

Agreement with Satisfaction in Adolescent Body Size between Female Caregivers and Teens from a Low-income African-American Community

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Objective To describe body size satisfaction and agreement among low-income, urban, African-American adolescents, and female caregivers. **Methods** Two hundred and fifteen adolescent–caregiver pairs completed measures of demographics, anthropometrics, and body size satisfaction. **Results** Adolescent–caregiver agreement on body size satisfaction varied by body mass index (BMI) category. Among normal weight adolescents, 61% of adolescent–caregivers agreed that current body size was ideal. Among adolescents at risk for overweight, 38% of adolescent–caregivers agreed that current body size was ideal, and 38% were discordant with adolescents wanting to be thinner and caregivers satisfied with current body size. Among overweight adolescents, adolescent–caregiver agreement was 67%; 52% agreed the adolescent should be thinner and 15% agreed current body size was ideal. **Conclusions** Body size satisfaction is related to BMI category for adolescents and caregivers, but adolescents have a lower threshold. Encouraging caregivers to elicit their adolescents' views on body size satisfaction may enable caregivers to support their adolescents in addressing weight-related issues.

Key words adolescent–caregiver agreement; adolescents; African American; at risk for overweight; body size satisfaction; overweight.

The rising prevalence of childhood and adolescent overweight [Overweight is defined as an age- and gender-specific body mass index (BMI) percentile >95th percentile based on the 2000 CDC tables used for children and adolescents aged 2–20 years (CDCP, 2000)] is a major public health concern (Hedley et al., 2004). Not only do overweight children suffer physical and psychological risk (Reilly et al., 2003), but overweight status during childhood and adolescence is a strong risk factor for adult obesity (Engeland, Bjorge, Tverdal, & Sogaard, 2004; Guo et al., 2000; Kvaavik, Tell, & Klepp, 2003; Whitaker, Wright, Pepe, Seidel, & Dietz, 1997).

African-American adolescents have been disproportionately affected by the obesity epidemic, experiencing the highest increase in rates of overweight among all

race/ethnic groups between 2000 and 2002 (Hedley et al., 2004; Ogden, Flegal, Carroll, & Johnson, 2002). Although many overweight adolescents are dissatisfied with their body size, frequently desiring to be thinner (Britz et al., 2000; Mellin, Neumark-Sztainer, Story, Ireland, & Resnick, 2002; Neumark-Sztainer et al., 2002; Wadden, Brown, & Foster, 1991; Wadden, Foster, Stunkard, & Linowitz, 1989), the relationship between body size and body size satisfaction among African-American adolescents is controversial. Some investigators have found that African-Americans adolescents have a larger ideal body size relative to other ethnicities (Adams et al., 2000; Neff, Sargent, McKeown, Jackson, & Valois, 1997; Perry, Rosenblatt, & Wang, 2004; Thompson, Corwin, & Sargent, 1997; Welch, Gross,

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Bronner, Dewberry-Moore, & Paige, 2004), whereas others have found that African-American adolescents, particularly females, express preference for a body size in the normal weight range (Baturka, Hornsby, & Schorling, 2000; Katz et al., 2004; Kumanyika, Wilson, & Guilford-Davenport, 1993; Thompson et al., 1997). Body size satisfaction is an important construct in weight management, because adolescents who are satisfied with their body size may see little reason to modify their dietary behavior or to conform to an ideal body size that may be discrepant from their own (Baranowski, Cullen, Nicklas, Thompson, & Baranowski, 2003).

