Social Comparison and Body Image: Attractiveness Comparisons to Models and Peers Among Adolescent Girls and Boys

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Relations among body image satisfaction and social comparisons to either same-sex peers or media models were examined in 2 studies of adolescent boys and girls. In the first study, 9th and 10th graders described their conceptions of attractiveness for same- and opposite-sex adolescents. These attractiveness attributes were then used in Study 2 in which 7th- and 10th-grade boys and girls reported on social comparisons to models/celebrities and same-sex peers. Body dissatisfaction was also assessed. The results confirmed that both same-sex peers and models/celebrities were the targets of social comparisons for physical attributes, but comparisons on personal and social attributes were more likely directed toward same-sex peers. For boys and girls, weight comparisons to both peer and model targets were primary correlates of body dissatisfaction. In addition, shape comparisons reported by the girls and facial comparisons endorsed by the boys also related to body dissatisfaction. Gender differences in social comparison indicated that girls reported more social comparisons across targets and attributes. Results are discussed in terms of the role of social comparison and peer context for body image during adolescence.

KEY WORDS: adolescent girls and boys; social comparison; body image.

Body image is an important aspect of self-representation and self-evaluation during adolescence. Although body image is a multidimensional construct, it is most frequently defined as the degree of satisfaction with one’s current physical self (size, shape, general appearance; Cash & Deagle, 1997). The

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One factor that has been considered a central contributor to body image is social comparison. Social comparison refers to the cognitive judgments that people make about their own attributes compared to others. The comparisons are pivotal to self-evaluations and depend less on objective circumstances than on how one judges the self in relation to others on a particular attribute (Wood, 1989). In theory, individuals prefer to compare themselves to others who are similar for the attribute of concern (Miller, Turnbull, & McFarland, 1988). Social comparison can also be employed to gather information about highly valued attributes, social expectations, and norms (Ruble, 1983; Wood, 1989) so that comparisons may be made to a variety of targets.

The empirical relationship between social comparison and body image has been evaluated among college students, primarily for women. The general finding has been that females who have reported more appearance-related social comparisons have been more likely to be dissatisfied with their body images (Faith, Leone, & Allison, 1997; Stormer & Thompson, 1996; Thompson, Coovert, & Stormer, 1999). The linkage between social comparison and negative body image may be enhanced in the research because the targets of the appearance comparisons have frequently been models and celebrities presented in the media (Botta, 1999; Taylor et al., 1998). Media images of thin females and muscular males represent idealized versions of physical attractiveness. Analyses of appearance magazines have revealed a steady bombardment of images that have underscored the importance of idealized appearance (Cusumano & Thompson, 1997; Spitzer, Henderson, & Zivian, 1999). The repeated media images of thin females and muscular males make these forms seemingly the standard of attractiveness. Social comparison to these idealized images then appears to promote a discrepancy between the attractiveness of self and other, leading to a more negative evaluation of self.

The existing research provides evidence supporting the relevance of social comparison for body image evaluation. There are, however, several limitations to note. First, there is little information on appearance-related social comparisons during adolescence even though there are clear indications that social comparison is employed by early adolescents to evaluate their academic competence among peers (Ruble, 1983). Given the physical changes associated with puberty and the importance of appearance for self-esteem, knowledge about the development of appearance social comparison for both boys and girls may be particularly helpful in understanding the
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dynamics associated with the changes and expectations surrounding body image.

Second, previous research has not considered the role of social comparison in the body image satisfaction of males so that gender differences and similarities in social comparison have not been explored. Although the body satisfaction has typically been higher among males than among females, the body image concerns of males have reportedly increased in recent years and have been linked to adjustment issues (Abell & Richards, 1996; Cohane & Pope, 2001; Lerner et al., 1991). Given the significant relationship between social comparison and negative body image in college women, it is important to evaluate the role of social comparison in the self-evaluation of body image for adolescent males as well.

Third, existing research has focused primarily on models/celebrities as targets for appearance comparisons during adolescence. However, comparison targets can be selected not only from the distal world of the media, but also from everyday life. Peers are a vital part of the lives of adolescents and play an increasingly prominent role in defining social expectations, establishing identity, and evaluating self (Brown, Mory, & Kinney, 1994). Feeling accepted and supported by friends and classmates is indeed one of the central concerns of adolescents (Bukowski, Hoza, & Boivin, 1993). Furthermore, studies have indicated that students at a young age are cognizant of the linkage between conforming to appearance expectations and acceptance among peers (Oliver & Thelen, 1996). During adolescence, girls have reported that they feel like they are being judged on appearance and are pressured by peers to conform to appearance expectations (Merten, 1996; Milkie, 1999; Paxton, Schutz, Wertheim, & Muir, 1999; Taylor et al., 1998).

