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Relationships between body satisfaction and psychological functioning and weight-related cognitions and behaviors in overweight adolescents

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Abstract

Purpose—To examine how differences in body satisfaction may influence weight control behaviors, eating, weight and shape concerns, and psychological well-being among overweight adolescents.

Methods—A sample of 103 overweight adolescents completed a survey assessing body satisfaction, weight control behaviors, eating-related thoughts and behaviors, importance placed on thinness, self-esteem, anger, and symptoms of depression and anxiety between 2004–2006. Logistic regression analyses compared overweight adolescents with high and low body satisfaction.

Results—Higher body satisfaction was associated with a lower likelihood of engaging in unhealthy weight control behaviors, less frequent fears of losing control over eating, and less importance placed on thinness. Overweight adolescents with higher body satisfaction reported higher levels of self-esteem and were less likely to endorse symptoms of depression, anxiety, and anger than overweight adolescents with lower body satisfaction.

Conclusions—Adolescents with higher body satisfaction may be protected against the negative behavioral and psychological factors associated with overweight.

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Keywords

Overweight Adolescents; body satisfaction; weight control behaviors; adolescent psychological functioning

Introduction

Weight is consistently linked to body satisfaction and psychological well-being, with overweight youth expressing lower body satisfaction and poorer psychological functioning [1]. Few studies have evaluated differences in behavior and psychological functioning in overweight youth with high body satisfaction. If a positive relationship between body satisfaction and behavioral and psychological well-being exists among overweight adolescents, then improved body satisfaction could be a key component of interventions for overweight youth, particularly cognitive-behavioral interventions that target negative thoughts about the self to ultimately promote engagement in positive health behaviors.

Although studies suggest that lower levels of body satisfaction may be a risk factor for more health-compromising behaviors and fewer health-promoting behaviors [2], body satisfaction may also serve as a protective factor with regard to weight and behavior. A longitudinal study examining the relationship between body satisfaction and weight found that overweight girls with higher body satisfaction gained less weight at 5-year follow-up than overweight girls with lower body satisfaction [3].

The aim of this study was to examine differences in self-reported body satisfaction among overweight adolescents in relation to weight control behaviors, eating in secret, fear of losing control while eating, importance placed on thinness, and psychological well-being (depression, anxiety, anger, and self-esteem). It was hypothesized that overweight youth with higher body satisfaction would engage in fewer unhealthy weight control behaviors and eating disordered behaviors and have report better psychological functioning than overweight youth with lower body satisfaction.

Methods

Study Design and Participants

Data was collected as part of Successful Adolescent Losers (SAL), a descriptive study of overweight adolescents who lost weight and those who did not [4]. Participants were recruited using public marketing strategies (e.g., flyers) from the Minneapolis/St. Paul area between 2004-2006. Study procedures were approved by the Institutional Review Board at the University of Minnesota. Only adolescents classified as overweight or obese (BMI 85th percentile for gender and age) were included in the analyses (see Table 1).

Measures

The following measures were part of the 73-item SAL survey, a self-report instrument that assesses behavioral and psychological factors potentially associated with weight in adolescence [4].

Weight Control Behaviors

Participants were asked about their use of 32 strategies to reduce or maintain weight, adapted from Project EAT [5]. A factor analysis identified four domains of weight control behaviors: healthy (HWBC) and unhealthy weight control behaviors (UWCB), “other” dietary changes (ODC), and behavior change strategies (BCS) [4]. HWCB were

dichotomized into 6 or more versus 5 or less using the distribution median. UWCB, BCS, and ODC were dichotomized into any versus none.

Eating-related Behaviors and Cognitions

Frequency of eating in secret and fear of losing control while eating (both in the past month) were measured using items from the Eating Disorder Examination Questionnaire [6]. Using the distribution median, these variables were dichotomized into 5 days or more versus 4 days or less. Importance of being thin was assessed with a 4-point Likert scale ranging from “not at all important” to “very important.”

Psychological Functioning

Depression was measured using the Center for Epidemiological Studies Depression Scale for Children [7]. Anger and anxiety were measured using the Spielberger State-Trait Personality Inventory [8]. Self-Esteem was measured using the Rosenberg Self-Esteem Scale [9].

Body Satisfaction

Body satisfaction was assessed with a modified version of the Body Shape Satisfaction Scale [10]. Participants rated their satisfaction with ten body features (weight, shape, waist, etc.), with lower scores indicating less body satisfaction (Range: 10-60). Responses were dichotomized using a median split (high >32.1; low <32.0).

Weight status

Height and weight was measured using standardized equipment and procedures. Cutoff points for gender- and age-specific BMI percentile values were based on growth charts from the Centers for Disease Control and Prevention.

Data Analysis

Statistical analyses were conducted using SPSS (version 15.0). There were no significant differences between the “high” (n=50) and “low” (n=53) body satisfaction groups on demographics or weight loss (see Table 1). Logistic regression analyses compared high and low body satisfaction in relation to dependent variables. Models controlling for gender and BMI were ran separately, but results were not significantly different from the unadjusted model, which is presented here.

