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Body Size and Social Self-Image among Adolescent African American Girls: The Moderating Influence of Family Racial Socialization

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Abstract

Social psychologists have amassed a large body of work demonstrating that overweight African American adolescent girls have generally positive self-images, particularly when compared with overweight females from other racial and ethnic groups. Some scholars have proposed that elements of African American social experience may contribute to the maintenance of these positive self-views. In this paper, we evaluate these arguments using data drawn from a panel study of socio-economically diverse African American adolescent girls living in Iowa and Georgia. We analyze the relationship between body size and social self-image over three waves of data, starting when the girls were 10 years of age and concluding when they were approximately 14. We find that heavier respondents hold less positive social self-images but also find that being raised in a family that practices racial socialization moderates this relationship.

Keywords

obesity; adolescence; racial socialization

The relationship between body weight and self-image among African American adolescent girls has been the topic of considerable study (Ge, Elder, Regnerus, & Cox, 2001; Lovejoy, 2001; Smolak & Levine, 2001). Overall, the results of this work show that, while African American girls are more likely to be overweight than females of other racial groups, they also feel good about their bodies and exhibit a relatively weak association between body size and outcomes such as self-esteem, self-evaluation, and psychological health (Berkowitz & Stunkard, 2002; Neumark-Sztainer, Story, Hannan, & Croll, 2002). These patterns have led scholars to suggest that elements of African American life may serve a protective function, limiting the negative influence of body size on self-image (Roberts, Cash, Feingold, & Johnson, 2006). In this paper, we explore these arguments by assessing the association between body size and social self-image within a sample of adolescent African American girls. We then

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examine elements of African American social experience that we hypothesize may be the source of this protection.

The Meaning of Body Size among Adolescent African American Girls

Adolescence is a time when the self-concept evolves to more fully incorporate the world and its expectations (Rosenberg, 1986). Concerns with popularity, attractiveness, and social status rise dramatically as does anxiety about the perceptions and evaluations of others (Seiffge-Krenke, 2003). During this developmental phase possessing a stigmatized physical characteristic, such as being overweight, can make both self and social acceptance even more challenging and contribute to the development of a negative self-image (French, Story, & Perry, 1995; Phillips & Hill, 1998; Smolak & Levine, 2001).

Given the importance adolescents place on the positive regard of others as well as the degree of stigma attached to obesity in the culture at large (Brownell, Puhl, Schwartz, & Rudd, 2005), it is not surprising that body size influences social self-images among adolescent girls. Further, though there is ample evidence suggesting African American girls are less vulnerable to these pressures (Hebl & Heatherton, 1998; Nichter, 2000), this should not be taken to mean they are immune from the psycho-social impact of weight stigma or unconcerned about the aesthetic and health consequences of weight gain (Granberg, Simons, Gibbons, & Melby, 2008; Siegel, 2002). Rather, the relative protection enjoyed by African American girls is detectable primarily because they are so often compared to girls from other racial groups, especially Caucasians, where concerns with body size are more salient (Beauboeuf-Lafontant, 2003). Research focused specifically on African Americans suggests that while they hold more moderate attitudes about weight than those found among European Americans, they still view obesity as a negative characteristic (Flynn & Fitzgibbon, 1996; Kumanyika, Wilson, & Guilford-Davenport, 1993; Paxton, Eisenberg, & Neumark-Sztainer, 2006). For these reasons, our expectation is that when heavier adolescent African American girls are compared with thinner girls who are also African American, heavier girls will show a deficit in social self-image. Also, in line with developmental theories of self and body image, we expect this relationship to become stronger as respondents enter mid-adolescence.

Exploring the Body Size Paradox: Why African American Girls are Less Concerned with Weight

While we anticipate that weight will be relevant to the self-images of adolescent African American girls, we also propose factors that may contribute to the differential protection they enjoy relative to other groups (Ge et al., 2001; Molloy & Herzberger, 1998). Specifically, we hypothesize that elements of African American social life provide resources upon which African American girls may draw when assessing their physical size and that, when available, these resources can buffer the impact of broader social standards regarding attractive body size. This, we argue, contributes to the relative protection they experience when compared to girls from other racial groups.

