Psychological Bulletin
2006, Vol. 132, No. 4, 622–640

0033-2909/06/$12.00 DOI: 10.1037/0033-2909.132.4.622

Ethnicity and Body Dissatisfaction Among Women in the United States: A Meta-Analysis

Shelly Grabe and Janet Shibley Hyde
University of Wisconsin—Madison

The prevailing view in popular culture and the psychological literature is that White women have greater body dissatisfaction than women of color. In this meta-analysis, 6 main effect sizes were obtained for differences among Asian American, Black, Hispanic, and White women with a sample of 98 studies, yielding 222 effect sizes. The average *d* for the White–Black comparison was 0.29, indicating that White women are more dissatisfied, but the difference is small. All other comparisons were smaller, and many were close to zero. The findings directly challenge the belief that there are large differences in dissatisfaction between White and all non-White women and suggest that body dissatisfaction may not be the *golden girl problem* promoted in the literature. Implications for theory and treatment are discussed.

Keywords: body image, racial and ethnic differences, ethnic identity, human females, meta-analysis

During the past 2 decades, a burgeoning clinical and scientific interest in body image has fueled empirical investigation of body dissatisfaction among women (see Pruzinsky & Cash, 2002, for a review). Findings from this growing literature demonstrate that body dissatisfaction is a significant problem in Western societies and that girls and women are more dissatisfied with their body size and shape than their male counterparts (e.g., Phares, Steinberg, & Thompson, 2004; J. K. Thompson & Stice, 2001). In a meta-analysis of gender differences in body dissatisfaction, Feingold and Mazella (1998) compared effect-size differences between men and women on body dissatisfaction across four decade categories; the progressively larger effect sizes in body dissatisfaction (pre-1970s, $d = 0.00$; 1970s, $d = 0.27$; 1980s, $d = 0.38$; 1990s, $d = 0.58$) indicate that the gap between women and men's dissatisfaction has increased substantially over time. Furthermore, the prevalence of body dissatisfaction among women in the United States is quite high, with almost half of all women reporting global negative evaluations of their bodies (Cash & Henry, 1995; J. K. Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999).

Psychologists have become increasingly interested in body dissatisfaction in part because body dissatisfaction puts women's health at risk; body dissatisfaction strongly predicts adverse psychological consequences including disordered eating (e.g., J. K. Thompson et al., 1999) and depression (F. Johnson & Wardle, 2005). Specifically, sociocultural theories assign body dissatisfaction a causal role in the development of disordered eating (Stice & Shaw, 2002). Research has demonstrated that starting in adolescence, girls are responding to weight concerns by extreme caloric restriction and severe weight control efforts such as purging (Stice, Killen, Hayward, & Taylor, 1998). Such extreme efforts may be attempted because maintaining the desirably low body weight is biologically impossible. Body dissatisfaction has also been hypothesized to contribute to the emergence of the gender disparity in depression. Indeed, a growing body of empirical work has documented that body dissatisfaction prospectively predicts girls' and women's depression (Rierdan, Koff, & Stubbs, 1989; Stice & Bearman, 2001). Body image dissatisfaction creates risk for mental health concerns that disproportionately affect women: Women experience higher levels of depression (sex ratio 2:1; Nolen-Hoeksema, 1987, 2001; J. K. Thompson et al., 1999) and eating disorders (sex ratio 9:1; J. K. Thompson et al., 1999) than men.

Although research has consistently found gender differences in body dissatisfaction, differences among women are less clear. A problem with the existing research on body image is that much of it has been conducted in samples of predominantly White women and girls, with little focus on ethnic differences. However, women from different ethnic/racial backgrounds may vary in the extent to which they are dissatisfied with their bodies because meanings of the body depend on cultural and social group context (Crago & Shisslak, 2003). Although investigation in the area has been limited, body image dissatisfaction among ethnic-minority women has gained increasing attention in the past decade. Results from the majority of these studies suggest that Black women have a more positive body image than White women (e.g., Ackard, Croll, & Kearney-Cooke, 2002; Barry & Grilo, 2002; Duncan, Anton, Newton, & Perri, 2003; Siegel, 2002). Results from studies that have included Asian American and Hispanic women are less clear. For example, several researchers have reported that White women are significantly more dissatisfied with their bodies than are their Asian American counterparts (e.g., Akan & Grilo, 1995; Franzoi & Chang, 2002; Mintz & Kashubeck, 1999; Tylka, 2004), whereas others have reported comparable levels of dissatisfaction between the two groups (e.g., Arriaza & Mann, 2001; Cash, Melnyk, & Hrabosky, 2004; Robinson et al., 1996; Siegel, 2002). Similar findings have emerged for studies including Hispanic women—many have indicated that White women report higher body dissatisfaction (e.g., Barry & Grilo, 2002; Demarest & Allen, 2000; Franko & Herrera, 1997; Suldo & Sandberg, 2000), whereas a

Shelly Grabe and Janet Shibley Hyde, Department of Psychology, University of Wisconsin—Madison.

Correspondence concerning this article should be addressed to Shelly Grabe, Department of Psychology, University of Wisconsin, 1202 West Johnson Street, Madison, WI 53706. E-mail: grabe@wisc.edu

number of others have suggested no differences (e.g., Cachelin, Rebeck, Chung, & Pelayo, 2002; Cash, Melnyk, & Hrabosky, 2004; Shaw, Ramirez, Trost, Randall, & Stice, 2004).

Because a close inspection of the individual articles reveals contradictory findings, there is a pressing need to synthesize the growing body of studies investigating potential ethnic differences in women's body dissatisfaction. Using quantitative methods, Wildes, Emery, and Simons (2001) reviewed ethnic differences in the development of eating disturbance and body dissatisfaction. The authors statistically combined the results of 15 studies and found that White women experienced greater levels of dissatisfaction than non-White women, aggregating across all non-White groups. Another major review by Cash, Morrow, Hrabosky, and Perry (2004) examined a similar question of racial differences and similarly reported that White women are more dissatisfied with their bodies than non-White women. Even though these reviews converged on similar findings, there has remained a need to examine the issue more closely. First, neither of the reviews was designed to answer the question of whether women of distinct ethnic groups (i.e., Asian American, Black, Hispanic, and White) differ on their levels of satisfaction or dissatisfaction with their bodies. Both reviews focused largely on Black–White differences; research on ethnicity needs to include additional groups. Second, the procedures used to identify relevant articles were selective in each review. Wildes and colleagues' search was limited to the literature examining eating disturbance or the development of eating disorder (e.g., search terms included clinical diagnoses such as anorexia nervosa), whereas Cash and colleagues' search included only studies conducted by Cash, at one university, based on one measure (the Multidimensional Body–Self Relations Questionnaire [MBSRQ]; T. A. Brown, Cash, & Mikulka, 1990).

The need, then, is for a quantitative review that examines the differences among ethnic subgroups of women in their body dissatisfaction. Body image is a crucial topic because of the high levels of disordered eating and depression found among women. An analysis of ethnic differences is important because past models of eating pathology have posited that ethnic-minority women have fewer eating disturbances than their White counterparts, yet recent research has provided little support for this hypothesis (Shaw et al., 2004). Shaw and colleagues (2004) found that levels of eating disorder symptomatology did not differ significantly across Asian American, Black, Hispanic, and White female adolescents and adults. These results imply that ethnic groups may have reached parity in terms of body image dissatisfaction and eating disturbances. Determining whether there are similarities or differences in body dissatisfaction among subgroups of women is essential to understanding whether current treatment and prevention efforts assess the unique needs of different ethnic groups (Dounchis, Hayden, & Wilfley, 2001; Smolak & Striegel-Moore, 2001).

Defining Body Dissatisfaction

Given the number of different components of body image, a plethora of measures—over 40 published—are available for assessing the construct (J. K. Thompson et al., 1999; J. K. Thompson, Penner, & Altabe, 1990). Indeed, in the burgeoning literature investigating this topic, body image has become a relatively complex phenomenon, with researchers now identifying four components of attitudinal body image: (a) global subjective dissatisfaction—referring to overall satisfaction–dissatisfaction with one's appearance; (b) affective distress regarding appearance—referring to one's emotions about one's appearance, including anxiety and discomfort; (c) cognitive aspects of body image—referring to investment in one's appearance, erroneous thoughts or beliefs about one's body, and body image schemas; and (d) behavioral avoidance reflective of dissatisfaction with appearance—referring to avoidance of situations or objects because of their elicitation of body image concerns (J. K. Thompson & van den Berg, 2002). It is argued that the two core facets of body image attitudes are evaluation (i.e., body dissatisfaction) and investment (i.e., the psychological importance one places on one's appearance; Cash, Morrow, et al., 2004); however, it is body dissatisfaction that has received the most attention in the empirical literature and is therefore a good candidate for meta-analysis (Cash & Pruzinsky, 2002).

Although there is some evidence of psychological consequences related to investment in one's appearance (e.g., Cashel, Cunningham, Landeros, Cokley, & Muhammad, 2003), the large and growing literature on the various facets of body image and psychosocial functioning among women overwhelmingly indicates that the evaluative aspect of body image (i.e., dissatisfaction) consistently predicts adverse psychological outcomes such as depression and eating disorders among women (e.g., F. Johnson & Wardle, 2005). In view of the clear relationship between body dissatisfaction and psychological consequences among women, we conducted a review focused specifically on the evaluative component of body image.

Perspectives on Ethnic Differences in Body Dissatisfaction

Although scholars have argued that a critical aim of research should be to examine the variations in body dissatisfaction across diverse groups of women, the focus of most research has been on African American women in relation to White peers (see Smolak & Striegel-Moore, 2001, for a review), whereas other women of color, most notably Asian American women, have been underrepresented in research. Because the Asian American and Hispanic populations are the fastest growing minority groups in the United States (U.S. Bureau of the Census, 2005), current research needs to expand to investigate body dissatisfaction in all these major groups of women.

Although body dissatisfaction differences between White women and Black women seem relatively apparent, differences between White, Asian American, and Hispanic women—or differences between women of color—are not clear. This is due in part to the grouping of women of color in a non-White group to facilitate comparison to the so-called normative group of White women (e.g., Cash, Morrow, et al., 2004), thereby obscuring differences among distinct ethnic-minority groups. Wildes et al. (2001) concluded that, "as a whole, White women in Western countries experience greater body dissatisfaction than non-White women" (p. 537), despite also reporting that ethnicity played an important role in determining the magnitude and direction of the mean effect sizes for measures of body dissatisfaction—White samples reported more body dissatisfaction than Black samples ($d = 0.30$), whereas Asian American women reported more dissatisfaction than their White counterparts ($d = -0.29$). This finding provides strong evidence that it is unwise to assume that all

women who are not White evaluate their bodies in similar enough ways to warrant being analyzed as a homogeneous group. Despite the growing knowledge about body dissatisfaction among women of different ethnic groups, there exists no quantitative analysis that has comprehensively reviewed the growing literature. Perhaps given the lack of accumulated and consistent findings, stereotypes persist regarding the experience of ethnic-minority women and their bodies (e.g., ethnic identity buffers women of color from mainstream messages advocating a White beauty ideal; Mastria, 2002). What follows is a detailed review of the empirical literature within each ethnic-minority group on which the current review focuses.

Black Women's Body Dissatisfaction

It has been reported that Black women adopt a larger ideal body size, are more accepting of overweight body sizes, experience less social pressure about weight, and are therefore more satisfied with their body image than White women (Streigel-Moore, Schreiber, Pike, Wilfley, & Rodin, 1995). This may be in part because Black women resist conforming to White notions of beauty and attractiveness (Allan, Mayo, & Michel, 1993). Collins (1990) argued that in the context of institutional racism, Afrocentric ideals of beauty involve uniqueness and creativity and, therefore, free Black girls and women from having to conform to a rigid, externally derived standard of beauty. Indeed, research examining body image and beauty ideals among Black and White female adolescents has suggested that White adolescents (in the eighth and ninth grades) described their beauty ideal using a set of fixed physical attributes (e.g., tall, thin, blonde hair, high cheekbones), whereas Black adolescents deemphasized external beauty, instead describing the ideal girl in terms of various personality traits (e.g., style, attitude, and ability to project pride and confidence; Parker, Nichter, Vuckovic, Sims, & Ritenbaugh, 1995). In sum, it appears that standards of attractiveness are not equated solely with thinness in Black girls and women.

The greater acceptance of different body shapes and sizes in Black communities may help to account for Black women's greater body satisfaction relative to White counterparts. Indeed, there is a substantial amount of evidence that Black girls and women tend to be more satisfied with their bodies than White girls and women despite weighing more on average (Akan & Grilo, 1995; Gray, Ford, & Kelly, 1987; S. M. Harris, 1994; Story, French, & Resnick, 1995). These ethnic differences appear relatively consistent across samples representing diverse populations, including schoolchildren (e.g., Adams et al., 2000; Botta, 2000; Casper & Offer, 1990; Shaw et al., 2004), college women (e.g., Bissell, 2004; Demarest & Allen, 2000; Gluck & Geliebter, 2002; Suldo & Sandberg, 2000), and older women from community samples (e.g., Duncan et al., 2003; Shulman & Home, 2003). Only a few rare studies have found no differences between Black and White women's body dissatisfaction (e.g., Caldwell, Brownell, & Wilfley, 1997). Nevertheless, the majority of studies have demonstrated consistent findings that support the notion that cultural factors play an important role in the development of body satisfaction and dissatisfaction among Black women. However, there has been no quantitative review summarizing the findings from this growing literature.