Results

Overweight adolescents with higher body satisfaction were less likely to engage in UWCB than adolescents with lower body satisfaction, but differences were not found for other weight control behaviors. Adolescents with higher body satisfaction were also less likely to report fear of losing control over eating and less importance placed on thinness. No differences were found for eating in secret. Finally, overweight adolescents with higher body satisfaction endorsed fewer symptoms of depression, anxiety, and anger, and higher self-esteem. (See Table 2 and 3).

Discussion

Overall, lower body satisfaction in overweight adolescents is associated with less positive behavioral and emotional functioning. Consistent with previous literature [2], adolescents with lower body satisfaction were more likely to engage in UWCB, such as fasting, skipping meals, vomiting, or using laxatives, diuretics, or diet pills. Adolescents with higher body

satisfaction reported lower levels of depression, anxiety and anger, higher levels of self-esteem, and less concern about thinness and fear of losing control over food. These results suggest that overweight adolescents who feel better about their bodies may be more resilient, with potentially less risk for developing or exhibiting psychological comorbidities associated with overweight [1].

Strengths of this study include the inclusion of questions on weight-related behaviors and psychological functioning in an overweight sample. Limitations of the study include the small sample and large age range of participants, use of self-report, the cross-sectional nature of the study, and the abbreviated nature of the psychological measures.

Findings from this study suggest that body satisfaction may protect against negative behavioral and psychological comorbidities associated with overweight. Cognitive behavioral interventions with overweight adolescents should focus on enhancing body satisfaction while providing motivation and skills to engage in more effective weight-control behaviors. Targeting cognitions related to body satisfaction in treatment with overweight adolescents may need to be done in conjunction with, or prior to, attempting to engage clients in behaviorally-oriented interventions geared toward prevention of unhealthy weight control strategies.

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Table 1
Demographics of sample of overweight adolescents and mean (SD) scale scores for continuous dependent variables

	Total Sample N = 103		High BS (n = 50)	Low BS (n = 53)	p
Gender					.06
	Female	67 (65.0%)	28 (56.0%)	39 (73.6%)	
	Male	36 (35.0%)	22 (44.0%)	14 (26.4%)	
Mean Age		15.2 (range 12-20; SD = 2.15)	15.6 (SD = 2.2)	14.9 (SD = 2.1)	.11
Ethnicity					.16
	White	61 (59.2%)	31 (62.0%)	30 (56.6%)	
	Multi-ethnic	16 (15.5%)	5 (10.0%)	11 (20.8%)	
	African American	15 (14.6%)	7 (14.0%)	8 (15.1%)	
	American Indian	6 (5.8%)	4 (8.0%)	2 (3.8%)	
	Asian	2 (1.9%)	0	2 (3.8%)	
	Other	3 (2.9%)	3 (6.0%)	0	
Mean Weight loss(lbs)		7.1 (range 0-65; SD = 11.6)	6.7 (SD = 10.1)	7.5 (SD = 12.9)	.71
Mean BMI		31.5 (range 21.7-45.1; SD = 5.1)	30.8 (SD = 4.1)	32.2 (SD = 5.8)	.18
Mean scale scores: Eating Behaviors and Cognitions					
	Secretive eating	3.4 (6.4)	2.1 (4.6)	4.5 (7.9)	
	Importance of thinness	3.0 (.92)	2.7 (.89)	3.3 (.86)	
	Fear of losing control	5.1 (8.2)	2.6 (5.0)	7.5 (9.9)	
Mean scale scores: Psychological Functioning					
	Depression	13.1 (11.5)	9.2 (7.2)	16.8 (13.5)	
	Anxiety	16.4 (4.4)	14.4 (3.6)	18.4 (4.2)	
	Anger	20.2 (6.4)	18.2 (5.0)	22.1 (7.1)	

Note. BS = Body Satisfaction

Table 2

Logistic associations between adolescent body satisfaction (high/low) weight control behaviors, eating, weight and shape concerns, and psychological functioning among overweight adolescents (N = 103). Beta, standard error, odds ratio and 95% confidence intervals presented.

		Body Satisfaction			
		B	SE	OR	95% CI
Weight Control Behaviors					
	HWCB	-.01	.41	.99	[.44, 2.22]
	UWCB	-.89	.41	.41 *	[.18, .93]
	BCS	-.61	.40	.54	[.25, 1.19]
	ODC	.82	.74	2.27	[.54, 9.63]
Eating, weight and shape concerns					
	Eating in secret	-.46	.42	.63	[.28, 1.44]
	Fear of losing control over eating	-1.02	.41	.36 **	[.16, .81]
	Importance placed on thinness	-.74	.24	.48 **	[.30, .77]
Psychological functioning					
	Depression	-.07	.02	.93 **	[.89, .97]
	Self-esteem	.20	.05	1.22 **	[1.11, 1.34]
	Anxiety	-.27	.07	.76 **	[.67, .87]
	Anger	-.11	.04	.90 **	[.84, .97]

Note. OR = odds ratio; CI = confidence interval; HWCB = healthy weight control behaviors; UWCB = unhealthy weight control behaviors; BCS = behavior change strategies; ODC = other dietary changes.

*
p .05.

**
p .01.