Interest in the notion that elements of social experience could protect the self-esteem of African American children gained ground with Morris Rosenberg's 1971 study of self-esteem (Rosenberg & Simmons, 1971). In explaining the finding (surprising at the time) that black children did not demonstrate evidence of reduced self-esteem, Rosenberg and Simmons cited the effect of what they termed a “consonant social context:” an environment in which social feedback and proximal social comparisons emphasize positive aspects of one's group membership while limiting exposure to negative aspects (1971). Among African American children, they argued, growing in such a context reduced exposure to bigotry and racial

discrimination which in turn promoted positive self-esteem even among children living in highly disadvantaged circumstances.

Researchers studying the association between body size and self-image have proceeded along a similar path arguing that elements of African American social and cultural life may protect girls' self-images by reducing exposure to negative feedback and promoting positive social comparisons (Root, 1990). This expands the resources upon which African American girls can draw to make positive evaluations of their weight and appearance providing a differential protection not as readily available to girls in other racial groups (Halpern, King, Oslak, & Udry, 2005; Paxton et al., 2006). In this paper, we hypothesize two resources that may be particularly important for this process: the structural availability of comparison others who are also African American and the practice of cultural education (i.e., racial socialization) among the families of African American teenagers.

We expect these factors to influence the evaluations African American girls make about their bodies by shaping the sources girls use to judge their physical size. For example, research examining sources of body dissatisfaction indicate that social comparisons are one of the primary mechanisms through which adolescent girls assess their bodies (Evans & McConnell, 2003; Thompson, Coovert, & Stormer, 1999). Downward comparisons, in which a girl judges herself smaller than those around her, typically produce greater body esteem and result in more positive self-evaluations (Morrison, Kalin, & Morrison, 2004). African American women are, on average, heavier than their peers from any other major racial group and also show greater variation in body size (Neumark-Sztainer et al., 2002). This would suggest that when African-American adolescents compare their body sizes with women from within their own racial group, they are more likely to perceive a favorable (i.e., downward) social comparison than they would if comparing themselves to women who are not African American. Thus, the availability of comparison others who are also African American may improve access to self-enhancing social feedback.

The protective effect of African American racial group membership may also develop by facilitating access to cultural resources that enhance adolescents' self-images – again giving teens the ability to buffer the impact of body size status. We propose that racial socialization, the practice of educating children about the meaning, history, and significance of being African American (Caughy, O'Campo, Randolph, & Nickerson, 2002; Hughes, 2003) may have this effect. Racial socialization has been linked to a number of positive psycho-social outcomes including higher self-esteem and lower rates of psychological stress (Bynum, Burton, & Best, 2007; Hughes et al., 2006). It also produces two effects that suggest it may contribute to more positive evaluations of body size: bi-culturalism and positive feelings about one's ethnic group (Brega & Coleman, 1999; Demo & Hughes, 1990; Hughes et al., 2006; McHale et al., 2006).

A bicultural orientation may reduce the impact of mainstream body size standards by facilitating recognition of the biases inherent in western, white standards of beauty (Lovejoy, 2001). This may be part of what allows African American women and girls to distinguish their own body evaluations from those standards (Evans & McConnell, 2003; Poran, 2002). Similarly, positive feelings about one's own ethnic group are likely to increase the salience and appeal of the in-group standard. Such recognitions may also reduce the influence of social comparisons made with non-African American others. If racial socialization has the effect we hypothesize, then girls growing up in families where it is practiced frequently should show a weaker relationship between body size and social self-images than do girls growing up in families where racial socialization is not a focus.

Our intent with this analysis is to deepen understandings of the relationship between body and self-image among adolescent African American girls. Our first goal is to assess the relative

importance of body size to self-image as these girls move through adolescence. Second, we test the idea that growing up within a "consonant social context" may protect girls, to some degree, from negative feedback about their bodies. Specifically, we hypothesize two forms of this consonant social context: the structural availability of comparison others who are also African American and the practice of cultural education (i.e., racial socialization) within respondents' families. In both instances, we expect that these factors will have a moderating effect, reducing the relationship between body size and social self-image.

METHODS

Sample

The data for this analysis are drawn from waves one through three of the Family and Community Health Study (FACHS), a multi-site study of the emotional and social health and development of African American pre-teens and adolescents. The complete FACHS dataset consists of approximately 900 African American families living in Georgia and Iowa. The FACHS sample is unique among data sets focusing on African Americans because it was designed to identify contributors to African American children's development in families living outside the urban inner city core and from a wide range of socioeconomic strata. Wave 1 of FACHS was collected during 1997 when target respondents were between 10 and 11 years of age; Wave 2 took place in 1999 when target children were between 12 and 13. Wave 3 data collection occurred in 2001 when the target children were aged 14 to 15. Details regarding the FACHS sampling strategy and data collections procedures can be found in Simons et al., (2002).