Hispanic Women's Body Dissatisfaction

Although fewer data have been collected on these issues from Hispanic women living in the United States, it has been documented that large, full-bodied women are considered healthy and of high status in many Latin American cultures (Gil-Kashiwabara, 2002). Thus, what is viewed as beautiful appears to be less narrowly defined than what is presented in the U.S. media. Nevertheless, cultural factors such as adherence to a more traditional feminine gender role, which is associated with concern over body image (Avila & Avila, 1995), may lead Hispanic women to experience levels of dissatisfaction comparable to those found among White women.

As with the research on Black women, the primary comparison group for studies of Hispanic women in the United States has been White women (Altabe & O'Garo, 2002). However, unlike the consistent differences reported in the Black–White literature, recent research regarding differences in body dissatisfaction between Hispanic and White women has been mixed. In several studies, White women reported higher levels of dissatisfaction than Hispanic women (Barry & Grilo, 2002; Suldo & Sandberg, 2000) and larger discrepancies between their current and ideal bodies (Demarest & Allen, 2000). Franko and Herrera (1997) reported that White college women were more dissatisfied with their weight and more focused on dieting than their Guatemalan American counterparts. However, other studies have found that Hispanic college women demonstrate higher rates of drive for thinness and more body dissatisfaction than White women (McComb & Clopton, 2002). In another study, Robinson and colleagues (1996) found that among sixth and seventh graders, Hispanic girls reported higher levels of body dissatisfaction than White girls, with the differences more pronounced among the leanest (lowest quartile of actual body fatness).

The majority of studies in this area, however, have reported no differences in body dissatisfaction between White and Hispanic women when measured with either a scale rating satisfaction with body parts (Miller et al., 2000; O'Neill, 2003; Walker, Timmerman, Kim, & Sterling, 2002), a general body dissatisfaction assessment (Cash, Melnyk, & Hrabosky, 2004; Gardner, Friedman, & Jackson, 1999; Siegel, 2002), or discrepancies between current and ideal body size (Cachelin et al., 2002; O'Neill, 2003). It is interesting to note that research has demonstrated a relation between weight concern and depression among Hispanic and White women, but not Black women (Bay-Cheng, Zucker, Stewart, & Pomerleau, 2002). The findings from the majority of these studies therefore call into question whether a different cultural ideal of beauty buffers Hispanic women from body dissatisfaction. Given the inconsistent findings, a quantitative review is necessary to test this assertion directly.

Asian American Women's Body Dissatisfaction

The scarcity of systematic research on Asian American women's body image issues contributes to a lack of knowledge regarding body ideals among Asian American women. However, it has been demonstrated that unlike Black women, who do not find mainstream beauty images relevant to themselves, Asian American women are more likely to endorse mainstream beauty standards in a fashion similar to White women (Evans & McConnell, 2003).

More specifically, Mintz and Kashubeck (1999) found that whereas overall levels of body dissatisfaction did not differ among White and Asian American women, Asian American women reported lower satisfaction with race-specific body parts (i.e., eyes and face) that differentiate them from the White standard of beauty held in the U.S. culture. The increasing evidence that Asian American body ideals are influenced by physical characteristics that distinguish Asian American women from their White counterparts, in particular, the idealization of the double eyelid, is thought to reflect adoption of White, mainstream standards of ideal beauty (Kawamura, 2002).

It has been hypothesized that Asian American women may be vulnerable to experiencing high levels of body dissatisfaction because of cultural values such as collectivism (Hall, 1995). For example, Asian American women may feel a burden to correct the negative images of their culture in the United States and work diligently to be the so-called perfect Asian woman by attempting to conform to an unrealistic ideal in ways that other women of color may not. Indeed, the growing popularity of physical alterations of characteristic Asian features in attempts to approximate European features among Asian American women is suggestive of attempts to conform to an unrealistic mainstream ideal (e.g., epicanthic eye-fold surgery; Hall, 1995). Thus, unlike the ethnic-minority groups reviewed thus far, among Asian American women, the role of acculturation in the development of body dissatisfaction has received considerable discussion (Kawamura, 2002). This may be due in part to the fact that Asian Americans are a heterogeneous group in terms of both geographical origin and length of time in the United States. However, the empirical investigations aimed at addressing this issue have demonstrated that there is no relation between Asian American women's levels of acculturation and levels of body dissatisfaction (e.g., Akan & Grilo, 1995; Ogden & Elder, 1998). Moreover, Yates, Edman, and Aruguete (2004) reported that there were no differences in body dissatisfaction among Asian American women of Japanese, Filipino, Chinese, Hawaiian, or multiethnic backgrounds. Thus, although it has been argued that ethnic identity may provide protection against unrealistic beauty standards, it appears equally plausible that attempting to conform to a nearly impossible White beauty ideal is something that Asian American women are as vulnerable to as, if not more so than, White women (Hall, 1995; Kawamura, 2002). In light of these issues, it is reasonable to expect that Asian American women share the high levels of dissatisfaction that White women report. However, results from a relatively small but growing number of studies of Asian American women present a mixed picture.

In some studies, Asian American women, relative to their White counterparts, reported lower rates of body dissatisfaction and problematic dieting attitudes and behaviors (Akan & Grilo, 1995) and smaller discrepancies between current and ideal body size (Altabe, 1998; Barnett, Keel, & Conoscenti, 2001; Cachelin et al., 2002). However, in other studies, body dissatisfaction and weight concern comparable to White women have been reported (e.g., Koff, Benavage, & Wong, 2001; Yates et al., 2004). Sanders and Heiss (1998) found that Asian American and White college women reported comparable levels of body dissatisfaction and shared the belief that they would feel better about themselves if they lost weight but that Asian American women had a greater fear of fat. In contrast, findings from Haudek, Rorty, and Henker (1999) suggested greater concern about body shape and higher body dissatisfaction among Asian American college women compared with White college women. Thus, the research conducted on Asian American women is conflicted at best.

In summary, the individual studies conducted among Black, Hispanic, and Asian American women have differed greatly in their outcomes. In the absence of a quantitative review, it has been difficult to discern the pattern of results. The findings from the majority of these studies call into question whether robust ethnic differences in body image dissatisfaction exist. In fact, many of these findings suggest that sociocultural factors may influence some ethnic groups equally, in contrast to the previously held assumption that Whites' experience heightened appearance pressures compared with all ethnic-minority females.

Variables That May Moderate Ethnic Differences in Body Image Dissatisfaction

By being more inclusive than previous reviews, we were able to locate a larger sample of articles that offered a wider variety of potential moderating variables. Because one purpose of a meta-analysis is to search for sources of variation in effect sizes between studies, a variety of study characteristics were coded. We investigated age of respondent, whether the study was published, body dissatisfaction measure used, whether the effect size was calculated or estimated, whether the article was ethnicity focused, and publication year as potential moderators of the magnitude of effect sizes. Because studies have used a variety of different measures and differences across studies may be a result of idiosyncrasies of particular assessment techniques, we investigated the measure as a moderator. The other moderator variables are discussed below in more detail.[1]

Age

A wealth of research has demonstrated that body image dissatisfaction increases as girls progress through adolescence (Feingold & Mazzella, 1998) and then remains relatively stable throughout adulthood (e.g., Tiggemann & Lynch, 2001). However, the majority of this research has been conducted among White youth. Research from a large longitudinal cohort study also supported the notion that there are age-related changes in body dissatisfaction but reported that those trends are dependent on ethnic background (Striegel-Moore et al., 2000). Specifically, Striegel-Moore et al. (2000) demonstrated a trend toward increasing scores with age on the Body Dissatisfaction Scale of the Eating Disorder Inventory (BDS-EDI; Garner, Olmstead, & Polivy, 1983) among adolescent girls enrolled in high school (13- to 17-year-olds) but reported that this trend applied only to White girls and not Black girls. Race differences became more pronounced with increasing age.

[1] Given that social status and body size are negatively related among women (Sobel & Stunkard, 1989) and that obesity is most prevalent among lower status women (Dawson, 1988), discussions of body dissatisfaction should include attention to the role of socioeconomic status (SES). However, despite the accepted notion that women develop values pertaining to body image within a social context, most empirical investigation has not included a discussion or assessment of SES. Thus, SES was not reported with sufficient specificity to be included in this review.

In support of these findings, two reviews demonstrated that age moderates differences in body dissatisfaction among White and Black women. In a comparison of mean effect sizes, Wildes et al. (2001) reported differences for high school, college, and community samples with moderate to large effects reported in high school and college samples and weaker effects in studies involving community women. In each sample, White participants reported greater levels of body dissatisfaction than Black participants, but this trend weakened with age. Similarly, in an analysis combining 11 studies, O'Neill (2003) reported that Black women on average reported a significantly larger body ideal than White women but that these differences were most pronounced among college women, with only small effects for teens and adults from community samples. Taken together, it appears that the greatest difference between Black and White women's body dissatisfaction exists during late adolescence and young adulthood, with smaller differences present in childhood and later adulthood. Moreover, the findings suggest that when comparing race or ethnic groups, age must be taken into account. However, no research, to our knowledge, has evaluated age trends among women from various backgrounds (i.e., not just White–Black) separately.

Published Versus Nonpublished and Ethnicity Focus of the Article

Published articles are likely to yield effect sizes that are upwardly biased because journals tend to publish findings that are significant; therefore, studies that yield only nonsignificant findings are less likely to be present in published articles (Riniolo, 1997). To test for the presence of this bias, we compared the effect sizes obtained from published research with those obtained from dissertations and unpublished supplementary materials sent by authors in response to letters requesting further data.

Often, reports of ethnicity differences are central to the main purposes of the article. Presumably, ethnicity differences from articles focused on a topic other than ethnicity are reported incidentally and are less likely to be upwardly biased. Accordingly, we examined whether articles that were focused on ethnicity yielded a larger mean effect size than those that were not.

Publication Year

Researchers have often claimed that negative body image has increased over time. Prevalence data from large-sample surveys conducted in 1972, 1985, and 1996 (Berscheid, Walster, & Bohrnstedt, 1973; Cash, Winstead, & Janda, 1986; Garner, 1997) have frequently been cited to support this claim. However, it is unclear whether the reported changes are evident in various groups of non-White women. In one of the only studies to have investigated changes in body dissatisfaction over time among women of color, Cash, Morrow, et al. (2004) reported that body satisfaction, as measured by the Body Areas Satisfaction Scale of the MBSRQ (BASS-MBSRQ; T. A. Brown et al., 1990), significantly declined among White women between the periods of 1990–1992 and 1996–1998 and then improved slightly between the periods of 1996–1998 and 1999–2001. In contrast, Black women's body satisfaction improved slightly between the periods of 1993–1995 and 1996–1998. These findings suggest that an investigation of year or decade is warranted. However, in the current review, with the exception of two articles, all were published after 1990, and over 50% of those were published after 2000. Thus, because of the relative neglect of women of color in this area of research until recently, conclusions regarding the influence of publication year on variation in effect sizes are limited.

Method

Measures of Body Dissatisfaction

In this review, we focused on measures that assess the evaluative component of body image, that is, satisfaction–dissatisfaction with the body. Measures aimed at the cognitive, affective, or behavioral components of body image have not been included (see J. K. Thompson & van den Berg, 2002, for a discussion and complete index of body image assessments). The choice of measures selected for this review was supported by an investigation (J. K. Thompson, Altabe, Johnson, & Stormer, 1994) that submitted several of the widely used measures of body satisfaction to a factor analysis to examine the distinctiveness of multiple measures of body image dissatisfaction: the Figure Rating Scales (FRS; e.g., Stunkard, Sorenson, & Schlusinger, 1983), the BDS-EDI, the Physical Appearance State and Trait Anxiety Scale (Reed, Thompson, & Brannick, 1991), the Body-Image Automatic Thoughts Questionnaire (Cash, Lewis, & Keeton, 1987), and the MBSRQ. On the basis of the existence of one strong factor, J. K. Thompson et al. (1994) concluded that the body image measures overlap substantially in the degree to which they assess dissatisfaction, with one exception: The Appearance Orientation scale of the MBSRQ loaded more highly on a second weak factor that indexed a cognitive, as opposed to evaluative, component of body image.

A measure of body dissatisfaction can be obtained in a variety of ways. Among the most widely used methods are schematic figure drawings that provide a broad range of outlines or silhouettes of the human form ranging in size from very thin to very overweight (e.g., Stunkard et al., 1983). Participants select the figures representing their perceived current and ideal sizes. The discrepancy between the two is used as a measure of dissatisfaction. Questionnaire measures are also used to index a subjective assessment of global satisfaction with the body. The most widely used is the BDS-EDI (Garner et al., 1983), which measures satisfaction with several weight-relevant body sites (waist, hips, buttocks, etc.). One of the earliest body image measures of this type was the Body Cathexis Scale (BCS; Secord & Jourard, 1953), which was later revised as the Body-Esteem Scale (BES; Franzoi & Shields, 1984). A similar scale that is more often used is the BASS-MBSRQ (T. A. Brown et al., 1990).