Given that appearance is one of the potential routes to acceptance and popularity, social comparison becomes a relevant mechanism for learning about the appearance-related social expectations among peers and for evaluating the self in terms of those standards. Yet peers as targets of social comparison have not figured prominently in the literature. When classmates have been distinguished as targets of appearance comparisons among college women, these comparisons have resulted in heightened body dissatisfaction (Heinberg & Thompson, 1992a, 1992b). Unfortunately, research has not focused on the frequency with which adolescent girls and boys select peers as targets of social comparison compared with models and celebrities.

Fourth, previous research has not specified the particular attractiveness attributes that are involved in appearance social comparisons, but have assessed attractiveness as a global phenomenon. However, reliance upon such a global approach does not permit an analysis of the relevance of various
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attributes for social comparison processes. Attention to specific attributes is important because gender differences in the attributes contributing to attractiveness and body satisfaction have been noted. For example, personality characteristics have been confirmed as determinants of physical attractiveness ratings, especially those made by college females (Jensen-Campbell, Graziano, & West, 1995). Furthermore, previous research has identified gender differences in the attributes associated with body image. Weight has been a primary feature predicting body dissatisfaction among females whereas the attractiveness concerns of males have been associated with height and shoulders/muscular shape (Abell & Richards, 1996; Franzoi & Herzog, 1987; Graziano, Brothen, & Berscheid, 1978). It is through examining specific attractiveness attributes that a better understanding of social comparison and body image for adolescent boys and girls will be possible.

The purpose of the current research was to overcome limitations in previous studies by examining attractiveness social comparison during adolescence through the self-reports of boys and girls from 7th and 10th grades. The research was guided by four questions. What are the attributes of attractiveness as defined by adolescents? Are there gender differences in these attractiveness attributes? Are there differences in the frequency with which adolescent boys and girls report same-sex peers or models as targets of social comparisons? Are there differential relationships in targets/attributes of social comparison and body image satisfaction?

The answers to these questions were obtained in two separate studies. In the first study, participants described their conceptions of attractiveness for same- and opposite-sex adolescents. These attractiveness attributes were then used in Study 2 to assess the self-reported frequency with which adolescents compared themselves to model/celebrities or peers and to determine the relationship between social comparison and body image satisfaction for boys and girls.

STUDY 1

The first goal of this initial study was to identify the features that define ideal attractiveness for adolescents. Previous studies that have assessed cultural standards or ideals have either been limited to college students who were provided a specific set of attributes such as weight or shape (Fallon & Rozin, 1985) or a standardized list of body parts for participants to evaluate (Franzoi & Herzog, 1987). These constrained approaches have not necessarily captured the range of attractiveness features that may be salient to adolescents. Therefore, an open-ended format was used to elicit the attractiveness
attributes so that the elements most central to adolescents’ ideal attractiveness conceptions could be identified.

An additional purpose of this study was to examine the gender differences and similarities in the conceptions of attractiveness among teenage boys and girls. As noted earlier, there are gender differences in the attributes that contribute to attractiveness judgments. It is unclear from existing research if both female and male adolescents endorse these attractiveness attributes for same- and opposite-sex peers. Even though there is some evidence of congruence in the physical features defining attractiveness (Franzoi & Herzog, 1987) for college males and females, other research reveals that adolescents (Cohn et al., 1987) and college students (Fallon & Rozin, 1985) hold distorted perceptions of opposite-sex preferences. In addition, non-physical characteristics have been identified as important determinants of physical attractiveness judgments, especially those made by females (Jensen-Campbell et al., 1995).

**Method**

**Participants**

The sample included 42 girls and 38 boys in 9th and 10th grades of a public high school. The participants were 98% White and middle- to upper-middle class. Passive parental consent and student assent were provided.

**Measures**

*Attractiveness Attributes.* In classroom settings, the students responded to a survey in which they were asked to write a description of their ideal image of attractiveness for both a teenage girl and a teenage boy. In this way, the same-sex and opposite-sex attractiveness conceptions were obtained from both boys and girls.

The open-ended, written responses were reviewed to establish conceptual categories for the attractiveness attributes. Responses were then coded into eight mutually exclusive categories representing physical attributes (height, weight, shape, facial features) and personal/social attributes (personality, intelligence, style, popularity). A complete description of the categories is presented in Table I. All responses that did not fit into one of these categories were coded as “other.” Students received a score of “1” if a category was presented in the description, regardless of the number of times the category was represented. Interrater reliabilities between two coders were calculated on 25% of the protocols and ranged from 81 to 94% agreement.
Table I. Categories for Attractiveness Attributes

