

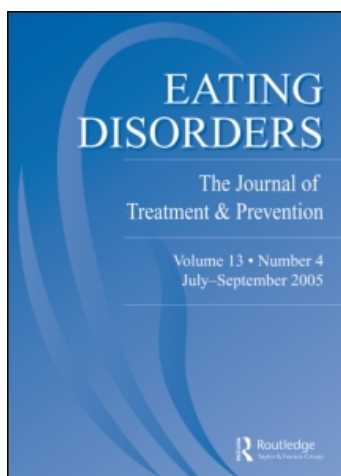
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Parents as Protective Factors in Eating Problems of College Women

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This study examined how parents can protect their college-aged daughters from disordered eating. Specifically, the influence of the following variables on disordered eating was investigated: parental emotional availability and acceptance, parents' critical messages about weight and shape, acceptance of sociocultural attitudes about appearance, self-esteem, and early menarche. Participants included a random sample of 211 female undergraduates who completed an Internet questionnaire. Using multiple regression, messages heard from mothers and fathers were found to contribute to disordered eating, and sociocultural attitudes acted as a mediator for the effects of mothers' and fathers' messages on disordered eating. Implications are discussed.

Female college students have an increased prevalence of eating disorders and eating-related pathology in comparison to the general population, with 6% of these women meeting criteria for the diagnosis of anorexia or bulimia and 25% to 40% displaying disordered eating and attitudes (Bishop, Bauer, & Baker, 1998; Douglas et al., 1997; Kurtzman, Yager, Landverck, Wiesmeier, & Bodurka, 1989; Tsai, Hoerr, & Song, 1998). The most commonly reported behaviors among this population are regular binge-eating, daily exercise, and occasional purging, consistent with a diagnosis of Eating Disorder Not Otherwise Specified (Schwitzer, Rodriguez, Thomas, & Salimi, 2001).

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Although the prevalence and the population with eating pathology should in no way be minimized or ignored, the rates and demographics suggest that most college women do not have a clinical eating disorder. Many more college women engage in unhealthy eating patterns than are accounted for in the statistics provided, but their lives are not as deeply impacted by these patterns and evaluations as are the lives of people who meet the clinical criteria for eating disorders. Additionally, there are college women who are not plagued with concerns about eating and appearance. Whether they have sub-clinical levels of symptoms or no symptoms at all, the majority of college women will not develop anorexia, bulimia, or an eating disorder not otherwise specified.

Researchers of resilience to eating disorders work to uncover the protective factors by which people who do not develop an eating disorder arrive at such outcomes. Protective factors are the mechanisms through which resilience to eating disorders and other unhealthy outcomes are fostered. Although not consistently defined within resilience literature (Kirby & Fraser, 1997), protective factors are generally considered to be mediators or moderators of the relationship between risk factors and negative outcomes (Shisslak & Crago, 2001; Werner, 2000). Numerous studies or models have examined risk factors for the onset of eating problems, often identifying awareness and internalization of sociocultural attitudes, low self-esteem, high BMI, and early menarche as risk factors for disordered eating (e.g., Stice, 2002; Wade & Lowes, 2002). Sadly, there is a lack of research on overall protective factors and resilience in relation to eating issues (Crago, Shisslak, & Ruble, 2001; Littleton & Ollendick, 2003; Shisslak & Crago, 2001).

One area out of which both risk and protective factors arise is within the familial context, particularly the characteristics and roles of parents. Many studies and literature reviews have focused on parents as risk factors for the development of eating disorders in their children (e.g., Park, Senior, & Stein, 2003; Patel, Wheatcroft, Park, & Stein, 2002; Wertheim, Martin, Prior, Sanson, & Smart, 2002). Several researchers have pointed out, though, that there is much less known about parents as protective factors for eating pathology and the role parents play in resilience to these conditions (Byely, Archibald, Graber, & Brooks-Gunn, 2000; Fonseca, Ireland, & Resnick, 2002).

Research has yielded mixed results regarding how various aspects of the parent-daughter relationship relate to or affect eating pathology in the daughter. Inconsistent parental affection, for example, may or may not be associated with presence of eating-disorder symptomatology in college students (Furr & Ross, as cited by Furr & Ross, 2006; Ross & Gill, 2002; Scalf-McIver & Thompson, 1989). Other areas of the parent-child relationship remain to be explored with respect to disordered eating. For instance, although parental emotional availability has been demonstrated to impact individual wellbeing (Lum & Phares, 2005), this construct has not been investigated with respect to offspring and maladaptive eating. The effects of any parental factors, for that matter, have not been robustly established as risk or protective factors in relation to eating pathology.