The following scales were classified as measures that assess dissatisfaction with the body and were included in the current review: (a) the BDS-EDI (Garner et al., 1983), (b) the FRS (e.g., Stunkard et al., 1983), (c) the BASS-MBSRQ (T. A. Brown et al., 1990), (d) the BES (Franzoi & Shields, 1984), (e) the Body Shape Questionnaire (Cooper, Taylor, Cooper, & Fairburn, 1987), (f) the BCS (Secord & Jourard, 1953), (g) the Body-Esteem Scale (Mendelson & White, 1985; different from the BES of Franzoi & Shields, 1984, already mentioned), and (h) the Body-Image Ideals Questionnaire (Cash & Szymanski, 1995). In addition to these scales, a variety of scales that were not standardized but were specifically described as measuring global body dissatisfaction were included ($N = 13$). Studies that did not measure an evaluative aspect of body image dissatisfaction in a manner consistent with our definition were excluded. Therefore, scales that measured specific domains of appearance (e.g., appearance orientation, internalization) were eliminated because they were inconsistent with the definition

(e.g., the Sociocultural Attitudes Toward Appearance Scale; Heinberg, Thompson, & Stormer, 1995).[2]

Sample of Studies

This review focused on those ethnic-minority women who have been studied most: Asian American, Black, and Hispanic women. Enough data were simply not available to permit cross-group comparisons on additional subgroups of women within the United States. Because of the nature of meta-analytic techniques in making comparisons, it is necessary that at least two groups of women be included in each study; in most cases, this involved a White group and one or more groups of women of color. When possible, we compared women of color with each other and not only with the White group.

We used multiple methods to obtain relevant data. First, a computerized database search of PsycINFO was conducted to generate a pool of potential articles. To identify all articles that investigated a body-image-related construct, *body image, body dissatisfaction, body satisfaction,* and *body esteem* were used as key terms in the literature search. These broad terms were selected to capture the wide range of research conducted in this literature. We purposely did not cross the search terms with the words *race* or *ethnicity* because such a search strategy would have biased the sample toward studies that reported significant racial/ethnic differences as a key finding. Search limits restricted the results to articles published in English between 1960 and 2004. The search identified 5,773 studies that were considered for inclusion. Second, several reference lists were searched for relevant studies, including prior reviews (e.g., O'Neill, 2003; Wildes et al., 2001). Third, we conducted a computerized search of Web of Knowledge for the years 1970 through 2004 to verify that all relevant studies had been obtained and located 2 additional articles through this process.

Abstracts were printed and were excluded based on any of the following criteria: (a) Only one racial/ethnic group was studied, (b) the number of participants was less than 100 and the authors did not report the racial/ethnic background, (c) the article did not describe an empirical study, (d) the article did not present original data, (e) the study was not conducted on a U.S. sample, (f) the article did not contain a relevant measure of body dissatisfaction, and (g) participants were preselected on assessment scores. Upon screening of the citations from the original search, 438 met the aforementioned criteria or could not be excluded on the basis of the abstract. We photocopied these articles and examined them to determine whether they presented sufficient statistics for an effect-size calculation. Unpublished dissertations were also included. Dissertations were ordered via interlibrary loan and reviewed at the receiving library.

Efforts to obtain additional data. If articles were deemed eligible but did not provide adequate information for coding (e.g., means and standard deviations for subgroups of women were omitted, precluding effect-size computation) and were not more than 7 years old, we contacted the authors for the information via e-mail. E-mail addresses were obtained from either the articles' contact information, authors' academic institutions' Web directories, or a Google search. We contacted the first authors of 72 articles. Of those, 7 could not be reached, and 18 (25%) provided usable data.

Coding the studies. The following information was coded for each study: (a) the measure used; (b) all reported statistics on group differences, including means, standard deviations, t values, and F values; (c) the number of respondents in each racial/ethnic group; (d) the mean age of the respondents (if age was not reported, the following rules were used to generate an estimate: If a range was given, the mean age was assumed to be the median; if grade levels were given, 5 years were added to the grade level; if the respondents were described as undergraduates, the mean age was assumed to be 20); (e) whether ethnicity was a central focus of the study (articles were coded as ethnicity focused if either of the following conditions were met: Ethnicity comparisons were described in the abstract, or the title or abstract included words such as *race, ethnicity, African American, Asian American,* or *Hispanic*); and (f) date of publication.

Final sample of studies. The search and review procedures led to a final sample of 98 articles from 41 different journals. These studies comprised 42,667 participants and yielded 222 effect sizes. See Table 1 for studies included in the meta-analysis.

Calculation of Effect Sizes

Formulas for the effect size (d) and homogeneity tests were taken from Hedges and Becker (1986). When means and standard deviations were available, the effect size was computed as the mean body dissatisfaction score for one ethnic group (e.g., White) minus the mean body image score for another ethnic group (e.g., Black) divided by the pooled standard deviation. For consistency, means of Asian American, Black, and Hispanic women were always subtracted from White women; means from Asian American and Hispanic women were subtracted from Black women; and means from Hispanic women were subtracted from Asian American women. Means and standard deviations were available for 216 (93%) of the 222 effect sizes. When means and standard deviations were not available, the effect size was calculated from reported t or F tests. When t or F was reported, d was calculated using the formula provided by Hedges and Becker. If t tests were not available but the significance level was reported, the t value associated with that significance value was found and used to estimate the effect-size formula reported above. For effects that were described only as nonsignificant, d was set to zero. These effect sizes are referred to as estimated, in contrast to those that were exactly calculated.

Because effect sizes tend to be upwardly biased when based on small sample sizes, we corrected effect sizes for bias in the estimation of population effect sizes using the formula provided by Hedges (1981). A positive effect size indicates that the comparison group (i.e., the first group from which the others were subtracted) scored higher on levels of body dissatisfaction. A negative effect size indicates that the second group scored higher. All effect-size analyses were weighted analyses (i.e., each effect size was weighted by an inverted variance; Lipsey & Wilson, 2001).

To conduct the meta-analyses, we used mixed-effects models, which assume that effect-size variance can be explained by both systematic and random components (Lipsey & Wilson, 2001). In mixed-effects models, certain identifiable study characteristics may act as moderator variables that are associated with systematic differences among effect sizes at the same time that a random component of residual variance remains after the systematic portion is accounted for. The mixed-effects model is preferable in this case because a fixed-effects model assumes that the only source of variation is from systematic variation and a random-effects model assumes none of the variation is from systematic sources. Mixed-effects models assume that the effects of between-study variables are systematic but that there is a remaining unmeasured random effect in the effect-size distribution in addition to sampling error. As is done in random-effects models, a random-effects variance component (derived from the residual homogeneity value after the moderators are taken into account) is estimated and added to the standard error associated with each effect size, and inverted variance weights are calculated.

---

[2] A number of measures related to body dissatisfaction were under consideration for inclusion. For example, although not common, some researchers use the EDI Drive for Thinness subscale to measure body dissatisfaction rather than the BDS-EDI, assuming that if an individual has a desire to be thin, she or he is dissatisfied with her or his body. However, one's body image is not wholly defined by one's weight. Individuals may be dissatisfied with multiple aspects of their bodies that a thinness scale does not adequately assess. Only the BDS-EDI was used in the current analysis. For similar reasons, only the BASS-MBSRQ, and not the MBSRQ's Appearance Orientation scale, was used in the current study.

Table 1
Effect-Size Estimates and Moderator Variables

Study	*N*				Age (years)	Measure	Published	*d*					
	W	B	A	H				WB	WA	WH	BA	BH	AH
Abood (1997)	373	80			18–22	BDS-EDI	1	0.30					
Abrams et al. (1993)	100	100			18–22	BDS-EDI	1	0.70					
Ackard et al. (2002)	269	49			18–22	BDS-EDI	1	0.61					
Adams et al. (2000) 4th grade	197	177			< 13	GWC	1	0.35					
Adams et al. (2000) 7th grade	228	228			< 13	GWC	1	0.31					
Akan & Grilo (1995)	28	36	34		18–22	BSQ	1	0.52	0.54		−0.01		
Altabe (1998)	NR	NR	NR	NR	18–22	BDS-EDI	1	0.00	0.34	0.34	0.00	0.34	0.00
Anderson (1993)	192	29			18–22	BSQ	0	0.51					
Andrews et al. (1993)	830	11	12	22	13–18	BSRQ-3	1	−0.13	−0.29	−0.17	−0.16	−0.04	0.15
Arkoff & Weaver (1966)	24		52		18–22	BCS	1		−0.56				
Arriaza & Mann (2001) Study 1	232		123	52	18–22	GBS	1		0.08	−0.14			−0.23
Arriaza & Mann (2001) Study 2	48		37	38	18–22	GBS	1		−0.15	0.23			0.38
Bagley et al. (2003)	204	169			> 22	BDS-EDI	1	0.00					
Barnett et al. (2001)[a]	136		44		18–22	FRS	1		6.46				
Barry & Grilo (2002)	303	49		46	13–18	MACI	1	0.46		0.52		0.05	
Bissell (2004)	192	26			18–22	BDS-EDI	1	0.67					
Botta (2000)	145	33			13–18	BDS-EDI	1	0.45					
Bromley (2000)	80	61	36	43	18–22	GBS	0	0.27	0.19	0.36	−0.07	0.10	0.17
Bross (2002)	115	57	43	33	18–22	BDS-EDI	0	0.22	0.00	0.00	0.00	0.00	0.00
K. M. Brown et al. (1995)	848	804			< 13	BES-WC	1	0.22					
Brownlow (1998)	103	85			18–22	BASS	0	0.15					
Cachelin et al. (2002)	101	132	189	379	18–22	FRS	1	−0.10	0.29	0.00	0.36	0.09	−0.27
Cachelin et al. (1998)	187	243	461	136	18–22	FRS	1	0.00	0.24	0.22	0.23	0.29	0.00
Caldwell et al. (1997)	7,200	183			> 22	FRS	1	−0.12					
Candy & Fee (1998) Sample 1	52	11			< 13	C-FRS	1	−1.12					
Candy & Fee (1998) Sample 2	71	15			< 13	C-FRS	1	−0.98					
Candy & Fee (1998) Sample 3	72	15			< 13	C-FRS	1	0.17					
Candy & Fee (1998) Sample 4	42	9			< 13	C-FRS	1	0.41					
Cash, Melnyk, & Hrabosky (2004)	269	122	26	17	18–22	BIQ	1	0.58	0.08	0.08	−0.48	−0.50	−0.01
Cash, Morrow, Hrabosky, & Perry (2004) Sample 1	311	44			18–22	BASS	1	0.36					
Cash, Morrow, Hrabosky, & Perry (2004) Sample 2	317	116			18–22	BASS	1	0.14					
Cash, Morrow, Hrabosky, & Perry (2004) Sample 3	489	122			18–22	BASS	1	0.16					
Cash, Morrow, Hrabosky, & Perry (2004) Sample 4	554	251			18–22	BASS	1	0.49					
Cash, Morrow, Hrabosky, & Perry (2004) Sample 5	199	101			18–22	BASS	1	0.26					
Cashel et al. (2003)	150	44		31	18–22	BDS-EDI	1	0.78		0.01		−0.91	
Casper & Offer (1990)	137	104			18–22	GBS	1	0.65					
Chandler et al. (1994)	373	106			18–22	BDS-EDI	1	0.45					
Cini (2000)	42	20		27	18–22	BSQ	0	0.28		0.41		0.12	
Crowley (1999)	99		45	17	18–22	BDS-EDI	0		0.50	0.00		0.79	
Dacosta & Wilson (1996) Sample 1	20	14			18–22	BDS-EDI	1	0.26					
Dacosta & Wilson (1996) Sample 2	20	13			> 22	BDS-EDI	1	−0.26					

Table 1 (*continued*)

