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Body dissatisfaction, self-esteem, and overweight among inner-city Hispanic children and adolescents

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Abstract

We examined the associations among self-reported body image, self-esteem, and measured body mass index (BMI) in El-Salvadoran American youth. Higher BMI was associated with body size dissatisfaction, lower peer esteem, and attempts to lose weight. Body size dissatisfaction was also significantly related to self-esteem in these El-Salvadoran American youth.

Keywords

Body dissatisfaction; Self-esteem; Overweight El-Salvadoran American children and adolescents

Body image distortion and overall body dissatisfaction among adolescents have been implicated in the development of negative self-worth [1] and negative affect [2], and may serve as risk factors for the development of adolescent depression [3] and disordered eating behaviors [4]. Body image may be affected and partly determined by cultural beliefs and values regarding beauty and attractiveness [5]. Three prior studies have found an inverse relationship between weight status and either body image or self-esteem among Mexican American and Southwestern Hispanic adolescents [6–8]. However, body image has not been extensively examined among non-Mexican American Hispanics. We therefore examined the associations among self-reported body image, self-esteem, and body mass index (BMI) in El-Salvadoran American youth.

Methods

We conducted a cross-sectional survey of El-Salvadoran American children and adolescents aged 10–18 years at two inner city community clinics in Washington, DC from February to July 2002. Subjects with both parents self-identified as Hispanics were eligible for the study. Only one child per family was recruited. Subjects were asked to indicate both their current and desired size using drawings of child figures from the Kids Eating Disorder Survey [9]. Body size dissatisfaction score was calculated as the difference between current and desired size. A greater absolute value of the score indicates more dissatisfaction with current body size. Self-esteem was measured using the abbreviated Hare Area-Specific Self-esteem scale [10,11]. The questions were scored on a 4-point scale. For the area-specific scores (peer, school, and home

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self-esteem), the higher the score, the greater the self-esteem. Subjects and their parents also answered questions derived from validated surveys [12–14] about their perceived health status, eating habits, ability to make friends, family medical history, sociodemographics, acculturation, parental body perception, physical activity and sedentary behavior patterns. Physical assessments included height and weight measured on calibrated instruments. The study was approved by the Institutional Review Board at Children’s National Medical Center, Washington, DC.

Analyses

Children with BMI \geq 95th percentile for age and gender were categorized as overweight, and those with BMI between 85th and 94th percentile as at risk for overweight [15]. Bivariate associations were examined using Chi-square tests for categorical variables, with analysis of variance (ANOVA) and Spearman correlation for ordinal variables. Variables with significant differences on bivariate analyses were included in multiple regression models.

Results

Demographics

Among the 113 children and adolescents of El-Salvadoran origin, the prevalence of overweight was 37%, and at risk for overweight was 19%. Most children were born in the United States (77%), but almost all parents were foreign-born.

Weight concerns

Overweight children and those at risk for overweight were significantly more likely to report that they were trying to lose weight (Table 1); 80% of overweight girls, but only 50% of overweight boys, considered themselves overweight. There were no significant associations between BMI and perception of good health, number of close friends, or ability to make new friends.

Self-esteem

Peer esteem scores were significantly lower among overweight children compared with their normal weight counter-parts (Table 1). Self-esteem scores were significantly lower among subjects who reported restricting calories to lose weight (Table 2). Self-esteem was negatively correlated with body size dissatisfaction in the peer and school domains (Table 2). Peer and school esteem scores were also significantly lower among subjects who found it difficult to make new friends.

Body image

Overall, girls desired smaller body size compared with boys ($3.09 \pm .14$ vs. $3.83 \pm .14$, $p = .0006$). Body size dissatisfaction scores were higher among overweight and at risk for overweight subjects (Table 1). BMI z-score and body size dissatisfaction were positively associated in boys and girls (Table 2). Subjects who perceived themselves as overweight, or who were trying to lose weight, had higher body size dissatisfaction scores (Table 2).

In multivariate analyses, BMI z-score and attempts to lose or gain weight were significantly associated with body size dissatisfaction (Table 3). There were also significant associations between body size dissatisfaction and attempts to gain weight and school esteem (Table 3).

