

Body Esteem, Eating Attitudes, and Gender-Role Orientation in Three Age Groups of Children

ELLEN C. FLANNERY-SCHROEDER

Temple University

JOAN C. CHRISLER

Connecticut College

The purpose of this study was to assess body esteem, eating attitudes, and gender-role orientation in three age groups (first, third, and fifth graders). The first graders were interviewed individually; the third and fifth graders completed a questionnaire in a group setting in which the questions were read aloud to set a pace and help those who may have had difficulty reading. All children completed the Children's Sex Stereotypes Measure, the children's version of the Eating Attitudes Test, and the Body Esteem Scale. It was hypothesized that children as young as six or seven do understand the connection between eating and body weight, that a proportion of children do experience eating and weight concerns, and that feminine children are most likely to experience such concerns. The results demonstrated that children, as early as first grade, were indeed engaging in eating disordered behaviors and expressing dieting and weight concerns. The children appeared to understand the connection between eating and weight, and body esteem was found to be significantly lower in the fifth than the third graders. However, feminine children were not more likely to exhibit eating disordered behaviors.

Concerns about weight, diet, and physical appearance have become widespread in contemporary American society. The current preoccupation with food and eating has reached a logical, albeit unfortunate, conclusion—many American women are desperately attempting to attain an unrealistically thin body ideal. This ideal coupled with one of the few remaining acceptable forms of prejudice—fat stigma—results in obsessive concerns about eating, weight, and body image. Such preoccupations are not only sustained but heightened by the anorexic-like bodies of fashion models, the plethora of diet manuals and weight loss therapies advertising quick “cures,” and the fitness industry that expounds on the virtues of being slim and physically fit.

Children growing up in this society will be unlikely to escape the pressures that arise from the cultural standards of beauty and thinness. Instead, they are likely to learn early in life the social benefits of thinness and the negative stereotypes associated with “excessive” weight. For example, researchers (Goldfield & Chrisler, 1995; Lerner & Gellert, 1969; Lerner & Schroeder, 1971; Staffieri, 1967, 1972) have reported that

children as young as 6 years demonstrate consistent aversions to endomorphic or "chubby" silhouettes.

Staffieri (1972) reported that girls ages 7 to 11 tended to rate an ectomorphic (slender) silhouette differently than did boys ages 6 to 10 in a previous study (1967). Whereas the boys assigned socially submissive adjectives (e.g., afraid) to the ectomorph, the girls tended to assign adjectives that signified social withdrawal (e.g., quiet). Of course, ectomorphy is likely to be seen as more positive by girls because of the thin beauty standard. It is interesting to note that of the 60 girls studied, 40 preferred to look like the mesomorph (athletic) and 20 like the ectomorph.

Brenner and Hinsdale (1978) studied body build stereotypes and self-identification in girls aged 6, 15, and 19 years. The results of the study seem to imply that girls can associate unfavorable or "bad" adjectives with endomorphic body types as early as 5 or 6 years old. The association between body types and favorable or "good" adjectives occurs later. Thus the authors conclude that "adults may have transferred the negative aspects of physique to children at an earlier age than they did the positive aspects" (p. 560).

Research has demonstrated children's clear preference to look like mesomorphs and their aversion to looking like endomorphs. Therefore, it would be expected that children with endomorphic body types, or those who perceive their bodies as having endomorphic properties, would be dissatisfied with their bodies.

Given the stereotypes associated with somatotypes, it is not surprising to find that feelings about the body are associated with feelings about the self. Mendelson and White (1982), in a study of 36 elementary school children, found body esteem to be moderately correlated with self-esteem and with relative weight. However, self-esteem and relative weight were not significantly correlated. Thus, it may be concluded that overweight children who are unhappy with their bodies may incorporate others' opinions of their weight into their self-concept and may apply to themselves the cultural stereotypes of fat people. The researchers theorized that ages 7 to 12 may be a critical period during which self-esteem may become affected by weight concerns.

Davies and Furnham (1986) studied dieting behaviors and body shape concerns of female adolescents in four age groups (12, 14, 16, and 18 yrs.). All age groups, but particularly 16- and 18-year-olds, tended to rate themselves as being overweight. Although only 4% were actually overweight as judged by standard height and weight tables, 40% considered themselves to be so.

