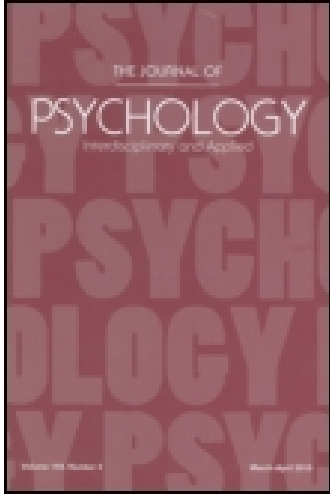


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Gender and Ethnic Differences in the Relationship Between Body Esteem and Self-Esteem

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ABSTRACT. Gender and ethnic differences in the relationship between body esteem and self-esteem were examined to assess the degree to which these variables change in relation to each other over time. Difference scores (between Time 1 and Time 2, 1 week apart) were obtained using the Self-Esteem Scale (M. Rosenberg, 1979) and the Body Esteem Scale (S. L. Franzoi & S. A. Shields, 1984) for 163 White women, 140 White men, 55 Black women, and 37 Black men. The results indicated that the correlation of the difference scores was stronger for the group of White women than for the other 3 groups, suggesting that changes in self-esteem parallel changes in body esteem more for White women than for White men, Black men, and Black women. The findings are discussed in relation to the prevalence of bulimia nervosa among White women.

THE LARGE NUMBERS OF WOMEN WITH EATING DISORDERS and the high levels of body dissatisfaction among women have caused researchers to become increasingly interested in the dynamics underlying body esteem. The term *body esteem* refers to the affective component of body image or the feelings one has about one's body (Franzoi & Shields, 1984). Research on body esteem is important because low body esteem has been associated with vulnerability to depression, anxiety, and low self-esteem, as well as to eating disorders (Dennison, Roth, & Gilroy, 1992; Jackson, Sullivan, & Rostker, 1988; Mintz & Betz, 1986).

The relationship between body esteem and self-esteem has received considerable attention over the past decade. Clinical theorists (e.g., Fairburn, Marcus,

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& Wilson, 1993) have suggested that the link between body esteem and self-esteem is critical to understanding the etiology of bulimia nervosa. Models of bulimia nervosa suggest that a woman with a poor self-concept or low self-esteem is likely to see changing her appearance as a way to meet societal standards and improve her self-esteem (Stice, 1994). The heightened drive to improve appearance is thought to lead to dietary restraint and ultimately, in some cases, to bulimic symptoms (Polivy & Herman, 1993). Thus, in these models, low body esteem is thought to be the mediating factor between low self-esteem and the eventual development of binge-purge behaviors.

Implicit in these models of bulimia nervosa is the notion that White women are more vulnerable to developing this disorder than men or women of other ethnic groups because concerns regarding appearance, shape, and weight are more central to the White woman's sense of self (Streigle-Moore, Silberstein, & Rodin, 1986). Researchers have found that White women, despite being proportionately thinner than both White men and Black women (Rand & Kaldau, 1990), are more concerned about issues surrounding eating and body weight (Chaiken & Pliner, 1987; Nevo, 1985), are less satisfied with their bodies (e.g., Abrams, Allen, & Gray, 1993; Henriques & Calhoun, 1995), engage in more restrictive weight loss and dieting behaviors (e.g., Harris, 1994; Ruderman, 1986), and demonstrate a greater discrepancy between their actual and ideal body sizes (Fallon & Rozin, 1985; Rucker & Cash, 1992). These ethnic and gender differences are thought to be at least partly responsible for the higher incidence of bulimia and anorexia nervosa in White women than in other demographic groups (e.g., Hsu, 1989).

Despite these findings, conclusive evidence that body esteem is more central to the self-esteem of White women than it is to other groups is still lacking. The research in this area has focused primarily on gender differences. Although some studies have found that women rate appearance and weight-related concerns as more important than men do (Jackson, Sullivan, & Hymes, 1987; Pliner, Chaiken, & Flett, 1990), correlational analyses of the relationship between body esteem and self-esteem have generally yielded no significant gender differences. Despite the consistent prediction that body esteem will be correlated higher with self-esteem in women than in men, only one study found this to be the case (Mintz & Betz, 1986). However, it is important to note that this study used a measure of social self-esteem, and an attempt to replicate these results failed (McCaully, Mintz, & Glenn, 1988).