In the present analysis we use only the female respondents from the FACHS sample. Approximately 400 girls participated in the FACHS data collection at wave 1; of these, 320 completed waves 2 and 3. Missing data from the body size measures (explained further below) and other scales reduced the final sample to 256. We used t-tests to examine whether respondents included in the sample differed from those excluded on any of the dependent or independent variables and found no significant differences.

Measures

Social Self-Image—Our primary research focus is on the association between body size and social self-image among adolescent girls. We measured social self-image using a five-item index capturing social characteristics that are meaningful to adolescents and that have been linked to behavior and attitudes regarding smoking, alcohol use, diet, and exercise (Gerrard, Gibbons, Stock, Vande Lune, & Cleveland, 2005; Gibbons & Gerrard, 1995, 1997; Simons et al., 2002). The items were reverse coded as necessary so that a high response indicated a more positive social self-image. Items were summed and the Chronbach's alpha for this scale was approximately .65 at both waves two and three.

Body Size Measures—The FACHS measures "visible body size" on a nine-point scale ranging from significantly underweight (1) to morbidly obese (9). These ratings were made from videotapes of the FACHS target children recorded during each of the first two waves of data collection. We elected to use visual ratings of body size rather than clinical measures such as BMI because our theoretical interest is in the implications of body weight for social comparisons and social self-images. Thus, a visual assessment of obesity was more a more valid measure than one drawn from BMI-for-age growth charts (National Center for Health Statistics, 2000). Finally, ratings of body size made from videotapes have been shown to be a valid representation of weight status (Cardinal, Kaciroti, & Lumeng, 2006).

Observer ratings were based on the Figure Rating Scale (FRS: Stunkard, Sorenson, & Schulsinger, 1983) as well as assessments of particular body parts (e.g., upper arm size, etc.). Details regarding the procedures used to arrive at target body size ratings, and to ensure reliability across videotape raters, can be found in Granberg, Simons, Gibbons, & Melby (2008). Body size ratings from wave 1 videotapes correlated significantly with those from wave 2 (r=.516**). The distribution of body size ratings for waves 1 and 2 are reported in table 1.[1]

We used the observers' ratings to identify those respondents whose body sizes could be considered "visibly obese" during wave 2 scoring. Previous validity studies using the FRS have identified body size ratings of 7, 8, and 9 as "visibly obese" (Bulik et al., 2001). Approximately 12 percent of the FACHS sample fell into this category. We then looked at wave 1 classifications of body size. We set the visible obesity cut off for wave 1 at 6 (rather than 7) because CDC growth charts set clinical obesity cutoffs[2] for 10 year olds at approximately 2.5 BMI points lower than those applied to 12 year olds (for example, a 10 year old is classified as obese with a BMI of 23, a 12 year old is classified as obese with a BMI slightly above of 25.2) leading us to feel a similar adjustment was appropriate on this measure (Centers for Disease Control, 2005).

Respondents whose body size ratings were scored at 6 or higher in wave one and at 7 or higher in wave two were coded "1" for the measure "large body size," all other respondents were coded "0". Requiring that respondents be evaluated as "large body size" at both waves 1 and 2 ensured that this was a long-term physical state and lessened the likelihood that a respondents' elevated body size was the result of puberty alone.

In approximately 18 cases, data for this measure were missing because tapes could not be found or respondents were not sufficiently visible for observers to reliably assess body size. In these cases, we replaced body size scores missing from wave 2 with the value from wave 1, if available. (We made no replacements for cases where body size was missing in wave 1.) We felt comfortable making this replacement because girls tend to get heavier as they enter adolescence and so replacing missing wave 2 scores with those from wave 1 would tend to understate, rather than overstate, the number of girls who were of large body size, resulting in a more conservative test of our hypotheses. After this coding was complete, 35 girls were coded as "large body size."

Family Racial Socialization—The dominant arguments hypothesizing that racial socialization moderates the relationship between weight and self-conception has focused on the importance of being aware of one's ethnic culture and history (Lovejoy, 2001). We measured this aspect of racial socialization using a scale based upon work by Diane Hughes (Hughes, 2003; Hughes & Chen, 1997) which asks respondents to report on five family activities (e.g., museum visits) that promote knowledge regarding the culture and meaning of being African American. Each item's responses ranged from "Never" (1) to "10 or more times" (5). The items were summed and Chronbach's alpha for the scale was .84.