Body dissatisfaction is often accompanied by a desire to lose weight. In the previous study one-third of the girls who considered themselves overweight were dieting, and in so doing they indicated their unhappiness with their bodies. The desire to lose weight is often connected to the development of eating disorders. Previous research has demonstrated the presence of weight concerns in children and young adolescents; however, not much attention has been paid to the development of eating disorders in this population. Most research on eating disorders has focused on college-aged women.

Until recently there was no standard way of assessing eating disorders in young children. However, Maloney, McGuire, and Daniels (1988) developed the Children's Eating Attitudes Test (ChEAT), which is a shortened, simplified version of the Eating

Attitudes Test (EAT) developed by Garner and Garfinkel (1979), in order to assess disordered eating in children between the ages of 8 and 13. It does not establish formal diagnoses, but can be used as a research tool with which to assess dieting behaviors, food preoccupation, anorexia, bulimia, and concerns about being overweight. In the validation study of 318 children girls were found to score higher than boys after third grade, with higher scores indicating more disordered eating. Seven percent of the children scored in the anorexic range, which parallels the percentages found in late adolescents and adults (American Psychiatric Association, 1987).

Richards, Casper, and Larson (1990) studied 481 children in the fifth through ninth grades who completed the Weight and Eating Concerns Scale, the Child Depression Inventory, and a self-esteem questionnaire, and reported on their thoughts using the experience sampling method. Girls reported more eating and weight concerns than did boys, and this difference increased with age. Girls' preoccupations with dieting and food appeared to begin in the fifth and sixth grades and increase in severity in the seventh and eighth grades.

To investigate whether or not children experience distorted perceptions of their bodies, Owens-Job and Bremer (1991) asked three age groups of children (7–8 yrs., 9–10 yrs., 11–12 yrs.) how satisfied they were with their bodies, what they thought their bodies looked like, and what they thought was an ideal body image. The researchers compared the children's responses to their actual heights and weights and found that boys were more likely than girls to show significant differences between their actual bodies and their perceived body images and between their perceived body images and their ideal body images. Older boys had smaller discrepancies between their actual bodies and ideal bodies than did younger boys. However, girls were found to have significantly more negative attitudes toward food than did boys, and such negative attitudes are believed to be precursors of eating disorders.

Several studies have examined the relationship between eating and gender-role orientation. Chaiken and Pliner (1987) found that both male and female subjects rated a woman who ate a small meal as more feminine, more attractive, and more likely to possess stereotypical traits than a woman who ate a large meal. Mori, Pliner, and Chaiken (1987) found that women decrease their food intake when they want to be perceived as feminine. Flannery, Bugel, Owen, and Scher (1991) showed 43 subjects a film in which a target individual (either a woman or a man) ate a particular kind of food (either diet food or junk food). Subjects were asked to rate the target on various traits (e.g., masculinity, femininity, concern about appearance). The results indicated that, regardless of gender, individuals who ate diet foods were more likely to be positively perceived (e.g., physically attractive, self-confident, aware of others' feelings) than were those who ate junk foods.

In a study of 540 women, van Strien and Bergers (1988) examined the relationship between overeating and gender-role orientation. Two types of eating—emotional and external—were found to be related to stereotypically feminine traits, but not to stereotypically masculine traits. Thus, they concluded that feminine women “seem to be particularly at risk for overeating”(p.89). However, Timko, Striegel-Moore, Silberstein, and Rodin (1987) found no correlation between disordered eating and

femininity in a study of 45 female college students. A relationship was found between importance of appearance and both femininity and disordered eating, and a belief in the importance of possessing socially desirable masculine traits was a significant predictor of disordered eating. Thus, the research on the relationship between gender-role orientation and eating has produced inconsistent findings.

The purpose of the present study was to assess body esteem, eating attitudes, and gender-role orientation in three age groups of children (first, third, and fifth graders). Staffieri (1967) has hypothesized that children begin to stereotype body sizes as early as ages four and five. In this study we explored the possibility that body dissatisfaction and weight concerns develop along with the ability to stereotype body size. Staffieri (1967) also hypothesized that body dissatisfaction cannot occur prior to the accurate perception of body type. However, we suggest that accurate perceptions of body type are not necessary for body dissatisfaction to occur. For example, although anorexics' body perceptions are distorted and inaccurate, they are still able to feel dissatisfied with their bodies. In fact, it may be the inaccuracy of their perceptions that spurs the dissatisfaction. If this is so, then very young children, even though they may not accurately perceive their own body types, may be capable of experiencing body dissatisfaction and weight concerns.

