Fatty, Fatty, Two-by-Four: Weight-Teasing History and Disturbed Eating in Young Adult Women

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Objective. We investigated the long-term effect of weight teasing during childhood.

Methods. Young adult women (n = 1533; aged 18–26 years) from 3 large universities participated in a survey (Fall 2009 to Spring 2010) that assessed disturbed eating behaviors; weight status at ages 6, 12, and 16 years; and weight-teasing history.

Results. Nearly half of the participants were weight-teased as a child. Participants who experienced childhood weight teasing were significantly more likely to have disturbed eating behaviors now than non–weight-teased peers. As the variety of weight teasing insults recalled increased, so did disturbed eating behaviors and current body mass index. Those who recalled their weight at ages 6, 12, or 16 years as being heavier than average endured weight teasing significantly more frequently and felt greater distress than their lighter counterparts.

Conclusions. Weight teasing may contribute to the development of disturbed eating and eating disorders in young women. Health care professionals, parents, teachers, and other childcare givers must help shift social norms to make weight teasing as unacceptable as other types of bullying. To protect the health of children, efforts to make weight teasing unacceptable are warranted. (*Am J Public Health.* 2013;103:508–515. doi:10.2105/AJPH.2012.300898)

Nearly one quarter of the population is subjected to taunts and jeers, such as "chubby," "tubby," and "fatso," during their lifetimes.[1] Weight-related teasing is especially prevalent during childhood and adolescence,[2,3] and may be on the rise with the increasing rates of overweight and obesity in youths.[4] At greatest risk for being teased are those who have "violated" social norms.[5] Social norms, a construct of the Theory of Reasoned Action and Theory of Planned Behavior,[6] are "written and unwritten rules that define 'appropriate' thoughts, feelings, and behaviors of a culture and exert pressure on people to believe and behave in a certain way."[7(p152)] In fact, overweight youths are the targets of weight-related teasing more often than their average-weight peers—about one fifth of average-weight girls and nearly half of overweight girls report being teased about their weight at least a few times each year.[2] Females are at greater risk for weight-teasing insults than males,[8] perhaps because of greater societal pressures to achieve the "thin ideal" body type.[9,10]

According to Haines et al., "Despite increased media and research attention on bullying and hate speech, weight-related teasing and the biased weight-related norms that influence such behaviors do not appear to be abating."[11(pS23)] The prevalence and persistence of weight teasing is troubling because of the pernicious effects it can have on physical and emotional health.[12] Weight-related teasing can lead to poorer overall health, diminished social well-being, and body dissatisfaction.[13] Even more worrisome are longitudinal research findings linking weight teasing insults to disturbed eating behaviors.[14,15]

Disturbed eating includes unhealthy or extreme weight-control behaviors, such as self-induced vomiting and medication misuse (e.g., laxatives), and binge eating.[16,17] These practices can escalate into a full-blown eating disorder.[16,17] Longitudinal data indicate that disturbed eating behaviors are common in adolescence and track into young adulthood, thereby placing youths at an increased eating-disorder risk.[18]

Little is known about the long-term effects of weight teasing during childhood on eating behaviors. In addition, previous investigations of weight-related teasing and disturbed eating practices did not use instruments that assessed the full array of eating disorder diagnostic criteria elucidated in the *Diagnostic Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*.[19] Previous weight-teasing research also has neglected exploration of other salient disturbed eating behaviors, such as emotional eating, disinhibited eating, and dichotomous thinking with regard to food. Increased emotional eating (i.e., eating in response to a mood) and disinhibited eating (i.e., uncontrolled eating) are common among dieters and binge eaters.[20,21] Although identified as a common factor among those who have eating disorders,[22] dichotomous thinking (i.e., rigid, "black and white" cognitive thinking style) remains an understudied psychological construct.[22,23] The rigid dietary "rules" in dichotomous thinking (e.g., good food vs bad food) may help maintain disturbed eating behaviors and increase the frequency of behaviors (e.g., binge eating, purging) following any breach of dietary rules.[24] This "all or nothing" attitude toward eating may place an individual at risk for eating disorders.

