

The Adverse Effect of Negative Comments About Weight and Shape From Family and Siblings on Women at High Risk for Eating Disorders

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ABSTRACT

OBJECTIVE. Our purpose with this work was to examine the relationship between negative comments about weight, shape, and eating and social adjustment, social support, self-esteem, and perceived childhood abuse and neglect.

METHODS. A retrospective study was conducted with 455 college women with high weight and shape concerns, who participated in an Internet-based eating disorder prevention program. Baseline assessments included: perceived family negative comments about weight, shape, and eating; social adjustment; social support; self-esteem; and childhood abuse and neglect. Participants identified 1 of 7 figures representing their maximum body size before age 18 and parental maximum body size.

RESULTS. More than 80% of the sample reported some parental or sibling negative comments about their weight and shape or eating. Parental and sibling negative comments were positively associated with maximum childhood body size, larger reported paternal body size, and minority status. On subscales of emotional abuse and neglect, most participants scored above the median, and nearly one third scored above the 90th percentile. In a multivariate analysis, greater parental negative comments were directly related to higher reported emotional abuse and neglect. Maximum body size was also related to emotional neglect. Parental negative comments were associated with lower reported social support by family and lower self-esteem.

CONCLUSIONS. In college women with high weight and shape concerns, retrospective reports of negative comments about weight, shape, and eating were associated with higher scores on subscales of emotional abuse and neglect. This study provides additional evidence that family criticism results in long-lasting, negative effects.

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Key Words

weight and shape concerns, weight, teasing, emotional abuse

Abbreviations

ED—eating disorder
CTQ—Childhood Trauma Questionnaire
WSC—Weight Shape Concerns screening measure
SAS—Social Adjustment Scale

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THERE IS SUBSTANTIAL evidence that criticism and teasing about weight is emotionally harmful for overweight children and adolescents. Overweight adolescents have a greater risk for developing dissatisfaction with their bodies^{1,2} and lower self-esteem^{1,3} and are teased more often than their normal-weight peers.⁴ In a study of 50 overweight adolescent girls, the girls reported significant and hurtful stigmatizing experiences, including name calling and teasing. In addition, participants reported hurtful comments and behaviors by family members and peers.⁵ Another study found that weight-based teasing was associated with suicidal ideation and suicide attempts.⁴ In addition to these negative effects on self-esteem and other aspects of emotional development, negative comments and teasing about weight and shape contribute to the development of excessive weight and shape concerns, which is a risk factor for the development of eating disorders (EDs).⁶⁻⁹

Given the negative impact of negative comments and teasing, weight and shape criticism might be perceived by children and adolescents as a form of emotional abuse or remembered as such. In recent years, childhood maltreatment was expanded to include not only physical and sexual abuse but also neglect and emotional abuse.^{10,11} Physical and sexual abuse has been posited as general risk factors for EDs.⁷ Striegel-Moore et al¹² found significantly elevated rates of childhood sexual or physical abuse and bullying among women with binge-eating disorder compared with women with no EDs. Johnson et al¹³ found that individuals who experienced sexual abuse or physical neglect during childhood were at elevated risk for EDs and additional eating problems (eg, weight fluctuations and strict dieting) during adolescence or early adulthood. However, none of these included measures of perceived emotional abuse during childhood, and no studies examined other aspects of recalled childhood maltreatment and high weight and shape concerns.

The purpose of this study was to examine the relationship between exposure to negative comments about weight, shape, and eating before age 18 years and the Childhood Trauma Questionnaire (CTQ), social adjustment, social support, and self-esteem.

METHODS

Sample

College women who expressed interest in participating in a body image enhancement program completed an online Weight Shape Concerns screening measure (WCS).¹⁴ Women with a WCS score ≥ 50 were invited to participate in a randomized study designed to determine whether an Internet-based psychoeducation program based on a cognitive behavioral model and techniques would prevent EDs. Interested and eligible participants provided informed consent to participate in the study.