It is hypothesized that children as young as six or seven do understand the connection between eating and weight, that a proportion of the children will experience eating and weight concerns, and that feminine children will be more likely to have such concerns.

METHOD

Participants

The participants were 84 children (50 girls and 34 boys) in grades one, three, and five. The first graders were 6–7 yrs. old, third graders were 8–9 yrs. old, and fifth graders were 10–11 yrs. old. Most of the children were white and were from the lower and middle socioeconomic classes. The children were drawn from an elementary school in southeastern Connecticut, and they were allowed to participate in the study only with permission from their parents. Permission was received from 71% of the first graders' parents, 79% of the third graders' parents, and 58% of the fifth graders' parents.

Measures

The Body-Esteem Scale (Mendelson & White, 1982) is a 24-item self-report measure designed for use with children. The items were designed to assess how children feel about themselves and how children believe others view them. Sample items include "I like what I look like in pictures," "I wish I looked better," and "My classmates would like to look like me." The children respond by circling "yes" or "no" for each item. The scale is scored by adding the items that indicate high body-esteem so that high scores on the scale represent high body-esteem. Several items were added to

the end of the scale to assess present and past dieting and restrained eating (questions 25 through 28). These items were not included in the scoring of the scale.

The children's version of the Eating Attitudes Test (ChEAT; Maloney, McGuire, & Daniels, 1988) is an instrument designed to assess children's eating attitudes and dieting behaviors. The authors of the ChEAT modified an existing instrument (EAT; Garner & Garfinkel, 1979) so that it would be appropriate for use with children as young as 8 yrs. Reliability estimates of the ChEAT are quite high, with a Chronbach alpha value of .76 and a test-retest reliability correlation coefficient of .81 (Maloney et al, 1988). The ChEAT was modified for the present study so that the scale could be used with children as young as 5 or 6 yrs. Items on the modified ChEAT include "I am scared about being fat," "I throw up on purpose after I eat," and "I think about getting rid of fat when I exercise." High scores on the ChEAT are indicative of more disordered eating.

The Children's Sex Stereotype Measure (Best, Williams, Cloud, Davis, Robertson, Edwards, Giles, & Fowles, 1977, cited in Williams & Best, 1982) was designed to measure children's knowledge of gender stereotypes. The scale is comprised of short "stories" that describe gender stereotypical traits. The children are shown silhouetted pictures of men and women and are asked to point to the one about which they believe the story is told. For example, the stereotypically masculine trait "strong" corresponds to the following "story": "One of these people is a strong person. They can lift heavy things by themselves. Which is the strong person?" If the children point to the male figure, they demonstrate a knowledge that, stereotypically, men are strong. The stories were modified for the present study such that the children would assign the gender stereotypes to themselves. In this way the researchers could determine the gender-role orientation of each child. Examples of the modified "stories" include "Some people are strong. They can lift heavy things by themselves. Are you like this?" and "Some people depend on others a lot. They like to have others around who can tell them what to do and make the rules. Are you like this?" The questionnaire consists of 32 "stories," 12 of which represent stereotypically feminine traits and 12 of which represent stereotypically masculine traits.

Procedure

The first grade children were interviewed individually by the first author in a private room. Before each interview, the child was asked to answer the questions as honestly as possible and assured that responses would not be told or shown to anyone else, including their parents, teachers, friends, or principal. The experimenter then asked the questions and recorded the child's answers.

The third and fifth graders were administered the questionnaires in a group setting. The anonymity of their answers was stressed as was the importance of giving honest answers. Each child received each of the three measures, and the questions were read aloud in order to set a pace and to help those children who may have had difficulty reading. The children indicated their answers directly on the questionnaires.

A retest was conducted approximately five weeks after the initial testing session in

order to determine test-retest reliability. Upon completion of the retest the study was described in detail and all of the children's questions were answered.

RESULTS

The Children's Sex Stereotype Measure, ChEAT, and Body-Esteem scores were analyzed using a multivariate analysis of variance (MANOVA). The ratings of 77 children were included in the analysis. Seven (four girls and three boys) were excluded because of missing data. The interaction between gender and grade (1st, 3rd, 5th) was not significant. However, there were several main effects.