The goal of this research was to expand our understanding of the long-term effect of weight teasing during childhood on a broad array of current disturbed eating behaviors of healthy young adult women. A second goal was to explore relationships among recollections of body weight during the growing years, frequency and effect of weight-teasing insults, and current disturbed eating behaviors.

METHODS

In this cross-sectional study that took place from Fall 2009 to Spring 2010, we recruited women aged 18 to 26 years who were enrolled at 3 east coast US universities through announcements

made in university e-mail lists, Web sites, and general health and education classes. We studied young adult women in particular because they have a higher prevalence rate of eating disorders than do men.[25] We excluded those with diet-related chronic health conditions (e.g., diabetes, celiac disease) to avoid potential confounding effects.

Instruments

The online survey included 3 sections: eating behaviors, weight teasing, and demographics.

Eating behaviors. The Eating Disorder Examination Questionnaire (EDE-Q), 16th edition[26] is a self-report version of the Eating Disorder Examination Semi-Structured Interview, which is considered the "gold standard" in clinical practice for identifying those at risk for disturbed eating and eating disorders with *DSM* criteria.[27] This valid, reliable questionnaire assesses cognitive and behavioral psychopathology of eating disorders with 4 scales (i.e., restraint, eating concerns, weight concerns, and shape concerns) and the binge eating disorder module.[26,28,29] The restraint scale (5 items) measures attempts to restrict food intake to influence body shape and weight. The eating concerns scale (5 items) measures preoccupation with and feelings toward eating food. The weight concerns scale (5 items) measures feelings toward one's weight. The shape concerns scale (8 items) assesses individual feelings about one's body shape and size. The 7-point rating scale for items on these 4 EDE-Q scales were either number of days in the past month (categorized as 0 = none; 1 = 1–5 days; 2 = 6–12 days; 3 = 13–15 days; 4 = 16–22 days; 5 = 23–27 days; 6 = every day) or "not at all" to "a lot." We computed scale scores with standard procedures (i.e., averaging the scores of items in a scale).[26] Higher scores indicate greater eating disorder risk.

The binge eating disorder module from the EDE-Q, 16th edition, assesses behaviors related to bulimia nervosa (i.e., binge eating and inappropriate compensatory behaviors).[26] Binge eating was assessed with 1 item (i.e., "During the past 28 days, how many days have you eaten what other people would regard as an unusually large amount of food given the circumstances and had a sense of loss of control at the time?").[26] The inappropriate compensatory behaviors scale (3 items) assesses the frequency of engaging in detrimental behaviors (i.e., self-induced vomiting, medication misuse, and excessive exercise) to control weight over the past 28 days.[26] The binge eating item had a possible score range of 0 to 28. The vomiting and medication misuse items were scored from 0 to 6 on the basis of the number of days the individual engaged in the behaviors (categorized as 0 = no days; 1 = 1–5 days; 2 = 6–12 days; 3 = 13–15 days; 4 = 16–22 days; 5 = 23–27 days; 6 = 28 days). We assigned scores to the excessive exercise compensatory behavior item as follows: 0 = no days; 1 = 1–5 days; 2 = 6–10 days; 3 = 11–15 days; 4 = 16–20 days; 5 = 21–25 days; and 6 = more than 25 days. We defined these score ranges because vomiting or misusing medicine 4 or more times in the past 28 days and excessively exercising 20 or more times over the past 28 days are clinically significant.[30,31]

The emotional eating and disinhibited eating scales from the Three Factor Eating Questionnaire is measured on a 4-point Likert scale (definitely false to definitely true).[32] The emotional eating scale (3 items) assesses how emotions influence the urge to eat. The disinhibited eating scale assesses uncontrolled eating behaviors.[32] To lower participant burden, the original disinhibited eating scale was reduced from 9 to 3 items by selecting items with the strongest factor loadings in previously reported research.[32] For both scales, we computed a scale score by averaging the scores of the scale items. Higher scale scores indicate greater emotional eating behaviors or a greater loss of control over eating.