Results of the majority of studies investigating the correlation between body esteem and self-esteem showed no significant gender differences (Franzoi & Herzog, 1986; Lerner & Karabenick, 1974; Lerner, Karabenick, & Stuart, 1973; Pliner, Chaiken, & Flett, 1990; Secord & Jourard, 1953). Several researchers even found a nonsignificant trend toward a higher correlation in men (Franzoi & Shields, 1984; Learner, Orlos, & Knapp, 1976; Mahoney & Finch, 1976; Silberstein, Streigle-Moore, Timko, & Rodin, 1988). In light of these findings, several

researchers have suggested that the key gender differences lie in the dynamics underlying body esteem, such as the tendency in men to want to be heavier and more muscular versus women's tendency to want to be thinner (Franzoi & Shields, 1984). Other researchers have disputed the contention that body esteem is more important to the self-esteem of White women relative to White men (e.g., Mahoney & Finch, 1976; Silberstein et al., 1988).

In addition to examining the general relationship between self-esteem and body esteem, some researchers have specifically examined weight satisfaction and its relationship to self-esteem in White women. Although measures of weight satisfaction do correlate moderately with self-esteem, the strength of this correlation has been found to be generally equal to or less than the correlation between self-esteem and attitudes about sexual attractiveness or physical conditioning (Franzoi & Herzog, 1986; Franzoi & Shields, 1984; Mahoney & Finch, 1976; Silberstein et al., 1988). These findings have led some researchers to conclude that because being dissatisfied with one's weight is the norm for women, weight concerns may not play a unique and important role in the lives of modern women (Mahoney & Finch, 1976; Silberstein et al., 1988).

Given the apparent inconsistencies between the correlational data and the predictions made by theorists, a more detailed analysis of the relationship between body esteem and self-esteem is warranted. The aforementioned studies analyzed the static correlation between body esteem and self-esteem. Conclusions drawn from this type of correlational analysis are problematic because the static correlations primarily measure the degree to which the trait components of the variables are related, yet research has demonstrated that there are important state components of both self-esteem (Rosenberg, 1979) and body esteem (Hamovitz, Lansky, & O'Reilly, 1993; Taylor & Cooper, 1992).

Furthermore, in a recent experiment, Henriques, Calhoun, and Cann (1996) found that changes in the self-esteem of White women were associated with changes in their body esteem, but the same was not true for Black women, even though the static correlations between body esteem and self-esteem were the same for both groups. Thus, although the static correlations may be similar among the groups, examining the dynamic correlations (how the variables change in relation to one another over time) may yield very different results.

In the present investigation, we used difference score correlations to obtain a clearer understanding of the dynamic relationship between body esteem and self-esteem. Difference score correlations can provide an indication about the extent to which changes in body esteem fluctuate consistently with changes in self-esteem. We predicted that periodic fluctuations in self-esteem may be more closely associated with fluctuations in body esteem in White women than in men or women of other ethnic groups. If this prediction is supported, the finding would support the notion that White women are more likely to change their appearance to try to improve their self-esteem and would support current models of bulimia nervosa.

Method

Participants

The participants were recruited from the University of North Carolina–Charlotte and received course credit for their participation. The initial sample consisted of 474 college students (189 White women, 166 White men, 71 Black women, and 48 Black men) from an introductory psychology class. Their mean ages were 20.6 for the White men, 21.0 for the White women, 20.9 for the Black women, and 21.7 for the Black men.

Materials

We used Rosenberg's (1979) 10-item Self-Esteem (RSE) Scale on which items are rated from *strongly disagree* (1) to *strongly agree* (4). A high score indicates high self-esteem. The instrument has a test–retest reliability of .80 and has been demonstrated to possess adequate construct, convergent, and discriminant validity (Rosenberg).

We assessed body satisfaction with the Body Esteem Scale (BES; Franzoi & Herzog, 1986; Franzoi & Shields, 1984). The BES lists 35 aspects of physical appearance and physical functioning. The BES has been found to correlate significantly with self-esteem for both men and women, with *rs* ranging between .4 and .6 (Silberstein et al., 1988). Participants rate each item on a 5-point scale, ranging from *strong negative feelings* (1) to *strong positive feelings* (5). An overall body satisfaction score can be obtained by summing across items.

The BES was used in the present study because the overall score can result in comparisons between men and women, whereas the gender-specific factors discussed below could be used for within-subject comparisons. For the current study, the BES was adapted for use as a state rather than a trait scale by asking the participants to rate how they were currently feeling toward their bodies (Irving, 1990).