Availability of African American Comparison Others—We measured the availability of comparison others using the percentage of African-Americans living in respondents' Block Group (BG). Block groups are clusters of contiguous residential blocks analogous to a

[1]Questions have been raised as to the suitability of FRS for use with non-Caucasian populations (Patt, Lane, Finney, Yanek, & Becker, 2002; Pulvers et al., 2004) and, with this concern in mind, we did examine a number of other rating systems. We chose the FRS because of the extensive body of research validating its effectiveness as a measure of visible obesity in diverse populations (including African Americans) and well as evidence demonstrating its validity for use with videotaped data (Bhuiyan, Gustat, Srinivasan, & Berenson, 2003; Cardinal et al., 2006; Patt et al., 2002).

[2]CDC Growth Charts do not use the term "obesity" when classifying children's weight; however a BMI-for-age at the 95th percentile or higher is typically considered "obese".

respondents' neighborhood (Bureau of the Census, 1994). In rural areas where housing does not always follow a block design, block groups are identified based upon a combination of factors including the extent and density of existing residential housing, natural and manmade boundaries (e.g., lakes, rivers, thorough fares), and local land survey information. Starting with the 1990 census, local authorities also provided input so that rural block groups accurately captured local residential patterns.

When the FACHS sample was originally identified, African Americans composed at least 20% of the residents in each BG from which respondents were recruited. Over time, however, some FACHS families have moved, increasing variation in the sample. As of wave 3, the proportion of African Americans living in respondents' BGs ranged from less than 1% to over 90% (Mean 26%; s.d. 28%).

Control Variables

Quality of Parenting—We control for quality of parenting in this analysis because parents who engage in racial socialization tend to be involved with and attentive towards their children in other ways (Caughy et al., 2002; Simons, Chao, Conger, & Elder, 2001) and effective racial socialization requires calling upon many of the skills that also make for good parenting. In addition, both constructs are associated with better psychosocial competence in children, potentially improving social self-image (Constantine & Blackmon, 2002; Fischer & Shaw, 1999; Maccoby, Martin, & Mussen, 1983). The items for the parenting scales were adapted from instruments developed for the Iowa Youth and Families Project (IYFP: Conger et al., 1992) and have been shown to have high validity and reliability (Simons, 1996; Simons et al., 2001; Simons, Johnson, Conger, & Elder, 1998). Coefficient alpha for the target child's instrument was approximately .90.

Family Social Class—Some researchers have suggested that body standards are more stringent among members of more affluent SES groups (Molloy & Herzberger, 1998). In order to ensure we were not confounding class-based associations with our variables of interest, we included family class status as a control. We measured class status by ranking respondents based on a combination of the primary caregiver's work status and the total household income (Billingsley, 1992). The measure generates five class groups: (1) nonworking poor, (2) working poor (3) working non-poor, (4) middle class, (5) upper class. Class status measures from waves 2 and 3 were correlated at .9. As a result, we used the wave 2 measure in all analyses.

Opposite Sex Relations—Adolescence is a period when relationships with the opposite sex take on heightened salience and are viewed as particularly relevant for status within one's peer group (Seiffge-Krenke, 2003). In order to account for the possibility that the relationship between body size and social self-image was due only to perceptions of romantic success, we included a control for the degree to which respondents saw themselves as successful at “making and keeping friends of the opposite sex”.[3] Respondents evaluated themselves on a scale of 1 to 3 where 1 corresponded to “not well” and 3 corresponded to “very well.”

Objective Social Skill—The stigma associated with obesity may limit the opportunities overweight people have to develop effective social skills (Miller, Rothblum, Barbour, Brand, & Felicio, 1990). In order to account for this association, we included primary caregivers' assessments of respondents' social abilities. This measure is a four-item scale assessing skills such as working well in a group. Responses to these items ranged from 1 to 3, with 3

[3]It would have been preferable to use a question that did not assume an exclusively heterosexual orientation. However, the data do not include a comparable question for respondents who are gay or lesbian. In this analysis, a very small number of respondents (N=5) identified as “mostly homosexual” or “homosexual”. Due to the small number, we felt the benefits of controlling for this aspect of adolescent interactions justified the use of the question.

corresponding to the most socially skillful evaluation. PC's answers to these questions were standardized and summed and the Chronbach's alpha for the scale exceeded .8.