One item from the Dichotomous Thinking in Eating Disorders Scale asks participants to respond to the following question: "I think of food as either 'good' or 'bad.'" Responses ranged from definitely false to definitely true on a 4-point Likert scale. Higher scores indicate greater dichotomous eating.

Weight teasing. We used the Perception of Teasing Scale (POTS) to assess weight-teasing history and effect.[33] The POTS weight teasing frequency subscale assesses the frequency of weight teasing during childhood (ages 6–16 years).[33] This is a 3-item, 5-point scale with responses ranging from never to very often. We assessed frequency of receiving 3 types of weight teasing insults (i.e., being made fun of because of one's weight, being called weight-related names [e.g., "fatso"], and being laughed at because of one's weight). The POTS weight teasing effect subscale evaluates how upset individuals felt after being weight teased. This scale is a 3-item, 5-point scale with responses ranging from not upset to very upset. We calculated scores by averaging the score of all items on a subscale. Higher scores indicated more frequent weight-related teasing as a child or more distress because of the weight-related teasing.

Demographics. We collected basic demographic information, including current height and weight (which were used to calculate body mass index [BMI, defined as weight in kilograms divided by the square of height in meters]), race/ethnicity, and previous diagnosis of an eating disorder by a health care professional. We also asked participants to recall their weight status (i.e., very thin, thin, average, slightly heavy, and overweight) at ages 6, 12, and 16 years to determine whether recalled weight status at these various time points was associated with weight teasing and disturbed eating behaviors. We selected these specific ages to address the various developmental stages throughout life (i.e., childhood, early adolescence, and late adolescence) and they are comparable to the ages used in the POTS instrument.

Data Analysis

We calculated internal consistency scores (i.e., Cronbach α) for all instruments. We performed descriptive statistics (e.g., mean, standard deviation, frequency) for all participants and split them by weight-teasing history during childhood (i.e., those who were and those who were not teased) on all demographic characteristics and scale scores. To determine if reported weight teasing frequency and weight teasing effect were related to current eating behaviors, we conducted an independent sample t test on all demographic characteristics and eating behavior scale scores. For the subset of women who were weight teased, we conducted analysis of covariance (ANCOVA), adjusted for BMI and previous diagnosis of an eating disorder, for each eating behavior scale and among the number of weight teasing insults received; when a significant main effect occurred, the Bonferroni

procedure was performed. We conducted further analyses comparing recalled weight status at 3 time periods and weight-teasing frequency and weight-teasing effect scores using analysis of variance (ANOVA) and repeated measures ANCOVA procedures. We set significance at $P < .05$. We conducted all analyses on PASW Statistics SPSS version 19.0 (SPSS Inc, Chicago, IL).

RESULTS

A total of 1539 young adult women aged 18 to 26 years with no diet-related chronic health condition completed the survey; 6 had missing responses and were eliminated from analyses resulting in a final sample of 1533 young adult women. The mean age was 19.66 (SD = 1.46) years with most participants being White (55%) followed by Asian (20%), Hispanic (10%), African American (10%), and other (5%). Most participants were either first- or second-year college students (65%) with the remainder more advanced in their college studies. Most participants (72%) had a normal BMI (mean = 22.77; SD = 4.0) with few being categorized as underweight (8%), overweight (15%), or obese (6%). Approximately 3% had been diagnosed by a health care professional previously with an eating disorder. Nearly half of all participants (45%) recalled being teased about their weight as a child.

The Cronbach α on all scales was good (i.e., range 0.80–0.91), except for the compensatory behaviors scale (α = 0.50; Table 1). To permit the study of the full array of *DSM-IV* criteria for disordered eating, we examined individual items from the compensatory behavior scale individually rather than by using the scale score. A comparison of eating behavior scales scores between those who were and were not weight teased as a child indicated that weight-teased participants had significantly higher restraint, eating concerns, weight concerns, inappropriate compensatory behaviors (i.e., self-induced vomiting, misuse of medicine, excessive exercise), binge eating, and dichotomous thinking mean scores. Binge eating mean scores were low for both groups indicating that few women engaged in this behavior. However, significantly more weight-teased women (18%) reported regularly binge eating (i.e., at least once per week over the past 28 days) than non–weight-teased women (11%; data not shown).