The purpose of this study was to uncover how parents can act as protective factors for eating problems in college women. Although a number of parental variables have been identified as being predictors of eating disturbances in offspring, only some of these variables lend themselves to intervention. For example, attachment styles established early in life may not be very susceptible to change; therapists may, however, work with parents to increase their displayed acceptance of their children or their emotional availability if the presence of these aspects of the parent-child relationship is empirically shown to be correlated with healthier eating in daughters. Pertaining to research methods, MacKinnon, Krull, and Lockwood (2000) state that variables conceptualized as mediators preferably are variables that can be changed. In light of this notion, aspects of the parent-daughter relationship that might be altered during intervention were chosen. Specifically, the research question for this study posited that low levels of perceptions of parental acceptance, emotional availability, and messages promoting the pursuit of thinness would have mediating-like effects by significantly reducing or eradicating the relationships between identified risk factors (high awareness/internalization of sociocultural attitudes, low self-esteem, BMI, and menarche) and eating pathology for college women.

METHOD

Participants

Participants were women in their first and second undergraduate years at two mid-sized, public universities in California; first- and second-year students were chosen as the target population because of the greater likelihood that these students lived at home or had recent memories of living at home with their parents. Data from 211 female participants were used for analyses. First-year students comprised 62.5% of the sample, whereas 37.0% of the sample were second-year students; modal age was 19 years old. Ethnically, 55.9% of the sample self-identified as White, 19.0% as Asian/Pacific Islander, 10.9% as Chicano/Latino/Hispanic, 2.8% as Black/African American, 1.4% as Middle-Eastern, 0% as Native American, and 9.5% as Other/Mixed. Regarding sexual orientation, 94.3% self-identified as heterosexual, 4.3% as bisexual, 0.9% as other, and 0% as lesbian/gay/homosexual.

Instruments

Random selection was used to determine the order in which the questionnaires were presented; the surveys assessing extant risk factors were administered before the parental measurements. Participants were also asked to provide demographic information, age of menarche, and height and weight (to calculate body mass index).

SOCIOCULTURAL ATTITUDES TOWARDS APPEARANCE QUESTIONNAIRE (SATAQ)

The SATAQ was used to assess participants' sociocultural attitudes about appearance. The SATAQ is a 14-item questionnaire that measures awareness and internalization of sociocultural values about thinness and appearance (Heinberg, Thompson, & Stormer, 1995). The awareness subscale consists of six questions, such as, "It's important for people to work hard on their figures/physiques if they want to succeed in today's culture" (Heinberg et al.). The internalization subscale involves eight questions ($\alpha = 0.88$), including, "Music videos that show thin women make me wish I were thin" (Heinberg et al.). Participants respond to items on a 5-point Likert scale, with 1 indicating *completely disagree* and 5 indicating *completely agree*. Several items are reverse scored, and a total score is calculated by summing the items. Higher scores indicate more awareness and internalization of sociocultural attitudes about appearance. With a previous sample, there was strong internal consistency reliability for the awareness subscale ($\alpha = 0.71$) and the internalization subscale ($\alpha = 0.88$; Heinberg et al.). Cronbach's alpha for the present sample was 0.85.

ROSENBERG SELF-ESTEEM SCALE (RS-E)

The RS-E was used to assess self-esteem. The RS-E is a 10-item scale that assesses self-acceptance and self-worth (Rosenberg, 1965). The RS-E has been used in a wide variety of populations, including college students (Hall, Peden, Rayens, & Beebe, 2004), and has shown good convergent and discriminant validity (Crandal, 1973). Examples of items include "On the whole, I am satisfied with myself;" and "I feel that I'm a person of worth, at least on an equal plane with others." Responses are recorded on a 4-point Likert scale, with 0 indicating *strongly disagree* and 3 indicating *strongly agree*. Several items are reverse scored, and a total score is calculated by summing the items. Higher scores indicate higher self-esteem. The RS-E produced a Guttman scale reproducibility coefficient of 0.92 (Crandal, 1973). The Cronbach's alpha coefficient for the present sample was 0.88.