1. Height: Aspects of stature, for example, tall/short, average height, or a specific height (e.g., 5'8")
2. Weight: Aspects of heaviness, for example, slim, not fat, not chunky, average weight, or a specific weight (e.g., 120 pounds)
3. Shape/build: Aspects of form or configuration of body (e.g., girls: body in proportion to bone structure, small frame, nice figure; boys: good muscle tone, muscular built)
4. Face: Description of facial features, for example, pretty, good-looking, good complexion, strong chin
5. Personality: Aspects of personality and identity, for example, nice, friendly, outgoing, look happy, stable, no ego, know who they are
6. Intelligence/achievement: Aspects of school performance and intelligence, for example, good student, smart, "A" student
7. Style: Aspects of grooming and clothes, for example, dresses well, grooms well, dresses "cool"
8. Popularity: Aspects of peer relationships, for example, has friends, is popular
9. Other: Aspects that were not coded into any of the previous categories

Results

Attractiveness Features for Teenage Girls

Table II presents the percentage of boys and girls who indicated that physical and personal/interpersonal features were associated with ideal attractiveness features of a teenage girl. An inspection of the percentages and the outcomes of chi-square tests revealed that both adolescent girls and boys endorsed height, weight, and facial characteristics as prominent attractiveness features for females.

The personal/social attributes of female attractiveness revealed distinct gender differences. More girls than boys consistently incorporated

<table>
<thead>
<tr>
<th>Ideal teenage girl features</th>
<th>Girls (%)</th>
<th>Boys (%)</th>
<th>Ideal teenage boy features</th>
<th>Girls (%)</th>
<th>Boys (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical attributes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>45</td>
<td>32</td>
<td>51</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>59</td>
<td>57</td>
<td>17</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Shape/build</td>
<td>08</td>
<td>14</td>
<td>83</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Face</td>
<td>83</td>
<td>87</td>
<td>93</td>
<td>50*</td>
<td></td>
</tr>
<tr>
<td>Personal/social attributes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personality</td>
<td>80</td>
<td>68</td>
<td>78</td>
<td>37*</td>
<td></td>
</tr>
<tr>
<td>Intelligence</td>
<td>43</td>
<td>22*</td>
<td>34</td>
<td>13*</td>
<td></td>
</tr>
<tr>
<td>Style</td>
<td>40</td>
<td>16*</td>
<td>32</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Popularity</td>
<td>23</td>
<td>05*</td>
<td>15</td>
<td>07</td>
<td></td>
</tr>
</tbody>
</table>

*Significant gender difference, ps at least <.05.
these features into their descriptions of attractive females. Specifically, more girls mentioned intelligence, $\chi^2(1, N = 77) = 3.8, p < .05$, style, $\chi^2(1, N = 77) = 5.3, p < .02$, and popularity, $\chi^2(1, N = 77) = 4.9, p < .03$, as elements of female attractiveness. The one arena of agreement for both boys and girls was that a girl’s personality was a defining element for female attractiveness.

**Attractiveness Features for Teenage Boys**

Height and shape/build were the more central features of agreement among boys and girls when defining male attractiveness. There was also gender concordance that weight was of lesser importance. The one distinct gender difference in the description of male physical features was that girls mentioned facial features nearly twice as often as the boys, $\chi^2(1, N = 71) = 16.97, p < .001$. The girls were more consistent in including facial characteristics for boys and girls whereas the boys’ descriptions revealed a clear difference across targets.

Gender differences emerged again for the personal/social features. More girls than boys included personality, $\chi^2(1, N = 71) = 12.42, p < .001$, and intelligence, $\chi^2(1, N = 71) = 3.97, p < .05$, in their conceptions of the attractiveness ideal for teenage males.

**Discussion**

This study indicates that males and females use multiple attributes to define attractiveness during adolescence. Attractiveness attributes encompass physical, personal, and social dimensions so that the conceptualization of ideal attractiveness reflects the “whole” person. Still it was for the physical attributes that the clearest gender similarity emerged. Adolescent girls and boys value height and facial attributes as common expectations for defining attractiveness in same- and opposite-sex peers. They also evaluate attractiveness for girls in terms of weight and for boys in terms of build. Without a standardized format constraining or influencing response possibilities, both girls and boys generated remarkably similar attractiveness attributes at remarkably similar levels for ideal male and female teenagers.

A note of caution is in order. The percentages for the attractiveness features were derived from a rather small and limited sample. This limitation can affect the ability to confirm gender differences and to generate stable estimates that are generalizable. Still the results are compatible
with previous research with college students that has noted the consensual nature of attractiveness standards among males and females (Franzoi & Herzog, 1987; Parker et al., 1995). The results from the current study suggest that similar standards of physical attractiveness are evident for ideal visions of both adolescent boys and girls as generated by both males and females.