Discussion

Overweight El-Salvadoran children and adolescents had significantly lower self-esteem scores in the peer domain. Furthermore, self-esteem was significantly associated with attempts to restrict calories to lose weight. Associations between overweight and psychosocial factors have been inconsistent [16], with some studies reporting an inverse relationship between BMI and self-esteem [17–19], and others showing no association [20–22]. Some of the postulated reasons for the divergent findings include methodological differences in measuring self-esteem, differences in samples surveyed (clinical and nonclinical groups), and in sociodemographic profiles.

As found for other children [23], overweight and at risk for overweight El-Salvadoran youth were more likely to be dissatisfied with their body size, and the higher the BMI, the greater the dissatisfaction. It has been suggested that body dissatisfaction may predict depression [3] and eating disordered symptoms [4,24]. Because the prevalence of childhood overweight in minority children is increasing in the United States, there is a concern that the prevalence of body dissatisfaction may increase, possibly leading to an increased prevalence of adverse psychological and health outcomes [25].

Limitations

Because our sample population is drawn from a clinic population of Hispanic youth of El-Salvadoran origin, our findings may not be generalizable to the general population of Hispanic youth. However, we believe that because this sample was drawn from a community clinic and not a tertiary or referral center, it is unlikely to be biased.

Conclusions

Among El-Salvadoran American youth in inner city Washington, DC, overweight was associated with body size dissatisfaction, attempts to lose weight, and lower peer esteem. Because body dissatisfaction is strongly correlated with BMI, programs aimed at prevention and reduction of overweight may result in a decrease in body dissatisfaction and an increase in self-esteem among Hispanic youth [16]. In turn, improving self-esteem may help with efforts to decrease obesity among high-risk youth populations.

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Distribution of self-esteem, body dissatisfaction scores, and self-perception of weight, health status, and coping skills among normal weight and overweight children and adolescents

Table 1

	n	BMI		p Value
		< 85 th Percentile	85–94 th percentile ≥ 95 th Percentile	
Self-esteem score (mean, SE) ^a	113			
Peer		9.30 (0.23) ^{a,c}	8.04 (0.39) ^a	0.03
School		9.32 (0.32)	8.94 (0.40)	0.61
Home		13.97 (0.35)	13.21 (0.57)	0.46
Desired body size score (mean, SE) ^a	109			
All subjects		3.24 (0.13)	3.51 (0.20)	0.41
Boys		3.55 (0.22)	4.16 (0.19)	0.13
Girls		3.03 (0.16)	2.90 (0.30)	0.30
Body size dissatisfaction score (mean, SE) ^a	109			
All subjects		0.18 (0.18) ^a	1.48 (0.32) ^b	<0.0001
Boys	46	0.30 (0.26) ^c	1.53 (0.58)	0.0002
Girls	63	0.10 (0.26) ^e	1.52 (0.41) ^f	<0.0001
Attempts to lose weight (%) ^b	110			
Trying to lose weight		22.4	57.1	92.5
Trying to stay the same		57.1	42.9	5.0
Trying to gain weight		20.4	0.0	2.5
Restricted calories to lose weight (%) ^{b,d}	110			
Exercised to lose weight (%) ^{b,d}	109			
Perception of own body weight (%) ^b	110			
Underweight		22.4	9.5	15.0
About right		61.2	61.9	20.0
Overweight		16.3	28.6	65.0
Perceived state of health (%) ^b	109			
Very healthy		16.3	28.6	20.5
Quite healthy		71.4	57.1	66.7
Not very healthy		12.2	14.3	12.8
# of close friends (%) ^b	109			
Two or less		26.5	23.8	28.2
Three or more		73.5	76.2	71.8
Ease at making new friends (%) ^b	109			
Very easy		20.4	19.1	15.4
Easy		63.3	57.1	64.1
Difficult/very difficult		16.3	23.8	20.5

^a ANOVA was used to test for significant differences between nonoverweight, at-risk for overweight, and overweight children for ordered variables.

^b Chi-square test was used to test for significant differences between nonoverweight, at-risk for overweight, and overweight children for categorical variables.

^c Means with the same letter are significantly different from each other within a category.

^d Within the last 30 days.