The study was approved by human subjects committees at each of the participant institutions and by the human subjects committees at Stanford University and San Diego State University. Potential participants underwent a standard structured interview for psychiatric diagnoses. Women who did not meet clinical criteria for any of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, EDs, were not actively suicidal, or had other psychopathology that would interfere with their participation, were ≤ 30 years of age, and were nonobese (< 32 BMI; weight [kg]/height [m²]) were randomly assigned to the intervention or control groups. Women who met clinical criteria for any of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, EDs were given appropriate clinical referrals.

Screening Criteria

The WCS was used to screen for at-risk participants. The WCS consists of 5 questions, which assess worry about weight and shape, fear of gaining 3 pounds, last time participant went on a diet, importance of weight, and feelings of fatness. The items were derived from a principal components analysis of a set of self-report questions used to assess ED symptoms.¹⁴ It is significantly correlated with the overall and body dissatisfaction subscales⁶ of the Eating Disorder Inventory¹⁵ and has 1 week test-retest reliability of ~ 0.85 , a 1-year stability of approximately $r = 0.75$, and predictive validity.^{6,16} Two prospective studies indicated that adolescents with scores in the upper 25th percentile on the WCS were much more likely to develop a subclinical or clinical ED than participants in lower percentiles.^{6,16} A score WCS of ≥ 57 represents approximately the upper quartile of scores. A receiver operating characteristic analysis of a subset of participants⁶ found that a score WCS of ≥ 47 had a sensitivity of 79%, a specificity of 67%, and positive predictive value of 13% for identifying adolescents who developed subclinical or clinical EDs.¹⁷

Measures

Participants completed a battery of assessments before beginning the intervention. Measures relevant to the current article are described below.

Demographics

Participants reported their age, year in school, ethnicity, and their mother and father's highest level of education.

Current Height/Body Weight

Standing height was measured to the nearest millimeter using a portable direct reading stadiometer. Participants were measured with shoes removed and the body positioned such that the heels and buttocks were against the vertical support of the stadiometer and head aligned so that the auditory canal and the lower rim of the orbit were in a horizontal plane. Weight was determined to

the nearest 0.1 kg using a digital stand-on scale with participants wearing light indoor clothing without shoes or coats. Height and weight were converted to BMI.

Maximum Perceived Body Size: Childhood and Parental

Participants were shown drawings of women representing a range of body sizes, ordered from thin to very overweight. They were asked to circle the figure and corresponding number (1–9) that best represented the most they weighed before age 18 years (maximum body size). Participants also circled the figure that best represented their biological father's and mother's (excluding pregnancy) maximum body size.

Childhood Trauma

The CTQ was used to measure possible childhood maltreatment.¹⁸ The original CTQ was composed of 70 items. A principal components analysis of a sample of 286 psychiatry patients' responses to the original CTQ yielded 4 rotated orthogonal factors: physical and emotional abuse, emotional neglect, sexual abuse, and physical neglect. Cronbach's α for the factors ranged from .79 to .94, indicating high internal consistency. A subsample of 40 patients completed a second CTQ 2 to 6 months later. The test-retest intraclass correlation was 0.88 for this subsample. A more recent 28-item version, consisting of 5 rotated factors (ie, emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical abuse), was developed to facilitate its use in large samples.¹⁹ Scher et al²⁰ found that the 5-factor model best described the data for a community sample. More recently, in a sample of 470 undergraduate students, Paivio and Cramer²¹ found that all of the factors, except physical neglect, demonstrated good internal consistency (ie, Cronbach's α ranged from .87 to .97) and test-retest reliability, measured at 8 to 10 weeks (ie, Cronbach's α = .94–.97). Norms for these scales are available for a community sample in the age range of this study population.²⁰

Negative Comments

The negative comments questions were taken from the Fairburn community-based case-control study of risk factors for bulimia nervosa.²² Participants were asked the following: "Before you were 18 did anyone ever make negative comments about your shape or weight?" and "Before you were 18 did anyone ever make negative comments about how much you ate?" Participants were asked to respond separately for mother, stepmother, father, stepfather, siblings, friends or peers, and coach or teacher. Ratings were: never, a few comments, or repeated comments.