Academic Skill—As with social skill, self-image in domains such as intelligence may reflect concrete information, such as grade point averages (Felson, 1985) and some studies have suggested overweight girls do better in school (Pesa, Syre, & Jones, 2000). To account for these associations, we controlled for the primary caregivers' assessment of respondents' ability to learn math, science, reading, social studies, and computers. PCs rated each academic subject on a scale from 1 to 3, with 3 corresponding to high ability. The responses were summed to create the academic skill scale; reliability on this scale also exceeded .8.

Analysis

We used ordinary least squares regression to assess the multivariate relationship between body size and social self-image and to test our moderation arguments. Due to the block group sampling strategy employed for this project, however, we were not able to assume compliance with the assumption of independent observations. In order to correct for this, we employed the "cluster" option available within the statistical program Stata (StataCorp, 2003). This option produces robust standard errors, which correct for correlations due to block group sampling.

RESULTS

Bivariate Analysis

The correlation coefficients, uncentered means, and standard deviations for all measures used in this analysis are shown in Table 2. Bivariate correlations show that being of large body size is not related to social self-image at wave 2 when the respondents were approximately 12 to 13 years of age. However, large body size is related to this measure at wave 3, when respondents were about 15 years old. Racial socialization and percentage of African-Americans in the neighborhood are both positively related to our wave 3 outcome but only racial socialization is related to our independent variable. Quality of parenting, at both waves, is correlated with racial socialization as well as with social self-image. Surprisingly, family social class is significantly and positively associated with body size; however, it shows only a marginal association with the outcome measure.

Our first research question asked whether the association between weight and social self-image became stronger as girls entered adolescence. In order to explore this issue, we regressed our dependent variable on large body size while controlling for quality of parenting and class status. This regression was first run using wave 2 and then repeated using wave 3 assessments.[4] All the hypotheses evaluated in this analysis were directional; consequently we report one-tailed results in all of our tests of significance. The results of these regressions are shown in Table 3. Model 1 shows that being of large body size has no significant association with respondents' evaluations of their social attributes at wave 2 when they are roughly 12 to 13 years of age. However, model 2 indicates that there is a small but significant negative association between large body size and social self-image at wave 3 when the respondents averaged 14 to 15 years of age. Further, model 3 shows that large body size significantly predicts wave 3 assessments after we control for social self-image assessed at wave 2. This suggests that girls who have had a large body size since at least age 10 experience a decline in social self-image as they move into adolescence. This pattern supports our hypothesis that being of large body size becomes

[4]In separate regressions we examined whether pubertal development might influence the relationship between body size and self-image. We found pubertal status was associated with social self-image but the relationship between body size and our outcome was unaffected. For the sake of parsimony these models are not shown.

relevant for self-image as girls move into their teenage years. Once the control for social self-image at wave 2 is included, family class status also becomes significant.

Our second hypothesis was that experiences that provided a "consonant social context" with respect to racial group membership would reduce the impact of large body size on social self-image. We tested this by examining the extent to which our measure of family racial socialization and of the percentage of African Americans in respondents' neighborhoods moderated the effect of a large body size on social self-image at wave 3; the results are shown in Table 4. Model 1 shows the results of adding our additional control measures to the regression equation estimations shown in Table 3 (Model 2) and indicates that adolescents who see themselves as able to relate successfully to members of the opposite sex also have more positive social self-images. There is also an association between parental evaluations of respondent social skills and targets' social self-image. Parents' evaluations of targets' academic abilities, however, showed no association. Also, the association between large body size and social self-image remained significant after the inclusion of these added controls. Table 4, Model 2 shows the main effect of our two proposed moderators. In Model 2, only racial socialization was associated with respondents' social self-image; the results show that racial socialization is positively related to social self-image but large body size continues to show a negative association.

Model 3 shows the result of adding the multiplicative interaction term formed by centering and multiplying large body size by family racial socialization. This interaction term is positive and statistically significant, consistent with our moderation hypothesis. We graphed this interaction using a web-based statistical application (Dawson, 2006); the result is displayed in Figure 1. Consistent with our hypothesis, the figure shows that, in homes where racial socialization is frequent, there is little difference between the perceived social attributes of girls with large bodies versus those who are smaller.[5] However, in homes where racial socialization is less frequent, heavier girls showed less positive social self-image.