Gender may also play an important role in body size satisfaction, with females more dissatisfied and generally preferring a thinner body size than males (Adams et al., 2000; Furnham, Badmin, & Sneade, 2002; Robinson, Chang, Haydel, & Killen, 2001; Young-Hyman, Schlundt, Herman-Wenderoth, & Bozylinski, 2003). However, males may also perceive pressure to obtain an idealized body size, particularly a muscular V-shaped figure (Furnham et al., 2002; Muris, Meesters, van de Blom, & Mayer, 2005). Evidence suggests that the relationship between gender and body size satisfaction may vary by ethnicity (Neumark-Sztainer et al., 2002). In an analysis of 4,746 public school adolescents, after adjusting for BMI and socioeconomic differences, African-American females reported fewer weight-related concerns than Caucasian females; by contrast, African-American males reported more weight-related concerns than Caucasian males (Neumark-Sztainer et al., 2002).

Caregivers influence their children's dietary behavior through the household contexts they establish, including purchasing food, preparing meals, and modeling dietary behavior (Golan & Crow, 2004). Caregivers' satisfaction with their children's body size may also impact feeding and household contexts. For example, if caregivers are satisfied with their child's body size, they may undermine strategies to alter existing dietary behaviors and have limited enthusiasm for recommendations that would curb weight gain, regardless of their child's actual body size (Fitzgibbon, Blackman, & Avellone, 2000; Thompson et al., 1997). Existing evidence suggests that although caregivers are often able to assess their adolescent's weight, they do not reliably recognize when their adolescent is overweight (Boutelle, Fulkerson, Neumark-Sztainer, & Story, 2004; Maynard, Galuska, Blanck, & Serdula, 2003; Young-Hyman et al., 2003) or engaging in disordered eating behaviors such as binge eating or overeating (Steinberg et al., 2004). There is limited information on adolescent-caregiver agreement regarding adolescent

body size satisfaction, particularly among African-American families.

The ecological model forms the basis of many family-based interventions, because it emphasizes the dynamic interplay among individual, caregiver, and household influences on behavior (Bronfenbrenner, 1979, 1993). For example, children are influenced by their caregivers' behavior, and in turn, they influence their caregivers. Interventions to promote healthy weight gain for adolescents are most likely to be successful when caregivers and adolescents are in agreement regarding weight-related goals.

The objective of the current investigation is to examine adolescent and caregiver body size satisfaction among low-income, urban, African-American adolescents. First, we examined the prevalence of adolescent body size satisfaction among adolescents and caregivers, including differences in satisfaction by adolescent gender and body size. Second, the within household agreement between adolescents and caregivers regarding their satisfaction with the adolescent's body size was described. Finally, factors that predict agreement between caregivers and adolescents were investigated.

Methods

Participants

Participants were part of the Challenge! study, a health promotion/obesity prevention randomized controlled trial for urban African-American adolescents from low-income communities. Eligibility criteria included age (11–16 years) and willingness to participate in a randomized controlled trial of a health promotion program. Weight was not a criterion for enrollment and was not mentioned in recruitment. Youths were recruited from two sites: a primary care site where the children had been monitored longitudinally since infancy or from three local public schools. Some (15.3%, $n = 33$) adolescents from the primary care site had experienced failure to thrive (FTT) during the first 2 years of life (weight-for-age or weight-for-height <5th percentile based on age- and gender-adjusted growth charts), but by 6 years of age, they had all experienced growth recovery (growth parameters >5th percentile) (Black & Krishnakumar, 1999). Two hundred and thirty-five adolescents were enrolled and completed the baseline evaluation. Baseline data were collected before randomization in the intervention. For the current investigation, additional inclusion criteria were African-American race/ethnicity and a female primary caregiver. Twenty adolescents were excluded due to Caucasian race/ethnicity (3.0%, $n = 7$).

and/or male primary caregiver (6.0%, $n = 14$), leaving an analysis sample of 215 adolescents.

Procedure

Adolescents and their caregivers participated in a baseline evaluation that included anthropometrics and questionnaires on demographics and current and ideal body size. Questionnaires were self-administered on a laptop computer. Questions were presented aurally through headphones and visually on the screen, and responses were selected with a mouse.

The research protocol was approved by the University of Maryland School of Medicine Institutional Review Board. Adolescents and caregivers completed assent and consent forms, respectively, before data collection. All participants were compensated for the evaluation visit. Baseline data were collected from April 2001 through May 2004.