A main effect for grade was found for both the body-esteem and gender-role variables, Wilks Lambda value = .706, $p < .001$. It is important to note that the masculinity and femininity variables are linearly dependent (as one increases, the other decreases). Therefore, when possible, the subscales will be referred to jointly as "gender-role orientation variables."

Body-esteem scores were found to vary significantly across the three grades, $F(2, 71) = 6.41$, $p = .003$. Marginal means for the first, third, and fifth graders were 18.05, 16.79, and 12.44, respectively. The first graders had the highest body-esteem, and the fifth graders had the lowest. A Tukey test revealed significant differences in body-esteem scores between grades one and five and between grades three and five. The body-esteem scores between grades one and three did not differ significantly.

A main effect for gender-role orientation was found across the three grades, $F(2, 71) = 6.02$, $p = .004$. Marginal means for the femininity subscale were 18.67, 16.67, and 16.91 for the first, third, and fifth graders, respectively. Marginal means for the masculinity subscale were 13.33, 15.33, and 15.09 for the first, third, and fifth graders, respectively. Note that the marginal means of the subscales add up to 32—the total score possible on the Children's Sex Stereotype Measure. A Tukey test demonstrated that significant differences exist in gender-role orientation scores between grades one and three and between grades three and five.

A main effect for gender was found for the gender-role orientation variable, Wilks Lambda value = .790, $p = .001$. Gender-role scores were significantly different for girls and boys regardless of grade, $F(1, 71) = 16.18$, $p < .001$. The marginal mean scores on the femininity subscale were 18.30 for girls and 15.77 for boys. The marginal means on the masculinity subscale were 13.70 for girls and 16.23 for boys.

Both internal reliability and test-retest reliability analyses were performed on each of the three questionnaires used in this study. Chronbach's alphas were calculated on the sample as a whole to investigate internal reliability. The Children's Sex Stereotype Measure was divided into the masculinity and femininity subscales prior to the analysis. The femininity subscale had moderate reliability, $\alpha = .58$, and the masculinity subscale had low reliability, $\alpha = .40$. The small number of items on each subscale (16) may be responsible, in part, for the low internal consistency coefficients. The ChEAT demonstrated a greater internal consistency, yet the reliability was still moderate, $\alpha = .65$. The internal reliability of the Body-Esteem Scale was very high, $\alpha = .91$, and it demonstrated the greatest reliability of the three scales used.

TABLE 1
Pearson Product Moment Correlation Coefficients Between the Femininity and Masculinity
Subscales of the Children's Sex Stereotypes Measure (FEM and MASC),
the Children's Eating Attitudes Test (ChEAT), and the Body-Esteem Scale (BES).

	FEM	MASC	ChEAT	BES
FEM	—			
MASC	-1.00*	—		
ChEAT	.17	-.17	—	
BES	-.03	.03	-.44*	—

* $p < .001$

Pearson product-moment correlation coefficients were calculated to determine test-retest reliability. Subjects' gender-role orientation scores at time one were significantly related to their gender-role orientation scores at time two, $r = .41$, $p < .001$. Scores on the ChEAT, $r = .64$, $p < .001$, and the Body-Esteem Scale, $r = .59$, $p < .001$, were also significantly correlated at times one and two. Although all of the correlations have high levels of statistical significance ($p < .001$), their practical significance is not very high. The practical significance of the Children's Sex Stereotype Measure is particularly low; only 16.6% of the variance is accounted for by this variable. The practical significance of the ChEAT and Body-Esteem Scale is better; these measures account for 41.5% and 34.7% of the variance, respectively.

It was hypothesized that there would be a correlation between femininity scores and scores on the ChEAT, but this relationship was not significant, $r = .17$, $p = .07$. One might expect the relationship between masculinity scores and ChEAT scores to be inversely and significantly correlated. In fact, the correlation between masculinity and ChEAT scores was $r = -.17$, $p = .07$. Thus, the directionality of the relationships was as predicted, but the correlations were not significant. The relatively small sample size ($N = 84$) may be partially responsible for the lack of strength of these relationships. Scores on the ChEAT and the Body-Esteem Scale were found to be negatively and significantly correlated, $r = -.44$, $p < .001$. See Table 1.

A frequencies analysis was performed on the ChEAT and the Body-Esteem Scale to determine the prevalence of eating concerns, dieting behaviors, and poor body-esteem among the children in each grade. Table 2 shows the frequency with which all children reported eating concerns and dieting behaviors.