Gender similarity was not as evident for the Personal/Social attributes of attractiveness. Although it was notable that physical features alone did not define attractiveness, it was the girls who were more likely to include these attributes in their visions of adolescent attractiveness. This pattern of results conforms to the gender differences that have emerged from other studies on attractiveness (Feingold, 1990; Graziano, Jensen-Campbell, Shebilske, & Lundgren, 1993). The present study contributes to this body of research by substantiating that young adolescent girls incorporate several personal and social attributes into their judgments of attractiveness for females and males. From a developmental perspective, it is interesting and important that a broad range of characteristics is clearly part of the attractiveness conceptions of adolescents as they begin to engage in the tasks of self-definition and evaluation. It would seem that adolescents not only have multiple dimensions on which they base their self-worth (Harter, 1998), but that they further differentiate within domains in ways that have implications for self and other. In the case of attractiveness, the greater array of ideal features may also carry with it the burden of greater expectations for self and other, particularly for the adolescent girls.

STUDY 2

The findings from Study 1 verified the commonality in the conceptions that form individual adolescent’s ideal images of physical attractiveness regardless of gender. Physical attractiveness was not just in the eye of the beholder in this sample, but had a solid consensual basis that was shared among adolescents. It is not known, however, if these features are used in appearance-related social comparisons, if they are relevant across targets of comparison, or if they are related to body satisfaction. Therefore, the purpose of Study 2 was to examine the self-reported frequency of social comparisons to models/celebrities and same-sex peers across the attractiveness features for boys and girls.

Because of the importance of peers in the lives of adolescents and their greater similarity as social comparison targets (Miller et al., 1988), it was predicted that peers would be the more frequent targets of social comparison than models, especially for the personal/social attributes. These attributes
correspond to arenas of social status and organization within the school context and represent central issues in the lives of many adolescents (Brown et al., 1994; Youniss, McLellan, & Strouse, 1994).

Gender differences in the rates of social comparison were also expected. The greater cultural emphasis upon physical attractiveness for women was the basis for predicting that girls would report higher levels of social comparison. At the same time, because of the importance of body image for self-evaluation for both males and females, it was expected that attractiveness-related social comparisons would be related to body dissatisfaction regardless of gender. The salient attributes, though, would vary by gender such that weight would be the more prominent contributor for girls and muscular build for boys.

Method

Participants

The sample included 174 seventh graders (92 girls and 82 boys, Mean age = 12.6 years) and 241 tenth graders (123 girls and 118 boys, Mean age = 15.5 years). The students were primarily from middle- to upper-middle-class backgrounds. Self-reports of ethnic background revealed that the majority of the students were White (71%). The sample also included Asian (18%), Hispanic (3%), and African American (1%) respondents. Participants provided parental consent and student assent.

Measures

The questionnaires were administered in regular class periods. Only a portion of the measures is reported here.

Social Comparisons to Models and Peers. Participants were asked to rate how frequently they compared themselves to two different targets (models or peers) on the attractiveness attributes identified in Study 1. One item was made gender relevant: Girls rated “shape” as an attribute whereas boys rated “build.” Students indicated how often they compared themselves with models/celebrities by rating each feature on a scale from 1 (Never) to 5 (A lot). The students also rated the similar set of appearance attributes in terms of same-sex peers at schools. The scales for models and same-sex peers were presented separately at different points in the questionnaire. Order of presentation was randomly assigned.

Body Image Satisfaction. The Body Dissatisfaction Scale from the Eating Disorder Inventory (Garner, Olmstead, & Polivy, 1983) evaluated the level of satisfaction with general shape and specific body parts. The items on
hips and thighs from the original scale were retained for the girls, but were altered for the boys to assess their satisfaction with chest and bicep size. The selection of these specific body parts for the boys was based conceptually on the relevance of upper body muscularity for boys and empirically on factor loadings for evaluating male body esteem (Franzoi & Shields, 1984). The final scales had adequate internal reliability for girls ($\alpha = .88$) and boys ($\alpha = .82$).

**Body Mass Index.** Body size has been implicated in the development of body image dissatisfaction (Rosenblum & Lewis, 1999). Therefore, body mass index was used in the design as a control variable. Previous research has established that self-reported weight and height are reliable (Brooks-Gunn, Warren, Rosso, & Gargiulo, 1987). From the students’ self-reported height and weight, a body mass index was computed using the formula, Body Mass Index (BMI) = kg/m².

### Results

**Social Comparisons to Models/Celebrities and Peers**

A series of Gender (2) $\times$ Grade (2) $\times$ (Target) (2) repeated-measures ANOVAs evaluated differences in the levels of reported social comparison to models and peers on Physical Attractiveness (height, weight, shape, and face) and Personal/Social Attributes (style, personality, intelligence, popularity). Repeated-measures analyses are the appropriate technique when comparing similar measures rated by the same individuals. Because of the multiple number of analyses, Bonferroni’s correction was used to set the significance level at $p < .002$.