Study	*N*				Age (years)	Measure	Published	*d*					
	W	B	A	H				WB	WA	WH	BA	BH	AH
Dacosta & Wilson (1996) Sample 3	21	14			> 22	BDS-EDI	1	0.10					
Demarest & Allen (2000)	20	20		20	18–22	FRS	1	0.29		0.51		0.15	
DiGioacchino et al. (2001)	320	119			18–22	FRS	1	0.07					
Douglas (1992)	20	20			18–22	BCS	0	0.63					
Duncan et al. (2003)	155	35			> 22	GBS	1	0.33					
Edwards-Hewitt & Gray (1993)	180	138			18–22	BDS-EDI	1	0.34					
Eitel (2003)	114	61			> 22	BASS	0	−0.88					
Esteban (2003)	34			78	18–22	BES-WC	0			0.16			
Feather et al. (1997)	168	122			18–22	BCS	1	0.52					
Franko & Herrera (1997)	29			28	18–22	BDS-EDI	1			0.62			
Franzoi & Chang (2002)	41		33		18–22	BES-WC	1		0.67				
Gardner et al. (1999)	69			21	< 13	C-FRS	1			0.41			
Gilmore (2001)	75	11	20	18	> 22	BSQ	0	0.33	0.49	−0.14	0.16	−0.40	−0.61
Gluck & Geliebter (2002)	108	46	40		18–22	FRS	1	0.29	0.44		0.10		
Grabe (2004)	287	263			13–18	GBS	0	0.43					
Granner et al. (2002)	103	103			18–22	BDS-EDI	1	0.09					
S. M. Harris (1994)	135	60			18–22	BASS	1	0.45					
Haudek et al. (1999)	26		25		18–22	BDS-EDI	1		−0.64				
Henriques & Calhoun (1999)	163	55			18–22	BES-WC	1	0.64					
Henriques et al. (1996)	84	33			18–22	BDS-EDI	1	0.43					
Hogan (2001)		246		319	> 22	FRS	0				−0.12		
C. Johnson et al. (2004)	281	281			18–22	BDS-EDI	1	0.73					
Jones (2004) high school sample	58		15		13–18	BDS-EDI	1		−0.46				
Jones (2004) middle school sample	50		20		13–18	BDS-EDI	1		−0.20				
Kawamura (2001)	95		60		18–22	FRS	0		−0.32				
Kemper (1993)	168	218			13–18	C-FRS	0	0.24					
Koff et al. (2001)	94		72		18–22	BASS	1		−0.36				
Lawrence & Thelen (1995)	46	70			< 13	C-FRS	1	0.08					
Lennon et al. (1999)	109	171	272		18–22	BASS	1	0.23	−0.83		−0.86		
Lopez et al. (1995)	32			35	> 22	FRS	1			−0.27			
McComb & Clopton (2002)	321			27	18–22	BDS-EDI	1			−0.30			
Miller et al. (2000)	20	20		20	18–22	BASS	1	0.70		0.03		−0.67	
Mintz & Kashubeck (1999)	105		33		18–22	GWC	1		0.27				
Moss (2004)	44	55		43	13–18	SIQYA	0	0.88		0.19		−0.69	
Owens et al. (2003)	654	124		44	> 22	GBS	1	−0.02		0.30		0.30	
Pan (2000)	91		144		18–22	BASS	0		0.95				
Perez & Joiner (2003)	60	36			18–22	FRS	1	0.22					
Petersons et al. (2000)	395	218			18–22	BDS-EDI	1	0.25					
Powell & Kahn (1995)	59	38			18–22	FRS	1	0.37					
Prendergast (2001)[a]	39	25	9	11	< 13	BES-Full	0	0.65	−0.87	0.04	−2.03	−0.67	0.93
Roberts (1991)	50	47			18–22	BSQ	0	0.86					
Robinson et al. (1996)	359		143	259	13–18	BDS-EDI	1		−0.06	−0.19			−0.14
Rosen et al. (1991)	77	90			18–22	BDS-EDI	1	0.54					
Rucker & Cash (1992)	55	59			18–22	BDS-EDI	1	0.48					
Russell & Cox (2003)	105	63			18–22	BCS	1	−0.17					
Sánchez-Johnson et al. (2004)		271		234	> 22	FRS	1				−0.45		
Sanders & Heiss (1998)	91		35		18–22	BDS-EDI	1		−1.29				
Schooler et al. (2004)	548	87			18–22	BES-WC	1	0.84					
Shaw et al. (2004)	564	49	64	108	13–18	BPS	1	0.22	0.07	−0.05	−0.15	−0.26	−0.12
Shulman & Home (2003)	45	51			> 22	BASS	1	0.54					
Siegel (2002)	82	46	53	230	13–18	GBS	1	0.49	0.08	0.09	−0.46	−0.40	0.02

(*table continues*)

Table 1 (*continued*)

Study	*N*				Age (years)	Measure	Published	*d*					
	W	B	A	H				WB	WA	WH	BA	BH	AH
R. E. Smith (2003)	126	99			< 13	GWC	0	0.27					
D. E. Smith et al. (1999)	924	974			> 22	FRS	1	0.04					
Stevens et al. (1994)	278	126			> 22	FRS	1	0.25					
Streigel-Moore et al. (2000) age 11	186	219			< 13	BDS-EDI	1	−0.06					
Streigel-Moore et al. (2000) age 12	172	229			< 13	BDS-EDI	1	0.04					
Streigel-Moore et al. (2000) age 13	161	213			13–18	BDS-EDI	1	0.18					
Streigel-Moore et al. (2000) age 14	146	188			13–18	BDS-EDI	1	0.24					
Streigel-Moore et al. (2000) age 15	142	188			13–18	BDS-EDI	1	0.18					
Streigel-Moore et al. (2000) age 16	154	198			13–18	BDS-EDI	1	0.25					
Suldo & Sandberg (2000)	123	21	7	10	18–22	BDS-EDI	1	0.55	−0.18	0.44	−0.77	−0.13	0.72
S. H. Thompson & Sargent (2000)	156	59			> 22	FRS	1	−0.04					
Thompson-Leonardelli (2003)	165	131			18–22	BES-WC	0	0.54					
Turnbull (1999)	40	16	49	28	18–22	BSQ	0	0.39	0.36	0.22	−0.06	−0.19	−0.14
Tylka & Subich (1999)	127	9			18–22	BDS-EDI	1	−0.10					
Tylka (2004) Study 1	262	31	10		18–22	BDS-EDI	1	0.54	0.61		0.09		
Tylka (2004) Study 2	368	51		23	18–22	BSQ	1	0.68		0.38		−0.28	
Tylka (2005)	197	27	6	9	18–22	BSQ	1	0.53	0.09	0.48	−0.39	−0.04	0.29
Vander Wal (2004)		74		65	< 13	BES-M	1					−0.52	
Vartanian et al. (2001)	147	10			18–22	BES-M	1	1.14					
Walker et al. (2002)	76	72		135	18–22	BCS	1	0.38		0.01		−0.38	
White et al. (2003)	29	32			13–18	GBS	1	0.77					
Wilfley et al. (1996)	267	271			> 22	BDS-EDI	1	−0.05					
Womble et al. (2001)	358	72	8		18–22	BDS-EDI	1	0.21	−0.11		−0.31		
Yates et al. (2004)	128	62	239		18–22	FRS	1	0.16	0.17		0.00		

Note. Published: 0 = No, 1 = Yes. A positive *d* indicates that the first group scored higher on dissatisfaction; a negative *d* indicates that the second group scored higher. NR = not reported; BDS-EDI = Body Dissatisfaction Scale of the Eating Disorders Inventory; GWC = general weight concern; BSQ = Body Shape Questionnaire; BSRQ-3 = Body–Self Relations Questionnaire; BCS = Body Cathexis Scale; GBS = general body dissatisfaction; FRS = Figure Rating Scale; MACI = Body Disapproval subscale of the Million Adolescent Clinical Inventory; BES-WC = Body Esteem Weight Control subscale; BASS = Body Areas Satisfaction Scale; C-FRS = Child Figure Rating Scale; BIQ = Body Image Ideals Questionnaire; SIQYA = Body Image subscale of the Self-Image Questionnaire for Young Adolescents; BES-Full = Body Esteem Scale Full; BPS = Body Parts Scale; BES-M = Body Esteem Scale—Mendelson; WB = White–Black comparison; WA = White–Asian American comparison; WH = White–Hispanic comparison; BA = Black–Asian American comparison; BH = Black–Hispanic comparison; AH = Asian American–Hispanic comparison.
[a] Outlier.

Results

Mean Effect Sizes

Mean effect sizes were calculated for each of the group comparisons. The results are reported in Table 2 and discussed below in the respective ethnicity-comparison sections. The number of samples (*k*), the weighted *d* (weighted by *w*; Hedges & Vevea, 1998; Lipsey & Wilson, 2001), the 95% confidence interval for *d,* the total homogeneity statistic (Q_T), and the residual homogeneity statistic (Q_E) for each ethnicity comparison are reported. To address outlier data points, we eliminated effect sizes that were more than two standard deviations above or below the mean (Lipsey & Wilson, 2001). This procedure identified two outliers (one White–Asian American comparison, Barnett et al., 2001; and one Black–Asian American comparison, Prendergast, 2001) that were eliminated from further analyses.

Table 2
Summary of Mean Effect Sizes for Mixed-Effects Analyses

Comparison	*k*	*d*	95% CI	Q_T	Q_E
White–Black	93	0.29	0.23, 0.35	121.20*	358.99
White–Asian American	34	0.01	−0.22, 0.24	16.23	495.40
White–Hispanic	31	0.09	0.02, 0.17	36.02	38.89
Black–Asian American	19	−0.12	−0.29, 0.04	15.29	61.79
Black–Hispanic	26	−0.18	−0.31, −0.06	28.63	64.10
Asian American–Hispanic	17	−0.07	−0.15, 0.01	30.53*	30.53

Note. A positive *d* indicates that the first group scored higher on dissatisfaction; a negative *d* indicates that the second group scored higher. *k* = number of studies; CI = 95% confidence interval; Q_T = total heterogeneity; Q_E = residual heterogeneity.
* $p < .05$.

Moderator Analysis

Because a meta-analysis provides the opportunity to determine if specific study or sample characteristics influence research findings, we conducted analyses to partition the variance among the effect sizes when homogeneity analyses indicated that total heterogeneity was significant. Using age as a moderator, effect sizes were divided into four subgroups on the basis of the average age of the participants: (a) 12-year-olds and younger, (b) 13- to 18-year-olds, (c) 18- to 22-year-olds, and (d) those over 22 years old. These groups corresponded roughly to middle childhood or elementary school, adolescence, early adulthood or college, and adulthood, respectively. Because, in any meta-analysis, publication bias is a concern, we also examined publication status as a moderator. Type of measure was the third potential moderator. Three measures were examined on the basis of the most frequently administered assessments (which constituted over 66% of the sample): (a) the BDS-EDI, (b) the FRS, and (c) the BASS-MBSRQ. To determine whether a calculated or estimated effect size moderated the magnitude of ethnic differences in women's body dissatisfaction, we also examined mean effect sizes separately for the studies with exactly computed and estimated effect sizes. To address whether the effect sizes were larger from ethnicity-focused articles, we examined mean effect sizes separately for studies with and without an ethnicity focus. Finally, to determine whether there was an effect based on publication year, we divided effect sizes into three groups: those published between 1990 and 1994, between 1995 and 2000, and between 2001 and 2004. Two studies published outside of these categories (i.e., 1966 and 1985) were excluded from the moderator analyses.

When multiple moderators were significant, we conducted weighted multiple regressions to determine the relative influence of the moderator variables on the effect-size magnitudes (Hedges & Becker, 1986). The inverse variance weight was specified as the weight, and the effect size was the outcome. Study descriptors were entered as predictor variables.

Table 3
Moderating Variables in the White–Black Comparison

Variable	Between-groups Q	k	d	Within-group Q
Age group	18.90***			
Elementary school (under 12 years)		12	0.10	23.85*
Adolescent (ages 13–18 years)		14	0.37	9.64
Young adult/college (ages 18–22 years)		44	0.39	30.75
Adult (over 22 years)		23	0.13	37.79*
Publication status	0.40			
Published		77	0.28	92.38
Not published		16	0.33	28.42*
Measure	52.01***			
BDS-EDI		32	0.30	26.42
FRS		18	0.05	22.10
BASS-MBSRQ		11	0.22	20.67*
Effect-size computation	0.41			
Calculated effect size		85	0.30	118.42**
Estimated effect size		8	0.24	2.37
Ethnicity a focus	0.03			
Yes		75	0.29	80.11
No		18	0.30	41.06***
Publication year	9.04*			
1990–1994		15	0.41	10.12
1995–2000		41	0.19	41.81
2001–2005		36	0.35	60.23**

Note. A positive d indicates that White women reported higher body dissatisfaction; a negative d indicates that Black females reported higher body dissatisfaction. k = number of studies; Q = heterogeneity; BDS-EDI = Body Dissatisfaction Scale of the Eating Disorders Inventory; FRS = Figure Rating Scales; BASS-MBSRQ = Body Areas Satisfaction Scale of the Multidimensional Body–Self Relations Questionnaire.
* $p < .05$. ** $p < .01$. *** $p < .001$.

White–Black Comparison

Mean differences. As can be seen in Table 2, averaged over 93 independent effect sizes, the weighted mean effect size for the difference between White and Black women's body dissatisfaction was 0.29, representing a small effect by Cohen's (1988) criteria. The 95% confidence interval for d was 0.23 to 0.35. The positive value indicates that overall, White girls and women reported higher levels of body dissatisfaction than their Black counterparts. Homogeneity analyses using procedures specified by Hedges and Becker (1986) and Lipsey and Wilson (2001) indicated that the set of 93 effect sizes was significantly heterogeneous ($Q_T = 121$) compared with a critical value of $\chi^2(92, N = 93) = 115.39$, $p < .05$. The random-effects variance, which is used to calculate the weighted effect size and test homogeneity, was .09 in this model.

Moderator analysis. The results of the moderator analyses for comparisons between White and Black women are shown in Table 3. The significant between-groups homogeneity statistics for age, $\chi^2(3, N = 4) = 16.27$, $p < .001$; measure, $\chi^2(2, N = 3) = 13.82$, $p < .001$; and publication year, $\chi^2(2, N = 3) = 5.99$, $p < .05$, suggest that there is a significant difference in the magnitude of the effect sizes as a function of these moderator variables. As predicted, ethnic differences were largest during adolescence and young adulthood. The findings also suggest that although the effect sizes for the BDS-EDI and BASS-MBSRQ were small and comparable, the confidence interval for studies using the FRS included zero, indicating that differences between Black and White women's body dissatisfaction are small and present when using body satisfaction questionnaires but not when using current- and ideal-body discrepancy measures. There also were effect-size differences based on publication year, although given that the decline from the early 1990s was followed by an increase in the early 2000s, these differences probably are not meaningful. The findings also indicate no difference in magnitude of the effect sizes on the basis of whether the study was published, whether we calculated or estimated the effect size, or whether the article was ethnicity focused. As is reflected in Table 3, significant within-group heterogeneity remained.