The significant interaction term suggests that elements of social context, in this case racial socialization practices in the home, are ameliorating the effect of large body size on self-image. In order to confirm this, we tested whether the drop in the magnitude of the large body size coefficient reached statistical significance. Using techniques described by Paternoster et al. (Paternoster, Brame, Mazerolle, & Piquero, 1998) we compared the size of the large body size coefficients for target respondents who reported racial socialization frequency that was above the mean to those reporting racial socialization frequencies below the mean. The results ($z = -2.41$, $p<.05$ – two tailed) suggest that active racial socialization within the home does lessen the influence of a large body size on social self-image.

As a further test of the influence of a "consonant social context" we tested our second hypothesized moderator, percent of African Americans living in respondents' residential block group area, by centering and multiplying large body size by this measure. The result for the effect of this moderator alone is shown in Model 4. As with racial socialization, the coefficient is positive and significant. A graph (not shown) of the interaction showed a similar pattern to that found with the effect of racial socialization; among girls living in neighborhoods where the percentage of African-American residents is relatively high (i.e., above the mean), there is little difference between the social self-image of larger versus smaller adolescent girls In contrast, among girls living in neighborhoods where the percentage of African-Americans is lower, larger girls are more likely to report a less positive social self-image when compared to smaller girls. As with racial socialization, we tested for the equality of the large body size

[5]Although the line representing respondents whose families engage in high rates of racial socialization appears to trend upward, the difference between the coefficients is not significant.

coefficients between respondents who were above and below the mean percentage of African Americans resident in the neighborhood. This coefficient did not achieve significance ($z = -1.25$, NS). Model 5 shows the results when the two interactions are estimated together; both remain significant and increase slightly in magnitude.

DISCUSSION

This paper set out to explore the degree to which elements of African American social life may serve to insulate overweight African American teenage girls from negative self judgments. In addition, we considered whether early adolescence might be a time when weight concerns were particularly relevant for African-American girls and consequently that the moderating effects of racial group membership could be most important.

In order to explore these questions, we examined respondents' evaluations of the degree to which they believed they possessed a set of positive social attributes and found that adolescent girls whose body sizes had placed them in the category of “visibly obese” from age 10 onward appeared to be relatively unaffected by their weight status until they reached mid-adolescence when they became significantly less likely to identify with positive labels such as “attractive,” “cool,” and “popular.” Of potentially greater theoretical interest, however, this analysis suggests that both family racial socialization and the density of African Americans in respondents' neighborhoods are resources that reduce the negative influence of being overweight.

These finding are important for a number of reasons. The seemingly paradoxical relationship between weight and positive self-image among African American females has been documented in numerous studies. To our knowledge, however, this is the first empirical investigation of the role of social context as an explanation of these patterns among African-American adolescent girls. The results lend support to the work of those who have located one source of this paradox in experiences that stem from racial group membership.

In considering these results, it is also important to acknowledge the degree to which they represent a double-edged sword. Given the well established threats to physical health from chronic obesity as well as its added risk for lifelong cumulative disadvantage (Ferraro & Kelley-Moore, 2003), the short term gains from improved self-image during adolescence may eventually be overtaken by obesity's long term costs. Still, negative self-images can bring serious consequences of their own, particularly with respect to eating disorders and psychological distress. Also, self-perceptions are highly influential in guiding decisions to improve health behavior. Understanding the mechanisms through which positive, as well as negative, self-images are sustained is important for understanding the role of the self in health maintenance. Thus, while we acknowledge the extent to which these effects may represent mixed blessings, we also feel they indicate areas where self and social processes have the potential to contribute to overall well-being.

These results also highlight the importance of family and parental socialization in equipping adolescents with assets to help them resist broader societal messages that equate being thin with goodness, intelligence, and competence (Bordo, 1993; Torrens, 1998). Even during the teen years, families remain an important agent of socialization (Aquilino & Supple, 2001) and these results emphasize the degree to which parents as well as other adults may play a central role in equipping their daughters to cope effectively with a core developmental task. The findings also join a growing literature that emphasizes ways that African-American families are a source of resilience for their children, particularly since racial group membership can still evoke discrimination (Natsuaki et al., 2007; Simons et al., 2001; Simons et al., 2002).