Table III presents the descriptive statistics for the model and peer target comparisons. The results from the within-subject analyses indicated that when adolescents reported on their physical attributes, it was the same-sex peers at school who were more likely to be comparison targets for height, $F(1, 407) = 112.49$, $p < .0001$, and weight $F(1, 407) = 38.18$, $p < .0001$ (see Table III for means). The significant Target $\times$ Gender interactions revealed that the same-sex peer focus was especially true for the weight and height attributes among the boys, Target $\times$ Gender: Height, $F(1, 407) = 14.60$, $p < .0001$; Weight, $F(1, 407) = 12.13$, $p < .001$. Comparisons for weight among the girls though were equally likely to occur for models and same-sex peers. In addition, both girls and boys were equally likely to compare themselves to models and peers when the attributes were shape/build and face.

Social comparisons for personal/social attributes, in contrast, were nearly always reported at higher levels for same-sex peers at school.
Table III. Means and Standard Deviations for Social Comparison to Models and Same-Sex Peers by Gender

<table>
<thead>
<tr>
<th>Physical attributes</th>
<th>Models celebrities</th>
<th>Same-sex peers</th>
<th>Models celebrities</th>
<th>Same-sex peers</th>
<th>Significant factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>2.05 (1.21)</td>
<td>2.38 (1.22)</td>
<td>1.81 (1.05)</td>
<td>2.55 (1.21)</td>
<td>Target; Target × Gender</td>
</tr>
<tr>
<td>Weight</td>
<td>2.86 (1.34)</td>
<td>2.98 (1.27)</td>
<td>1.90 (1.05)</td>
<td>2.36 (1.13)</td>
<td>Target; Target × Gender</td>
</tr>
<tr>
<td>Shape/build</td>
<td>3.12 (1.24)</td>
<td>2.95 (1.27)</td>
<td>2.62 (1.00)</td>
<td>2.69 (1.15)</td>
<td>Sex; Grade</td>
</tr>
<tr>
<td>Face</td>
<td>3.20 (1.33)</td>
<td>3.16 (1.30)</td>
<td>2.45 (1.32)</td>
<td>2.40 (1.23)</td>
<td>Sex; Grade</td>
</tr>
<tr>
<td>Personality</td>
<td>2.24 (1.25)</td>
<td>3.16 (1.31)</td>
<td>2.23 (1.20)</td>
<td>2.64 (1.25)</td>
<td>Target; Target × Gender; Target × Grade</td>
</tr>
<tr>
<td>Intelligence</td>
<td>2.22 (1.26)</td>
<td>2.93 (1.31)</td>
<td>2.34 (1.34)</td>
<td>2.91 (1.29)</td>
<td>Target</td>
</tr>
<tr>
<td>Style</td>
<td>3.28 (1.26)</td>
<td>3.36 (1.21)</td>
<td>2.68 (1.31)</td>
<td>2.75 (1.25)</td>
<td>Sex</td>
</tr>
<tr>
<td>Popularity</td>
<td>2.37 (1.26)</td>
<td>2.94 (1.33)</td>
<td>2.36 (1.30)</td>
<td>2.76 (1.22)</td>
<td>Target; Target × Grade</td>
</tr>
</tbody>
</table>

Personality comparisons were more likely to be directed at same-sex peers ($M = 2.87$) than models ($M = 2.25$), $F(1, 404) = 123.48$, $p < .0001$. The main effect was qualified by significant interaction terms that indicated same-sex peer personality comparisons were more likely to be reported by girls than boys, $F(1, 404) = 17.32$, $p < .0001$, and 10th graders ($M = 3.03$) rather than 7th graders ($M = 2.71$), $F(1, 404) = 24.57$, $p < .0001$. Intelligence also was endorsed more frequently as an attribute of social comparisons among same-sex peers, $F(1, 407) = 97.68$, $p < .0001$ (models, $M = 2.29$; peers, $M = 2.91$). Comparisons focusing on popularity were at higher levels for peer targets ($M = 2.83$) compared to models ($M = 2.38$), $F(1, 404) = 64.97$, $p < .0001$, especially among the older students (10th graders, $M = 2.95$; 7th graders, $M = 2.70$), Target × Grade, $F(1, 404) = 12.90$, $p < .0001$.