Social Adjustment

Current social adjustment was assessed using the Social Adjustment Scale (SAS),²³ modified for college students.

The SAS is widely used for this purpose and has been used as an outcome measure in several ED outcome studies. An overall adjustment score is computed based on the mean scores of 7 applicable role areas (eg, student, social, and leisure activities). A higher global score on the SAS indicates greater impairment in social functioning. The SAS is widely used in patients undergoing therapy and has been demonstrated to be a valid measure in detecting effects of treatment.²³ Furthermore, the SAS has good reliability and convergent validity with clinician ratings.²³

Social Support

The 12-item Multidimensional Scale of Perceived Social Support²² was used to measure perceived social support. The Multidimensional Scale of Perceived Social Support divides perceived social support into 3 distinct constructs: support from family members, support from friends, and support from significant others. This factor structure has been supported in studies of clinically distressed and student samples.²² The perceived social support factors of family and friends consistently had the strongest associations with symptomatology. Other studies confirm its reliability, validity, and utility.²²

Self-esteem

The Rosenberg Self-esteem Scale²⁷ is a 10-item self-report measure of overall self-worth or self-acceptance. Each item has 4 response options that range from "strongly agree" to "strongly disagree."

Statistical Analysis

Factor analysis was performed on the negative comment questions to form independent measures. The regression model used the 5 CTQ subscales as independent measures. To investigate how participants' weight affected the relationship, perceived maximum body size before the age of 18 years was used along with the interactions with negative comments. The effect of negative comments on social adjustment, family support, and self-esteem was examined using the same model as negative comments. Finally, the relationship between negative comments and the individual items from the CTQ were examined.

RESULTS

Participants

The original study recruited 480 subjects, but relevant baseline data were available on 455 participants. The sample was 61% white, 2% black, 10% Hispanic, 17% Asian, and 11% other/unknown. By year in school, the sample was 31% freshman, 21% sophomore, 23% junior, 17% senior, and 8% graduate student. The average age was 20.8 years (SD = 2.6), and the average BMI was 23.7 (SD = 2.8). Twenty-eight percent of the sample met

criteria for being overweight (BMI >25). Average parental perceived body size scores were 5.1 (SD = 1.7) for mother and 5.2 (SD = 1.8) for father. Parents were well educated, 51% attended graduate school, and an additional 25% earned college degrees.

Negative Comments

Table 1 shows the frequency of negative comments about weight, shape, and eating by family members. More than half of the sample reported negative weight and shape comments by their mother, >40% reported negative comments by their fathers, and 48% by their siblings. Stepparents accounted for fewer negative comments. Only 6% of the sample reported negative comments by a stepmother and 5% by a stepfather, although it is unclear how many participants actually had stepparents. The incidence of negative comments about eating was similar. More than 50% of mothers and ~40% of fathers and siblings made negative comments about the participant's eating. Again, <5% of the sample reported negative comments by stepparents. There was a high amount of overlap of negative comments by >1 person. Approximately one quarter of the sample reported negative comments about their weight and shape by both parents and siblings, and approximately one third reported negative comments from 2 family members. Twenty-three percent reported no negative comments about weight. The incidence of negative comments about eating was slightly lower, with more than

one third of the sample reporting no negative comments about eating. One fifth of the sample reported negative comments by both parents and a sibling, and one quarter received negative comments by 2 family members. Eighty-two percent of the sample received some sort of negative comment about either weight and shape or eating.

