with eating disorders were more likely themselves to be more eating disordered. They were also more likely than mothers of non-eating disordered daughters to poorly evaluate their daughters' attractiveness and think their daughters should lose more weight.

Parents may also impose norms for body image and eating behaviors by making direct comments about their child's weight. In a survey of 131 mothers and 89 fathers of fourth- and fifth-grade boys and girls, Smolak, Levine, and Schermer (1999) found that comments regarding their daughter's body or weight—particularly from mothers—seemed to have a greater effect on the child's beliefs and behaviors regarding weight and shape than did parental modeling. Comments, which can also take the form of encouragement to diet, have been shown among daughters to lead to a greater drive for thinness and body dissatisfaction (Wertheim, Martin, Prior, Sanson, & Smart, 2002). Adolescents who are repeatedly exposed to negative comments from parents about weight, shape, and eating have been shown to have a higher incidence of binge eating than adolescents who are not exposed to such repeated comments (Fairburn et al., 1998). Clearly, additional research on the impact of parental influence on disordered eating among college-aged adolescents is needed.

### **The Role of Parent and Peer Norms on Body Esteem**

Two possibilities arise in addressing social norms as they relate to young women's body esteem. First, as discussed above, women's own misperceptions of their body, of what others say about their bodies, and what others think about the acceptability of various weight control strategies may affect their body esteem. In other words, young women's beliefs that peers often make comments about their weight, when in fact this occurs fairly infrequently, may affect their body esteem. Here, perceptions of peers and parents are more important than the actual behavior enacted by peers and parents in influencing body esteem. These perceptions of what parents say become a benchmark or norm for the young woman, and this norm influences body esteem.

A second possibility is that women accurately perceive their parents' or peers' comments. These comments then influence their own norms for what is acceptable and correct and, in turn, influence their own body esteem. In this study, we ask direct questions about others' behavior: "my parents encourage me to diet" or "my parents make comments about my body." Therefore, it may be that norms arise from the direct influence of parents' and peers' comments and behaviors. Although self-report data cannot determine if women's perceptions of parents and peers are accurate, the variance in women's reports and their relationship to body esteem does inform social norm theory. That is, what women believe to be right vis-à-vis bodies, weight, and appearance influences their own esteem regarding these issues. In order to address this, additional issues arise.

The first question is to ask how accurate young women are in their perceptions of their own and others' bodies, weight, and attractiveness. Overall, it appears that both

men and women tend to misperceive weight and attractiveness, with women being more likely to think of themselves as being more overweight when in actuality they are underweight or at their normal weight (McCreary & Sadava, 2001). Furthermore, Mann et al. (1997) found that women overestimate the number of peers who have eating disorders. Therefore, it is clear that young women, like their male counterparts, are not always accurate in perceiving their own bodies and those of their peers.

Second, we might ask what body types young women find acceptable. Acceptability is another dimension of norms, one in which young women might look to their peers in order to understand how they should look and behave to achieve those looks. For example, Kusch (2002) found that college women who were dissatisfied with their body, concerned with appearance, and engaged in disturbed eating significantly overestimated what their female and male peers selected as the thin ideal. Therefore, not only may young women misperceive what is normal, they also appear to misperceive what is acceptable and appealing to others. The danger in misperceiving what peers think of as the thin ideal lies in the potential for those misperceptions to manifest in body esteem issues, which could ultimately lead to clinical and subclinical levels of disordered eating.

In addition to peer norms, we might also ask what contribution parental norms make to young women's body esteem. Research has indicated that parents play a critical role in the development of body image in their children (Mussell et al., 2000) and may model unhealthy eating behaviors (Levine et al., 1994; Paxton et al., 1991). It is less clear whether individuals' perceptions of their parents' norms toward thinness influence disordered eating behavior. In a longitudinal study examining the importance of risk factors for eating disorders among a sample of sixth- to ninth-grade students, the investigators found that body preoccupation and social pressure predicted the onset of eating disorders, but parental influences, including perceived parental weight, did not predict eating disorders. This finding has not been replicated in a college sample, where parental influence may manifest in unique ways. For example, incoming college freshmen will experience living on their own for the first time. It is possible that as incoming freshman spend less time with parents and more time with peers, the relative weight of each influence shifts towards peers. In addition, with this may come poor nutritional habits, weight gain, and increased social pressure to fit in due to the absence of daily, direct contact with family. Parents, themselves, may project pressures for their children to fit in and may comment on body weight changes (Smolak et al., 1999). It is important to note, however, that these data were collected when students had arrived on campus yet prior to classes beginning. In other words, it is possible that both parents and peers influence norms, a pattern that may or may not shift as the year progresses. In this study, we measured young women's reports of peer and parent norms. We do not have direct normative data (as we might from observation of parent and peer norms). There are two reasons that this is appropriate. First, in the literature on social norms, normative data is not typically measured through observation of actual norms but by self-report of peer and parent norms from the participant. Therefore, measuring norms indirectly, through self report, is the most common way of measuring norms. Second, perceptions



