Abstract: Objective: Both scientific research and popular attention have begun to focus on the neglected issue of body image in boys. We reviewed the findings of this emerging literature. Method: Using computer and manual search techniques, we located 17 studies that assessed body image attitudes in boys under age 18. Results: We located 17 studies, most performed within the last 10 years. Eight studies used exclusively questionnaires or interviews; the rest also used figure drawings from which the subjects could choose specific images in answer to questions. Although boys generally displayed less overall body concern than girls, many boys of all ages reported dissatisfaction with their bodies, often associated with reduced self-esteem. Whereas girls typically wanted to be thinner, boys frequently wanted to be bigger. However, most studies failed to distinguish between "bigness" due to increased muscle and that due to fat. Conclusions: Body image dissatisfaction in boys is common and often associated with distress. To better assess this phenomenon, future studies should take care to separate the indices of muscle and fat. © 2001 by John Wiley & Sons, Inc. Int J Eat Disord 29: 373-379, 2001.

Key words: body image; boys; distress

INTRODUCTION

Recent years have witnessed a striking increase in body image concerns among men (Pope, Phillips, & Olivardia, in press). Prior to the late 1980s, body image was often viewed as a primarily female problem; most of the available literature described eating disorders and other weight-related conditions in women. Recent studies, however, have shown that men may also suffer from body image preoccupations. For example, a condition called muscle dysmorphia has been described, in which muscular men perceive themselves as thin and underdeveloped (Pope, Gruber, Choi, Olivardia, & Phillips, 1997; Olivardia, Pope, & Hudson, in press). This disorder is associated with impaired self-esteem; symptoms of mood, anxiety, and eating disorders; and a high prevalence of anabolic steroid abuse. Muscle dysmorphia and other body image concerns may affect not only adult men, but even young boys. Several studies have examined body image in boys,
prompted in part by observations that girls display concerns with thinness even at an early age (Gustafson-Larson & Terry, 1992). We examine these studies, summarize their principal findings, and suggest future directions.

METHOD

We searched the literature using Medline under the key words "male body image," "boy body image," and "boy body shape." We then searched the reference lists from each relevant paper found on Medline to locate additional studies. We applied three criteria to select papers for review. First, we required that the study examine a sample of at least 20 boys; studies including a comparison group of girls were included provided that they met the first criterion. Second, we excluded studies that comprised subjects over 18 years of age (Dibiase & Hjelle, 1968; Silberstein, Mishkind, Striegel-Moore, Timko, & Rodin, 1989; Furnham & Baguma, 1994). Third, because we were focusing on satisfaction with body shape and size, we excluded studies that focused exclusively on weight loss, dieting habits, and nutrition (Dwyer, Feldman, & Mayer, 1967; Nylander, 1971; Maloney, McGuire, Daniels, & Specker, 1989; Davis, Shapiro, Elliott, & Dionne, 1993). After applying these three criteria, our list was narrowed to 17 studies.

RESULTS

Of the 17 qualifying studies, 8 used exclusively interviews or questionnaires to analyze boys' views of body image. Table 1 summarizes the designs and key findings of these studies. Three of the studies (Moore, 1990; Gustafson-Larson & Terry, 1992; Page & Allen, 1995) examined exclusively levels of body dissatisfaction in their subjects. Page and Allen (1995) found that girls expressing the greatest body dissatisfaction were those who believed they were overweight, whereas the most dissatisfied boys were those who believed they were underweight. Similarly, Gustafson-Larson and Terry (1992) found that fourth-grade girls were more concerned with their weight than boys. Remarkably, however, 45% of the boys wanted to change their weight, with 38% wanting to be thinner and 7% wanting to be heavier. In Moore's study, roughly equal numbers of boys believed they were overweight and underweight; the boys' most common concern regarding body shape was being underdeveloped.