Because the frequency of negative comments by stepparents was extremely low, and a report of "no comments" could be interpreted as "no comments" or "no stepparent," these data were not used in any additional analyses. Principal component analysis of the negative comment variables indicated 4 factors accounting for 67% of the variance. Factor 1 combined paternal and maternal negative comments about weight, shape, and eating. Factor 2 combined negative comments about weight, shape, and eating by siblings. Maximum body size before age 18 years was significantly correlated with parental negative comments ($r = 0.33$; $P = .000$) and sibling negative comments ($r = 0.25$; $P = .000$), as was minority status (parent comments, $r = .10$, $P = .03$; sibling comments, $r = .1$, $P = .02$). In addition, negative comments were higher in families where the biological father had a higher maximum body size (parents comments, $r = .12$, $P = .008$; siblings, $r = 0.16$, $P = .001$). Negative comments were not related to parental education.

Childhood Maltreatment

Table 2 shows the mean and SDs for the CTQ along with the percentage who scored at approximately the median and 90th percentile for a community sample of comparable age participants.²⁰ Table 3 shows the results of multiple linear regression examining relationships of maximum body size before age 18 years, negative comments and interactions, and aspects of maltreatment. Emotional abuse was related to higher levels of parental negative comments and higher levels of sibling comments, especially when combined with higher maximum body size before age 18 years. Emotional neglect was related to higher maximum body size before age 18 years and higher levels of parental criticism and sibling criticism when the subject had a higher weight. Although the model for physical abuse was significant, none of the individual predictors made a significant contribution. This model did not predict physical neglect or sexual abuse.

Adjustment and Social Support

To further examine the effects of negative comments, measures of social adjustment, social support by families,

TABLE 1 Frequency of Repeated Negative Comments About Weight and Eating

Variable	Negative Comments About Weight, <i>n</i> (%)	Negative Comments About Eating, <i>n</i> (%)
By mother		
No comments	190 (42)	205 (45)
A few comments	192 (42)	169 (37)
Repeated comments	65 (14)	70 (15)
No response	8 (2)	11 (2)
By stepmother		
No comments	144 (32)	150 (33)
A few comments	21 (5)	13 (3)
Repeated comments	4 (1)	6 (1)
No response	286 (63)	286 (63)
By father		
No comments	235 (52)	254 (56)
A few comments	158 (35)	134 (30)
Repeated comments	42 (9)	43 (10)
No response	20 (4)	24 (5)
By stepfather		
No comments	142 (31)	152 (33)
A few comments	19 (4)	13 (3)
Repeated comments	4 (1)	3 (1)
No response	290 (64)	287 (63)
By siblings		
No comments	188 (41)	241 (53)
A few comments	165 (36)	132 (29)
Repeated comments	54 (12)	36 (9)
No response	48 (11)	46 (10)

TABLE 2 Mean and SD for the CTQ Subscales

CTQ Subscale	Mean (SD)	% Above Median	% Above 90%
Emotional abuse	8.7 (4.0)	82	31
Emotional neglect	9.2 (4.2)	77	32
Physical abuse	5.9 (1.8)	30	9
Physical neglect	6.1 (1.9)	41	6
Sexual abuse	5.7 (2.3)	14	11

TABLE 3 Relationship of Negative Comments in the Family and Perceived Emotional and Physical Abuse