Measures

Adolescents and caregivers reported basic demographic information including their age, gender, race/ethnicity, and highest grade completed. Caregivers reported on family size and family income. Using this information and the poverty ratio equation provided by the US Census Bureau, each family's poverty ratio was calculated and compared with the 2003 poverty index, based on household size, number of dependents, and income (<http://www.census.gov/hhes/www/poverty.html>; U.S. Census Bureau, 2004).

Anthropometry

A trained staff member collected all anthropometrics for both adolescents and their caregivers. Height was measured to the nearest 0.5 cm with a wall-mounted stadiometer, and weight was measured to the nearest 100 g with a digital scale (Tanita, Arlington Heights, Illinois). BMI was calculated as weight (kilograms) divided by height (square meters). For adolescents, BMI values were converted to z-scores and percentiles based on the 2000 CDC age- and gender-specific tables using algorithms provided at <http://www.cdc.gov/growthcharts> (CDCP, 2000). Subjects were divided into the following categories based on their age-adjusted, gender-specific BMI percentiles: normal weight (<85th percentile), at risk for overweight (≥ 85 th and <95th percentile), and overweight (≥ 95 th percentile). Caregivers were grouped into the following categories based on their BMI values: underweight and normal weight ($\text{BMI} < 25 \text{ kg/m}^2$), overweight ($\text{BMI} \geq 25$ and $< 30 \text{ kg/m}^2$), and obese ($\text{BMI} \geq 30 \text{ kg/m}^2$).

Body Size Satisfaction

Body size satisfaction was measured by culturally adapted, age- and gender-specific, 9-point silhouettes, modified from Stunkard, Sorensen, and Schulsinger's study (1983), presented to the adolescents and caregivers independently (see Fig. 1). The silhouettes were ordered from thinnest (rating = 1) to heaviest (rating = 9). The adolescents were asked to identify the silhouette closest to their current body size (real) and then, given a second set of silhouettes, to identify the silhouette they wished to look like (ideal). Caregivers were asked to identify which silhouette most resembled their child (real) and which one they would like their child to look like (ideal). For both adolescents and caregivers, body size satisfaction was calculated as the difference between the real and the ideal silhouettes. Desire to remain the same (satisfaction) included an ideal body size either the same as the real body size or one image either smaller or larger than the real body size. Desire to be heavier was defined as having an ideal body size at least two images larger than real body size. Desire to be thinner was defined as an ideal body size at least two images smaller than real body size.

Adolescent–Caregiver Body Size Agreement

Agreement of body size satisfaction within adolescent–caregiver pairs was defined as concordance between adolescent and caregiver in their level of satisfaction for the adolescent's current body size. Agreement of adolescent body size satisfaction between pairs was coded as 1 and disagreement was coded as 0. Two disagreement categories were examined in more detail: (a) adolescent desires to be thinner whereas caregiver is satisfied with

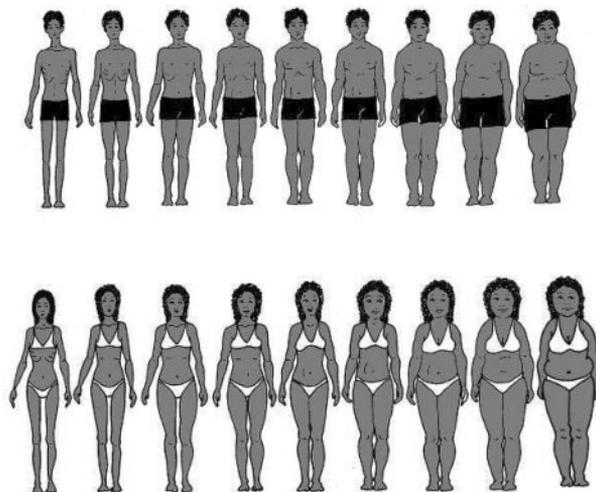


Figure 1. Culturally adapted, age- and gender-specific, 9-point silhouettes.

adolescent's current body size and (b) adolescent is satisfied with current body size whereas caregiver desires adolescent to be thinner.