of norms are relevant because it is through those perceptions of, for example, how much peers value thinness that an effect could occur. In fact, it is unlikely that actual norms would have an effect if young women did not perceive them. Overall, then, we do have data suggesting how young women perceive their parents and peers to respond to issues of body appearance and weight in themselves and for others. Therefore, we advance the following hypotheses:

- H1: There will be a negative effect of perceived parent norms for thinness on the body esteem of young women.*
- H2: There will be a negative effect of perceived peer norms for thinness on the body esteem of young women.*

### **Mass Media and Body Image Satisfaction**

In the past decade, there has been a marked increase in research on the role of mass media in promoting the thin ideal, affecting body esteem and, ultimately, promoting eating disorders in young women. In fact, a review of correlational, longitudinal, and experimental research suggested that exposure to thin-depicting media, combined with a tendency to internalize societal pressures to be thin, consistently contributed to women's body dissatisfaction and eating dysfunction (Thompson & Heinberg, 1999). For example, Harrison and Cantor (1997) found a significant positive correlation between young women's exposure to thin-depicting media and eating disorder symptoms even after controlling for interest in body improvement media. These findings suggest that the effect of media exposure on eating disorders may, in fact, be causal. Harrison later replicated these findings (2000), this time with over 300 adolescent girls. Interestingly, the author also found that the relationship was stronger among older adolescents suggesting, perhaps that media images of thinness become internalized and accepted over time.

Botta (2003) has also found a relationship between exposure to thin media, especially in magazines, and body dissatisfaction and anorexic behaviors. In particular, she found that exposure to thin-depicting magazines consistently accounted for more variance in behavior among girls than boys. She also argued that a possible explanation for this is that girls may engage in more elaborate processing of media messages. This may result in a greater internalization of the messages conveyed in these magazines.

To understand this internalization of the thin ideal, we might look to cultivation theory (Gerbner, Gross, Morgan, Signorielli, & Shanahan, 2002). Cultivation theory predicts that the more media a person is exposed to, the more likely it is that their own view of reality mirrors that presented in the media. Furthermore, one underlying assumption of the original theory is that certain themes pervade television, and these repeated themes then influence real world perceptions of heavy viewers. In the case of body appearance, television presents the female body as considerably thinner than the average American woman. Certainly, young, attractive, very thin women appear more often on television than they exist in the real world. Cultivation theory would then argue that the omnipresent images of thin women on television would affect what

viewers think of as the normal female body. This is similar to social norms theory, in that both predict that individuals' misperceptions of what is acceptable or normal (from peers, parents, the media) may in fact impact their own perceptions and, perhaps ultimately, their behavior (Berkowitz, 2003). In fact, Nabi and Sullivan (2001) recently suggested that by combining cultivation theory with an assessment of individuals own norms and normative beliefs, we might better understand the process by which television viewing might eventually shape people's behaviors. Simply put, our beliefs about what is normal may come directly from our peers (i.e., social norms theory; see Berkowitz, 2003) or from media (i.e., cultivation; see Gerbner et al., 2002).