Factor analysis of the BES has yielded three factors for women (Franzoi & Shields, 1984). The first, Weight Concern (WC), consists of items related to those areas most likely to be affected by weight, such as the hips, stomach, thighs, and so forth. The second factor, Sexual Attractiveness (SA), measures women's attitudes toward parts of their body and functions associated with facial attractiveness and sexuality. The third factor, Physical Condition (PC–F), deals with women's attitudes toward their stamina, strength, and agility. The alpha coefficients are .87 for WC, .78 for SA, and .82 for PC–F. Adequate convergent and discriminant validity has been demonstrated for each of these factors (Franzoi & Herzog, 1986).

For men, the BES yields two factors (Franzoi & Herzog, 1986). The first factor, Upper Body Strength (UBS), measures men's attitudes toward their upper

body and includes aspects that can be altered through exercises, such as weight lifting, which are associated with masculine characteristics such as vigor and power. The second factor, Physical Condition (PC-M), reflects men's feelings about their stamina, agility, and general body functioning ability. Cronbach's alphas are .85 for UBS and .86 for PC-M. Both factors have shown adequate convergent and discriminant validity. Originally (Franzoi & Shields, 1984), there was a third factor for men (Physical Attractiveness), but subsequent research did not demonstrate this factor's validity (Franzoi & Herzog, 1986).

Procedure

The participants filled out both the RSE and the BES at two separate administrations, 1 week apart. The participants were asked to place a four digit identification number on their questionnaires at both administrations so that their tests could be accurately matched while also preserving their anonymity. The data from 26 White women, 26 White men, 16 Black women, and 11 Black men were eliminated from the analyses because they did not complete the second administration.

Results

We used the data from 163 White women, 140 White men, 55 Black women, and 37 Black men in the analyses. The mean scores for the RSE and BES for Time 1 and Time 2 administrations are contained in Table 1. A 2×2 multivariate analysis of variance (MANOVA) with gender and ethnicity as independent variables, on four dependent variables, the BES Time 1, BES Time 2, RSE Time 1, and the RSE Time 2 revealed significant differences among the groups, $F(1, 393) = 4.03, p < .01$. Post hoc analyses of variance (ANOVAs) on the BES Time 1 and BES Time 2 revealed significant main effects for gender and ethnicity (alpha levels below .01), with Blacks and men reporting higher levels of body satisfaction. Post hoc ANOVAs on the RSE Time 1 and RSE Time 2 revealed a significant main effect for ethnicity with alpha levels below .01, with Black participants reporting higher levels of self-esteem than White participants.

Post hoc Tukey honestly significant difference comparisons on both BES scores found that the White women had significantly lower BES scores than any of the other three groups ($p < .01$). Also, the Black women scored significantly lower on the BES at Time 2 than the Black men ($p < .05$). A comparison of Black and White women on the female factors of the BES at both Time 1 and Time 2 revealed significant differences for the WC-F Time 1 factor, $F(1, 216) = 3.56, p < .001$, the WC-F Time 2 factor, $F(1, 216) = 3.78, p < .001$, the SA Time 1 factor, $F(1, 216) = 3.10, p < .001$, and the SA Time 2 factor, $F(1, 216) = 2.95, p < .01$, but not the PC-F Time 1 or Time 2, with Black women reporting higher levels of satisfaction on both administrations of the WC and the SA factors than White women. There were no other significant post hoc comparisons.

TABLE 1
Mean Scores and Standard Deviations on the RSE and Factors of the BES
for the Time 1 and Time 2 Administrations

Measure	White women (<i>n</i> = 163)		Black women (<i>n</i> = 55)		White men (<i>n</i> = 140)		Black men (<i>n</i> = 37)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Time 1</i>								
RSE	32.2	5.0	35.5	5.3	33.3	4.8	35.1	3.7
BES	116.0	18.9	129.0	23.0	131.0	21.5	137.0	19.0
WC	27.8	8.5	33.4	9.1				
SA	47.4	7.0	51.7	8.0				
PC-F	31.2	6.3	33.4	7.1				
UBS					26.1	5.4	26.9	5.1
PC-M					48.9	9.7	52.5	7.7
<i>Time 2</i>								
RSE	32.8	5.1	35.3	5.4	33.8	5.0	35.2	4.5
BES	118.0	19.3	129.0	23.9	132.0	21.9	138.0	19.1
WC	28.6	9.2	34.1	9.6				
SA	47.8	6.7	51.0	7.7				
PC-F	31.6	6.5	33.5	7.1				
UBS					26.4	4.8	27.3	4.7
PC-M					47.5	7.5	49.1	7.0

Note. RSE = Rosenberg Self-Esteem Scale; BES = Body Esteem Scale; WC = Weight Concern; SA = Sexual Attractiveness; PC-F = Physical Condition-Female; UBS = Upper Body Strength; PC-M = Physical Condition-Male.