To investigate the relative influence of the moderators, we conducted a multiple regression analysis to determine the extent to which the multiple moderator variables influenced the effect sizes. In a linear regression model, age group was entered in as a continuous variable, measure was entered based on two dummy codes that reflected the three different measures, and publication year was entered as a continuous variable. Random-effects-model weightings were used as case weights, and corrected effect size

was used as the outcome variable. Age, measure, and publication year each accounted for a significant amount of overall variance, adjusted $R^2 = .05$, $F(1, 59) = 4.36$, $p < .05$; $R^2 = .13$, $F(3, 57) = 3.99$, $p < .01$; and $R^2 = .12$, $F(4, 56) = 3.12$, $p < .05$, respectively, and each of the moderators remained significant when included in the model simultaneously. Age and publication year each negatively predicted effect-size magnitude (βs = $-.12$ and $-.10$, respectively), suggesting that overall, as age increases and publication year is more recent, smaller differences in White and Black women's body dissatisfaction are observed. When measure was entered into the model, the second contrast (FRS vs. BDS-EDI, BASS-MBSRQ) was significantly associated with effect size ($\beta = -.37$).

White–Asian American Comparison

Mean effect sizes are reported in Table 2. Averaged over 34 independent effect sizes, the weighted mean effect size for the difference between White and Asian American women's body dissatisfaction was 0.01, representing no effect by Cohen's (1969) criteria. The 95% confidence interval for d was -0.22 to 0.24. The small effect size, coupled with the fact that the 95% confidence interval included zero, indicates that overall, White and Asian American women do not differ significantly in their levels of body dissatisfaction. Homogeneity analyses indicated that the set of 34 effect sizes was homogeneous ($Q_T = 16$), critical value for $p < .05 = \chi^2(32, N = 34) = 47.40$. In the absence of significant heterogeneity, no moderator analyses were conducted. The random-effects variance was .48 in this model.

White–Hispanic Comparison

As can be seen in Table 2, averaged over 31 independent effect sizes, the weighted mean effect size for the difference between White and Hispanic women's body dissatisfaction was 0.09, representing no effect by Cohen's (1969) criteria. The 95% confidence interval for d was 0.02 to 0.17. The very small effect size indicates that overall, White and Hispanic women do not differ in their levels of body dissatisfaction. Homogeneity analyses indicated that the set of 31 effect sizes was homogeneous ($Q_T = 39$), critical value of $\chi^2(29, N = 31) = 43.77$, $p < .05$. Because of nonsignificant heterogeneity, no moderator analyses were conducted. The random-effects variance was .06.

Black–Asian American Comparison

As reported in Table 2, averaged over 19 independent effect sizes, the weighted mean effect size for the difference between Black and Asian American women's body dissatisfaction was -0.12, representing a small effect by Cohen's (1969) criteria. The 95% confidence interval for d was -0.29 to 0.04. The very small effect size, coupled with the fact that zero is included in the confidence interval, indicates that overall, Black and Asian American women do not differ significantly in their levels of body dissatisfaction. Homogeneity analyses indicated that the set of 19 effect sizes was homogeneous ($Q_T = 15$) compared with a critical value of $\chi^2(17, N = 19) = 28.67$, $p < .05$. In the absence of significant heterogeneity, no moderator analyses were conducted. The random-effects variance was .16.

Black–Hispanic Comparison

Again, mean effect sizes are reported in Table 2. Averaged over 26 independent effect sizes, the weighted mean effect size for the difference between Black and Hispanic women's body dissatisfaction was -0.18, representing a small effect by Cohen's (1988) criteria. The 95% confidence interval for d was -0.31 to -0.06. The small negative effect size indicates that overall, Hispanic women report higher levels of body dissatisfaction than their Black counterparts. Homogeneity analyses indicated that the set of 26 effect sizes was homogeneous ($Q_T = 28$) compared with a critical value of $\chi^2(24, N = 26) = 37.65$, $p < .05$. Because heterogeneity was nonsignificant, no moderator analyses were conducted. The random-effects variance was .12.

Asian American–Hispanic Comparison

Mean differences. As reported in Table 2, averaged over 17 independent effect sizes, the weighted mean effect size for the difference between Asian American and Hispanic women's body dissatisfaction was -0.07, representing no effect by Cohen's (1969) criteria. The 95% confidence interval for d was -0.15 to 0.01. The very small effect size, coupled with the fact that zero is included in the confidence interval, indicates that overall, Asian American and Hispanic women do not differ in their levels of body dissatisfaction. Homogeneity analyses indicated that the set of 17 effect sizes was significantly heterogeneous ($Q_T = 30$) compared with a critical value of $\chi^2(15, N = 17) = 26.3$, $p < .05$. Therefore, moderator analyses were conducted. The random-effects variance was .00.

Moderator analysis. Results for the Asian American–Hispanic moderator analyses are shown in Table 4. Significant between-groups heterogeneity appeared for age, measure, estimated effect size, and ethnicity focus. Because there were not enough studies in the first age group (children; $k = 1$), we tested only three age groups. A significant between-groups homogeneity statistic for age group indicates that small negative differences exist between Asian American and Hispanic women's body dissatisfaction during adolescence and adulthood, with Hispanic adolescents and adults being more dissatisfied than Asian American adolescents and adults, but that trend is reversed during young adulthood. Using measure as a moderator, only the BDS-EDI and FRS were used because no studies with Asian American and Hispanic women used the BASS-MBSRQ. The significant between-groups homogeneity statistic compared with a critical value of $\chi^2(1, N = 2) = 10.83$, $p < .001$, indicates that the effect sizes for the BDS-EDI and FRS were both negative and small, but it appears that the difference between Asian American and Hispanic women's body dissatisfaction is more pronounced when using the FRS than when using body dissatisfaction questionnaires. The significant heterogeneity as a function of estimated effect sizes should be interpreted with caution because only two studies were estimated. The significant between-groups statistic for ethnicity focus indicated that ethnicity focus of the study was associated with a difference in magnitude of the effect. Specifically, if ethnicity was not the focus in the study, effects were positive and moderate, suggesting that Asian American women were more dissatisfied with their bodies than Hispanic women, whereas in studies that held ethnicity as a focus, the effects were very small and negative,

Table 4
Moderating Variables in the Asian American-Hispanic Comparison

Variable	Between-groups *Q*	*k*	*d*	Within-group *Q*
Age group	9.21**			
Adolescent (ages 13–18 years)		5	−0.11	1.82
Young adult/college (ages 18–22 years)		7	0.18	7.76
Adult (over 22 years)		4	−0.15	8.71*
Publication status	2.81			
Published		11	−0.10	13.85
Not published		6	0.10	13.87*
Measure	15.29***			
BDS-EDI		5	−0.03	11.01
FRS		2	−0.15	4.23
Effect-size computation	4.34*			
Calculated effect size		15	−0.09	21.84
Estimated effect size		2	0.30	4.35*
Ethnicity a focus	11.12***			
Yes		11	−0.11	14.13
No		6	0.43	5.28
Publication year	1.21			
1995–2000		5	−0.01	11.65*
2001–2005		11	−0.10	17.67

Note. A positive *d* indicates that Asian American women reported higher body dissatisfaction; a negative *d* indicates that Hispanic females reported higher body dissatisfaction. *k* = number of studies; *Q* = heterogeneity; BDS-EDI = Body Dissatisfaction Scale of the Eating Disorders Inventory; FRS = Figure Rating Scales.
* $p < .05$. ** $p < .01$. *** $p < .001$.

suggesting that Hispanic women were slightly more dissatisfied with their bodies than were Asian American women.

To investigate the relative influence of the significant moderators, we conducted a weighted multiple regression to determine the extent to which the multiple moderator variables influenced the effect sizes. Measure and whether the effect size was estimated accounted for a significant amount of overall variance, adjusted $R^2 = .67$, $F(3, 7) = 7.74$, $p < .05$, $\beta = -.70$, and $R^2 = .67$, $F(4, 6) = 6.13$, $p < .05$, $\beta = .05$, respectively. Age did not account for a significant amount of overall variance when the other predictors were in the model, $R^2 = .06$, $F(1, 9) = 1.62$, $\beta = .10$, *ns,* and ethnicity focus was marginal, $R^2 = .65$, $F(5, 5) = 4.71$, $p < .10$, $\beta = .25$. Because, with the exception of age, the moderators are not continuous variables, interpretation of these findings beyond their relative contribution may not be meaningful.

Discussion

Magnitude and Direction of the Ethnic-Group Differences

We conducted a meta-analysis with six main comparisons to investigate ethnic differences in body dissatisfaction. The first analysis, based on White–Black differences, yielded an overall mean effect size of 0.29, a small difference, with White women being more dissatisfied than Black women. The second and third analyses were based on comparisons between White and Asian American and White and Hispanic women. The overall mean effect sizes for these comparisons suggested differences very close to zero. The fourth and fifth analyses were based on comparisons between Black and Asian American and Black and Hispanic women. The confidence interval for the mean effect size for the Black–Asian American comparison included zero. The effect size for the Black–Hispanic comparison was −0.18, indicating more body dissatisfaction among Hispanic women. The final analysis was based on the Asian American and Hispanic comparison and yielded an overall mean effect size of −0.07 and a confidence interval that included zero. The results of our analyses directly challenge the belief that there are large differences in levels of body dissatisfaction between White and non-White women (Wildes et al., 2001). Rather, it depends on which ethnic group White women are compared with.

The reported effect sizes for ethnic differences in body dissatisfaction can be compared with published effect sizes for gender differences in body dissatisfaction to better interpret their magnitude. For example, during a comparable study period (i.e., the 1990s), Feingold and Mazella (1998) reported a moderate difference in women's and men's body dissatisfaction ($d = 0.58$, women more dissatisfied). By comparison, the magnitude of the ethnic difference between White and Black women in body dissatisfaction reported in the current study was small ($d = 0.29$, Whites more dissatisfied), despite the much-publicized ethnicity effect. The range of mean effect sizes for the remaining analyses was −0.18 to 0.09, indicating that all other ethnic comparisons were smaller. This pattern of results suggests that gender, relative to ethnicity, has more important consequences for experiences of body dissatisfaction.

Unlike past reviews, this meta-analysis identified a sufficient number of studies that investigated ethnic subgroups of women to examine more accurately the relationship between body dissatisfaction and ethnicity. On the basis of the findings, we are led to question why White women differ from Black women but not from Asian American and Hispanic women in their levels of body dissatisfaction. One potential explanation may lie in the construction of gender identity and gender roles within the African American community. Institutional racism has made it risky for Black women to depend on men for economic support and may be part of the reason that Black women are raised to be strong, independent, and self-reliant rather than passive, dependent, and deferential, according to the traditional White feminine gender role (Lovejoy, 2001). Researchers have found that gender identities of Black women are more androgynous than those of White women (A. C. Harris, 1996). Within the Black community, women's bodies may represent a source of strength and are positively valued because of their maternal role, as opposed to a body that needs to be controlled and manipulated to conform to an ideal. Another plausible explanation may lie in the fact that Black men prefer a larger body type for women and tend to associate more favorable characteristics with large women than do their White male counterparts (Greenberg & LaPorte, 1996; Jackson & McGill, 1996). Thus, ethnicity-specific standards of beauty may help promote greater acceptance of body size and shape among Black women. Traditional values within Asian American and Hispanic cultures (e.g., perfectionism, investment in appearance) may leave women of these backgrounds more vulnerable to mainstream body ideals.

Although reporting of body mass index (BMI) was not consistent enough in the literature to examine how differences in average BMI across ethnic groups might impact the interpretation of dif-

ferences in body dissatisfaction, the potential role of BMI in the development of body dissatisfaction warrants discussion. Research has demonstrated that BMI is among the most potent risk factors for high body dissatisfaction (Jones, 2004). Given that Black women tend to be heavier on average than their White counterparts, whereas, for example, Asian American women tend to be smaller, we might have expected BMI to differentially influence body dissatisfaction. However, reports of the positive relation between BMI and dissatisfaction have typically been found in predominantly White samples, whereas it has been found that BMI is not linked to dissatisfaction for women of color (Asian American women: Mukai, Kambara, & Sasaki, 1998; Japanese and African American women: Yates et al., 2004). Thus, although it may seem remarkable that the White–Black body dissatisfaction difference runs counter to the differences in average BMI across these groups, this finding is consistent with the notion that BMI is a strong predictor among White, but not Black, women. These notions are supported by the existence of different body ideals among women of color (i.e., body ideals influenced by larger sizes among Black and Hispanic women and by facial features among Asian American women).

Age

One goal of the present study was to determine whether various factors moderate the magnitude of the ethnic-group differences. As hypothesized, the effect sizes for the White–Black comparisons varied by age of respondent. Specifically, the difference was largest during adolescence and young adulthood but small during elementary school and near zero in the oldest adult age group. The finding that differences emerge during adolescence supports past research suggesting that body dissatisfaction increases with age, but only among White women, and that these differences become quite small again in adulthood (Striegel-Moore et al., 2000). Although prior studies have demonstrated similar findings, no studies to date were inclusive of a full range of ages. One possible reason that the largest mean differences are observed during adolescence and young adulthood is that the media target this demographic with images of the mainstream ideal—an ideal that Black women are more likely to reject (Evans & McConnell, 2003). At early and older ages, White and Black girls and women may hold more similar standards for themselves or place less emphasis on bodily appearance.