### Interpersonal Channels as a Mechanism

How might media portrayals contribute to social norms (for example, those for thinness)? Several studies have attempted to demonstrate the link and its possible mechanism, and found two possibilities. One is that interpersonal channels mediate the relationship between media and self-esteem. Many young women exist in a similar social environment to their peers and parents; therefore, it may be that those peers and parents are influenced by media norms for thinness. Their influence, in turn, affects the body image satisfaction of the young woman in question. Consistent with the classic Two-Step Flow model of mass communication, which argues that media influences opinion leaders who then affect others (Heath & Bryant, 2000), young women may ultimately be influenced by parents and peers who themselves are affected by media norms. Consider that McCabe & Ricciardelli (2001) have found that parents and peers can have a negative effect of the body esteem of young women. Similarly, media have been implicated in negative body esteem (Harrison, 2000). If, in fact, the social environment is the mechanism by which media influences body esteem, then when one controls for interpersonal norms and tests the residual relationship between mediated norms and women's esteem, the relationship between media and esteem should remain. If, on the other hand, the relationship between media and esteem disappears, it may be that media affect the greater social environment of young women, and then these media images are digested and used by parents and peers who influence young women. In other words, interpersonal norms mediate thin media norms. Therefore, we ask:

*R1: Do interpersonal norms mediate the relationship between media and body esteem?*

### Social Comparison as a Mechanism

If interpersonal channels do not fully mediate the influence of television and magazines, is it possible that another process influences how young women's body esteem is affected? Social comparison theory has been recognized by several scholars as a possible mediator between media exposure to images of the thin ideal and young women's body dissatisfaction (e.g., Botta, 1999; Harrison, 2000). Social comparison

theory (Festinger, 1954) suggests that individuals will compare themselves to others in order to assess their own competence and self worth in order to set goals and estimate the likelihood of achieving those goals. Several aspects of the theory are critical in understanding how media and interpersonal norms influence beliefs about the self. First, Festinger argued that social comparison arises when the evaluation of opinions or abilities is not feasible by testing directly in the environment. In the case of body esteem, thinness and attractiveness are highly subjective. In this way, they may be very susceptible to norms set by mediated others. Furthermore, factors such as the importance of the issue, its relevance, and attraction to the comparison group affect the strength of the comparison and any resulting desire to be like them. In other words, in the case of body esteem, the effect on women's esteem may well be heightened by the importance of mediated images to young women and the frequency with which they engage in social comparison to them.

In fact, social comparison has been implicated in the individual's development of self-identity and self-esteem (Stipek, Recchia, & McClintic, 1992). In understanding the comparison process and how thin-depicting media can affect body esteem and body dissatisfaction, it is useful to understand how young women might view these depictions. For example, Wood and colleagues (Wood, 1989, 1996; Wood & Taylor, 1991) argued that when viewers consume mediated images and note a mismatch between their own perceived attributes and those of the mediated images, they are motivated to overcome the mismatch. In other words, in the case of thin-depicting media, they are motivated to disparage their own image and emulate the thin ideal. The comparison, then, between one's own body and that of the nearly unattainable thin ideal may be the mechanism by which body dissatisfaction occurs in young women. In fact, Heinberg and Thompson (1992) found that social comparison to thin media figures contributed to eating disorder behavior in a sample of young women.

In addition, in an experimental test of the effect of mediated thinness on women's esteem, Thompson & Heinberg (1999) presented to women either appearance-related television commercials with an emphasis on thinness or non-appearance-related television advertisements. Individuals with higher initial levels of awareness of societal norms regarding thinness became more dissatisfied with their appearance following exposure to commercials illustrating thinness/attractiveness. Participants who were initially low on the awareness variable showed no change. Therefore, it appears that, perhaps through setting up unrealistic norms, exposure to images of thinness in the media can have a deleterious effect on the body image and esteem for at least some young women. In this case, it appears that the influence can be direct, but that for some women, the images are processed in a particular way, resulting in lower self-esteem. Although the study did not examine social comparison, it seems at least likely that higher initial levels of awareness of societal norms regarding thinness might result in greater social comparison.