The remaining five studies (Blyth et al., 1981; Rauste-von Wright, 1989; Austin, Champion, & Tzeng, 1989; Folk, Pedersen, & Cullari, 1993; McCreary & Sasse, 2000) looked at the association between body dissatisfaction and self-esteem. In general, the studies found a positive correlation between body image satisfaction and various measures of self-esteem. Rauste-von Wright (1989) failed to find a consistent relationship of this nature. Folk et al. (1993) found virtually no relationship between body satisfaction and self-concept in third-grade boys, but they found a strong positive correlation in sixth-graders. Table 2 summarizes the remaining nine studies. We grouped these together because they used figure drawings and questionnaires to examine body image attitudes in children. Most of the studies used sets of seven to nine male and/or female figure drawings, ranging from extremely thin to extremely fat. These figure drawings were adapted from those created by Stunkard, Sorensen, and Schlusinger (1983). Subjects in each study were typically asked to choose the image most closely resembling themselves, the image rep-
Table 1. Studies involving questionnaires

<table>
<thead>
<tr>
<th>Study (Year)</th>
<th>Sample</th>
<th>Measure</th>
<th>Results</th>
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<tbody>
<tr>
<td>Blyth et al. (1981)</td>
<td>274 White boys studied in Grade 6, and again in Grade 7</td>
<td>1) Measurement of height and weight 2) Personal interview assessing a) Satisfaction with body image b) self-image dimensions involving self-esteem, self-consciousness, and stability of self-image</td>
<td>1) Boys who grew early (in height) displayed significantly greater satisfaction with muscular development and self-esteem 2) Overweight boys displayed significantly lower self-esteem and were more self-conscious</td>
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<td>Rauste-von Wright (1988)</td>
<td>52 girls, 38 boys studied four times at ages 11, 13, 15, and 18</td>
<td>1) Body Image Satisfaction Scale comprising 17 five-point subscales (1 = dissatisfied, 2 = satisfied) regarding face, arms, hips 2) Self-image test involving subjects' ratings of their own intelligence, anxiety, leadership</td>
<td>1) Both sexes were most satisfied with appearance at age 18 2) Boys were least happy with the size of their shoulders, girls with their weight 3) No consistent correlation between body image satisfaction and measures of self-esteem in boys</td>
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<tr>
<td>Austin, Champion, and Tzeng (1989)</td>
<td>1,200 high school boys</td>
<td>1) Questionnaire asking about a) self-concept (i.e., self-esteem and anxiety) and b) attitudes toward their own body image and shape</td>
<td>1) Self-concept and attitudes toward body image were positively correlated</td>
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<td>Moore (1990)</td>
<td>895 boys age 12–22</td>
<td>1) Anonymous questionnaire concerning attitudes toward body weight and eating behavior</td>
<td>1) 22% believed they were overweight, 18% underweight 2) Being underdeveloped was the most common concern (33% not satisfied with their shape, 67% satisfied)</td>
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<tr>
<td>Gustafson-Larson and Terry (1992)</td>
<td>219 girls, 238 boys age 9–11</td>
<td>1) Twelve-part questionnaire assessing attitudes toward body weight and body shape. Responses coded as very often, sometimes, and never.</td>
<td>1) 33% of girls versus 15% of boys “very often worried about being fat” 2) 60% of girls versus 38% of boys wanted to be thinner; 67% of boys versus 49% of girls wanted to be taller</td>
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<tr>
<td>Folk, Pedersen, and Cullari (1993)</td>
<td>18 girls, 29 boys in 3rd grade and 29 girls, 14 boys in 6th grade</td>
<td>1) Fifteen-item Body Satisfaction Questionnaire comprising 15 five-point ratings of body parts 2) Piers-Harris Self-Concept scale (written statements on anxiety and intelligence)</td>
<td>1) Boys had higher body satisfaction in 3rd than in 6th grade; girls were the reverse 2) No significant correlation was found between self-concept and body image in 3rd-grade boys (r = 0.11), but significant correlation was found in 6th-grade boys (r = .82)</td>
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<tr>
<td>Page and Allen (1995)</td>
<td>1,915 children in grades 9 through 12</td>
<td>1) Two 5-point scales assessing a) perceived body weight and b) weight satisfaction (1 = completely dissatisfied; 5 = completely satisfied)</td>
<td>1) Boys who perceived themselves as “much too thin” were the least weight satisfied among boys (mean = 2.2) 2) Girls who perceived themselves as “much too fat” were least weight satisfied among girls (mean = 1.5)</td>
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<tr>
<td>McCreary and Sasse (2000)</td>
<td>101 girls and 96 boys in high school (mean age = 18)</td>
<td>1) Fifteen-item DMS 2) Behavioral indicators (i.e., weightlifting and exercise) 3) Psychological well-being measured by a) Rosenberg Self-Esteem scale b) CES-D 4) Drive for Thinness measured by the EAT</td>
<td>1) Boys wished to be larger and more muscular 2) Boys had greater DMS scores than girls 3) DMS scores were unrelated to Drive for Thinness in both boys and girls 4) Higher DMS scores in boys were associated with lower self-esteem and greater depression</td>
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Note: DMS = Drive for Muscularity Scale; EAT = Eating Attitudes Test; CES-D = Center for Epidemiologic Studies Depression Scale.
<table>
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<tr>
<th>Author (Year)</th>