Data Analysis Plan

Gender differences in demographic variables were investigated using chi-square test for categorical variables and *t*-test for continuous variables. Chi-square analyses were also employed to examine differences in the prevalence of body size satisfaction by gender and weight status and to explore the level of agreement in body size satisfaction between adolescents and their caregivers. Logistic regression models were developed to estimate the association between adolescent gender and BMI category and adolescent-caregiver agreement, adjusting for adolescent age, caregiver BMI, household socioeconomic status, and history of FTT. Dummy variables were created for adolescent BMI categories (normal, at risk for overweight, and overweight) and were included within the model. The interaction between adolescent gender and BMI category was included in the model to determine whether the association between BMI category and adolescent-caregiver agreement varied by gender. A dummy variable indicating history of FTT and the interaction between history of FTT and the predictor variables were also investigated within the analysis.

For covariates with <10% missing data, a mean substitution was performed. Results with and without the substitution were compared and were found to be similar. All final models included mean substituted covariates. Non-significant variables, defined as a *p*-value ≥ 0.10 , were not included in the final models. All analyses were conducted using SPSS 11.0 statistical software (SPSS Inc., Chicago, Illinois).

Results

The sample was evenly divided by gender (50.2 male versus 49.8% female; see Table I). Age did not significantly differ by gender; however, more females were in middle school and more males were in high school. Overall, 40% of the adolescents were at risk for overweight or overweight (BMI ≥ 85 th percentile). Females had significantly higher age- and gender-adjusted BMI *z*-scores compared with males (0.91 versus 0.54, respectively, $t = -2.35$, $p = 0.02$). There was no gender difference in the percentage of adolescents at risk for overweight (BMI ≥ 85 th and < 95 th percentile), but fewer males were overweight (BMI ≥ 95 th percentile) relative to females (20.4 versus 35.5%; $\chi^2 = 6.13$, $p = 0.013$).

Table I. Baseline Adolescent and Caregiver Demographic Characteristics by Adolescent Gender

	Males <i>n</i> = 108	Females <i>n</i> = 107
	Mean (SD)	Mean (SD)
Adolescent characteristics		
Age (years)	13.4 (1.05)	13.1 (0.96)
Education (%)		
Elementary school (4–5th grade)	5.6	5.6
Middle school (6–8th grade)*	75.9	87.9
High school (9–12th grade)**	18.5	6.5
BMI, <i>z</i> -score*	0.54 (1.17)	0.91 (1.13)
At risk for overweight (%)	12.0	12.1
Overweight (%)*	20.4	35.5
Female caregiver and household characteristics		
Age (years)	39.2 (8.52)	40.1 (8.61)
Education (%)		
<12th grade or HSE	28.7	20.6
12th grade or HSE	28.7	34.6
Some college or professional training	42.6	44.9
At or below poverty index (%)	53.7	49.5
BMI (kg/m ²)	32.0 (9.79)	31.3 (7.86)
Overweight (%)	18.9	24.3
Obese (%)	56.6	53.3

BMI, Body mass index; HSE, high school equivalent.

* $p < .05$. ** $p \leq .01$.

Within this sample, children with a history of FTT were significantly older (13.7 versus 13.1 years, $t = -3.28$, $p = 0.001$), more likely to be in high school (33.3 versus 8.8%, $\chi^2 = 15.3$, $df = 1$, $p < 0.0001$), and more likely to be males (76 versus 45%, $\chi^2 = 10.2$, $df = 1$, $p = 0.001$), when compared to children without a history of FTT. There were no significant differences in age- and gender-adjusted BMI percentage, BMI *z*-scores, or percentage of youth classified as at risk for overweight and overweight by FTT status.