Variable	Emotional Abuse	Emotional Neglect	Physical Abuse	Physical Neglect	Sexual Abuse
Maximum body size before age 18 y					
β	.33	.43	.32	.20	-.006
t_{444}	1.9	2.2	1.4	2.2	-.53
P	.056	.026	.16	.026	.59
Negative comments: parent					
β	1.5	1.5	.34	-.003	.52
t_{444}	3.8	3.4	1.8	-.13	2.2
P	.000	.001	.08	.90	.03
Negative comments: sibling					
β	.95	.32	.13	.17	-.15
t_{444}	2.7	.81	.76	.89	-.67
P	.008	.42	.45	.37	.50
Negative comments (parents) \times negative comments (siblings)					
β	-.007	-.008	.14	-.20	-.35
t_{444}	-.12	-.13	.51	-.67	-1.0
P	.90	.90	.61	.50	.31
Body size \times negative comments (parents)					
β	.11	.005	-.28	-.14	-.37
t_{444}	.34	.14	-1.7	-.79	-1.8
P	.73	.89	.08	.43	.08
Body size \times negative comments (siblings)					
β	.95	.64	.14	.35	.18
t_{444}	3.3	2.0	.96	2.3	.99
P	.001	.047	.34	.025	.32
Body size \times negative comments (parents) \times negative comments (siblings)					
β	-.89	-.69	.006	-.28	.003
t_{444}	-1.8	-1.3	.03	-1.1	.08
P	.062	.20	.98	.27	.93
R^2	15%	9%	5%	3%	3%
Overall model	$F_{8,444} = 9.6$	$F_{8,444} = 5.4$	$F_{8,444} = 2.7$	$F_{8,444} = 1.8$	$F_{810,444} = 1.4$
P	.000	.000	.006	.074	.19

Relationship is after adjusting for center effects.

and Rosenberg self-esteem were used as dependent measures (see Table 4). Parental negative comments lead to poorer self-esteem and feeling less social support by families but explained only a small part of the variance.

CTQ Item Analysis

Individual CTQ questions were correlated with parental and sibling negative comments. As seen in Table 5, there were significant associations between parental criticism and the emotional abuse and neglect items and the physical abuse items. Items with the strongest relationship to negative comments included more general negative comments such as, "People in my family called me things like 'stupid,' 'lazy,' or 'ugly'" (parental criticism: $r = .32$, $P = .009$; sibling criticism: $r = .27$, $P = .000$), and "People in my family said hurtful or insulting things to me" (parental criticism: $r = .31$, $P = .009$; sibling criticism: $r = .26$, $P = .000$). Items assessing the closeness of the family such as, "There was someone in my family who helped me feel that I was important or special" (parental criticism: $r = -.24$, $P = .009$; sibling criticism: $r = -.21$, $P = .000$) or "People in my family felt close to each other" (parental criticism: $r = -.24$, $P = .009$;

sibling criticism: $r = -.12$, $P = .013$) were also related. Interestingly, the item, "I believe that I was emotionally abused" was less strongly related to parental criticism ($r = 0.16$; $P = .001$) and not related to sibling criticism at all. There were no significant associations with negative comments and perceived sexual abuse.

DISCUSSION

The most important findings of this study are the high rates of reported negative comments about weight, the high scores on the CTQ, and the strong association between these 2 self-report measures in young women with high WSCs. Eighty-two percent of the sample scored above the median norms from a community sample of a similar age range. More than half of the sample reported negative comments by their mother about weight, shape, or eating, >40% of the sample report negative comments by their father, and ~40% by siblings. Negative comments were significantly associated with retrospective report of greater maximum body size before age 18 years, minority status, and biological father's maximum body size. It was not related to parental education or biological mother's maximum body size. In

TABLE 4 Relationship Among Negative Comments, Social Adjustment, and Social Support

Variable	Social Adjustment	Social Support (Family)	Rosenberg Self-esteem
Maximum body size before age 18 y			
β	.03	-.07	-.26
$t_{444}, t_{434}, t_{441}$	1.6	-1.2	-1.1
<i>P</i>	.12	.24	.27
Negative comments (parent)			
β	.06	-.47	-1.4
$t_{444}, t_{434}, t_{441}$	1.6	-3.4	-2.6
<i>P</i>	.11	.001	.000
Negative comments (sibling)			
β	.01	-.18	-.44
$t_{444}, t_{434}, t_{441}$.29	-1.4	-.90
<i>P</i>	.77	.15	.37
Negative comments (parents) \times negative comments (siblings)			
β	-.02	.10	-.53
$t_{444}, t_{434}, t_{441}$	-.32	.51	-.71
<i>P</i>	.75	.61	.48
Body size \times negative comments (parents)			
β	-.003	-.008	.47
$t_{444}, t_{434}, t_{441}$	-.08	-.63	1.0
<i>P</i>	.94	.53	.29
Body size \times negative comments (siblings)			
β	-.02	-.13	.02
$t_{444}, t_{434}, t_{441}$	-.62	-1.2	.06
<i>P</i>	.54	.22	.95
Body size \times negative comments (parents) \times negative comments (siblings)			
β	.05	.18	-1.1
$t_{444}, t_{434}, t_{441}$	1.1	.77	-1.6
<i>P</i>	.29	.44	.10
<i>R</i> ²	5%	7%	7%
Overall model	$F_{8,444} = 2.8$	$F_{10,434} = 4.2$	$F_{8,441} = 4.0$
<i>P</i>	.005	.000	.000