While these findings provide intriguing evidence of the sources of this body-image paradox, they are also limited in a number of ways. First, while our moderation analysis was consistent with our theoretical expectations, there are other factors that may also play a role. For example, the influence of racial socialization and living in a neighborhood with a high proportion of African Americans may have their effects because they contribute to the development of a more positive ethnic identity. Our data were not detailed enough to be able to test this pathway but future studies could explore this possibility.

Other limitations to these findings should also be noted. We focused on “body size” as assessed by others but did not have measures of respondents' perceptions of their own weight. Replicating these analyses using respondents' subjective perceptions of their weight status as well as with evaluations made during face to face interactions, rather than via videotape, will allow us to better specify the social pathways through which these processes occur.

Finally, our measure of neighborhood racial composition used census block groups as a proxy for the availability of African American comparison others. While block groups are designed to capture actual residential areas as closely as possible, they are a rough approximation of the actual neighborhoods where respondents are spending time. It is possible that the use of this measure contributed to the relatively weak influence of comparison others as a moderating effect. Future research with more specific conceptualizations of neighborhood will help clarify the influence of comparison others on the association between body size and self-image.

Finally, these results suggest that many African American women live in a social context that may reduce the influence of mainstream appearance standards on their self-evaluations. However, weight is also only one element of appearance; while African American women growing up in specific contexts appear to enjoy some protection from the imposition of Caucasian standards of slenderness, they may be more vulnerable in other areas. For example, feelings about skin tone, facial features, and hair texture may be more susceptible to influence from the majority group standard (Roberts et al., 2006). Thus, another way in which this area of research can be expanded is to consider whether social context provides similar protection with respect to other aspects of appearance.

The link between body size and self-image is an important issue for adolescents of all racial groups, not only African-Americans, and a substantial body of research suggests that this relationship does vary by racial and ethnic group membership. Continued work in this area has the potential to produce significant benefit. Substantively, it will help to specify the conditions under which weight affects the self-concept, providing guidance to both researchers and policy makers. Theoretically, it has the potential to advance understandings of the pathways through which social group membership characteristics, such as race, influence self-image and overall well-being.

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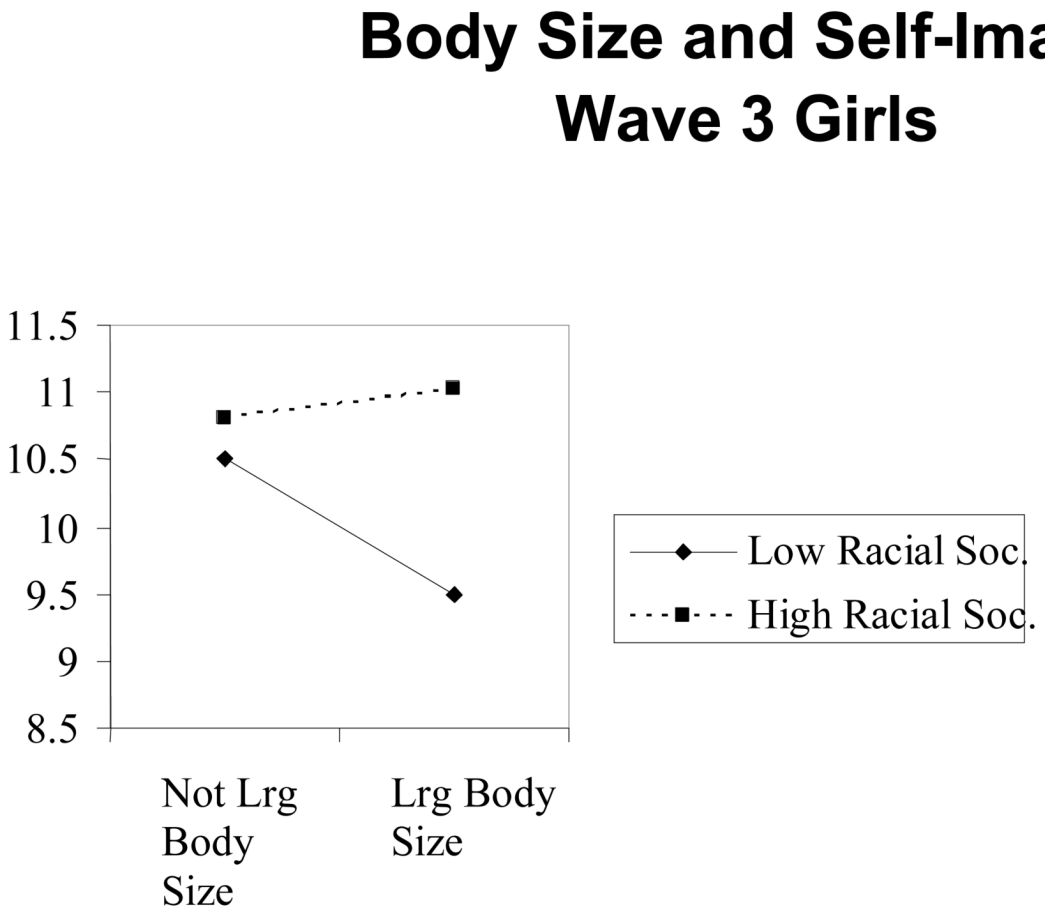