LUM EMOTIONAL AVAILABILITY OF PARENTS (LEAP)

The LEAP was used to assess perceptions of maternal and paternal emotional availability. The LEAP is a 15-item questionnaire that asks respondents to rate their mothers and fathers on a series of statements that inquire about parental emotional availability. Examples of items include "shows she/he cares about me" and "is willing to talk about my troubles," which are rated on a 6-point Likert scale with 1 indicating *never* and 6 indicating *always* (Lum & Phares, 2005). Responses are summed to create a cumulative score, with higher scores reflecting higher levels of parental emotional availability.

The LEAP has demonstrated good reliability and convergent validity with other measures that assess similar, perceived parental characteristics. According to Lum and Phares (2005), Cronbach's alpha coefficients of the mother and father forms were generated to assess reliability during creation of the instrument (mother: alpha = 0.98; \bar{M} = 4.20; \underline{SD} = 0.26; father: alpha = 0.98; \bar{M} = 4.10; \underline{SD} = 0.30). Cronbach's alpha coefficients for this sample were 0.97 (mother) and 0.98 (father).

THE PARENTAL ACCEPTANCE/REJECTION (ABBREVIATED) QUESTIONNAIRE (PARQ-M- MOTHER VERSION; PARQ-F- FATHER VERSION)

The abbreviated PARQ was used to assess perceptions of maternal and paternal acceptance. This version of the PARQ is a copyrighted, 24-item questionnaire that inquires about respondents' perceptions of acceptance and rejection by their mother and father (Rohner & Khaleque, 2005). The questionnaire consists of four subscales—parental warmth, hostility, neglect, and undifferentiated rejection. Participants responded to statements on a 4-point Likert scale ranging from *almost always true* to *almost never true*. The parental warmth subscale was reverse-coded, and scores from the dimensions were summed to generate a total score; participants with higher scores are considered to view their parents as more rejecting than accepting. Studies of the PARQ support the convergent validity of the PARQ (Khaleque & Rohner, 2002; Rohner & Khaleque, 2005). Reliability studies across various ethnic groups in the United States produced Cronbach's alpha coefficients ranging from 0.89–0.95 (Khaleque & Rohner, 2002). For the present sample, Cronbach's alpha coefficients were 0.95 (PARQ-M) and 0.96 (PARQ-F).

PARENTAL MESSAGES CONCERNING WEIGHT AND SHAPE

Perceptions of parental messages surrounding weight and shape were assessed using the questions developed and utilized by Levine, Smolak, Moodey, Shuman, and Hessen (1994). A 5-point Likert scale was provided on which participants rated the level of concern they perceived their mother and father showed that she may become too fat, in addition to how important it is that she be thin. On a second scale, participants were given a 6-point Likert scale to answer questions about how often each of their parents is on a diet, how important it is to each parent to be thin, and how important appearance is to each parent in general; this differs from Levine et al., who assessed only participants' perceptions of their mothers' dieting and pursuit of thinness. Levine et al. report Cronbach's alpha coefficients of 0.82 for the questions regarding parental concerns about the participant's weight and 0.69 for questions regarding maternal dieting and pursuit of thinness. For the present sample, mean and composite scores were created for each

parent and Cronbach's alpha coefficients for each set of questions were 0.80 (mother) and 0.83 (father).

EATING ATTITUDES TEST-26 (EAT-26)

The EAT-26 was used to assess disordered eating. It is a 26-item questionnaire that assesses various maladaptive eating-related cognitions and behaviors (Garner, Olmsted, Bohr, & Garfinkel, 1982). The EAT-26 consists of three subscales: Dieting, Bulimia and Food Preoccupation, and Oral Control. Sample items include, "am terrified of being overweight," "vomit after I eat," and "like my stomach to be empty." Participants indicated their responses on a 6-point Likert scale, with 1 indicating *always* and 6 indicating *never*. Twenty-five of the items were reverse-coded to create a mean and composite score for analysis, with higher scores indicating disordered eating. The EAT-26 is an abbreviated version of the 40-item EAT and has demonstrated validity with clinical and nonclinical samples as a screening assessment of eating problems. Furnham & Husain (1999) reported that the EAT-26 has high internal consistency (alpha = 0.90 for people with anorexia; alpha = 0.83 for female controls). Cronbach's alpha coefficient of the EAT-26 for this study was 0.90.

Procedure

Random samples of e-mail addresses of 1,000 female first-years and second-years were obtained from administrative offices on both campuses. Students were contacted via e-mail and invited to participate in an online survey. On the survey website, students were presented with an informed consent letter, after which participants had the option of entering a raffle for a \$100 gift certificate. Participants then completed the measures, and responses were submitted anonymously.