a multivariate analysis, higher levels of parental criticism were associated with higher reported emotional abuse and neglect regardless of the body size. High levels of sibling criticism interacted with higher maximum body size before age 18 years to predict emotional abuse and neglect. Higher maximum body size before 18 years was related to higher levels of emotional neglect.

Although more than half of the sample reported negative comments, most participants reported that their parents or siblings only made a few negative comments. The data suggest that even a few comments may have a negative impact. In fact, in otherwise or generally supportive families, a few negative comments may have a particularly detrimental impact, because they stand out against patterns of little or no criticism. The harmful effects of negative comments are substantiated in the data, which showed that higher emotional abuse scores were associated with poorer self-esteem and lower perceived social support.

Although the scale used in these analyses is labeled by the authors as representing "emotional abuse," only 1 item on the scale directly asks about emotional abuse (ie, "I believe that I was emotionally abused"). This item was

significantly but weakly associated with parental criticism about weight, whereas 2 items, "People in my family called me things like stupid, lazy or ugly" and "People in my family said hurtful or insulting things to me" were much more strongly associated with parental and sibling criticisms about weight and eating. Furthermore, the overall model from the regression analyses explained only a small part of the variance of the emotional abuse scale. This suggests that participants who perceive being emotionally abused might live in a family environment where they felt criticized for a variety of things, including weight and shape. Given the strong pejorative connotation of the phrase "emotional abuse" and the low correlation of the item, which directly assesses it with negative criticism, it is not appropriate to equate negative criticism with emotional abuse in this sample.

It seemed that criticism was higher by both parents and siblings when the biological father was rated as having a higher maximum body size. Siblings' negative comments seemed to be more hurtful when the participant was heavier.

The rates of physical and sexual maltreatment were

TABLE 5 Association of Parental and Sibling Negative Comments With Emotional Abuse and Neglect Items

CTQ Questions	Parent Negative Comments	Sibling Negative Comments
Emotional abuse		
People in my family called me things like "stupid," "lazy," or "ugly"	.32 ^a	.27 ^a
I thought that my parents wished I had never been born	.17 ^a	.05
People in my family said hurtful or insulting things to me	.31 ^a	.26 ^b
I felt that someone in my family hated me	.13 ^b	.15 ^a
I believe that I was emotionally abused	.16 ^a	.08
Emotional neglect		
There was someone in my family who helped me feel important and special	-.24 ^a	-.21 ^a
I felt loved	-.19 ^a	-.12 ^c
People in my family looked out for each other	-.19 ^a	-.10 ^c
People in my family felt close to each other	-.24 ^a	-.12 ^c
My family was a source of strength and support	-.19 ^a	-.10 ^c
Physical abuse		
I got hit so hard by someone in my family that I had to go see a doctor or go to the hospital	.03	.03
People in my family hit me so hard that it left me with bruises or marks	.10 ^c	.11 ^c
I was punished with a belt, a board, a cord, or some other hard object	.13 ^b	.12 ^b
I believe that I was physically abused	.09 ^c	.03
I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor	.10 ^c	.08

^a $P < .001$.

^b $P < .01$.