Female caregivers ranged in age from 25 to 78 years (39.8 ± 8.7 years). Three-quarters of the female caregivers had a high school education or some college or professional training (75%, $n = 162$), and 52% ($n = 111$) reported living at or below the poverty line. Most caregivers were obese (BMI ≥ 30 ; 54.9%) or overweight (BMI ≥ 25 , < 30 ; 21.6%). Neither caregiver demographics nor BMI status differed by adolescent gender (see Table I).

Adolescents' Body Size Satisfaction

Overall, most adolescents (55.1%, $n = 114$) were satisfied with their current body size. Of those who were dissatisfied, most reported a desire to be thinner (68.8%, $n = 64$) versus heavier (31.2%; $n = 29$). Among females,

51.0% ($n = 52$) wanted to remain the same, 36.3% ($n = 37$) wanted to be thinner, and 12.7% ($n = 13$) wanted to be heavier. Among males, 59.0% ($n = 62$) wanted to remain the same, 25.7% ($n = 27$) wanted to be thinner, and 15.2% ($n = 16$) wanted to be heavier. Overall, there was no significant difference in body size satisfaction by gender ($\chi^2 = 2.71, df = 2, p = 0.258$).

Among the adolescents who were at risk for overweight or overweight (BMI ≥ 85 th percentile), 35.4% ($n = 29$) wanted to remain the same, 64.6% ($n = 53$) desired to be thinner, and none wanted to be heavier. Among at risk and overweight adolescents, 68.8% of the females ($n = 33$) and 58.8% of the males ($n = 20$) desired to be thinner. The association between BMI category and body size satisfaction did not differ significantly by gender ($p > 0.10$).

When examining differences between adolescent BMI categories, those who were at risk for overweight or overweight (BMI ≥ 85 th percentile) were more likely to desire to be thinner than normal weight adolescents (48.0, 71.9, and 8.8%, respectively; at risk for overweight versus normal weight $\chi^2 = 28.4, df = 1, p < 0.001$; and overweight versus normal weight $\chi^2 = 77.4, df = 1, p < 0.001$, respectively). At-risk-for-overweight and overweight adolescents were not significantly different from one another with regard to body size satisfaction ($\chi^2 = 2.86, df = 1, p = 0.091$) (Fig. 2). When they were grouped together, at-risk-for-overweight and overweight adolescents were less likely to be satisfied with their body size ($\chi^2 = 21.3, df = 1, p < 0.001$) than normal weight adolescents.

Caregivers' Satisfaction with Adolescent's Body Size

Most caregivers (73.3%, $n = 148$) wanted their adolescent to remain the same body size. Among caregivers

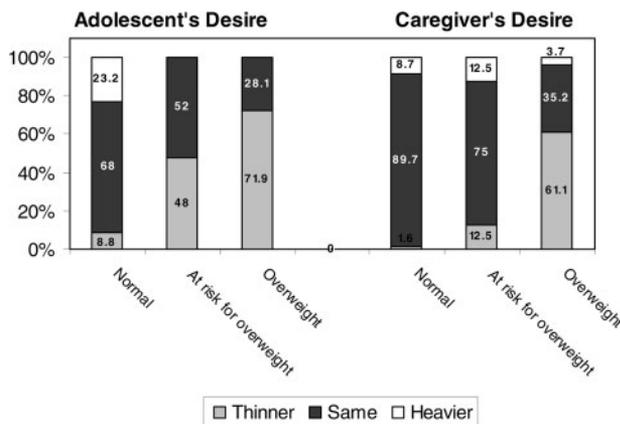


Figure 2. Adolescent and caregiver satisfaction with adolescent body size by adolescent BMI category.

who were dissatisfied with their adolescent's current body size, 70.4% ($n = 38$) wanted their adolescent to be thinner and 29.6% ($n = 16$) wanted their adolescent to be heavier.