Specifically, consider the choices of the young, female media consumer. Flipping through the pages of a fashion or celebrity magazine, she may look for the latest products, she might examine the clothing in the magazines, or, alternately, she might focus on the bodies, the thinness of the images. In this latter case, it is likely that

consumption of the body as image, and not of the clothing or products, may promote the comparison process, and this comparison process may lead to lowered body esteem. In other words, social comparison itself may be the mechanism by which body dissatisfaction occurs. Without the social comparison, thin-depicting images may have little or no effect. Therefore, we predict the following:

*H3: The effect of exposure to thin-depicting media on body esteem will be mediated by social comparison.*

## **Methodology**

### *Participants and Design*

All incoming female college freshman from a private university in the southeastern United States were invited to complete a survey during their freshman orientation testing time in August of 2005. The female participants comprising the current sample ( $N = 427$ ) were mostly homogenous with regards to race, with white students accounting for 89% of the sample and African Americans (4%), Hispanic (2%), Asian (2%), and Other (3%) comprising the ethnic categories of the remaining participants. Participant age was also fairly homogenous, with 100% being 18 years of age or older. Participant socio-economic status was gauged by the following single item, How would you describe your family's socio-economic status?, with response options of "upper" (18%), "upper middle" (55%), "middle" (22%), "lower middle" (4%), and "lower" (5%) SES. Participants completed an informed consent form that was approved by the University's Institutional Review Board prior to completing the survey. The survey generated demographic as well as cross-sectional data regarding a variety of risk factors related to disordered eating.

### *Procedures*

Participating students were surveyed during a university-sponsored freshman orientation session where the current instrument was completed in conjunction with other measures required by the university administration for internal purposes. For the current study, participants responded to questions about demographics, body esteem, frequency of participation in various healthy and risky behaviors, parent and peer norms, media exposure, and social comparison to media personalities.

### *Instrument*

#### *Demographics*

Participants were asked about their age, ethnicity, socioeconomic status, and high school grade point average. In addition, participants responded to items measuring sensation seeking and frequency of various risk taking behaviors. Results from analyses incorporating these variables were not used in the present study and will therefore be reported elsewhere.

### *Body-Esteem Scale*

Participants completed an adapted version of the Body-Esteem Scale for Adolescents and Adults (BESAA) (Mendelson, Mendelson, & White, 2001). This adapted version of the scale contains 23 items. Participants indicated their degree of agreement on five-point Likert scales ranging from 1 (never) to 5 (always), with negatively worded items being reverse-coded for consistency. Overall the complete scale maintained good reliability ( $\alpha = .92$ ), consistent with the findings from Mendelson et al. (2001). The BESAA subscales measures three dimensions of self-esteem: body-esteem appearance, body-esteem weight, and body-esteem attribution. Body-esteem appearance contained nine items that gauged participants' general feelings about their appearance (e.g., "I like what I look like in pictures,"  $\alpha = .76$ ). Body-esteem weight contained eight items designed to measure participants' satisfaction with their current weight (e.g., "I am preoccupied with trying to change my body weight,"  $\alpha = .90$ ). Body-esteem attribution measured participants' perceptions of evaluations attributed to others about their own body appearance (e.g., "Other people consider me good looking,"  $\alpha = .78$ ).

### *Peer norms*

The peer norms items were designed to measure both descriptive norms (i.e., perceptions of prevalence of a behavior) and injunctive norms (i.e., perceptions of acceptability of a behavior). As such, we measured three peer norm variables: peer acceptability norms, peer thinness norms, and peer norms of prevalence. These variables were measured using Likert-type items with possible responses ranging from one (strongly agree) to five (strongly disagree). Three items measuring thinness norms (e.g., "My friends think being thin is important") were reliable ( $\alpha = .88$ ,  $M = 2.981$ ,  $SD = 1.89$ ). The four items measuring peer acceptability norms (e.g., "My friends think bingeing and purging is acceptable") were reliable ( $\alpha = .76$ ,  $M = 3.75$ ,  $SD = 2.99$ ). The four items measuring prevalence also were reliable ( $\alpha = .70$ ,  $M = 2.27$ ,  $SD = 1.68$ ). Unlike the Likert-type items, these questions asked participants to state how many people their age participated in one of four disordered eating behaviors (e.g., "How many people your age do you think regularly..."): binge and purge to lose weight, diet to lose weight, exercise to purge food, and use laxatives to lose weight. Responses ranged on a five-point scale from one (none) to five (all).