^c $P < .05$.

much lower and below the norms from the community sample. This suggests that participants were responding differentially to items reflecting "childhood maltreatment" and not simply reporting high scores on all of the items. Rates of childhood sexual abuse are generally higher in women with EDs than in nonclinical samples. Sexual abuse is considered to be a nonspecific risk factor for EDs.^{7,23} There are no studies, to our knowledge, of reported sexual abuse rates in a nonclinical but high risk sample.

There are significant limitations of this study. The population only includes women, mostly enrolled in college, who had high WSCs and wanted to participate in a body image enhancement intervention project. All of the data are self-reported and retrospective. Because of the correlational nature of the data, we only know that perceived negative comments were associated with high scores on the CTQ emotional abuse and neglect subscales; we do not know if negative comments about weight caused participants to believe that they were emotionally abused. Negative comments about weight may be associated with other factors that together cause women to believe that they were emotionally abused and neglected. Furthermore, the time periods of self-report measures may have varied; for instance, the data do not permit us to relate the real-time relationships between body size and exposure to criticism by various parental figures and siblings. The data are also confounded by the complexity of, and changes in, family structure. Nonetheless, the results of this study are consistent with a large body of literature that has shown that negative criticism has a negative impact on the emotional development of young people.

Given these findings and those of other research groups, it would seem appropriate for pediatricians to

counsel parents about the impact of negative comments about their children's weight, shape, and eating; to teach parents to provide constructive advice without being negative; and to help parents monitor the impact of constructive advice so that it is not perceived as negative by their child. In a pilot study, we randomly assigned 69 parents of adolescents to a program that combined on-line instruction and a pamphlet to reduce parental criticism about weight, shape, and eating.²⁸ The pamphlet included a self-quiz in which parents self-assessed the type of messages they might be sending their daughter about weight and shape, discussed the negative consequences of these messages, and provided examples of how to communicate without being critical. There was a significant reduction on a measure of parental negative attitudes and behaviors to others and, surprisingly, a significant increase on the parents' outlook about themselves. Because few parents used the Internet program, most of the changes were likely related to the pamphlet. (The content of this pamphlet has been included in a document designed to help parents provide positive messages to their daughters about weight and shape and to avoid criticism. The document is available at <http://bml.stanford.edu>. Select "McKnight/parental education newsletter." More studies are needed, obviously, to identify strategies to educate families about parental criticism and how they can adopt more constructive approaches to communicate their concern about their children's weight and shape.

REFERENCES

1. Grilo CM, Wilfley DE, Brownell KD, Rodin J. Teasing, body image, and self-esteem in a clinical sample of obese women. *Addict Behav.* 1994;19:443-450