No hypotheses were put forth regarding age differences for additional ethnic comparisons, and with the exception of the Asian American–Hispanic comparison, no additional moderator analyses were run. The Asian American–Hispanic comparison revealed that during adolescence and adulthood, Hispanic women were more dissatisfied but that during young adulthood, Asian American women were more dissatisfied. It is possible that during adolescence and adulthood, Asian American women are investing less in the mainstream ideal but that during the college experience, they become more dissatisfied to the extent that their minority status is more salient.

Publication Status and Ethnicity Focus

We also examined two possible sources of bias in estimates of effect sizes: publication status and ethnicity focus of the article. The logic is that data from unpublished sources or from articles that are not focused on ethnicity provide effect sizes that are potentially less contaminated by publication bias. We found little evidence of these biases. First, publication status did not influence the magnitude of effect sizes in either comparison (White–Black, Asian American–Hispanic). Second, effect sizes from articles that were focused on ethnicity were comparable to ones that were not ethnicity focused in the White–Black comparison, but differences were present in the Asian American–Hispanic comparison. Contrary to hypotheses, effect sizes from articles that were not focused on ethnicity were significantly larger than those from articles that were focused on ethnicity (*d*s of 0.44 and −0.11, respectively). Again, however, so few studies were included in this comparison that conclusions should be speculative. In sum, these findings provide little reason to believe that publication status or ethnicity focus biased estimates of effect sizes.

Measure

We found that measure moderated the magnitude of the mean effect sizes in both comparisons in which moderators were analyzed. In the White–Black comparison, although the effect sizes for BDS-EDI and BASS-MBSRQ were small and comparable, the effect size for studies using the FRS was near zero, indicating that differences between Black and White women's body dissatisfaction are small and present when using body satisfaction questionnaires but not when using current- and ideal-body discrepancy measures. It is interesting to note that these findings suggest that Black women's dissatisfaction may not come from the same source as White women's. In other words, the items on the widely used questionnaires (e.g., "I feel satisfied with the shape of my body") may be more indicative of White women's dissatisfaction—and less applicable to Black women—whereas the FRS discerns discrepancies between current and ideal body sizes among both groups of women. The number of studies included in the Asian American–Hispanic comparison was too small to draw conclusions. Nevertheless, the findings from the White–Black comparison highlight that studies using questionnaire assessments versus figure ratings scales may yield different results across ethnic groups. One explanation for this finding may be that the questionnaire assessments were constructed and validated on predominantly White samples and therefore have greater sensitivity to body dissatisfaction in samples of White women (T. A. Brown et al., 1990; Garner et al., 1983).

Implications

The prevailing view in American popular culture and the psychological literature is that White women have greater body dissatisfaction than non-White women. This popular stereotype is so prevalent that commonly used terms such as *White female phenomenon* or *golden girl problem* have emerged to reflect the belief that body dissatisfaction is a problem only among White women (Mastria, 2002; Smolak & Striegel-Moore, 2001). Relatedly, stereotypes suggesting that ethnic-minority women are buffered from the deleterious effects of the mainstream thin ideal because of their racial identity have persisted. Such beliefs can be costly for ethnic-minority women. For example, some experts believe that stereotypes regarding weight standards for ethnic-minority women have

led to the inadvertent alienation of ethnic-minority women from eating disordered health care or research (Mastria, 2002).

This review highlights that much of what is known about women's body dissatisfaction is based on largely White samples. Research agendas and treatment approaches are often developed from this standpoint, which may be inappropriate for minority populations. First, although it appears that Black women on average do not have the same body issues as White women, it is not safe to assume that they are without dissatisfaction. Furthermore, simply because Asian American and Hispanic women appear as dissatisfied as White women does not mean that their dissatisfaction reflects the same concerns or that dissatisfaction predicts the same set of psychological consequences (depression, eating disorders). This meta-analysis highlights that a broader scope of research is needed for a better understanding of ethnic differences in body image dissatisfaction.

An enormous potential cost of the belief that only White women are dissatisfied with their bodies is that women of color seeking treatment with related psychopathology (e.g., depression) may be overlooked or that body dissatisfaction may be ignored as an issue. Thus, it is important to develop culturally appropriate prevention and intervention efforts that specifically address body dissatisfaction. For example, Mintz and Kashubeck (1999) found that Asian American women reported less satisfaction than White women with 5 of 12 specific body features (height, eyes, face, breasts, arms). Notably, facial features are often sources of discontent among Asian American women, as is height, because they signal differences from the majority culture and the prevailing standards of attractiveness (Hall, 1995). Similarly, Altabe (1998) found that Black, Hispanic, White, and Asian American women prioritized different aspects of their bodies. For instance, Hispanic and White women reported a desire for larger breasts, whereas neither the Black nor the Asian American women reported breast size as an important feature of their ideal body. Furthermore, Black and Asian American women both reported lighter skin as an ideal trait in higher proportions than White and Hispanic women. This last example points to the fact that distinct aspects of women's body ideals may be particularly "raced" (e.g., skin color; Bond & Cash, 1992).

Future Directions

Because our analysis has focused on mean-level differences, it does not provide any information regarding sources of body dissatisfaction. Although women of different backgrounds appear to have similar levels of dissatisfaction, their dissatisfaction may arise for different reasons and from different sources. It is clearly important to understand differential sources to develop appropriate prevention and treatment interventions.

This review has also made evident that women of color were largely neglected in research in this area until the 1990s. Furthermore, the comparatively small number of studies that included Asian American and Hispanic women, relative to Black women, draws attention to the fact that women from these backgrounds continue to be marginalized from this research. However, the findings of this review highlight that levels of dissatisfaction among Asian American and Hispanic women are as high as those among White women, who have been the traditional focus in this research. More research on body image attitudes among Asian American and Hispanic women is clearly needed. Certainly, we can conclude that research in this area needs to move beyond a sole emphasis on Black–White comparisons.

The confirmation of a small but statistically significant ethnicity difference between White and Black women does not close the door on the issue of White–Black differences in body dissatisfaction. Specifically, research should examine sources of resiliency among Black women, as well as how mainstream influence does affect Black women's body dissatisfaction. Furthermore, issues surrounding Black women's body image may be different and overlooked. For example, despite Black women's generally higher satisfaction with their bodies, the body may still be a means by which various sources of gender oppression are played out. Whereas White women may restrict their eating severely to attain the stringent standards of beauty promoted by the media, Black women's eating problems and high risk of obesity (Must et al., 1999) may be indicative of the variety of oppressions experienced by Black women (e.g., racism, sexual abuse; Ullman & Filipas, 2005). In this way, positive body image among Black women actually may reflect a defensive need to deny the health problems associated with obesity (Lovejoy, 2001). In fact, some authors have argued that some degree of dissatisfaction regarding the body may be helpful and necessary to motivate healthy exercise and eating behavior and may therefore be adaptive among individuals for whom there is a cultural component to obesity (Heinberg, Thompson, & Matzon, 2001). Thus, although eating problems may manifest differently among White and Black women, there are problems related to the body in both subgroups of women.

In summary, the current meta-analysis represents the first comprehensive quantitative review of the research on women's body dissatisfaction among groups of women from four different ethnic backgrounds. The results of this analysis do not indicate that women's body dissatisfaction is strongly differentiated by ethnicity. In contrast, we found that Asian American, Hispanic, and White women are roughly the same in their levels of body dissatisfaction. Although we did find what White women are more dissatisfied with their bodies than Black women, the difference is small, in fact, notably smaller than gender differences in body dissatisfaction. Thus, our results indicate that the large differences believed to exist between White and ethnic-minority women's body dissatisfaction are simply not there. However, given how little is known about the predictors of dissatisfaction among women of color, the findings also indicate that more sophisticated research on body dissatisfaction among subgroups of women is sorely needed.

References

References marked with an asterisk indicate studies included in the meta-analysis.

*Abood, D. A. (1997). Race and the role of weight, weight change, and body dissatisfaction in eating disorders. *American Journal of Health Behavior, 21,* 21–25.

*Abrams, K. K., Allen, L., & Gray, J. J. (1993). Disordered eating attitudes and behaviors, psychological adjustment, and ethnic identity: A comparison of Black and White female college students. *International Journal of Eating Disorders, 14,* 49–57.

*Ackard, D. M., Croll, J. K., & Kearney-Cooke, A. (2002). Dieting frequency among college females: Association with disordered eating,

body image and related psychological problems. *Journal of Psychosomatic Research, 52,* 129–136.

*Adams, K., Sargent, R. G., Thomson, S. H., Richter, D., Corwin, S. J., & Rogan, T. J. (2000). A study of body weight concerns and weight control practices of 4th and 7th grade adolescents. *Ethnicity & Health, 5,* 79–94.

*Akan, G. E., & Grilo, C. M. (1995). Sociocultural influence in eating attitudes and behaviors, body image, and psychological functioning: A comparison of African-American, Asian-American, and Caucasian college women. *International Journal of Eating Disorders, 18,* 181–187.

Allan, J. D., Mayo, K., & Michel, Y. (1993). Body size values of White and Black women. *Research in Nursing and Health, 16,* 323–333.

*Altabe, M. (1998). Ethnicity and body image: Quantitative and qualitative analysis. *International Journal of Eating Disorders, 23,* 153–159.

Altabe, M., & O'Garo, K. N. (2002). Hispanic body images. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 250–256). New York: Guilford Press.

*Anderson, M. (1993). *Correlates of body image in university women.* Unpublished doctoral dissertation, University of North Texas.

*Andrews, J. A., Lewinsohn, P. M., Hops, H., & Roberts, R. E. (1993). Psychometric properties of scales for the measurement of psychosocial variables associated with depression in adolescence. *Psychological Reports, 73,* 1019–1046.

*Arkoff, A. U., & Weaver, H. B. (1966). Body image and body dissatisfaction in Japanese Americans. *Journal of Social Psychology, 68,* 323–330.

*Arriaza, C. A., & Mann, T. (2001). Ethnic differences in eating disorder symptoms among college students: The confounding role of body mass index. *Journal of American College Health, 49,* 309–315.

Avila, D. L., & Avila, A. L. (1995). Mexican-Americans. In N. A. Vacc & S. B. DeVaney (Eds.), *Experiencing and counseling multicultural and diverse populations* (3rd ed., pp. 119–146). Philadelphia: Accelerated Development.

*Bagley, C. A., Character, C. D., & Shelton, L. (2003). Eating disorders among urban and rural African American and European American women. *Women & Therapy, 26,* 59–79.

*Barnett, H. L., Keel, P. K., & Conoscenti, L. M. (2001). Body type preferences in Asian and Caucasian college students. *Sex Roles, 45,* 867–878.

*Barry, D. T., & Grilo, C. M. (2002). Eating and body image disturbances in adolescent psychiatric inpatients: Gender and ethnicity patterns. *International Journal of Eating Disorders, 32,* 335–343.

Bay-Cheng, L. Y., Zucker, A. N., Stewart, A. J., & Pomerlau, C. S. (2002). Linking femininity, weight concern, and mental health among Latina, Black, and White women. *Psychology of Women Quarterly, 26,* 36–45.

Berscheid, E., Walster, E., & Bohrnstedt, G. (1973, November). The happy American body: A survey report. *Psychology Today, 7*(6), 119–131.

*Bissell, K. (2004). Must-see TV or ESPN: Entertainment and sports media exposure and body-image distortion in college women. *Journal of Communication, 54,* 5–21.

Bond, S., & Cash, T. F. (1992). Black beauty: Skin color and body images among African-American college women. *Journal of Applied Social Psychology, 22,* 874–888.

*Botta, R. A. (2000). The mirror of television: A comparison of Black and White adolescents' body image. *Journal of Communication, 50,* 144–159.

*Bromley, C. E. (2000). *Body weight, life satisfaction, and psychological distress in adolescent males and females of different racial groups.* Unpublished doctoral dissertation, Fordham University.

*Bross, A. L. (2002). *Determining racial differences in the prediction of college women's body dissatisfaction: An examination of media influences, thin-ideal internalization, and social comparison.* Unpublished doctoral dissertation, State University of New York at Buffalo.

*Brown, K. M., Schreiber, G. B., McMahon, R. P., Crawford, P., & Ghee, K. L. (1995). Maternal influences on body satisfaction in Black and White girls aged 9 and 10: The NHLBI Growth and Health Study (NGHS). *Annals of Behavioral Medicine, 17,* 213–220.

Brown, T. A., Cash, T. F., & Mikulka, P. J. (1990). *Attitudinal body image assessment: Factor analysis of the Body–Self Relations Questionnaire.* Unpublished manuscript.

*Brownlow, B. S. (1998). *The relationship between objectification, body image disturbances, and disordered eating: Investigating race, socioeconomic status, acculturation and self-objectification as mediators.* Unpublished doctoral dissertation, Duke University.

*Cachelin, F. M., Rebeck, R. M., Chung, G. H., & Pelayo, E. (2002). Does ethnicity influence body size preference? A comparison of body image and body size. *Obesity Research, 10,* 158–166.

*Cachelin, F. M., Striegel-Moore, R. H., & Elder, K. A. (1998). Realistic weight perception and body size assessment in a racially diverse community sample of dieters. *Obesity Research, 6,* 62–68.

*Caldwell, M. B., Brownell, K. D., & Wilfley, D. E. (1997). Relationship of weight, body dissatisfaction, and self-esteem in African American and White female dieters. *International Journal of Eating Disorders, 22,* 127–130.

*Candy, C. M., & Fee, V. E. (1998). Reliability and concurrent validity of the Kids' Eating Disorders Survey (KEDS) body images silhouettes with preadolescent girls. *Eating Disorders, 6,* 297–308.