### *Parent norms*

Three parent norms variables were measured: parent thinness norms, parent encouragement norms, and parent communicative norms. These variables were each measured using Likert-type items with possible responses ranging from one (strongly agree) to five (strongly disagree). The two items for thinness norms (e.g., "My parents think being thin is important") were reliable ( $\alpha = .88$ ,  $M = 3.41$ ,  $SD = 2.43$ ); the items for encouragement norms (e.g., "My parents encourage me

to diet,"  $\alpha = .80$ ,  $M = 3.35$ ,  $SD = 2.28$ ) and the items for communicative norms (e.g., "My parents make comments about my weight,"  $\alpha = .94$ ,  $M = 3.40$ ,  $SD = 2.44$ ) were also reliable.

### *Media exposure*

To measure participants' media consumption, items asked how frequently (1 = never, 5 = very often) participants read celebrity, fashion, news, and fitness magazines. Specifically celebrity magazines (e.g., "like *People* and *Us*,"  $M = 2.95$ ,  $SD = 1.18$ ), fashion magazines (e.g., "like *Glamour* or *Cosmo*,"  $M = 2.93$ ,  $SD = 1.19$ ), news magazines (e.g., "like *Time* and *Newsweek*,"  $M = 2.70$ ,  $SD = .99$ ), and fitness magazines (e.g., "like *Self*,"  $M = 1.98$ ,  $SD = 1.08$ ) were measured. General media exposure was measured using four single-item questions. In addition, on a scale from 1 (less than 30 minutes) to 5 (more than 5 hours), participants reported their overall television exposure ( $M = 1.95$ ,  $SD = .95$ ) and music video exposure ( $M = 1.12$ ,  $SD = .38$ ).

### *Social comparison to media figures*

This variable was measured with four items regarding the frequency of social comparison (1 = never to 5 = very often) and asked questions such as "How often do you compare your BODY to actors and celebrity bodies that you see on TV, in magazines, and in movies?" and "How often do you compare your LOOKS to actors' and celebrities' looks that you see on TV, in magazines, and in movies?" Reliability for the four items was very good ( $\alpha = .92$ ).

## **Results**

Hypotheses one and two were related to the effect of non-mediated norms on appearance and weight esteem. Specifically, we predicted that there would be a negative effect of thin parent norms and thin peer norms on young women's esteem. To test each of the two hypotheses, we ran hierarchical multiple regressions, one with appearance-esteem and another with weight-esteem as the dependent variable. For hypothesis one, parent norms was the independent variable of interest; for hypothesis two, peer norms was the independent variable of interest. In each case, we controlled for ethnicity, socioeconomic status, and most recent GPA (high school) on step one and entered the variable of interest on step two.

Overall, there was no effect of the control variables on appearance esteem ( $R^2 = .01$ ,  $F(3, 317) = .93$ ,  $p = ns$ ) or on weight esteem ( $R^2 = .01$ ,  $F(3, 317) = .99$ ,  $p = ns$ ). However, on step two, parent norms were significantly negatively related to appearance esteem ( $R^2 = .12$ ,  $F(1, 316) = 38.73$ ,  $p < .001$ ;  $B = -.33$ ,  $p < .001$ ) and weight esteem ( $R^2 = .16$ ,  $F(1, 316) = 56.83$ ,  $p < .001$ ;  $B = -.39$ ,  $p < .001$ ). Therefore, hypothesis one is supported, and parent norms are negatively related to the esteem of young women.

To test hypothesis two, peer norms were examined. On the second step, peer norms were significantly negatively related to appearance esteem ( $R^2 = .12$ ,  $F(1, 314) = 44.41$ ,  $p < .001$ ;  $B = -.35$ ,  $p < .001$ ) and weight esteem ( $R^2 = .13$ ,  $F(1, 315) = 41.96$ ,  $p < .001$ ;  $B = -.34$ ,  $p < .001$ ). Therefore, hypothesis two is supported, and peer norms are also negatively related to young women's esteem.

Last, we examined the influence of media images, which might be referred to as mediated norms, on the esteem of young women. First, we asked if interpersonal norms (parents and peers) mediated the relationship between media and esteem. Second, we asked if the relationship would be statistically mediated by social comparison. To test these questions, we used the procedure suggested by Baron and Kenny (1986) to test for statistical mediation. This was done twice, once to look at the role of interpersonal norms in mediating the relationship and again to look at the role of social comparison.