2. Vander Wal JS, Thelen MH. Predictors of body image dissatisfaction in elementary-age school girls. *Eat Behav.* 2000;1:105–122
3. Pesa JA, Syre TR, Jones E. Psychosocial differences associated with body weight among female adolescents: the importance of body image. *J Adolesc Health.* 2000;26:330–337
4. Jackson TD, Grilo CM, Masheb RM. Teasing history, onset of obesity, current eating disorder psychopathology, body dissatisfaction, and psychological functioning in binge eating disorder. *Obes Res.* 2000;8:451–458
5. Neumark-Sztainer D, Story M, Faibisch L. Perceived stigmatization among overweight African-American and Caucasian adolescent girls. *J Adolesc Health.* 1998;23:264–270
6. Killen JD, Taylor CB, Hayward C, et al. Pursuit of thinness and onset of eating disorder symptoms in a community sample of adolescent girls: a three-year prospective analysis. *Int J Eat Dis.* 1994;16:227–238
7. Stice E. Risk and maintenance factors for eating pathology: a meta-analytic review. *Psychol Bull.* 2002;128:825–848
8. McKnight Investigators. Risk factors for the onset of eating disorders in adolescent girls: results of the McKnight Longitudinal Risk Factor Study. *Am J Psychiatry.* 2003;160:248–254
9. Jacobi C, Hayward C, de Zwaan M, Kraemer HC, Agras WS. Coming to terms with risk factors for eating disorders: application of risk terminology and suggestions for a general taxonomy. *Psych Bull.* 2004;130:19–65
10. Edwards VJ, Holden GW, Felitti VJ, Anda RF. Relationship between multiple forms of childhood maltreatment and adult mental health in community respondents: results from the adverse childhood experiences study. *Am J Psychiatry.* 2003;160:1453–1460
11. Arnow BA. Relationships between childhood maltreatment, adult health and psychiatric outcomes, and medical utilization. *J Clin Psychiatry.* 2004;65(suppl 12):11–15
12. Striegel-Moore RH, Dohm FA, Pike KM, Wilfley DE, Fairburn CG. Abuse, bullying, and discrimination as risk factors for binge eating disorder. *Am J Psychiatry.* 2002;159:1902–1907
13. Johnson JG, Cohen P, Kasen S, Brook JS. Childhood adversities associated with risk for eating disorders or weight problems during adolescence or early adulthood. *Am J Psychiatry.* 2002;159:394–400
14. Killen JD, Taylor CB, Hammer LD, et al. An attempt to modify unhealthy eating attitudes and weight regulation practices of young adolescent girls. *Int J Eat Dis.* 1993;13:369–384
15. Garner DM, Olmstead MP, Polivy J. Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *Int J Eat Dis.* 1983;2:15–34
16. Killen JD, Taylor CB, Hayward C, et al. Weight concerns influence the development of eating disorders: a four-year prospective study. *J Consult Clin Psychol.* 1996;64:936–940
17. Jacobi C, Abascal L, Taylor CB. Screening for eating disorders and high-risk behavior: caution. *Int J Eat Dis.* 2004;36:273–288
18. Bernstein DP, Ahluvalia T, Pogge D, Handelsman L. Validity of the Childhood Trauma Questionnaire in an adolescent psychiatric population. *J Am Acad Child Adolesc Psychiatry.* 1997;36:340–348
19. Bernstein DP, Stein JA, Newcomb MD, et al. Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse Negl.* 2003;27:169–190
20. Scher CD, Stein MB, Asmundson GJG, McCreary DR, Forde DR. The childhood trauma questionnaire in a community sample: psychometric properties and normative data. *J Trauma Stress.* 2001;14:843–857
21. Paivio SC, Cramer KM. Factor structure and reliability of the Childhood Trauma Questionnaire in a Canadian undergraduate student sample. *Child Abuse Negl.* 2004;28:889–904
22. Fairburn CG, Welch SL, Doll HA, Davies BA, O'Connor ME. Risk factors for bulimia nervosa. A community-based case-control study. *Arch Gen Psychiatry.* 1997;54:509–517
23. Weissman MM, Bothwell S. Assessment of social adjustment by patient self-report. *Arch Gen Psychiatry.* 1976;33:1111–1115
24. Zimet GD, Powell SS, Farley GK, Werkman S, Berkoff KA. Psychometric characteristics of the Multidimensional Scale of Perceived Social Support. *J Pers Assess.* 1990;55:610–617
25. Clara IP, Cox BJ, Enns MW, Murray LT, Torgrud LJ. Confirmatory factor analysis of the multidimensional scale of perceived social support in clinically distressed and student samples. *J Pers Assess.* 2003;81:265–270
26. Canty-Mitchell J, Zimet GD. Psychometric properties of the Multidimensional Scale of Perceived Social Support in urban adolescents. *Am J Community Psychol.* 2000;28:391–400
27. Rosenberg M. *Society and the Adolescent Self-Image.* Princeton, NJ: Princeton University; 1965
28. Bruning Brown J, Winzelberg AJ, Abascal LB, Taylor CB. An evaluation of an Internet-delivered eating disorder prevention program for adolescents and their parents. *J Adolesc Health.* 2004;35:290–296

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