Cash, T. F., & Henry, P. E. (1995). Women's body images: The results of a national survey in the U.S.A. *Sex Roles, 33,* 19–28.

Cash, T. F., Lewis, R. J., & Keeton, P. (1987, March). *Development and validation of the Body-Image Automatic Thoughts Questionnaire: A measure of body-related cognitions.* Paper presented at the annual meeting of the Southeastern Psychological Association, Atlanta, GA.

*Cash, T. F., Melnyk, S. E., & Hrabosky, J. I. (2004). The assessment of body image investment: An extensive revision of the Appearance Schemas Inventory. *International Journal of Eating Disorders, 35,* 305–316.

*Cash, T. F., Morrow, J. A., Hrabosky, J. I., & Perry, A. A. (2004). How has body image changed? A cross-sectional investigation of college women and men from 1983–2001. *Journal of Consulting and Clinical Psychology, 72,* 1081–1089.

Cash, T. F., & Pruzinsky, T. (2002). Future challenges for body image theory, research, and clinical practice. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 509–516). New York: Guilford Press.

Cash, T. F., & Szymanski, M. L. (1995). The development and validation of the Body-Image Ideals Questionnaire. *Journal of Personality Assessment, 64,* 466–477.

Cash, T. F., Winstead, B. A., & Janda, L. H. (1986, April). The great American shape-up. *Psychology Today, 20*(4), 30–37.

*Cashel, M. L., Cunningham, D., Landeros, C., Cokley, K. O., & Muhammad, G. (2003). Sociocultural attitudes and symptoms of bulimia: Evaluating the SATAQ with diverse college groups. *Journal of Counseling Psychology, 50,* 287–296.

*Casper, R. C., & Offer, D. (1990). Weight and dieting concerns in adolescents: Fashion or symptom? *Pediatrics, 86,* 384–390.

*Chandler, S. B., Abood, D. A., Lee, D. T., Cleveland, M. Z., & Daly, J. A. (1994). Pathogenic eating attitudes and behaviors and body dissatisfaction differences among Black and White college students. *Eating Disorders: The Journal of Treatment & Prevention, 2,* 319–328.

*Cini, L. A. (2000). *The role of acculturation in disordered eating attitudes, behaviors, and body image.* Unpublished doctoral dissertation, St. John's University.

Cohen, J. (1969). *Statistical power analysis for the behavioral sciences* (1st ed.). New York: Academic Press.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Collins, P. H. (1990). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment.* New York: Routledge.

Cooper, P. J., Taylor, M. J., Cooper, Z., & Fairburn, C. G. (1987). The

development and validation of the Body Shape Questionnaire. *International Journal of Eating Disorders, 6,* 485–494.

Crago, M., & Shisslak, C. M. (2003). Ethnic differences in dieting, binge eating, and purging behaviors among American females: A review. *Eating Disorders, 11,* 289–304.

*Crowley, J. J. (1999). *Media influence and the social self: The relation of other awareness to body image and eating pathology.* Unpublished doctoral dissertation, University of California, Davis.

*Dacosta, K. O., & Wilson, J. F. (1996). Food preferences and eating attitudes in three generations of Black and White women. *Appetite, 27,* 183–191.

Dawson, D. (1988). Ethnic differences in female overweight: Data from the 1985 National Health Interview Survey. *American Journal of Public Health, 78,* 1326–1329.

*Demarest, J., & Allen, R. (2000). Body image: Gender, ethnic, and age differences. *Journal of Social Psychology, 140,* 465–472.

*DiGioacchino, R. F., Sargent, R. G., & Topping, M. (2001). Body dissatisfaction among White and African American male and female college students. *Eating Behaviors, 2,* 39–50.

*Douglas, L. A. (1992). *The impact of racial identification and gender identity on body distortion and body dissatisfaction.* Unpublished doctoral dissertation, Long Island University, Brooklyn Campus.

Dounchis, J. Z., Hayden, H. A., & Wilfley, D. E. (2001). Obesity, body image, and eating disorders in ethnically diverse children and adolescents. In J. Kevin Thompson & L. Smolak (Eds.), *Body image, eating disorders, and obesity in youth: Assessment, prevention, and treatment* (pp. 67–98). Washington, DC: American Psychological Association.

*Duncan, G. E., Anton, S. D., Newton, R. L., & Perri, M. G. (2003). Comparison of perceived health to physiological measures of health in Black and White women. *Preventive Medicine: An International Journal Devoted to Practice & Theory, 36,* 624–628.

*Edwards-Hewitt, T., & Gray, J. J. (1993). The prevalence of disordered eating attitudes and behaviors in Black-American and White-American college women: Ethnic, regional, class, and media differences. *European Eating Disorders Review, 1,* 41–54.

*Eitel, B. J. (2003). *Body image satisfaction, appearance importance, and self-esteem: A comparison of Caucasian and African-American women across the adult lifespan.* Unpublished doctoral dissertation, Texas Women's University.

*Esteban, C. M. (2003). *The effects of media images on women's body esteem across ethnicity.* Unpublished doctoral dissertation, Alliant International University.

Evans, P. C., & McConnell, A. R. (2003). Do racial minorities respond in the same way to mainstream beauty standards? Social comparison processes in Asian, Black, and White women. *Self & Identify, 2,* 153–167.

*Feather, B. L., Herr, D. G., & Ford, S. (1997). Black and White female athletes' perception of their bodies and garment fit. *Clothing & Textiles Research Journal, 15,* 125–128.

Feingold, A., & Mazzella, R. (1998). Gender differences in body image are increasing. *Psychological Science, 9,* 190–195.

*Franko, D. L., & Herrera, I. (1997). Body image differences in Guatemalan-American and White college women. *Eating Disorders: The Journal of Treatment & Prevention, 5,* 119–127.

*Franzoi, S. L., & Chang, Z. (2002). The body esteem of Hmong and Caucasian adults. *Psychology of Women Quarterly, 26,* 89–91.

Franzoi, S. L., & Shields, S. A. (1984). The Body-Esteem Scale: Multidimensional structure and sex differences in a college population. *Journal of Personality Assessment, 48,* 173–178.

Gardner, R. M., Friedman, B. N., & Jackson, N. A. (1999). Hispanic and White children's judgments of perceived and ideal body size in self and others. *Psychological Record, 49,* 555–564.

*Gardner, R. M., Friedman, B. N., Stark, K., & Jackson, N. A. (1999). Body size estimations in children six through fourteen: A longitudinal study. *Perceptual & Motor Skills, 88,* 541–555.

Garner, D. M. (1997, January-February). The 1997 Body Image Survey results. *Psychology Today, 30,* 30–84.

Garner, D. M., Olmstead, M. A., & Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders, 2,* 15–34.

Gil-Kashiwabara, E. F. (2002). Body image disturbance and disordered eating in African-American and Latina women. In L. H. Collins & M. R. Dunlap (Eds.), *Charting a new course for feminist psychology* (pp. 282–306). Westport, CT: Greenwood Press.

*Gilmore, T. (2001). *Influence of shame, female identity, and ethnic identity on body image across women's life-span.* Unpublished doctoral dissertation, Fuller Theological Seminary.

*Gluck, M. E., & Geliebter, A. (2002). Racial/ethnic differences in body image and eating behaviors. *Eating Behaviors, 3,* 143–151.

*Grabe, S. (2004). *Body image dissatisfaction and women's HIV-related sexual risk taking: The mediating roles of negative affect and sex motives in a longitudinal community sample.* Unpublished doctoral dissertation, University of Missouri—Columbia.

*Granner, M. L., Black, D. R., & Abood, D. A. (2002). Levels of cigarette and alcohol use related to eating-disorder attitudes. *American Journal of Health Behavior, 26,* 43–55.

Gray, J. J., Ford, K., & Kelly, L. M. (1987). The prevalence of bulimia in a Black college population. *International Journal of Eating Disorders, 6,* 733–740.

Greenberg, D. R., & LaPorte, D. J. (1996). Racial differences in body type preferences of men for women. *International Journal of Eating Disorders, 19,* 275–278.

Hall, C. C. (1995). Asian eyes: Body image and eating disorders of Asian and Asian American women. *Eating Disorders: The Journal of Treatment & Prevention, 31,* 8–19.

Harris, A. C. (1996). African American and Anglo American gender identities: An empirical study. *Journal of Black Psychology, 22,* 182–194.

*Harris, S. M. (1994). Racial differences in predictors of college women's body image attitudes. *Women & Health, 21,* 89–104.

*Haudek, C., Rorty, M., & Henker, B. (1999). The role of ethnicity and parental bonding in the eating and weight concerns of Asian-American and Caucasian college women. *International Journal of Eating Disorders, 25,* 425–433.

Hedges, L. V. (1981). Distribution theory for Glass's estimator of effect size and related estimators. *Journal of Educational Statistics, 6,* 107–128.

Hedges, L. V., & Becker, B. J. (1986). Statistical methods in the meta-analysis of research on gender differences. In J. S. Hyde & M. C. Linn (Eds.), *The psychology of gender* (pp. 14–50). Baltimore: Johns Hopkins University Press.

Hedges, L. V., & Vevea, J. L. (1998). Fixed- and random-effects models in meta-analysis. *Psychological Methods, 3,* 486–504.

Heinberg, L. J., Thompson, J. K., & Matzon, J. L. (2001). Body image dissatisfaction as a motivator for healthy lifestyle change: Is some distress beneficial? In R. H. Striegel-Moore & L. Smolak (Eds.), *Eating disorders: Innovative directions in research and practice* (pp. 215–232). Washington, DC: American Psychological Association.

Heinberg, L. J., Thompson, J. K., & Stormer, S. (1995). Development and validation of the Sociocultural Attitudes Towards Appearance Questionnaire. *International Journal of Eating Disorders, 17,* 81–89.

*Henriques, G. R., & Calhoun, L. G. (1999). Gender and ethnic differences in the relationship between body esteem and self-esteem. *Journal of Psychology: Interdisciplinary & Applied, 133,* 357–368.

*Henriques, G. R., Calhoun, L. G., & Cann, A. (1996). Ethnic differences in women's body satisfaction: An experimental investigation. *Journal of Social Psychology, 136,* 689–697.

*Hogan, K. B. (2001). *Predictors of binge eating and bulimic symptoms in*

a community population of Black and Hispanic women. Unpublished doctoral dissertation, Northwestern University.

Jackson, L. A., & McGill, O. D. (1996). Body type preferences and body characteristics associated with attractive and unattractive bodies by African American and Anglo Americans. *Sex Roles, 35,* 295–307.

*Johnson, C., Crosby, R., Engel, S., Mitchell, J., Powers, P., Wittrock, D., & Wonderlick, S. (2004). Gender, ethnicity, self-esteem and disordered eating among college athletes. *Eating Behaviors, 5,* 147–156.

Johnson, F., & Wardle, J. (2005). Dietary restraint, body dissatisfaction, and psychological distress: A prospective analysis. *Journal of Abnormal Psychology, 114,* 119–125.

*Jones, D. C. (2004). Body image among adolescent girls and boys: A longitudinal study. *Developmental Psychology, 40,* 823–835.

*Kawamura, K. Y. (2001). *Body image attitudes of Asian American and Caucasian American women and men.* Unpublished doctoral dissertation, University of Massachusetts at Amherst.

Kawamura, K. Y. (2002). Asian American body images. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 243–249). New York: Guilford Press.

*Kemper, K. A. (1993). *Black and White adolescent females' perceptions of ideal body size and social norms.* Unpublished doctoral dissertation, Coastal Carolina University.

*Koff, E., Benavage, A., & Wong, B. (2001). Body-image attitudes and psychosocial functioning in Euro-American and Asian-American college women. *Psychological Reports, 88,* 917–928.

*Lawrence, C. M., & Thelen, M. H. (1995). Body image, dieting, and self-concept: Their relation in African-American and Caucasian children. *Journal of Clinical Child Psychology, 24,* 41–48.

*Lennon, S. J., Rudd, N. A., Sloan, B., & Kim, J. (1999). Attitudes toward gender roles, self-esteem, and body image: Application of a model. *Clothing & Textile Research Journal, 17,* 191–202.

Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis.* Thousand Oaks, CA: Sage.

*Lopez, E., Blix, G. G., & Blix, A. G. (1995). Body image of Latinas compared to body image of non-Latina White women. *Health Values: The Journal of Health Behavior, Education & Promotion, 19,* 3–10.

Lovejoy, M. (2001). Disturbances in the social body: Differences in body image and eating problems among African American and White women. *Gender & Society, 15,* 239–261.

Mastria, M. (2002). Ethnicity and eating disorders. *Psychoanalysis and Psychotherapy, 19,* 59–77.

*McComb, J. R., & Clopton, J. R. (2002). Explanatory variance in bulimia nervosa. *Women & Health, 36,* 115–123.

Mendelson, B. K., & White, D. R. (1985). Development of self-body-esteem in overweight youngsters. *Developmental Psychology, 21,* 90–96.

*Miller, K. J., Gleaves, D. H., Hirsch, T. G., Green, B. A., Snow, A. C., & Corbett, C. C. (2000). Comparisons of body image dimensions by race/ethnicity and gender in a university population. *International Journal of Eating Disorders, 27,* 310–316.

*Mintz, L. B., & Kashubeck, S. (1999). Body image and disordered eating among Asian American and Caucasian college students: An examination of race and gender differences. *Psychology of Women Quarterly, 23,* 781–796.