When examining caregiver satisfaction by adolescent body size, there was a significant difference between adolescent BMI categories ($\chi^2 = 89.1, df = 4, p < 0.0001$). Satisfaction reached 89% ($n = 111$) among caregivers of normal weight adolescents, 75% ($n = 18$) among caregivers of at risk for overweight, and 35.2% ($n = 19$) among caregivers of overweight adolescents (Fig. 2). The percentage of caregivers desiring their child to be thinner increased as BMI category increased, from 2% among caregivers of normal weight adolescents, to 12.5% of caregivers of at-risk-for-overweight adolescents, to 61.1% of caregivers of overweight adolescents. There were no significant differences in satisfaction by adolescent gender. Caregivers of at-risk-for-overweight adolescents were significantly less likely to desire their child to be thinner ($\chi^2 = 14.1, df = 1, p < 0.0001$) and more likely to be satisfied with their child's body size ($\chi^2 = 8.87, df = 1, p = 0.003$), compared to caregivers of overweight adolescents. There were no significant differences by gender.

Adolescent–Caregiver Agreement

Overall, 62% of caregivers agreed with their adolescents regarding body size satisfaction; however, agreement varied by adolescent BMI category (Fig. 3). Normal (64.5%), and overweight (67.3%) adolescents were more likely to agree with their caregivers on body size than adolescents at risk for overweight (41.7%; $\chi^2 = 5.03, df = 1, p = 0.025$). In the normal weight category, most adolescents and caregivers (61.2%) agreed that they were

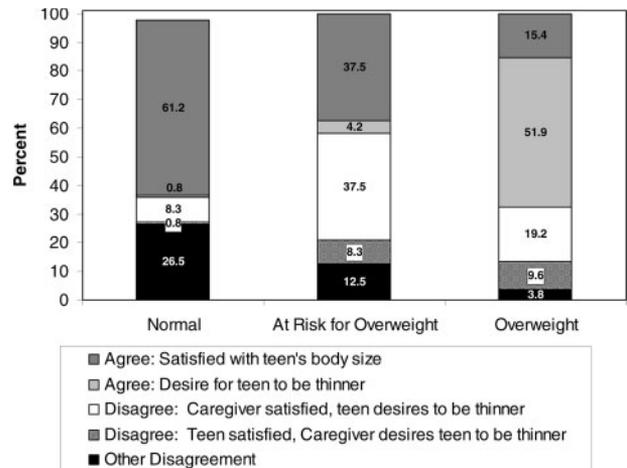


Figure 3. Adolescent–caregiver agreement/disagreement on ideal body size for adolescent by BMI category of adolescent.

satisfied with the adolescent's current body size. By contrast, in the overweight category, most adolescents and caregivers agreed with a desire for the adolescent to be thinner (51.9%), and only 15.4% agreed that they were satisfied with the adolescent's current body size.

There was a linear relationship (Kendall's tau-b = $-.40$, $p < .001$) in adolescent-caregiver agreement in their satisfaction with the adolescent's current body size, ranging from 61.2% in the normal weight adolescent, to 37.5% among the at-risk-for-overweight group, to 15.4% in the overweight group. Agreement that the adolescent should be thinner also differed by BMI group, ranging from <1% in the normal weight group, 4.5% in the at-risk-for-overweight group, to 52% in the overweight group, Kendall's tau-b = $.55$, $p < .001$.

The most common pattern among discordant pairs was the adolescent wanting to be thinner and the caregiver expressing satisfaction with the adolescent's current body size. This pattern represented 8.3% among normal weight adolescents, 37.5% among at-risk-for-overweight adolescents, and 19.2% among overweight adolescents. The opposite discordant pattern (the caregiver wanting the adolescent to be thinner and the adolescent expressing satisfaction with the current body size) represented 0.8% among normal weight adolescents, 8.3% among at-risk-for-overweight adolescents, and 9.6% among overweight adolescents. Other discordant patterns, in which either the adolescent or the caregiver wanted the adolescent to be heavier, were less common, particularly among the at-risk-for-overweight or overweight groups.