Test-retest correlations ranged from .82 (White men) to .69 (Black men) on the RSE and .88 (White women) to .74 (Black men) on the BES. As shown in Table 2, and consistent with previous research, there was a significant, moderate correlation between the RSE and the BES, ranging from .37 (Black men) to .55 (Black women) on the Time 1 administration and from .40 (Black men) to .52 (White men) on the Time 2 administration. There were no significant differences in the sizes of any of the correlations ($p > .10$).

To analyze the extent to which body esteem and self-esteem fluctuated concurrently over time, we correlated the difference scores (Time 1–Time 2) for each individual on the RSE and the BES. The difference score correlations provided an index that indicated the degree to which body esteem and self-esteem fluctuated together over time, with a higher correlation meaning that a change in one variable was more closely associated with and more accurately predicted change in the other.

TABLE 2
Correlations Between the BES and RSE at the Time 1 and Time 2 Administrations

Measure	RSE			
	White women (<i>n</i> = 163)	Black women (<i>n</i> = 55)	White men (<i>n</i> = 140)	Black men (<i>n</i> = 37)
<i>Time 1</i>				
BES	.50	.55	.50	.37
WC	.41	.44		
SA	.45	.46		
PC-F	.34	.52		
UBS			.47	.39
PC-M			.43	.36
<i>Time 2</i>				
BES	.48	.47	.52	.40
WC	.37	.39		
SA	.43	.46		
PC-F	.36	.44		
UBS			.51	.41
PC-M			.55	.54

Note. All correlations are significant at $p < .001$. RSE = Rosenberg Self-Esteem Scale; BES = Body Esteem Scale; WC = Weight Concern; SA = Sexual Attractiveness; PC-F = Physical Condition-Female; UBS = Upper Body Strength; PC-M = Physical Condition-Male.

Table 3 contains the difference score correlations for the four groups. A two-tailed Fisher's z test comparing the strength of these correlations showed that the White women had significantly higher BES-RSE difference score correlations than did the Black women ($p < .01$) or the White men ($p < .05$). The small number of Black male participants precluded this comparison from reaching significance. Comparisons on the gender-specific factors revealed that the White women also had significantly higher WC-RSE and SA-RSE difference score correlations than the Black women did, $p < .01$ and $p < .05$, respectively. These results mean that fluctuations in body esteem are more closely associated with fluctuations in self-esteem in White women than in either Black women or White men.

These aforementioned differences are not a statistical artifact of greater variation in the difference scores of the White women. Examination of the size and standard deviations of the difference scores on the RSE, BES, and the gender-specific factors revealed no significant differences between the groups on any variable ($p > .10$ for each comparison).

TABLE 3
Comparisons of the Difference Score Correlations (Time 2–Time 1)

Measure	RSE			
	White women (<i>n</i> = 163)	Black women (<i>n</i> = 55)	White men (<i>n</i> = 140)	Black men (<i>n</i> = 37)
BES	.41**	.00	.18*	.14
WC	.42**	-.10		
SA	.30**	-.02		
PC–F	.12	.10		
UBS			.09	.36*
PC–M			.25**	.12

Note. RSE = Rosenberg Self-Esteem Scale; BES = Body Esteem Scale; WC = Weight Concern; SA = Sexual Attractiveness; PC–F = Physical Condition–Female; UBS = Upper Body Strength; PC–M = Physical Condition–Male.

* $p < .05$. ** $p < .01$.

We completed a within-group comparison of the gender-specific factors for the White women by calculating a *t* score, based on Fisher's *z* transformation, which accounts for the fact that the data are not based on an independent sample. Results from these comparisons demonstrated that the WC–RSE and the SA–RSE difference score correlations for the White women were significantly higher than the PC–RSE difference score correlations, $p < .01$ and $p < .05$, respectively. Thus, in White women, periodic fluctuations in self-esteem were more highly correlated with fluctuations in weight satisfaction and feelings of sexual attractiveness than with fluctuations in feelings about physical conditioning.

Analyses of the difference score correlations revealed possible differences among the Black and White men. For the Black men, feelings about upper body strength fluctuated significantly with changes in self-esteem, whereas for the White men, attitudes about physical conditioning changed significantly with changes in self-esteem. Strong conclusions cannot be drawn because of the few numbers of Black male participants, the relatively lower rates of test–retest reliability among the Black men, and the nonsignificance of differences within or between male groups on the overall BES or its factors. Nevertheless, there is some indication that there may be ethnic differences in the relationship between body esteem and self-esteem among men as well as women.