First, we examined interpersonal norms as a mediator. We found that the independent variables were correlated with the outcome variables. Specifically, each of the thin-depicting and -promoting magazine genres was related to appearance and weight esteem (see Table 1); however, television exposure was not. Therefore, the television exposure variable was dropped from further analysis. Next, the celebrity and fashion magazines were significantly correlated with peer norms but not with parent norms (see Table 1). Lastly, we conducted a hierarchical regression, controlling for the mediating variables of interpersonal norms (parents and peers). We demonstrated that the relationship between the thin-depicting media and esteem held even when interpersonal norms were controlled for. Specifically, in step one, there was a significant relationship between interpersonal norms and appearance esteem ( $R^2 = .20$ ,  $F(2, 406) = 16.30$ ,  $p < .001$ ). Both peer norms ( $B = -.36$ ,  $p < .001$ ) and parent norms ( $B = -.15$ ,  $p < .001$ ) were related to appearance esteem; however, there is no effect of the media variables ( $R^2$  change = .01,  $F(3, 404) = .94$ ,  $p = ns$ ) on appearance esteem. Specifically, neither exposure to fashion ( $B = -.06$ ,

**Table 1** Zero Order Correlations between Media Exposure, Esteem, and Social Comparison ( $N = 417$ )

	1	2	3	4	5	6	7	8
<b>Celeb mags</b>								
Fashion	.60 <sup>†</sup>							
Fitness	.12*	.21 <sup>†</sup>						
TV	.14 <sup>†</sup>	.02	-.10*					
App esteem	-.12*	-.14 <sup>†</sup>	-.15 <sup>†</sup>	-.02				
Wt esteem	-.12*	-.13 <sup>†</sup>	-.21 <sup>†</sup>	.02	.76 <sup>†</sup>			
Social comp	.21 <sup>†</sup>	.23 <sup>†</sup>	.17 <sup>†</sup>	-.05	-.46 <sup>†</sup>	-.41 <sup>†</sup>		
Parent norm	.00	.06	.00	.11*	.36 <sup>†</sup>	.42 <sup>†</sup>	.33 <sup>†</sup>	
Peer norms	.13*	.11*	.02	.19*	.38 <sup>†</sup>	.37 <sup>†</sup>	.31 <sup>†</sup>	.45 <sup>†</sup>

\* $p < .01$ , <sup>†</sup> $p < .001$ .

$p = ns$ ), celebrity  $B = -.06$ ,  $p = ns$ ), nor fitness magazines ( $B = -.03$ ,  $p = ns$ ) is related to esteem, despite the relationships in the zero-order correlations. Therefore, it appears that interpersonal norms do mediate the relationship between media and appearance esteem. For weight esteem, the same process was observed. In step one, there was a significant relationship between interpersonal norms and weight esteem ( $R^2 = .22$ ,  $F(2, 406) = 58.96$ ,  $p < .001$ ). Both peer norms ( $B = -.38$ ,  $p < .001$ ) and parent norms ( $B = -.25$ ,  $p < .001$ ) were related to weight esteem; however, there is no effect of the media variables ( $R^2$  change = .00,  $F(3, 404) = .100$ ,  $p = ns$ ) on weight esteem. Specifically, neither exposure to fashion ( $B = -.06$ ,  $p = ns$ ), celebrity  $B = -.03$ ,  $p = ns$ ), nor fitness magazines ( $B = -.01$ ,  $p = ns$ ) are related to weight esteem, despite the relationships in the zero-order correlations. Therefore, it appears that interpersonal norms do mediate the relationship between media and esteem.

Regarding social comparison as a mediator, we conducted a hierarchical regression, controlling for social comparison. We demonstrated that the relationship between the thin-depicting media and esteem disappeared when social comparison was controlled. Specifically, in step one, there was a significant relationship between social comparison and appearance esteem ( $R^2 = .22$ ,  $F(1, 407) = 11.58$ ,  $p < .001$ ;  $B = -.45$ ,  $p < .001$ ); however, there is no effect of the media variables ( $R^2$  change = .00,  $F(3, 404) = .94$ ,  $p = ns$ ) on appearance esteem. Specifically, neither exposure to fashion ( $B = -.01$ ,  $p = ns$ ), celebrity  $B = -.00$ ,  $p = ns$ ), nor fitness magazines ( $B = -.07$ ,  $p = ns$ ) is related to esteem, despite the relationships in the zero-order correlations.