In a logistic regression model, adjusting for adolescent age, caregiver BMI, socioeconomic status, and history of FTT, being at risk for overweight (compared to normal weight) significantly decreased the odds of

adolescent and caregiver agreement regarding body size satisfaction (OR = 0.35; 95% CI: 0.14–0.88, $p = 0.026$). There were no significant effects of gender, the interaction between gender and body size, history of FTT, or the interaction between history of FTT and body size or gender on adolescent-caregiver agreement (Table II). The analysis was repeated by predicting the type of agreement (satisfaction with current body size or desire to be thinner). In the prediction of desire to be thinner, a history of FTT decreased the odds of adolescent-caregiver agreement (OR = 0.11, 95% CI: 0.01–0.05, $p = 0.048$).

Discussion

This study extends our understanding of body size satisfaction among a community sample of low-income African-American adolescents and their female caregivers. The first objective of this investigation was to estimate adolescent body size satisfaction by adolescent gender and body size. Adolescent body size satisfaction was closely aligned with BMI. As the adolescents increased in BMI, their body size satisfaction decreased and their desire to be thinner increased. These findings suggest that African-American adolescents have an ideal body size that is within the normal range and are aware when their own body exceeds the normal range. Other studies among African-American adolescents (Katz et al., 2004; Sherwood et al., 2003; Thompson et al., 1997) have also reported that most adolescents in the at risk or overweight groups wanted to be thinner.

The second objective was to examine female caregiver's level of satisfaction with adolescent body size. Female caregivers had a relatively high tolerance for increased body size among their adolescents. Most caregivers were satisfied with their adolescent's body size

Table II. Logistic Regression Model, Odds Ratios (OR) and 95% Confidence Intervals (CI), Predicting Adolescent-Caregiver Agreement

	Bivariate model	Multivariate model 1 ^b	Multivariate model 2 ^b
	OR (95% CI)	OR (95% CI)	OR (95% CI)
Adolescent gender ^a	0.873 (0.49-1.56)	0.816 (0.45-1.49)	-
Adolescent BMI category			
Normal	1.00	1.00	-
At risk for overweight	0.38 (0.16-0.91)*	0.35 (0.14-0.88)*	
Overweight	1.33 (0.68-2.60)	1.15 (0.55-2.37)	
Gender × BMI category			
Normal	-	-	1.00
At risk for overweight			0.172 (0.02-1.22)
Overweight			1.052(0.229-04.83)
		$r^2 = 0.068$	$r^2 = 0.094$

^aMales are reference.

^bAll multivariate models are adjusted for adolescent age, caregiver BMI, poverty ratio, and history of failure to thrive.

* $p < .05$. ** $p \leq .01$.

until their adolescent was overweight, suggesting a general acceptance of increased body size. In comparison with Caucasian women, African-American women often endorse a heavier ideal body size for themselves and report higher rates of body size satisfaction (Altabe, 1998; Harris, 1994), despite high rates of obesity (Hedley et al., 2004). It is likely that these same women, as female caregivers, apply these cultural beliefs and body image ideals to their adolescents.

The third objective, and the most novel, was to examine within household agreement between adolescents and caregivers regarding their satisfaction with the adolescent's body size. Most normal weight adolescents were satisfied with their current weight status, and their caregivers agreed. The highest prevalence of disagreement was between adolescents who were at risk for overweight and their caregivers. Almost half of the adolescents in the at-risk-for-overweight category wanted to be thinner, but fewer than 5% of the adolescents and caregivers were in agreement that the adolescent should be thinner. In most cases, caregivers of adolescents in the at-risk-for-overweight category were satisfied with the adolescent's current body size. In the overweight group, most caregivers and adolescents agreed that the adolescent should be thinner, but in almost 20% of the pairs, caregivers were satisfied and adolescents desired to be thinner. This discordance could become problematic, if adolescents who are at risk or overweight wanted to make behavioral changes to curb their weight gain, as they may lack environmental and familial support (Golan & Crow, 2004).