Selected items that were considered to be representative of the items on the ChEAT are presented. Table 3 illustrates the frequency of these concerns among children in the first, third, and fifth grades.

Representative items from the Body-Esteem Scale are presented in Table 4 to show the children's perceptions of their bodies. Table 5 shows the prevalence of body concerns in the first, third, and fifth graders.

Table 6 illustrates the prevalence of dieting behaviors, eating concerns, and restrained eating. These items were added to the end of the Body-Esteem Scale.

TABLE 2
Percentage of Children ($N = 84$) Who Answered "Every Day," "Some Days," and "Never" to Selected Items on the Children's Eating Attitudes Test (ChEAT).

Item	Every Day	Some Days	Never
1. I am scared about being fat.	20.2	26.2	48.8
2. I stay away from eating when I am hungry.	7.1	28.6	61.9
4. I have started eating and eating and eating and felt like I might not be able to stop.	10.7	23.8	64.3
6. I am aware of the fat in the foods I eat.	25.0	23.8	48.8
9. I throw up on purpose after I eat.	6.0	8.3	84.5
10. I feel like I have done something bad after I eat.	2.4	22.6	72.6
11. I think about wanting to be thinner.	33.3	22.6	41.7
12. I think about getting rid of fat when I exercise.	40.5	28.6	27.4
17. I eat diet foods.	10.7	41.7	45.2
22. I feel uncomfortable after eating sweets.	16.7	33.3	47.6
23. I have been dieting.	10.7	36.9	50.0
26. I want to throw up after eating.	7.1	15.5	75.0

DISCUSSION

It was hypothesized that children as young as six or seven do understand the connection between eating and weight, that a proportion of these children do experience eating and weight concerns, and that feminine children are more likely to experience such concerns. The results demonstrated that the children studied were aware of the connection between eating and weight and that a large proportion of them had concerns about eating, their bodies, and their weights. However, the more feminine children did not express more concerns than the other children.

It is unlikely that children growing up in American society will fail to recognize the importance placed on being thin and attractive. The results of the present study support those of other studies (Brenner & Hinsdale, 1978; Goldfield & Chrisler, 1995; Lerner & Gellert, 1969; Lerner & Schroeder, 1971; Staffieri, 1967, 1972) that have demonstrated that children express reliable aversions toward the fat physique. The percentage of children who responded "no" to the item "I wish I were fatter" was 94%. The percentage of children who responded "every day" to the items "I am scared about being fat," "I think about wanting to be thinner," and "I wish I were thinner" were

TABLE 3
Percentages of First Graders (N = 25), Third Graders (N = 34), and
Fifth Graders (N = 25) Who Answered “Never” to Selected Items on the
Children’s Eating Attitudes Test (ChEAT).

Item	Never		
	First	Third	Fifth
1. I am scared about being fat.	52.2	65.6	32.0
2. I stay away from eating when I am hungry.	87.5	54.5	52.0
4. I have started eating and eating and eating and felt like I might not be able to stop.	58.3	67.6	68.0
6. I am aware of the fat in the foods I eat.	82.6	35.3	40.0
9. I throw up on purpose after I eat.	87.5	88.2	80.0
10. I feel like I have done something bad after I eat.	91.7	73.5	58.3
11. I think about wanting to be thinner.	45.8	52.9	25.0
12. I think about getting rid of fat when I exercise.	26.1	29.4	29.2
17. I eat diet foods.	50.0	44.1	45.8
22. I feel uncomfortable after eating sweets.	54.2	52.9	37.5
23. I have been dieting.	60.9	50.0	44.0
26. I want to throw up after eating.	95.7	76.5	60.0

20.2%, 33.3%, and 54.8%, respectively. Thus, the children clearly understand the societal pressures to fit and the advantages that derive from fitting the thin body ideal, and they desire to meet this ideal.

High percentages of children were found to have low body-esteem. Although body-esteem scores are significantly lower in the fifth graders, the first and third graders also experience low body-esteem. For example, 39.1% of the first graders and 24.2% of the third graders answered “no” to the item “Kids my age like my looks.” Nearly half of the first (47.8%) and third (42.2%) graders wished they looked better, a sizable percentage (first graders 17.4%, third graders 30.3%) often feel ashamed of how they look, and many (first graders 39.1%, third graders 44.1%) would change a lot of things about their looks if they could. The body-esteem scores of the fifth graders were significantly lower than the already low body-esteem of the younger subjects. Thus, these findings suggest considerable body dissatisfaction in pre-pubertal children.