For weight esteem, the pattern was similar, but not identical. Specifically, when weight esteem is the dependent variable, there was a significant relationship between social comparison and weight esteem ( $R^2 = .17$ ,  $F(1, 407) = 82.05$ ,  $p < .001$ ;  $B = -.41$ ,  $p < .001$ ); however, the relationship between media exposure was not entirely insignificant on the second step. Media variables were somewhat related to weight esteem ( $R^2$  change = .02,  $F(3, 404) = 3.83$ ,  $p = .01$ ). Specifically, neither exposure to fashion ( $B = -.01$ ,  $p = ns$ ) nor celebrity ( $B = -.04$ ,  $p = ns$ ) magazines had any remaining effect; however, fitness magazines were somewhat negatively related to weight esteem ( $B = -.15$ ,  $p < .01$ ). This pattern of results suggests that for appearance esteem, social comparison mediates the effect of media on esteem. However, for weight esteem, the same can only be said for celebrity and fashion magazines. Fitness magazines appear to operate somewhat differently. Social comparison does not fully mediate the relationship between exposure and weight esteem. Rather, the relationship between the two variables is direct.

## Discussion

### *Summary of Findings*

This study examined the contribution of norms, both interpersonal and mediated, to young women's body esteem. In addition, we examined the role of interpersonal



norms and social comparison as a mediator for the relationship between media norms and lowered body esteem. Several findings were notable. First, interpersonal norms do have a significant and moderate relationship with esteem. Young women whose peers and, interestingly, parents valued thinness and made comments about body appearance had lower self-esteem. In addition to these "live" norms, however, mediated norms also were related to lower appearance and weight esteem. Specifically, exposure to fashion, celebrity, and fitness magazines had a negative effect on young women's appearance esteem; however, this relationship was mediated by two processes. One was interpersonal norms. Perceptions of interpersonal norms from both parents and friends mediated the relationship between exposure to thin media images and body satisfaction. This suggests that the social environment, which includes the parents and peers of a young woman, can either reinforce or perhaps negate negative effects of media on body esteem. In cases where peers and parents support the thin ideal, value it and comment on the appearance of young women, the media images may be further reinforced. However, that is not the only process at work. The social environment, which includes mass media, is also mediated by processes internal to the woman. In other words, her own level of social comparison is another mechanism that can either reinforce or negate effects. However, in the case of social comparison, the process appeared to work somewhat differently for fitness magazines, especially in relationship to weight esteem. In this case, the relationship between exposure and esteem was direct and held up even when social comparison was controlled for.

### *Limitations*

This project is part of an ongoing, longitudinal study of eating disorders on one college campus. Therefore, there is still an opportunity to explore this area of research and learn from the limitations of this project. First, and perhaps most importantly, when this project was conceptualized, we did not use social comparison theory for both media and peer norms. It will be interesting to explore, therefore, how social comparison to parents and peers affects body esteem in young women. It seems likely that women compare themselves to figures other than those in the media, and future projects should explore their use of social comparison across a wide spectrum of individuals.

Second, this research is based on cross-sectional data. Future projects using the same sample will allow us to examine the genesis and, importantly, the development of body esteem and eating disorders when young women first acculturate to a college campus.

Third, this research was conducted on one college campus with the purpose of exploring body image and eating disorders within this campus community. Therefore, the generalizability of the findings is in question. Future research should examine exposure to media, peer, and parent norms and social comparison to each of these and their cumulative effect on the body esteem of women.

Fourth, due to concerns outlined by the proposal reviewers of the sponsoring university, we were not allowed to directly ask students questions regarding their height and weight, both of which are used to compute an individual's body mass index (BMI) (McCreary & Sadava, 2001). In fact, funding was contingent on making certain revisions, and the removal of these outcome measures was one of the recommendations of the reviewers. However, we do have access to aggregate student health data collected by the university for internal purposes that reports body-mass index information. Given that the data in the present study represent approximately 90% of the freshman female population, these population data are relevant. This data show that for undergraduate, freshman females approximately 10% are underweight, 78% are at their ideal weight, 11% are overweight and approximately 1% is considered obese according to the BMI. However, of the same population, 17% of those females who are at their BMI desired weight indicated that they themselves feel they are overweight, and 38% of females who are underweight according to the BMI reported that they feel like they are at their correct weight. Both of these findings indicate discrepancies between BMI and weight perception for the females studied—and both are in the direction of desire for thinness. The sample included in the current study was drawn from this population, as we felt the above statistics provided warrant for our investigation.