Bivariate associations of self-esteem, body size dissatisfaction and demographic characteristics, self-perception of weight, health status, and coping skills

Table 2

	Self-esteem Score			Body Size Dissatisfaction			
	Peer Esteem (mean)	p Value	School Esteem (mean)	Home Esteem (mean)	p Value	Score (mean)	p Value
Gender ^a							
Boys	8.77	0.37	9.93	14.47	0.17	1.17	0.57
Girls	9.06		9.21	13.88		1.38	
Age category ^a							
10 < 12 years	8.65		9.18	14.15		1.49	
12 < 14 years	9.21	0.61	9.51	14.27	0.84	1.37	0.16
14 < 16 years	8.92		9.71	14.26		1.58	
16–18 years	9.00		10.00	13.72		0.39	
Perception of own body weight ^a							
Underweight	9.58a ^c		9.63	14.32		0.10a	< 0.0001
About right	9.16	0.01	9.71	14.41	0.27	0.69b	
Overweight	8.33a		9.22	13.68		2.67ab	
Attempts to lose weight ^a							
Trying to lose weight	8.68		9.28	13.88		2.41ab	
Trying to stay the same	9.13	0.16	10.05	14.38	0.39	0.18a	< 0.0001
Trying to gain weight	9.64		9.00	14.64		-0.73b	
Restricted calories to lose weight ^{a,d}							
Yes	8.27	0.002	9.00	13.28	< 0.002	2.12	0.0003
No	9.32		9.82	14.62		0.81	
Exercised to lose weight ^{a,d}							
Yes	8.94	0.89	9.49	14.06	0.72	2.06	< 0.0001
No	8.89		9.56	14.21		0.61	
Perceived state of health ^a							
Very healthy	8.64		9.41	13.27a		1.43	
Quite healthy	9.14	0.19	9.69	14.65ab	0.001	1.20	0.88
Not very healthy	8.36		8.77	12.86b		1.21	
# of close friends ^a							
Two or less	8.41	0.05	9.52	14.03	0.76	1.52	0.36
Three or more	9.12		9.53	14.18		1.15	
Ease at making new friends ^a							
Very easy	9.35 ^a		9.68a	13.85		1.10	
Easy	9.16 ^b	0.002	9.81b	14.49	0.07	1.12	0.29
Difficult/very difficult	7.81, ^{ab}		8.40ab	13.29		1.81	
Acculturation score ^b	0.05	0.59	0.05	0.05	0.578	0.14	0.13
Body size dissatisfaction score ^b	-0.32	0.0008	-0.27	-0.15	0.13	—	—
BMI z-score ^b							
All subjects	-0.24	0.01	-0.11	-0.11	0.24	0.71	< 0.0001
Boys	-0.18	0.23	-0.14	-0.03	0.83	0.64	< 0.0001
Girls	-0.24	0.06	-0.10	-0.20	0.11	0.76	< 0.0001

^a ANOVA was used to test for significant differences between the descriptive variables in peer esteem, school esteem, home esteem, and body size dissatisfaction scores.

^b Spearman correlation was used to test for correlation between acculturation or body size dissatisfaction and the three domains of self-esteem.

^cMeans with the same letter are significantly different from each other within a category.

^dWithin the last 30 days.

Table 3

Multivariate analysis: self-esteem and body size dissatisfaction as the dependent variables

Variable	Self-esteem			Body Size Dissatisfaction		
	Peer Self-esteem	School Self-esteem	Home Self-esteem	Body Size Dissatisfaction		
	Model R ² : 0.14 p Value: 0.04	Model R ² : 0.23 p Value: 0.009	Model R ² : 0.22 p Value: 0.016	Model R ² : 0.56 p Value: < 0.0001	β coefficient	p Value
BMI z-score	-0.12	0.16	0.02	0.73	0.0002	0.0002
Body size dissatisfaction	-0.20	-0.33	-0.09	—	—	—
Trying to lose weight	0.03	-0.26	-0.35	1.26	0.56	0.001
Trying to gain weight	-0.07	-1.58	-0.18	-1.05	0.55	0.04
Age (years)	0.03	0.11	0.03	-0.12	0.82	0.04
Gender	0.33	-0.65	-0.49	0.15	0.73	0.58
Maternal education	0.30	0.29	0.25	-0.03	0.23	0.86
Household income	-0.06	0.31	0.09	-0.07	0.30	0.73
Acculturation	0.02	0.006	0.01	0.01	0.77	0.79
Positive family history of obesity	-0.60	-0.47	-1.95	0.08	< 0.0001	0.79

Variables determined to have significant differences on bivariate analysis were included in multiple regression models, controlling for potential confounders (age, gender, income, maternal education and acculturation).

Separate regressions were performed with peer esteem, school esteem, home esteem, and body size dissatisfaction as dependent variables.