Discussion

In the present study, we investigated possible gender and ethnic differences in the relationship between body esteem and self-esteem. Results indicated that substantial gender and ethnic differences do exist, not only in the levels of body esteem and self-esteem, but also in how these variables relate to one another over

time. Comparison of the groups revealed that, consistent with previous research, men and Blacks reported higher levels of body esteem, with White women having the lowest body satisfaction and Black men having the highest body satisfaction. These findings are consistent with models of bulimia nervosa that predict that White women are especially vulnerable to this disorder because of lower levels of body esteem (e.g., Stice, 1994; Striegel-Moore, 1993).

Our objective in this study was to examine how body esteem and self-esteem changed in relation to each other over time. The results support the hypothesis that changes in body esteem correlate with changes in self-esteem more for White women than for White men, Black men, or Black women. This finding is consistent with an investigation by Henriques et al. (1996), who found that general positive or negative social feedback influenced the body esteem of White women but did not influence the body esteem of Black women—a difference that occurred despite the fact that both groups reported similar reactions of pleasure or displeasure to the feedback.

The large differences between the groups in the magnitude of the difference score correlations are especially striking because the static correlation between body esteem and self-esteem at both Time 1 and Time 2 administrations were similar for all four groups. An explanation for these discrepant findings is possible by making the distinction between state and trait components of body esteem and self-esteem. These data suggest that the trait components of body esteem and self-esteem may relate similarly to Blacks and Whites and men and women.

However, the state components, or periodic fluctuations of body esteem and self-esteem, appeared to relate very differently among the groups. For the White women, the difference score correlation between the RSE and BES was of moderate strength, yet was weak for the men and nonexistent for the Black women. Differences were also noted among the White and Black men. For the Black men, fluctuations in self-esteem were more closely associated with changes in feelings toward their upper body strength, whereas for the White men, self-esteem was associated with attitudes about physical conditioning. These results are provocative in that ethnic differences in body esteem among men has not been explored; however, the small number of Black male participants and the slightly lower levels of test-retest correlations precluded generalizations.

In addition to group differences, there were also differences for White women in the extent to which the different aspects of body esteem fluctuated with self-esteem. WC covaried most consistently with self-esteem, followed by SA. Fluctuations in the PC-F were not significantly associated with changes in self-esteem. Although not inferring causality, these results may mean that when a White woman experiences an increase (or decrease) in her self-esteem she may experience a concurrent increase (or decrease) in weight satisfaction and feelings of sexual attractiveness. No similar association occurs with feelings about physical conditioning.

Both a strength and a limitation of this study reside with the fact that the spe-

cific causes of the changes in the scores in self-esteem and body esteem were unknown. The findings do not delineate the types of incidents that may have caused fluctuations in either body esteem or self-esteem or address which types of incidents may have been more likely to cause the joint fluctuation. Conversely, a strength of the study rests in the generalizability of the findings, as the changes were not artificially induced and are likely to be representative of typical week to week fluctuations in the two variables. The type of analysis was unique and replication of these results, perhaps with different measures of body esteem and self-esteem, will be important. However, because differences were found in the size of the difference score correlations among the groups and among the specific factors on the BES, it is clear that the changed scores do not simply represent random error or a shift in response tendencies.

Over 10 years ago, Streigle-Moore et al. (1986), suggested that three questions must be answered in an adequate theory of bulimia nervosa: Why women? Which women in particular? And why now? In this study, we have provided some answers to these questions by demonstrating that the state components of body esteem in general and weight satisfaction in particular fluctuate more consistently with the self-esteem of White women than with the self-esteem of White men, Black men, or Black women. The findings that body esteem, and weight satisfaction in particular, fluctuate more consistently with self-esteem in White women support the notion that White women are more likely to change their appearance as a way of trying to improve their self-esteem. These findings are consistent with current models of bulimia nervosa (e.g., Fairburn et al., 1993) and provide evidence that body esteem and self-esteem are related differently in White women than in White men, Black men, and Black women.

Future research based on these findings could help delineate clinical applications and further assist in determining which women in particular are at risk. For example, it could be hypothesized from this research that women who experience more emotional lability or more dramatic fluctuations in self-esteem would also experience more fluctuations in body esteem and thus may be more likely to view changing their body as a way to gain control or improve their self-esteem. Indeed, research has suggested that individuals with eating disorders have more emotional lability and unstable self-concepts (Schupak-Neuberg & Nemeroff, 1993). This research connects these findings with body esteem.

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