*Moss, R. C. (2004). *Influences on body image and eating behaviors: An ethnic study of young adolescent females.* Unpublished doctoral dissertation, University of Arkansas.

Mukai, T., Kambara, A., & Sasaki, Y. (1998). Body dissatisfaction, need for social approval, and eating disturbances among Japanese and American college women. *Sex Roles, 39,* 751–763.

Must, A., Spadano, J., Coakley, E. H., Field, A. E., Colditz, G., & Dietz, W. H. (1999). The disease burden associated with overweight and obesity. *JAMA, 282,* 1523–1529.

Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin, 101,* 259–282.

Nolen-Hoeksema, S. (2001). Gender differences in depression. *Current Directions in Psychological Science, 10,* 173–176.

Ogden, J., & Elder, C. (1998). The role of family status and ethnic group on body image and eating behavior. *International Journal of Eating Disorders, 23,* 309–315.

O'Neill, S. K. (2003). *Body image among women of color and White women: A meta-analysis.* Unpublished doctoral dissertation, State University of New York at Albany.

*Owens, L. K., Hughes, T. L., & Owens-Nicholson, D. (2003). The effects of sexual orientation on body image and attitudes about eating and weight. *Journal of Lesbian Studies, 7,* 15–33.

*Pan, A. S. (2000). *Body image, eating attitudes, and eating behaviors among Chinese, Chinese-American and non-Hispanic White women.* Unpublished doctoral dissertation, George Mason University.

Parker, S., Nichter, M., Vuckovic, N., Sims, C., & Ritenbaugh, C. (1995). Body image and weight concerns among African American and White adolescent females: Differences that make a difference. *Human Organization, 54,* 103–114.

*Perez, M., & Joiner, T. E. (2003). Body image dissatisfaction and disordered eating in Black and White women. *International Journal of Eating Disorders, 33,* 342–350.

*Petersons, M., Rojhani, A., Steinhaus, N., & Larkin, B. (2000). Effect of ethnic identity on attitudes, feelings, and behaviors toward food. *Eating Disorders: The Journal of Treatment & Prevention, 8,* 207–219.

Phares, V., Steinberg, A. R., & Thompson, J. K. (2004). Gender differences in peer and parental influences: Body image disturbance, self-worth, and psychological functioning in preadolescent children. *Journal of Youth & Adolescence, 33,* 421–429.

*Powell, A. D., & Kahn, A. S. (1995). Racial differences in women's desires to be thin. *International Journal of Eating Disorders, 17,* 191–195.

*Prendergast, K. S. (2001). *Body image and locus of control in children and adolescents.* Unpublished doctoral dissertation, Alfred University.

Pruzinsky, T., & Cash, T. F. (2002). Understanding body images: Historical and contemporary perspectives. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 3–12). New York: Guilford Press.

Reed, D. L., Thompson, J. K., & Brannick, M. T. (1991). Development and validation of the Physical Appearance State and Trait Anxiety Scale (PASTAS). *Journal of Anxiety Disorders, 5,* 323–332.

Rierdan, J., Koff, E., & Stubbs, M. L. (1989). A longitudinal analysis of body image as a predictor of the onset and persistence of adolescent girls' depression. *Journal of Early Adolescence, 9,* 454–466.

Riniolo, T. C. (1997). Publication bias: A computer-assisted demonstration of excluding nonsignificant results from research interpretation. *Teaching Psychology, 24,* 279–282.

*Roberts, R. A. (1993). *Ethnicity, body image dissatisfaction, and eating disorders: The differential impact of norms of attractiveness on Black and White women.* Unpublished doctoral dissertation, University of Louisville, KY.

*Robinson, T. N., Killen, J. D., Litt, I. F., Hammer, L. D., Wilson, D. M., Haydel, K. F., et al. (1996). Ethnicity and body dissatisfaction: Are Hispanic and Asian girls at increased risk for eating disorders? *Journal of Adolescent Health, 19,* 384–393.

*Rosen, E. F., Anthony, D. L., Booker, K. M., Brown, T. L., Christian, E., Crews, R. C., et al. (1991). A comparison of eating disorder scores among African-American and White college females. *Bulletin of the Psychonomic Society, 29,* 65–66.

*Rucker, C. E., & Cash, T. F. (1992). Body image, body-size perceptions, and eating behaviors among African-American and White college women. *International Journal of Eating Disorders, 12,* 291–299.

*Russel, W. D., & Cox, R. H. (2003). Social physique anxiety, body

dissatisfaction, and self-esteem in college females of differing exercise frequency, perceived weight discrepancy, and race. *Journal of Sport Behavior, 26,* 297–318.

*Sánchez-Johnson, L. A., Fitzgibbon, M. L., Martinovich, Z., Stolley, M. R., Dyer, A. R., & Van Horn, L. (2004). Ethnic differences in correlates of obesity between Latin-American and Black women. *Obesity Research, 12,* 652–660.

*Sanders, N. M., & Heiss, C. J. (1998). Eating attitudes and body image of Asian and Caucasian college women. *Eating Disorders: The Journal of Treatment & Prevention, 6,* 15–27.

*Schooler, D., Ward, L. M., Merriwether, A., & Caruthers, A. (2004). Who's that girl: Television's role in the body image development of young White and Black women. *Psychology of Women Quarterly, 28,* 38–47.

Secord, P. F., & Jourard, S. M. (1953). The appraisal of body cathexis: Body cathexis and the self. *Journal of Consulting Psychology, 17,* 343–347.

*Shaw, H., Ramirez, L., Trost, A., Randall, P., & Stice, E. (2004). Body image and eating disturbances across ethnic groups: More similarities than differences. *Psychology of Addictive Behaviors, 18,* 12–18.

*Shulman, J. L., & Home, S. G. (2003). The use of self-pleasure: Masturbation and body image among African American and European American women. *Psychology of Women Quarterly, 27,* 262–269.

*Siegel, J. M. (2002). Body image change and adolescent depressive symptoms. *Journal of Adolescent Research, 17,* 27–41.

*Smith, D. E., Thompson, J. K., Raczynski, J. M., & Hilner, J. E. (1999). Body image among men and women in a biracial cohort: The CARDIA study. *International Journal of Eating Disorders, 25,* 71–82.

*Smith, R. E. (2003). *Weight concern in at-risk early adolescent girls: The role of problem behavior and peer processes.* Unpublished doctoral dissertation, University of Oregon.

Smolak, L., & Striegel-Moore, R. H. (2001). Challenging the myth of the golden girl: Ethnicity and eating disorders. In R. H. Striegel-Moore & L. Smolak (Eds.), *Eating disorders: Innovative directions in research and practice* (pp. 111–132). Washington, DC: American Psychological Association.

Sobel, J., & Stunkard, A. (1989). Socioeconomic status and obesity: A review of the literature. *Psychological Bulletin, 105,* 260–275.

*Stevens, J., Kumanyika, S. K., & Keil, J. E. (1994). Attitudes towards body size and dieting: Differences between elderly Black and White women. *American Journal of Public Health, 84,* 1322–1325.

Stice, E., & Bearman, S. K. (2001). Body-image and eating disturbances prospectively predict increases in depressive symptoms in adolescent girls: A growth curve analysis. *Developmental Psychology, 37,* 597–607.

Stice, E., Killen, J. D., Hayward, C., & Taylor, C. B. (1998). Age of onset for binge eating and purging during late adolescence: A 4-year survival analysis. *Journal of Abnormal Psychology, 107,* 671–675.

Stice, E., & Shaw, H. E., (2002). Role of body dissatisfaction in the onset and maintenance of eating pathology: A synthesis of research findings. *Journal of Psychosomatic Research, 53,* 985–993.

Story, M., French, S. A., & Resnick, M. D. (1995). Ethnic/racial and socioeconomic differences in dieting behaviors and body image perceptions in adolescents. *International Journal of Eating Disorders, 18,* 173–179.

*Striegel-Moore, R. H., Schreiber, G. B., Lo, A., Crawford, P., Obarzanek, E., & Rodin, J. (2000). Eating disorder symptoms in a cohort of 11- to 16-year-old Black and White girls: The NHMBI Growth and Health Study. *International Journal of Eating Disorders, 27,* 49–66.

Streigel-Moore, R. H., Schreiber, G. B., Pike, K. M., Wilfley, D. E., & Rodin, J. (1995). Drive for thinness in Black and White preadolescent girls. *International Journal of Eating Disorders, 18,* 59–69.

Stunkard, A. J., Sorenson, T., & Schlusinger, F. (1983). Use of the Danish Adoption Register for the study of obesity and thinness. In S. Kety, L. P. Rowland, R. L. Sidman, & S. W. Matthaysse (Eds.), *The genetics of neurological and psychiatric disorders* (pp. 115–120). New York: Raven Press.

*Suldo, S. M., & Sandberg, D. A. (2000). Relationship between attachment styles and eating disorder symptomatology among college women. *Journal of College Student Psychotherapy, 15,* 59–73.

Thompson, J. K., Altabe, M., Johnson, S., & Stormer, S. M. (1994). Factor analysis of multiple measures of body image disturbance: Are we all measuring the same construct? *International Journal of Eating Disorders, 3,* 311–315.

Thompson, J. K., Heinberg, L. J., Altabe, M. N., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance.* Washington, DC: American Psychological Association.

Thompson, J. K., Penner, L. A., & Altabe, M. N. (1990). Procedures, problems, and progress in the assessment of body image. In T. F. Cash & T. Pruzinsky (Eds.), *Body images: Development, deviance, and change* (pp. 21–48). New York: Guilford Press.

Thompson, J. K., & Stice, E. (2001). Thin-ideal internalization: Mounting evidence for a new risk factor for body-image disturbance and eating pathology. *Current Directions in Psychological Science, 10,* 181–183.

Thompson, J. K., & van den Berg, P. (2002). Measuring body image attitudes among adolescents and adults. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 142–154). New York: Guilford Press.

*Thompson, S. H., & Sargent, R. G. (2000). Black and White women's weight-related attitudes and parental criticism of their childhood appearance. *Women & Health, 30,* 77–92.

*Thompson-Leonardelli, K. I. (2003). *Is thin in: The influence of sociocultural variables on the development of body image and disordered eating in African and European American college women.* Unpublished doctoral dissertation, The Ohio State University.

Tiggemann, M., & Lynch, J. E. (2001). Body image across the life span in adult women: The role of self-objectification. *Developmental Psychology, 37,* 243–253.

*Turnbull, D. B. (1999). *Weight control strategies and eating disorder tendencies among college women in four ethnic groups (African American, Asian American, European American, Hispanic American).* Unpublished doctoral dissertation, Pacific Graduate School Of Psychology.

*Tylka, T. L. (2004). The relation between body dissatisfaction and eating disorder symptomatology: An analysis of moderating variables. *Journal of Counseling Psychology, 51,* 178–191.

*Tylka, T. L. (2005). [Body dissatisfaction]. Unpublished raw data.

*Tylka, T. L., & Subich, L. M. (1999). Exploring the construct validity of the eating disorders continuum. *Journal of Counseling Psychology, 46,* 268–276.

Ullman, S. E., & Filipas, H. H. (2005). Ethnicity and child sexual abuse experiences of female college students. *Journal of Child Sexual Abuse, 14,* 67–89.

U.S. Bureau of the Census. (2005). *American Community Survey—Multi-Year Profile.* Retrieved January 2006 from http://www.census.gov/acs/www/

*Vander Wal, J. S. (2004). Eating and body image concerns among average-weight and obese African American and Hispanic girls. *Eating Disorders, 5,* 181–187.

*Vartanian, L. R., Giant, C. L., & Passino, R. M. (2001). "Ally McBeal vs. Arnold Schwarzenegger": Comparing mass media, interpersonal feedback and gender as predictors of satisfaction with body thinness and muscularity. *Social Behavior & Personality, 29,* 711–723.

*Walker, L., Timmerman, G. M., Kim, M., & Sterling, B. (2002). Relationships between body image and depressive symptoms during postpartum in ethnically diverse, low income women. *Women & Health, 36,* 101–121.

*White, M. A., Kohlmaier, J. R., Varnado-Sullivan, P., & Williamson,

D. A. (2003). Racial/ethnic difference in weight concerns: Protective and risk factors for the development of eating disorders and obesity among adolescent females. *Eating & Weight Disorders, 8,* 20–25.

Wildes, J. E., Emery, R. E., & Simons, A. D. (2001). The roles of ethnicity and culture in the development of eating disturbance and body dissatisfaction: A meta-analytic review. *Clinical Psychology Review, 21,* 521–551.

*Wilfley, D. E., Schreiber, G. B., Pike, K. M., & Striegel-Moore, R. H. (1996). Eating disturbance and body image: A comparison of a community sample of adult Black and White women. *International Journal of Eating Disorders, 20,* 377–387.

*Womble, L., Williamson, D. A., Martin, C. K., Zucker, N. L., Thaw, J. M., Netemeyer, R., et al. (2001). Psychosocial variables associated with binge eating in obese males and females. *International Journal of Eating Disorders, 30,* 217–221.

*Yates, A., Edman, J., & Aruguete, M. (2004). Ethnic difference in BMI and body/self-dissatisfaction among Whites, Asian subgroups, Pacific Islanders, and African-Americans. *Journal of Adolescent Health, 34,* 300–307.

Received July 1, 2005
Revision received January 24, 2006
Accepted February 6, 2006 ■