Clifford (1971) proposed that body dissatisfaction develops because of body changes that occur during adolescence. However, our results support social learning theory. Children learn from their families, teachers, friends, and the media that fat is “bad”

TABLE 4
Percentages of Children ($N = 84$) Who Answered "No" and "Yes" to Selected Items on the Body-Esteem Scale.

Item	No	Yes
1. I like what I look like in pictures.	26.2	71.4
2. Kids my age like my looks.	29.8	66.7
3. I'm pretty happy about the way I look.	21.4	76.2
4. Most people have a better body than I do.	51.2	45.2
5. My weight makes me happy.	35.7	60.7
7. I wish I were thinner.	54.8	41.7
8. There are a lot of things I'd change about my looks if I could.	45.2	54.2
11. I wish I looked better.	46.4	50.0
12. I often feel ashamed of how I look.	63.1	32.1
13. Other people make fun of the way I look.	76.2	20.2
15. I'm looking as nice as I'd like to.	22.6	75.0
17. I wish I were fatter.	94.0	3.6
18. I often wish I looked like someone else.	54.8	42.9
19. My classmates would like to look like me.	76.2	21.4
22. I'm as nice looking as most people.	39.3	58.3
24. I worry about the way I look.	70.2	27.4

and thin is "good," and they learn this lesson well before adolescence. The children learn that their bodies should look like the thin, albeit unrealistic, body ideal, and then become dissatisfied with their imperfect, yet normal, bodies.

Body-esteem has been found to be related to self-esteem (Mendelson & White, 1982). Thus, one could expect that the children in the present study who exhibited low body-esteem would also have low self-esteem. The significant difference in body-esteem between the third and fifth graders parallels the drop in self-confidence that Carol Gilligan and her colleagues (Gilligan, Lyons, & Hanmer, 1990) found in 11- and 12-year-old girls. However, we did not find gender differences in body-esteem scores in our study.

Many children expressed a desire to be thinner, yet few of them were actually overweight. The percentages of first, third, and fifth graders who responded "yes" to the item "I wish I were thinner" were 36.3%, 35.3%, and 68%, respectively. Not only did high numbers of children express a desire to be thinner, but many reported dieting (21.7% of the first graders, 12.1% of the third graders, and 16% of the fifth graders) or engaging in dieting behaviors. Nearly 9%, 18%, and 28% of first, third, and fifth graders, respectively, claimed that they had been on a diet in the past. One quarter of

TABLE 5
Percentages of First ($N = 25$), Third ($N = 25$), and Fifth ($N = 34$) Graders Who Answered "Yes" to Selected Items on the Body-Esteem Scale.

Item	Yes		
	First	Third	Fifth
1. I like what I look like in pictures.	91.3	76.5	52.0
2. Kids my age like my looks.	60.9	75.8	68.0
3. I'm pretty happy about the way I look.	87.0	79.4	68.0
4. Most people have a better body than I do.	21.7	51.5	64.0
5. My weight makes me happy.	81.8	67.6	40.0
7. I wish I were thinner.	36.4	35.3	68.0
8. There are a lot of things I'd change about my looks if I could.	39.1	44.1	80.0
11. I wish I looked better.	47.8	42.4	68.0
12. I often feel ashamed of how I look.	17.4	30.3	54.2
13. Other people make fun of the way I look.	26.1	12.1	28.0
15. I'm looking as nice as I'd like to.	91.3	82.4	56.0
17. I wish I were fatter.	0.0	5.9	4.0
18. I often wish I looked like someone else.	26.1	35.3	72.0
19. My classmates would like to look like me.	27.7	26.5	16.0
22. I'm as nice looking as most people.	56.5	67.6	52.0
24. I worry about the way I look.	13.0	20.6	52.0

all first graders, nearly one third of all third graders, and nearly one half of all fifth graders believed that they should be on a diet. Nearly 11% of the children reported having eaten diet foods. These statistics suggest that not only do children express a desire to be thin, but they have at least some awareness of a means to lose weight, i.e., dieting. Parents, who are largely responsible for the purchase and preparation of their children's food, may influence their children's attitudes and behaviors by stressing the importance of low fat and sugar-free foods and/or by actively encouraging their children to diet. It is important for parents to become aware of their influence on their children's attitudes toward weight and eating.