A major finding from this study is that African-American female caregivers had a higher threshold for their adolescent's increased BMI status than the adolescents, particularly among those in the at-risk-for-overweight category. Caregiver tolerance for increased weight may, in part, be determined by misclassification of the child's weight status. Maynard et al. (2003) found that among 5,500 mother-child pairs, mothers of children who were at risk for overweight considered their child "about the right weight" 85 and 70.4% of the time for boys and girls, respectively. In the same study, there was significantly less maternal misclassification among the overweight children (32%) (Maynard et al., 2003). In a sample of school-age overweight African-American children, parents did not recognize their children as overweight and in need of services until they were severely obese (BMI >99th percentile) (Young-Hyman, Herman, Scott, & Schlundt, 2000). Among overweight adolescents in our study, over half of the adolescent-caregiver pairs desired for the adolescent to be thinner,

suggesting that perception of the adolescent's weight status was more accurate when the adolescent's weight was more extreme. These data suggest that many overweight adolescents and their caregivers may be ready for a change in the adolescent's body size, thereby providing an opportunity for clinicians to engage overweight adolescents and their caregivers in interventions to control weight gain.

We also examined the role of gender on body size satisfaction among adolescents and caregivers. Within BMI group, males were as likely as females to report a desire to be thinner. In addition, there were no gender differences in caregivers' desires for their adolescent to be thinner. Although other investigators have found females to be more vulnerable to body size dissatisfaction than males (Adams et al., 2000; Thompson et al., 1997), our data suggest that male gender was not protective against body size dissatisfaction among adolescents who are at risk or overweight.

For both adolescents and caregivers, body size satisfaction was related to the adolescents' body size. In the prediction of agreement on desire to be thinner, a history of FTT decreased the odds of desiring to be thinner. It is possible that families of children with FTT, who may have spent their early years focused on increasing weight gain, could not agree on a goal of becoming thinner. The lack of association with poverty, maternal BMI, or the adolescent's gender may be partially explained by the homogeneity of the sample and the limited sample size. In addition, the current focus on body size in the popular literature may have sensitized adolescents, and to a lesser extent their caregivers, to an idealized body size in the normal range.

There are several methodological limitations that should be considered in interpreting the current findings. First, the small sample size may not provide adequate power to detect small differences between gender and BMI category. However, findings are consistent with other studies in similar populations (Katz et al., 2004; Sherwood et al., 2003). Second, the sample is relatively homogenous. Therefore, findings may be generalizable only to low-income urban African-American populations.

Third, a small proportion of the sample had a history of FTT. Although there were relatively few differences in BMI or adolescent-caregiver agreement by FTT history, caution is warranted in drawing conclusions on adolescent-caregiver body size satisfaction related to early growth history given the small proportion of adolescents in this study with a history of FTT. Finally, some caregivers may have been hesitant to express discontent with their child's body size. To reduce this

possibility and to optimize privacy, questionnaires were administered aurally with a computer and headphones.

Given the rising prevalence of overweight among African-American youth, effective interventions to prevent and treat overweight are needed. Our findings illustrate that not only does body size dissatisfaction increase among low-income, urban African-American adolescents as their BMI increases but adolescent-caregiver agreement on body size satisfaction also varies by adolescent BMI. The lowest rates of adolescent-caregiver agreement occur among the at-risk-for-overweight group with the adolescent wanting to be thinner and the caregivers satisfied with their current body size. In keeping with ecological theory, discordance between adolescents and caregivers may minimize the effectiveness of intervention efforts. Encouraging caregivers to elicit their adolescents' views on body size satisfaction and desire to be thinner may enable caregivers to support their adolescents in addressing weight-related issues. Future studies should explore determinants of agreement on body size satisfaction between adolescents and caregivers.

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