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<tr>
<td>Staffieri (1967)</td>
<td>90 boys age 6-10</td>
<td>1) Silhouettes: two sets (child and adult) of three (endomorph, mesomorph, ectomorph); 39 adjectives provided to describe these images</td>
<td>1) All adjectives describing the mesomorph were positive; subjects desired to resemble the mesomorph</td>
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<td>2) Adjectives given to ectomorph, endomorph much less favorable</td>
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<td>Cohn et al. (1987)</td>
<td>283 boys, 288 girls (mean age = 13)</td>
<td>1) Figure drawings: Subjects asked to choose a) actual, b) ideal, c) figure most attractive to opposite sex, and d) figure of opposite sex they found most attractive</td>
<td>1) Boys' ideal figure significantly heavier than their current perceived figure whereas girls chose an ideal figure significantly thinner than their perceived figure</td>
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<td>2) Ten-item survey assessing body dissatisfaction</td>
<td>2) Boys and girls were equally dissatisfied with their bodies compared with the chosen ideal</td>
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<td>Collins (1991)</td>
<td>1,118 preadolescent children (mean age = 8)</td>
<td>1) Figure drawings: Subjects asked to choose images resembling a) themselves, b) their ideal selves, c) ideal for another child, d) ideal adult (what they want to look like), and e) ideal opposite sex adult</td>
<td>1) Girls expressed a significantly greater desire to be thinner than boys (0.48 units vs. 0.11 units between actual and ideal on 7-point scale) 2) 42% of girls wanted to be thinner, 14% heavier 3) 30% of boys wanted to be thinner, 23% heavier</td>
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<td>Paxton et al. (1991)</td>
<td>221 boys and 341 girls in Grades 7-11</td>
<td>1) Body Dissatisfaction and Drive for Thinness subcales of the EDI</td>
<td>1) Body Dissatisfaction scores on EDI significantly higher in girls than in boys (mean 9.0 vs. 4.2) 2) 26% of boys and 48% of girls had used extreme weight loss methods (fasting, crash dieting, and vomiting) at some time</td>
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<tr>
<td>Hoffmann-Muller and Amstad (1994)</td>
<td>153 boys, 203 girls, age 14-19</td>
<td>1) Figure drawings</td>
<td>1) More boys (93%) satisfied with their body shape than girls (63%) 2) More boys (69%) chose the same figure for their &quot;actual&quot; and &quot;ideal&quot; shape than girls (49%)</td>
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<td>Thompson, Sargent, and Kemper (1996)</td>
<td>496 boys (337 White, 159 Black)</td>
<td>1) Figure drawings</td>
<td>1) Black boys selected a larger male image for what girls would find most attractive (mean = 4.49) than White boys (mean = 4.20) 2) 35% of boys dissatisfied with their size versus 55% of girls</td>
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<tr>
<td>Wood, Becker, and Thompson (1996)</td>
<td>109 boys, 95 girls age 8-10 years</td>
<td>1) Figure drawings</td>
<td>2) Figure drawings less reliable than EDI</td>
</tr>
<tr>
<td>Rolland, Farnill, and Griffiths (1997)</td>
<td>105 boys, 139 girls (mean age = 10)</td>
<td>1) Figure drawings</td>
<td>1) 33% of boys and 50% of girls had wanted to be thinner 2) 24% of boys and 40% of girls had attempted to lose weight</td>
</tr>
<tr>
<td>Thompson, Corwin, and Sargent (1997)</td>
<td>817 children (51% female, 52% White, mean age = 9)</td>
<td>1) Figure drawings</td>
<td>1) Boys showed smaller difference between images for actual and ideal self than girls (0.11 vs. 0.49 units on a 7-point scale) 2) Black boys selected larger images for actual and ideal self than White boys</td>
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Note: EDI = Eating Disorders Inventory; WEC = Weight and Eating Concerns scale; EAT = Eating Attitudes Test; PHCSCS = Piers-Harris Children's Self-Concept Scale; CDI = Children's Depression Inventory; Figure drawings = rows of seven or nine figures of each sex ranging from thinnest to fattest (see text).
resenting what they would ideally like to look like, and often the ideal image for a same-sexed and opposite-sexed child or adult. Although the test-retest reliability of figure drawings varied considerably with different populations and different study questions (Collins, 1991; Wood, Becker, & Thompson, 1996), the results of the studies were fairly consistent. First, although boys showed less body dissatisfaction than girls, most investigators found that a substantial number of boys of all ages were not satisfied with their body proportions. In general, girls ideally wanted to be thinner, whereas boys were more variable, with some choosing a thinner ideal image and others choosing a heavier one. Two studies considered race as an independent variable (Thompson, Sargent, & Kemper, 1996; Thompson, Corwin, & Sargent, 1997); both found that Black boys chose significantly larger ideal male images than White boys. A problem with figure drawings, however, is that they do not distinguish between increased size due to muscle and increased size due to fat. Only one study (Staffieri, 1967) separately presented a muscular (mesomorphic) image, a fat (endomorphic) image, and a thin (ectomorphic) image. When presented with a series of 39 descriptive adjectives, young boys chose strongly positive adjectives to describe the mesomorph and reported that they desired to resemble this image. Conversely, the adjectives given to the endomorph and ectomorph were considerably less favorable. This finding suggests that boys desired increased muscularity, but not increased fat.