There were no target differences when style was the attribute of focus, but girls were more likely to report higher rates of social comparison for style ($M = 3.29$) compared to boys ($M = 2.69$), $F(1, 405) = 27.10$, $p < .0001$. Gender and grade differences also emerged for the two physical attributes of shape/build, $F(1, 405) = 11.91$, $p < .001$, and face, $F(1, 406) = 38.44$, $p < .001$. An inspection of the means indicated that girls were more likely to endorse higher rates of social comparison for shape/build ($M = 2.97$) and face ($M = 3.13$) compared to boys ($M = 2.60, 2.39$ respectively). Grade differences emerged for shape/build, $F(1, 405) = 45.97$, $p < .001$, and face, $F(1, 406) = 18.46$, $p < .0001$. In these instances, 10th graders compared to 7th graders confirmed more engagement in social comparison when
the attributes were shape/build ($M_s = 3.14$ vs. 2.43) and face ($M_s = 3.02$ vs. 2.50).

**Relationships Between Body Dissatisfaction and Reported Social Comparison**

Pearson correlations were calculated separately by gender to assess the relationships between body dissatisfaction and the social comparison rates for physical and personal/social attributes. The analyses were also done separately for each target and attribute in order to identify differential patterns within and across the domains of attractiveness. Bonferroni’s correction for Type I error set the significance level at $p < .01$.

A review of the correlations in Table IV revealed that the students reporting higher levels of social comparison were more likely to feel greater dissatisfaction with their bodies. These relationships were consistently significant for the physical attributes among the boys and primarily so (except for height) among the girls. The relationships were particularly strong for the attributes of weight and shape among the girls, but were only at a moderate level among the boys.

The relationships for the personal/social attributes displayed distinct gender differences. The pattern of correlations among the boys indicated that comparisons to models and peers in terms of personality, style, and popularity were all significantly related to higher body dissatisfaction. Among the girls, comparisons to models and same-sex peers on popularity and to same-sex peers on the attribute of style were also linked to body dissatisfaction.

In order to determine the differential contributions of the attractiveness attributes to body dissatisfaction, simultaneous multiple regressions were calculated. The results are presented in Table IV.

**Table IV. Correlations Between Body Dissatisfaction and Social Comparisons to Models and Peers by Gender**

<table>
<thead>
<tr>
<th></th>
<th>Girls ($n = 215$)</th>
<th>Boys ($n = 197$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Models/ celebrities</td>
<td>Same-sex peers</td>
</tr>
<tr>
<td>Physical attributes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>.06</td>
<td>.06</td>
</tr>
<tr>
<td>Weight</td>
<td>.54**</td>
<td>.66**</td>
</tr>
<tr>
<td>Shape/build</td>
<td>.54**</td>
<td>.56**</td>
</tr>
<tr>
<td>Face</td>
<td>.30**</td>
<td>.31**</td>
</tr>
<tr>
<td>Personal/social attributes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personality</td>
<td>-.04</td>
<td>.15</td>
</tr>
<tr>
<td>Intelligence</td>
<td>.08</td>
<td>.05</td>
</tr>
<tr>
<td>Style</td>
<td>.04</td>
<td>.20*</td>
</tr>
<tr>
<td>Popularity</td>
<td>.18*</td>
<td>.32**</td>
</tr>
</tbody>
</table>

*p < .01, **p < .001.
were calculated separately by gender. The attractiveness attributes that had significant zero-order relationships with body dissatisfaction were selected as the predictor variables in the separate analyses for models/celebrities and same-sex peer targets. In each case, BMI and grade were entered as control variables.

The multiple regression equations were significant, Girls: Models, $F(6, 207) = 32.73, p < .0001$; Same-Sex Peers, $F(7, 205) = 37.04, p < .0001$; Boys: Models, $F(9, 187) = 5.99, p < .0001$; Same-Sex Peers, $F(9, 186) = 5.96, p < .0001$. Because the intercorrelations among the social comparison attributes ranged from .20 to .64, variance inflation factors (VIF) were obtained for each model so that potential statistical problems with multicollinearity could be evaluated. VIFs less than “10” are considered acceptable (Graybill & Iyer, 1994). In only one case did the VIF approach 3.3. The other VIF levels ranged between 1.2 and 2.5. Therefore, multicollinearity was not considered a statistical problem in the multiple regression analyses. The standardized beta coefficients and $R^2$ for each of the four equations are presented in Table V.

BMI was a significant predictor for both boys and girls and indicated that adolescents who were physically larger also experienced greater body dissatisfaction. Regardless of BMI, girls who reported engaging in social comparison in terms of weight and shape were more likely to express greater body dissatisfaction. Of the two attributes, shape comparisons had the stronger multivariate relationship with body dissatisfaction when models were the targets and weight comparisons had the greater strength when same-sex peers