In a similar manner, the mean score for each inappropriate compensatory behavior also indicated these detrimental behaviors for controlling weight were not commonly practiced. Nevertheless, significantly more weight-teased women reported regular occurrences (i.e., at least once per week over the past 28 days) of self-induced vomiting and medicine misuse (6% and 5%, respectively) than non–weight-teased women (2% and 1.5%, respectively). Regular occurrence of excessive exercise (i.e., exercising vigorously "as a means of controlling weight, altering shape or amount of fat, or burning off calories" for ≥ 20 days in the past 28 days) was reported by 5.5% of weight-teased and 3% of non–weight-teased participants, but this difference was not significant. There also were significant differences in demographics between weight teased and non–weight-teased participants. That is, weight-teased participants were significantly more likely than non–weight-teased participants to be African American (n = 154; 56% vs 44%), currently overweight (n = 224; 69% vs 31%), obese (n = 88; 88% vs 12%), and with a history of an eating disorder (n = 46; 61% vs 39%).

Findings from the POTS revealed that weight-teased participants were subjected to weight teasing insults "sometimes" and the effect of this ridicule caused them to be upset. Of those who were weight teased, nearly all (98%) reported being made fun of and approximately half were called names (49%) or laughed at (57%). Being called weight-related names was the most hurtful teasing insult (mean = 3.87; SD = 1.09), followed by being laughed at (mean = 3.72; SD = 1.20) and being made fun of (mean = 3.62; SD = 1.19). A comparison of POTS scores by BMI category (i.e., underweight, normal weight, overweight, obese), by using ANOVA and posthoc analyses, indicated that weight-teased participants who were currently obese reported being teased significantly more often and being significantly more upset by teasing insults than those at lower BMIs, whereas underweight participants reported being teased significantly less often and were less upset by teasing insults than those with higher BMIs (Table 1). In addition, weight-teasing frequency and weight-teasing effect scores were significantly ($P < .05$) higher in weight-teased women who reported a history of an eating disorder than in those without.

After we adjusted for BMI and history of an eating disorder (possible confounding factors), ANCOVA revealed that weight-teasing frequency and weight-teasing effect scores increased significantly as the variety of weight-teasing insults received increased (Table 2). In addition, all eating behavior scores (i.e., more disturbed eating behaviors), except for self-induced vomiting and excessive exercise, tended to be significantly higher in those experiencing a greater variety of weight-teasing insults.

Weight-teasing scores by participants' recollections of weight status at ages 6, 12, and 16 years are reported in Table 3. ANOVA revealed that, at each time point, those who recalled having a heavier than normal weight tended to have been weight teased significantly more often and felt more upset than those at or below normal weights. Chi-square analysis of teasing insult type by weight status indicated similar findings. That is, being called weight-related names and being laughed at were teasing insults that occurred significantly more often among participants who recalled their body weight to be slightly heavy or overweight at all ages. However, this same trend did not occur in participants who were made fun of at ages 6 and 16 years.

We conducted repeated measures ANCOVA and follow-up tests (with control for BMI and history of an eating disorder) to determine associations between participants' recalled body weight (i.e., very thin to overweight) at 3 time points (i.e., ages 6, 12, and 16 years) and weight-teasing distress (i.e., weight-teasing effect scale; Table 3). The Mauchley's test indicated that the assumption of sphericity had been violated ($\chi^2(2) = 36.77$; $P > .05$), so we corrected degrees of freedom by using Huynh–Feldt estimates of sphericity ($\varepsilon = 0.98$). There was a main effect for how participants recalled their body weight during childhood and weight-teasing effect scores ($F_{37.30,1295.52} = 1.90$; $P = .001$). Follow-up pairwise comparisons with Bonferroni adjustment for multiple comparisons revealed significant ($P < .001$) differences in recalled body weights between ages 6 and 12 years and ages 6 and 16 years, but not ages 12 and 16 years. Thus, there was a stronger association