**DISCUSSION**

Although it has long been recognized that girls may suffer from disorders of body image, an emerging literature shows that boys also suffer body image disturbances, even at a very young age. Because this is only "first-generation" literature, any conclusions must be tentative. It appears that body image dissatisfaction differs between boys and girls. Girls exhibit a higher prevalence of body dissatisfaction than boys and they tend to choose thinner "ideal" images for themselves. Nevertheless, many boys express dissatisfaction as well, but some prefer a thinner ideal image and others a heavier one. In general, body satisfaction among boys is positively correlated with self-esteem.

There are at least three methodological reasons to suspect that the true levels of body dissatisfaction among boys are actually higher than those estimated by these first-generation studies. First, because most of the studies were not anonymous, they may have been subject to selection bias; boys embarrassed or sensitive about their appearance might have been less likely to participate. Second, in the absence of anonymity, response bias may also have occurred. Although such bias might of course operate in either direction, a likely possibility is that boys might minimize their true degree of dissatisfaction or unhappiness in the presence of an interviewer.

Third, and perhaps most important, is the problem posed by using a single row of images of increasing size to assess boys’ responses to body image questions. This unidimensional measure does not distinguish between increasing size due to fat and increasing size due to muscle. Thus, a boy desiring a more muscular body, but not a fatter one, may select a "compromise" image that does not fully reveal the magnitude of the difference between his body reality and his body ideal. Staffieri’s (1967) findings, described above, exemplify this problem, as do the results of McCreary and Sasse (2000), who found that Drive for Thinness was unrelated to the Drive for Muscularity in both boys and girls. In our own laboratory, we devised a two-dimensional test of body image called the "somatomorphic matrix," in which the subject can choose among images that vary along two
independent axes of fat and muscularity. Using this instrument, we found that adult men usually choose an ideal body much more muscular, but not fatter, than their own (Gruber, Pope, Borowiecki, & Cohane, 1999; Pope et al., in press). These observations suggest that future studies of boys should take care to distinguish between fat and muscularity when assessing body image ideals and body image dissatisfaction.

In conclusion, given rapidly increasing scientific interest in body image among boys, and growing attention to the subject in the popular media (Hall, 1999), further studies in this area would be particularly welcome. The first-generation studies reviewed above have established that body image problems in boys are common. These body image problems are often associated with impaired self-concept and self-esteem and frequently focus on bigness and muscularity rather than thinness. Second-generation studies are needed to dissect more carefully the indices of fat and muscularity and to assess more systematically boys' level of associated pathology.

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