**Table V.** Multiple Regressions of Body Dissatisfaction on BMI, Grade, and Attractiveness Attributes by Gender

<table>
<thead>
<tr>
<th></th>
<th>Girls ($n = 212$)</th>
<th>Boys ($n = 197$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Models/</td>
<td>Models/</td>
</tr>
<tr>
<td></td>
<td>Same-sex</td>
<td>Same-sex</td>
</tr>
<tr>
<td></td>
<td>celebrities</td>
<td>celebrities</td>
</tr>
<tr>
<td></td>
<td>peers</td>
<td>peers</td>
</tr>
<tr>
<td>BMI</td>
<td>.42***</td>
<td>.16*</td>
</tr>
<tr>
<td>Grade</td>
<td>-.02</td>
<td>.01</td>
</tr>
<tr>
<td>Height</td>
<td>—</td>
<td>-.05</td>
</tr>
<tr>
<td>Weight</td>
<td>.16*</td>
<td>.27**</td>
</tr>
<tr>
<td>Shape/Build</td>
<td>.33***</td>
<td>-.05</td>
</tr>
<tr>
<td>Face</td>
<td>-.05</td>
<td>.22**</td>
</tr>
<tr>
<td>Personality</td>
<td>—</td>
<td>.07</td>
</tr>
<tr>
<td>Style</td>
<td>—</td>
<td>-.17</td>
</tr>
<tr>
<td>Popularity</td>
<td>.02</td>
<td>.17</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.49</td>
<td>.22</td>
</tr>
</tbody>
</table>

Note. Dashes indicate that predictor was not included in the regression equation.

*p < .05, **p < .01, ***p < .001.
were the targets. Among the boys, weight and facial comparisons to both peers and models/celebrities were related to body dissatisfaction. Finally, the variance accounted for in body dissatisfaction was substantial for the girls and modest for the boys.

**Discussion**

The results of this study highlight both gender similarities and differences in social comparison and its relationship to body image. Both adolescent girls and boys use the multiple attractiveness attributes identified in Study 1 for social comparison when the targets are models/celebrities and peers. The reported social comparisons encompassed the range of attributes embedded in the conceptions of ideal attractiveness during adolescence rather than being limited to the most consensual or highly endorsed attributes.

The patterns of comparisons to peers or models provide additional evidence of gender similarities. Peers tended to be the more frequent targets of social comparison for both girls and boys, especially for height, weight, personality, intelligence, and popularity. The results support the general expectation from the social comparison literature that individuals prefer to make comparisons to similar others (Miller et al., 1988). In addition, certain attributes such as popularity and intelligence may be more relevant to both acceptance and performance within the school context (Brown et al., 1994) making peers more salient targets. Another possible reason for the preference for peer targets may be the difficulty of obtaining information about certain attributes from two-dimensional representations in the media. It is through personal interactions that knowledge about these attributes can be more readily obtained.

Although peers were more frequently the targets of attractiveness comparisons, models were certainly identified as targets as well. For example, there were no differences in the rates at which students reported comparing themselves to models or peers when the attributes were style, shape/build, and face. Furthermore, girls reported comparable levels of social comparison across targets for weight; for boys, similar rates of social comparison were noted for build. It is apparent that popular appearance culture represented by media models and celebrities as well as the proximal appearance culture of same-sex peers at school are both relevant sources for judging the self and gathering information especially about physical attractiveness attributes.

Social comparisons to peers and to models/celebrities also share a similar relationship to body dissatisfaction. Indeed, comparisons to peer targets
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do not diminish the relationship between social comparison and negative body image. Students who report more frequent social comparison with peers as well as models experience greater body dissatisfaction. Furthermore, the pattern is evident for boys and girls and supports the connection between attractiveness comparisons and negative body image during adolescence regardless of gender.

At the same time, social comparisons on certain attributes had stronger relationships to body dissatisfaction. Weight comparisons were the primary correlate of body dissatisfaction for both girls and boys. The contribution of this study is that it confirms the centrality of weight when it is evaluated against other attractiveness comparisons. It also extends previous knowledge by identifying peers as an important target for weight comparisons that contribute to body dissatisfaction. Even though theoretically there are a range of possible effects that social comparisons can produce (Pelham & Wachsmuth, 1995) from the positive (self-enhancement, inspiration) to the negative (self-denigration and deflation), these findings confirm that the most systematic outcome is negative.

Gender differences were evident for the other significant predictors of body dissatisfaction. For the girls, body shape comparisons as well as weight were significantly related to body dissatisfaction. This outcome is compatible with previous research (Rosenblum & Lewis, 1999; Taylor et al., 1998) and supports the prominence of weight and shape concerns in the body image evaluations of girls. Although ideal attractiveness as defined by girls was conceived as multidimensional, the reality is that body image satisfaction was related most strongly to the frequency of social comparisons for a very limited set of physical attributes. These are the very attributes that are idealized in the media and are frequently the basis for teasing by peers (Taylor et al., 1998; Thompson et al., 1999). The broader vision of attractiveness exemplified in Study 1 is seemingly difficult to integrate into body image evaluations given the weight conscious culture of appearance in which adolescent girls are embedded.