TABLE 1—Eating Behaviors and Weight Teasing of Young Adult Women Aged 18–26 Years: 3 Large US Universities, Fall 2009–Spring 2010

Characteristic (Possible Score Range)	Cronbach α	Non–Weight-Teased (n = 848), Mean ±SD	Weight-Teased (n = 685), Mean ±SD	P[a]
Eating Disorders Examination Questionnaire				
Restraint (0–6)	0.84	1.12 ±1.31	1.64 ±1.52	<.001
Eating concerns (0–6)	0.84	0.64 ±0.89	1.19 ±1.23	<.001
Weight concerns (0–6)	0.85	1.54 ±1.46	2.53 ±1.59	.005
Shape concerns (0–6)	0.91	1.96 ±1.53	2.91 ±1.59	.106
Binge eating (0–28)	[b]	1.18 ±3.25	2.18 ±4.78	<.001
Inappropriate compensatory behaviors				
Self-induced vomiting (0–6)	[b]	0.17 ±0.87	0.40 ±1.41	<.001
Misuse of medicine (0–6)	[b]	0.11 ±0.72	0.36 ±1.30	<.001
Excessive exercise (0–6)	[b]	0.53 ±1.14	0.71 ±1.33	<.001
Three-Factor Eating Questionnaire				
Emotional eating (1–4)	0.82	2.08 ±0.76	2.30 ±0.76	.429
Disinhibited eating (1–4)	0.80	2.13 ±0.68	2.26 ±0.67	.497
Dichotomous thinking in eating disorders (1-4)	[b]	2.70 ±0.82	2.86 ±0.78	<.001
Perception of Teasing Scale[c]				
Weight teasing frequency (1–5)	0.91		2.39 ±1.06	<.05[d]
Underweight (BMI < 18.5; n = 42)			2.24 ±0.93	
Normal weight (BMI = 18.5 to < 25; n = 412)			2.25 ±0.96	
Overweight (BMI = 25 to < 30; n = 154)			2.47 ±1.12	
Obese (BMI ≥ 30; n = 77)			3.06 ±1.23[e]	
No eating disorder history (n = 657)			2.39 ±1.05[f]	
With eating disorder history (n = 28)			2.54 ±1.25	
Weight teasing effect (1–5)	0.89		3.53 ±1.17	<.05[d]
Underweight (BMI < 18.5; n = 42)			3.26 ±1.27	
Normal weight (BMI 18.5 to < 25; n = 412)			3.47 ±1.16	
Overweight (BMI 25 to < 30; n = 154)			3.55 ±1.17	
Obese (BMI ≥ 30; n = 77)			3.88 ±1.13[g]	
No eating disorder history (n = 657)			3.61 ±1.20[f]	
With eating disorder history (n = 28)			3.82 ±1.13	

Note. BMI = body mass index, defined as weight in kilograms divided by the square of height in meters. The sample size was n = 1533.
[a]Independent sample *t* test indicated significant differences ($P < .05$) between those who were (n = 685) and were not weight teased (n = 848) as a child.
[b]Cronbach α cannot be computed for 1-item scales or composite scores (i.e., teasing severity score).
[c]Perception of Teasing Scale scores were calculated only for those who were teased.
[d]Analysis of variance followed by the Student–Newman–Keuls posthoc procedure by weight.
[e]Obese participants experienced weight teasing significantly more frequently than participants in all other weight groups ($P < .05$) as determined by analysis of variance and the Student–Newman–Keuls posthoc procedure.
[f]Independent sample *t* test indicated significant differences ($P < .05$) between those with (n = 28) and without (n = 657) a history of an eating disorder for weight-teasing frequency and weight-teasing effect scores.
[g]Obese participants were significantly more upset from weight-teasing insults and underweight participants were significantly less upset from weight-teasing insults than participants in all other weight groups ($P < .05$) as determined by analysis of variance and the Student–Newman–Keuls posthoc procedure.

between recalled higher body weight at ages 6 and 12 (i.e., between first and sixth grades) and increased degree of distress from weight-teasing insults received.