Figure 1.
Interaction between Large Body Size and Family Racial Socialization

Table 1

Frequencies and Descriptive Statistics for Body Size Ratings

	Wave 1		Wave 2	
Size Rank	**N**	**%**	**N**	**%**
1	2	.8	1	.4
2	21	8.2	9	3.8
3	89	34.8	60	25.2
4	66	25.8	82	34.5
5	43	16.8	46	19.3
6	12	4.7	8	3.4
7	12	4.7	20	8.4
8	9	3.5	11	4.6
9	2	.8	1	.4
Total	256	100.0	238	100.0
Mean	4.05		4.38	
s.d.	1.51		1.50	

Table 2

Correlation Coefficients and Descriptive Statistics for Multivariate Analyses

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Large Body Size	1										
2. Social Self-Image – W2	−.040	1									
3. Social Self-Image – W3	−.170**	.379**	1								
4. Racial Socialization	−.113*	.132*	.212**	1							
5. Percent AA in Neighborhood	−.015	.008	.120*	.155**	1						
6. Parenting Quality – W2	−.172**	.098+	.081+	.259**	.142*	1					
7. Parenting Quality – W3	−.141*	.138*	.098+	.338**	.139*	.568**	1				
8. Family Class Status	.123*	.075	−.087+	−.027	−.076	.017	−.016	1			
9. Rel. w. Opposite Sex	−.038	.177**	.225**	.056	.126*	.019	.127*	.155**	1		
10. Social Skill Scale	−.093+	.134*	.227**	.157**	−.039	.137**	.252**	−.038	.071	1	
11. Academic Ability Scale	−.097+	.129*	.170**	.063	.030	.117*	.214**	−.061	.067	.411**	1
Mean	.14	16.40	16.55	12.80	.26	.00	.22	3.46	2.52	10.19	10.35
Standard Deviation	.34	2.30	2.37	4.84	.29	5.35	6.31	1.11	.61	1.76	1.66

+ p<.10

* p<.05

** p<.01

Table 3

Standardized Coefficients for Girls' Positive Self-Image Regressed on Body Size, Waves 2 and 3

	Wave 2	Wave 3	
	Model 1	**Model 2**	**Model 3**
Large Body Size	−.03	−.151*	−.139*
Quality of Parenting	.09+	.076+	.025
Family Class Status	.08+	−.068	−.098*
Self-image W2			.337***
Adjusted R-Sq	2%	4%	18%

+ p<.10

* p<.05

** p<.01

*** p<.001 (one-tailed tests)

Table 4

Standardized Coefficients for Girls' Positive Self-Image Regressed on Body Size and Family Racial Socialization

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Large Body Size	−.123*	−.116*	−.089*	−.110*	−.081+
Quality of Parenting	−.034	−.088*	−.076+	−.084*	−.070+
Family Class Status	−.116**	−.105*	−.103*	−.117**	−.116**
Wave 2 Self-evaluation	.333***	.323***	.319***	.323***	.319***
Opposite Sex	.170**	.159**	.161**	.155**	.157**
Social Skill	.145**	.141**	.121*	.150**	.129*
Academic Skill	.045	.050	.047	.051	.048
Racial Socialization		.136**	.144**	.145**	.155**
Percent AA in Block Group		.083+	.089+	.080+	.087*
Body Size * Racial Socialization			.110*	---	.119*
Body Size * Percent AA in Block Group				.139**	.146**
Adjusted R-Squared	23%	26%	27%	28%	29%

+ p<.10

* p<.05

** p<.01

*** p<.001 (one-tailed tests)