The results for the boys, however, stand in contrast to expectations and the recent attention given to muscularity in the development of body image among boys (Cohane & Pope, 2001; McCreary & Sasse, 2000). Comparisons on body build directed toward either peers or models were not significant predictors of body image among the males. Rather comparisons on the attributes of weight and facial characteristics accounted for unique variance in body dissatisfaction. These findings support the importance of weight for body image of boys as well as girls and may reflect a common experience with peers, namely teasing. Recent research (Jones, Vigfusdottir, & Lee, 2002) has verified that peer teasing about weight was the strongest predictor of body
satisfaction among adolescent boys. It appears that weight comparisons are more salient and critical for self-evaluation among the boys when the peer world highlights weight in a negative manner.

It is not entirely clear why facial characteristics would be another central attribute related to body satisfaction for the boys. From a developmental perspective, concerns with facial hair may be the relevant issue for young males rather than muscular build. It is possible that later in development, build becomes a more potent comparison attribute (McCreary & Sasse, 2000).

There are two additional findings that reflect important gender differences in social comparison. First, the girls compared to the boys were more highly engaged in social comparisons for six of the eight attractiveness attributes. In addition, self-reported social comparison accounted for more variance in body dissatisfaction among the girls than for the boys. This study does not have direct evidence to identify the mechanisms for these differences, but the results are suggestive of gender differences in the processes of social comparison. Although speculative, the reasons for these differences are important to consider.

Previous research indicates that social comparison is most evident when individuals are uncertain of their self-evaluations about important attributes (Pelham & Wachsmuth, 1995). Certainly, gender-role socialization for adolescent girls continues to emphasize the importance of appearance evaluations by others (Merten, 1996) and the self (Harter, 1998). The greater frequency of attractiveness comparisons by the adolescent girls could thus reflect greater uncertainty about the attractiveness of their bodies, an attribute of importance for them in their social worlds. A related explanation highlights the greater sensitivity to social context and attention given by girls to others in the social world. Previous research has revealed that college women compared to men demonstrate greater sensitivity to information provided by same-sex peers prior to making judgments about the physical attractiveness of others (Graziano et al., 1993). In the present case, the greater frequency of self-reported social comparison among the girls may reflect their greater sensitivity to the social context. This sensitivity to social context appears to encompass not only greater integration of information provided by others, but also greater information gathering about the attractiveness characteristics of same-sex others. It is unknown if the self-generated comparison information is integrated into the self-evaluations in a manner similar to that of evaluations provided about others. It does seem that uncertainty about one’s attractiveness, the importance of attractiveness, and sensitivity to social context, individually or in combination, may promote gender differences in the processes of social comparison. Future research that examines gender differences in the processes of gathering and integrating social comparison information is clearly needed.
CONCLUSIONS

Overall, this research verifies that adolescent girls and boys engage in social comparisons to peers and models across an array of attractiveness attributes. Furthermore, the message from this study is clear: regardless of BMI, comparisons to peers and models/celebrities are connected to more negative body image for both girls and boys. The greater frequency of social comparison among the girls and the greater percentage of variance in their body dissatisfaction scores attributed to social comparison suggest that girls are embedded in a more negative process whether they look to the media images or to the peers in their daily lives. These findings mean that interventions to assist adolescents in negotiating body image evaluations need to address not only the media representations of body image, but also the values and expectations embedded in the world of peers and how this information is integrated into self-evaluations by adolescents.

There are limitations in this research that future research should address. Although this research establishes a relationship between self-reported social comparison and body dissatisfaction, the causal direction of this relationship cannot be determined in this study. It may be that higher rates of social comparison contribute to heightened body dissatisfaction by highlighting discrepancies between self and other. The bidirectional nature of the correlational data makes it equally plausible that body dissatisfaction contributes to more frequent social comparison. Longitudinal studies and experimental research are necessary to determine more clearly the causal connections between social comparison and body dissatisfaction.

This research is based primarily on White, middle-class students. Although it is within this population that body dissatisfaction and eating disorders have been most prominent, there is increasing recognition of the prevalence of body image issues among adolescents from diverse backgrounds (Erkut, Szalacha, Garcia Coll, & Alarcon, 2000). Furthermore, adolescents from different backgrounds may rely on different attributes to define attractiveness (Milkie, 1999). Future research should explore the definitions of attractiveness, the nature of appearance-related social comparisons, and their relationships to body satisfaction for adolescents from diverse backgrounds.

Finally, the multiple regression analyses explained a substantially greater portion of the variance in body dissatisfaction for the girls than the boys. Future research needs to identify and evaluate the dimensions that enhance our understanding of the contributors to body dissatisfaction among boys. With this knowledge, we would be better able to understand and intervene to support all adolescents in the fundamental developmental task of defining and accepting the physical self.
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