DISCUSSION

The findings from this study indicate that nearly half of young adult women were victims of weight-related teasing as a child, with being "made fun of" the most common insult received and being called weight-related names the most hurtful taunt. As demonstrated by their scores on the eating behavior scales, young women who experienced weight teasing during their growing years were more likely to have disturbed eating behaviors than their non–weight-teased peers. As the variety of weight-teasing insults recalled increased, so did disturbed eating behavior scores and current BMI. Weight-teased participants also were more likely to be African American, to have an above-normal BMI now, and to have been previously diagnosed by a health care professional with an eating disorder. In addition, those who recalled their weight at ages 6, 12, or 16 years as being heavier than average

TABLE 2—Eating Behaviors of Weight-Teased Young Adult Women Aged 18 to 26 Years by Insult Types Received: 3 Large US Universities, Fall 2009–Spring 2010

Characteristic (Possible Score Range)	Weight Teasing Insult Types[a]			ANCOVA[b]	
	1 Type, Mean ±SD (n = 251)	2 Types, Mean ±SD (n = 158)	3 Types, Mean ±SD (n = 276)	*F*	*P*
Eating Disorders Examination Questionnaire					
Restraint (0–6)	1.31 ±1.41	1.12 ±1.43	2.06 ±1.57	16.43[c,d,e]	<.001
Eating concerns (0–6)	0.89 ±1.08	0.95 ±1.17	1.61 ±1.28	24.88[c,d,e]	<.001
Weight concerns (0–6)	2.09 ±1.56	2.18 ±1.56	3.13 ±1.45	20.51[c,d,e]	<.001
Shape concerns (0–6)	2.43 ±1.58	2.56 ±1.55	3.54 ±1.42	25.60[c,d,e]	<.001
Binge eating (0–28)	1.49 ±4.09	1.89 ±4.52	2.97 ±5.37	6.75[c,d]	.001
Inappropriate compensatory behaviors					
Self-induced vomiting (0–6)	0.31 ±1.23	0.32 ±1.24	0.53 ±1.63	2.66	.07
Misuse of medicine (0–6)	0.21 ±1.00	0.37 ±1.34	0.50 ±1.49	3.89[c,d]	.021
Excessive exercise (0–6)	0.58 ±1.17	0.70 ±1.22	0.83 ±1.50	2.54	.08
Three-Factor Eating Questionnaire					
Emotional eating (1–4)	2.19 ±0.71	2.21 ±0.75	2.45 ±0.78	5.82[c,d,e]	.003
Disinhibited eating (1–4)	2.12 ±0.62	2.21 ±0.63	2.42 ±0.70	12.70[c,d,e]	<.001
Dichotomous thinking in eating disorders (1-4)	2.79 ±0.77	2.80 ±0.78	2.94 ±0.78	2.96	.052
Perception of Teasing Scale					
Weight-teasing frequency (1–5)	1.48 ±0.21	2.13 ±0.45	3.37 ±0.93	534.62[c,d,e,f]	<.001
Weight-teasing effect (1–5)	3.12 ±1.22	3.24 ±1.14	4.06 ±0.91	48.78[c,d,e]	<.001
Body mass index[g]	23.00 ±3.53	23.37 ±4.59	25.73 ±5.40	. . .	. . .

Note. ANCOVA = analysis of covariance.
[a]Three types of weight-teasing insults were being made fun of because of one's weight, being called weight-related names (e.g., "fatso"), and being laughed at because of one's weight.
[b]Analysis of covariance with body mass index and eating disorder diagnosis as covariates.
[c]Significant pairwise differences among the adjusted means for the variety of weight teasing insult types received, as determined by Bonferroni procedure only when a main effect ($P < .05$) occurred.
[d]Those receiving 1 insult scored significantly lower than those receiving 3 Insults.
[e]Those receiving 2 insults scored significantly lower than those receiving 3 insults.
[f]Those receiving 1 insult scored significantly lower than those receiving 2 insults.
[g]Body mass index defined as weight in kilograms divided by the square of height in meters.

endured weight teasing more frequently and felt greater distress than their lighter counterparts.