### Conclusions and Implications

Although earlier research (e.g. Harrison & Cantor, 1997) has shown that exposure to fashion and fitness magazines affects the body esteem of young women, little research has conceptualized exposure to media images and exposure to real life models such as parents and peers under the same theoretical framework. In this case, both mediated and non-mediated images are seen to affect norms. Furthermore, the role of social comparison in enhancing the relationship between image exposure and body esteem suggests that the concept of norms may well serve as a fruitful avenue for understanding how young women establish their own sense of self- and body esteem. Lastly, in this study, the social environment is seen to include parents, peers, and media. Media are not consumed in a vacuum but are further interpreted and perhaps reinforced by parents and peers.

This finding is an important one. After all, parents, peers, and mass media are often linked in a complex web of effects, with parents and peers focusing on, interpreting, and perhaps reinforcing various media images for a young woman. However, it is the interpersonal norms, not the mediated ones, that we are most likely able to control. Educating peers and parents may well be a more fruitful avenue for change than exerting influence over mass media. Emphasizing the lack of reality of mediated norms, as well as their health risks to young adults and to parents, while teaching them to consume media with a critical eye is not only a real solution, but one that is practical. Recognizing the importance of interpersonal norms may be the first step in mitigating the effect of media norms.

In the past, critiques have been leveled at communication research for treating mass and interpersonal communication as distinct areas of research, each with its own set of theories and largely independent empirical findings (O'Sullivan, 1999). In some cases, this separation is necessary in terms of theory building. However, there are many possibilities for cross-pollination, and norm theory is one of them. In attempting to understand how adolescents, for example, develop a sense of what is normative—whether that information is gleaned from the media or from their every day interactions—and then, furthermore, understanding how norms affect their own self-perception, we can gain a better understanding of how behavior, especially risky behavior, is adopted.

Social comparison is another area that can offer insight into how adolescents develop body esteem. Social comparison itself has been found to occur through comparison to mediated and non-mediated others. In fact, Jones (2001) has found that although adolescent boys are more likely to compare themselves to peers on issues regarding body height and weight, adolescent girls are equally likely to compare themselves to peers and models. This occurs despite the fact that models frequently do not have bodies that are achievable for the average young woman. As a result, and as social comparison theory would suggest, it is this comparison process, and not exposure to models per se, that can encourage and build body esteem or alternately decrease body esteem. Although the use of social comparison theory in understanding responses to media images is not new (e.g., Botta, 1999), it may be useful to explore ways in which norm theory and the social comparison process can together explain adolescent female's responses to overly thin media images. Again, health educators may garner effective outcomes by emphasizing the importance of choosing healthy social comparison figures. Although it is unlikely that we can eliminate social comparison, we can encourage young women to admire and socially compare themselves to those who are psychologically and physically fit.

Last, from a practical perspective, eating disorders and the associated low body esteem can be viewed from the perspective of adolescent risk taking. Exposure to media images, peer and parent encouragement of thinness, and social comparison to thin norms all contribute to low esteem. If, as has been demonstrated in past research (Stice et al., 2000), low esteem leads to disordered eating, then the low esteem and the behavior itself is risky. The present research suggests that there are at least two ways to address this issue. First, the mechanism of social comparison might be addressed. By encouraging females to look to positive, healthy role models, or, importantly, by encouraging them to seek only to base their esteem on more socially valuable attributes (e.g., strength, skills), the mechanism of social comparison can be addressed. Second, the issue of norms can be utilized. If young women, their peers, and their parents value and see as accurate the media's representation of thinness, then the norms that young women see are not healthy. One way of addressing this issue is by taking on the norm itself. Those who have influence, such as parents and the media, might become more aware of the need to emphasize health (and not thinness) and strength (and not traditional beauty) as valuable and, importantly, normative qualities. After all, social comparison and the role of norms in establishing

body esteem do not have to have a negative outcome if the role models themselves are not problematic.

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