A sizable percentage of the children reported engaging in eating disordered behaviors. Four percent and 7.1% of first graders reported throwing up on purpose after they eat and wanting to throw up after they eat, respectively. These unlikely reports may have been the results of the children's attempts to "impress" the experimenters. It is also possible that some children did not understand the concept of "on purpose" and confused purposeful vomiting with an illness that arose after eating. However, one

TABLE 6
Percentages of First ($N = 25$), Third ($N = 25$), and Fifth ($N = 34$) Graders Who Indicated
Dieting Behaviors, Dieting Concerns, and Restrained Eating.

Item	First		Third		Fifth	
	No	Yes	No	Yes	No	Yes
I am on a diet.	78.3	21.7	87.9	12.1	84.0	16.0
I have been on a diet in the past.	91.3	8.7	82.4	17.6	72.0	28.0
I should be on a diet.	73.9	26.1	70.6	29.4	60.0	40.0
I don't eat some foods that I like because I am afraid they will make me fat.	78.3	21.7	70.6	29.4	48.0	52.0

cannot ascertain which children's answers, if any, do not reflect reality. No third graders reported purging behavior. However, 16% and 12% of fifth graders reported throwing up on purpose after eating and wanting to throw up after eating, respectively. These percentages are not dissimilar from those found in prevalence studies of bulimia in high school and college populations.

One item assessed bingeing behavior, i.e., "I have started eating and eating and eating and felt like I might not be able to stop." The percentages of "every day" responses to this item for first, third, and fifth graders were 12.5%, 14.7%, and 10%, respectively. Restrained eating was evaluated by the item "I don't eat some foods that I like because I am afraid they will make me fat." The percentages of first, third, and fifth graders responding "yes" to this item were 21.7%, 29.4%, and 52%, respectively. Thus, these results suggest that children as young as six or seven may already be engaging in eating disordered behaviors.

Although it was predicted that more feminine children would report more disordered eating, this was not found to be the case. However, the direction of the correlation was as predicted—femininity was positively, albeit not significantly, and masculinity was negatively, albeit not significantly, related to ChEAT scores. Lack of significance may have been related to sample size, problems inherent in the femininity subscale, or both. The femininity subscale of the Children's Sex Stereotype Measure consists of such items as "Some people are weak. They need help to lift heavy objects. Are you like this?", "Some people are shy. They are quiet and afraid to talk to others. Are you like this?", and "Some people depend on others a lot. They like to have others around who can help them figure out what to do and to make the rules. Are you like this?". Children, regardless of gender, who are dependent on their parents for many things may endorse such items. Thus, the high femininity subscale scores may be reflective of characteristics ordinarily associated with children (e.g., lack of physical strength, shyness, dependence on adults). This confounding of the femininity subscale may be responsible, at least in part, for the relative lack of strength of the relationship between femininity and ChEAT scores. This possibility is supported by the significant decrease

in femininity scores between the first and third graders. Third and fifth grade students, who are less dependent on adults or believe themselves to be so, endorsed fewer of the feminine items.

ChEAT scores and body-esteem scores were found to be inversely related. Thus, children who had high scores on the ChEAT were likely to have low body-esteem scores. This relationship is similar to that found by Timko et al. (1987) between the importance of appearance and disordered eating in college students. Future research might examine the causality of this relationship. Does disordered eating lead to low body-esteem? Does low body-esteem cause one to engage in disordered eating behaviors? Do they develop together, or are they both triggered by some third variable?

Unfortunately, differences in methodology were necessary in this study because first graders cannot read. Therefore, they were tested individually, whereas the third and fifth graders could be tested in a group setting in the interest of time. The individual interview format may have caused the first graders to be more self-conscious about their answers, and thus less likely to give honest responses. The first graders may have also been more susceptible to subject biases; they may have attempted to surprise or impress the interviewer.

In conclusion, the results of this study suggest that children learn, prior to puberty, the importance of looking good and being thin. The children expressed concerns about their bodies and their appearance. Some reported engaging in disordered eating behaviors. Many are dieting or believe they should be dieting. Future research should identify which children are particularly susceptible to eating and weight concerns so that appropriate early interventions may be developed and applied. School officials must recognize the need for programs that address children's concerns about eating, weight, and body image. The implementation of such programs may reduce the number of children who develop eating disorders and body image disturbances in their adolescent years.

NOTES

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