Of particular concern is that nearly 1 in 25 weight-teased participants reported having been diagnosed with an eating disorder by a health care professional—this rate is 1.5 times that of those who were not weight teased and is slightly higher than the lifetime prevalence rates of eating disorders in the general population (i.e., anorexia nervosa, bulimia nervosa, and binge eating).[34]

Longitudinal and cross-sectional studies also have reported that weight teasing history is significantly related to body image and disturbed eating behaviors in adolescent, college-age, and adult females.[2,3,13,35–37] For instance, a study of adolescent girls reported that both teasing frequency and teasing effect were significantly associated with body dissatisfaction, eating disturbances, and depression.[36] Results from the study reported here support findings of previous work[2,3] and extend them by demonstrating that disturbed eating behaviors persist at least into young adulthood. The study reported here also indicates that eating behavior disturbances are more profound as weight-teasing frequency and ensuing distress increase. However, as others have proposed, race may offer some "protection" from the harmful effects of teasing and pressures to conform to prevailing social norms[38] in that African American women in this study reported being subjected to weight teasing most frequently but had the lowest teasing hurtfulness scores. This finding should be viewed with caution because other factors not explored in this study could explain these racial differences in weight-teasing distress.

The finding that those who were overweight during childhood suffered the greatest teasing supports the idea that those who "violated" the "thin ideal" social norm are most at risk for being teased.[5] Social norms also may play a role in supporting the continued pervasiveness and persistence of weight-related disparagement and prejudice in our otherwise increasingly "politically correct" society.[39–44] That is, weight teasing may be perceived as a normative practice by children who frequently witness or experience weight-teasing derision and discrimination. Breaking the vicious cycle of social norms that support weight bias and weight teasing ridicule is critical to protecting emotional, social, and physical well-being.

A recent review article noted a general lack of research on interventions aimed at combating antifat prejudice, methodological problems that limited the usefulness of many

TABLE 3—History of Weight Teasing and Effect by Recalled Body Weight Over Time Among Young Adult Women Aged 18 to 26 Years: 3 Large US Universities, Fall 2009–Spring 2010

Recalled Body Weight	Weight Teasing Frequency (1–5), Mean ±SD	Weight Teasing Effect (1–5), Mean ±SD	Name Called (n = 336), No. (%)	Name Called (n = 336), χ^2 (*P*)	Laughed at (n = 391), No. (%)	Laughed at (n = 391), χ^2 (*P*)	Made Fun of (n = 668), No. (%)	Made Fun of (n = 668), χ^2 (*P*)
Weight in 1st grade (about age 6 y)				42.95 (<.001)		32.88 (<.001)		4.77 (.092)
Very thin or thin (n = 264)	2.13 ±0.88[a]	3.24 ±1.24[a,c]	94 (28)		128 (33)		254 (38)	
Average (n = 309)	2.34 ±1.02	3.57 ±1.09	162 (48)		173 (44)		302 (45)	
Slightly heavy or overweight (n = 112)	3.15 ±1.19	4.07 ±1.03	80 (24)		90 (23)		112 (17)	
Weight in 6th grade (about age 12 y)				90.84 (<.001)		47.29 (<.001)		13.38 (.001)
Very thin or thin (n = 159)	2.06 ±0.82[b]	2.89 ±1.23[a]	35 (10)		77 (20)		153 (23)	
Average (n = 233)	2.05 ±0.86	3.38 ±1.11	102 (30)		103 (26)		222 (33)	
Slightly heavy or overweight (n = 293)	2.84 ±1.15	3.98 ±0.99	199 (59)		211 (54)		293 (44)	
Weight in 10th grade (about age 16 y)				57.16 (<.001)		16.97 (<.001)		1.90 (.388)
Very thin or thin (n = 174)	2.17 ±0.90[b]	3.19 ±1.25[a]	50 (15)		94 (24)		172 (26)	
Average (n = 281)	2.21 ±0.95	3.46 ±1.13	133 (40)		141 (36)		272 (41)	
Slightly heavy or overweight (n = 230)	2.78 ±1.18	3.86 ±1.08	153 (46)		156 (40)		224 (34)	

Note. The sample size was n = 685.
[a]Weight-teasing frequency and weight-teasing effect scores among all recalled body weight statuses (i.e., very thin or thin, average, and slightly heavy or overweight) were significantly ($P < .05$) different from each other as determined by analysis of variance and the Student–Newman–Keuls post hoc procedure.
[b]Weight-teasing frequency scores among those who recalled their body weight as being "very thin or thin" and "average" were significantly ($P < .05$) different from those who recalled their body weight as being "slightly heavy or overweight" as determined by analysis of variance and the Student–Newman–Keuls post hoc procedure.
[c]Repeated measures analysis of covariance (body mass index and eating disorder diagnosis as covariates) and follow-up pairwise Bonferroni comparison showed a significant ($P < .001$) main effect with how participants recalled their body weight over time in 1st, 6th, and 10th grades and weight-teasing frequency scores. Follow-up pairwise comparison also show significant differences in weight-teasing effect scores between grades 1 and 6, and grades 1 and 10.

existing studies, and that more-rigorous studies produced mixed outcomes.[12] These authors concluded that antifat prejudice interventions using social norm approaches appear encouraging.[12] It is clear from this and previous studies that efforts to shift social norms to make weight-related teasing unacceptable are urgently needed to protect the health and well-being of children, especially those who are overweight.[45,46]

Study Strengths and Limitations

This study's findings are informative, statistically significant using robust procedures, and involved a large sample of healthy young-adult college women with an ethnic diversity reflective of the White and non-White US population in this age group.[47] In addition, the study instruments were reliable and valid, and assessed the full array of eating disorder diagnostic criteria elucidated in the *DSM* as well as others not typically addressed during eating disorder assessments. Administrating the survey online likely yielded more accurate (i.e., less "socially desirable") responses to sensitive items than may have occurred with an in-person administration of the survey.[48] The study was limited, however, in that it was cross-sectional and, accordingly, causal inferences cannot be made. Thus, findings from this study only examine associations between recalled weight teasing, recalled weight status, and disturbed eating behaviors. However, this study's findings are consistent with those of longitudinal studies.[3,11,14]

In addition, participants' reports of being weight teased as a child and recalled body weight, not actual weight, at ages 6, 12, and 16 years must be interpreted with caution as these are recollections and it is possible that participants may have inaccurately recalled their weight status at these time points. A further limitation is that examination of other factors that may increase the risk for disturbed eating behaviors (e.g., body image, psychological well-being, media use) were beyond the scope of this study.[49] In addition, we did not explore nonverbal teasing insults (e.g., suggestive hand gestures) and source of teasing insults (e.g., family members, friends), but these should be considered in future studies.

Conclusions

Weight-related teasing during childhood and adolescence may contribute to the development of disturbed eating and eating disorders in young women. Eating disturbances and disorders can have serious—even fatal—outcomes.[50,51] Thus, to protect the health of children, especially those who are overweight and at greatest risk for being weight teased, efforts to make weight teasing unacceptable are warranted. Although obesity interventions may be helpful in decreasing the prevalence of obesity and the number of weight-related teasing comments being made, it is also important to promote psychosocial and physical well-being of children who already are overweight to ensure that they are not being mistreated because of their weight status. Health care professionals, parents, teachers, and other childcare givers all have a role to play in helping shift social norms to make weight teasing as unacceptable as other types of

bullying and hate speech.[11] Given the well-documented deleterious physical and emotional damage caused by obesity and the epidemic of childhood obesity, the time to act is now. ■

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Contributors

V. M. Quick designed and implemented the study and was involved in all aspects of data analysis and interpretation, and in writing of the article. C. Byrd-Bredbenner aided in writing the article. R. McWilliams assisted with data analysis and interpretation of the data. All authors contributed to and have approved the final article.

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Human Participant Protection

The Rutgers University institutional review board granted approval of this study before data collection commenced.

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