RESULTS

Preliminary Analyses

Alpha levels (alpha = 0.05), as well as a Power level of 0.80 were chosen in order to determine better the effects of the independent variables. An a priori power analysis indicated that a sample size of 172 would uncover a medium effect size (0.015) using 10 predictors in multiple regression. The means, standard deviations, and range of scores for each measure utilized in this study are presented in Table 1.

Original plans for data analysis included incorporation of participants' BMIs as a predictor variable; however, quite a few participants (n = 81) did

TABLE 1 Means, Standard Deviations and Range of Scores for Measured Variables

Variables	<i>M</i>	<i>SD</i>	Observed range	Scale range
1. Eating problems	63.04	16.57	31–112	26–156
2. Early menarche (age in years)	12.67	1.35	8–16	n/a
3. Self-esteem	20.44	4.81	6–30	0–30
4. Sociocultural attitudes	46.26	8.26	25–65	14–98
5. Mother emotional availability	73.98	16.13	21–90	15–90
6. Mother eating/appearance messages	14.71	4.86	5–27	5–28
7. Mother acceptance/rejection	33.43	11.41	24–88	24–96
8. Father emotional availability	66.00	19.78	15–90	15–90
9. Father eating/appearance messages	11.31	4.56	5–27	5–28
10. Father acceptance/rejection	36.05	13.78	24–90	24–96

not respond to both questions; thus their BMI scores could not be calculated. In order to maximize the use of the data collected, participants with incomplete BMI data were kept in the sample and BMIs were not included in data analyses.

Test of the Mediation Model

The mediating role of the parental factors was evaluated utilizing multiple regression, as recommended by Baron and Kenny (1986) and Frazier, Tix, and Barron (2004). Methods used in this study were modified from those used by Wade and Lowes (2002), a study with a similar design to that of the present study.

In order to satisfy preliminary criteria for mediation, zero-order Pearson correlations were used to determine the presence of significant relationships among the risk factors, the parental protective factors, and eating problems (Baron & Kenny, 1986; Reid & Purcell, 2004). All correlations and sample sizes for the correlations are presented in Table 2. Similar to Wade and Lowes (2002) as well as Reid and Purcell (2004), only risk factors that were correlated with eating problems were entered into the model. No significant correlations were detected between EAT-26 score and menarche, LEAP-M, LEAP-F, PARQ-M, or PARQ-F, hence these variables were not included in further analyses.

The first simultaneous multiple regression equation entered the variables of sociocultural attitudes about appearance (SATAQ) and self-esteem (RS-E) in order to predict eating problems (EAT-26). The predictive power of the model was found to be significant, $R^2 = .341$, $F(2, 195) = 50.405$, $p < .05$. However, only sociocultural attitudes was found to be a significant predictor of eating problems, $t(195) = 8.559$, $p < .05$; self-esteem was not a significant predictor of eating problems, $t(195) = -1.545$, $p = .124$. Table 3 displays the results of this regression analysis.

TABLE 2 Zero-Order Pearson Product Correlations Among Measured Variables

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Eating problems	–										
2. Early menarche	-.02	–									
3. Self-esteem	-.32*	.12*	–								
4. Sociocultural attitudes	.59*	-.06	-.40*	–							
5. Mother emotional availability	-.04	.09	.20*	.02	–						
6. Mother eating/appearance messages	.25*	-.06	-.11	.25*	-.19*	–					
7. Mother acceptance/rejection	.08	-.10	-.21*	.04	-.70*	.26*	–				
8. Father emotional availability	-.05	.07	.24*	-.03	.62*	-.22*	-.51*	–			
9. Father eating/appearance messages	.25*	-.11	.04	.23*	-.05	.41*	.12*	-.10	–		
10. Father acceptance/rejection	.05	-.11	-.19*	.09	-.46*	.27*	.61*	-.80*	.19*	–	
11. BMI	.07	-.21*	.05	-.05	-.13	.15*	.05	-.12	.32*	.12	–

* $p < .05$ (1-tailed).

**Based on the number of participants with complete data for each variable, n ranged from 191–211 for correlations among variables 1–10, and ranged from 122–130 for correlations involving variable 11.

TABLE 3 Simultaneous Regression Analysis for Risk Factors and Eating Problems

Variables	R^2	F	β	SE	t	P
Self-esteem	.341	50.405*	-.0332	0.215	-1.545	.124
Sociocultural attitudes			1.079	0.126	8.559*	.000

* $p < .05$.

The second simultaneous multiple regression equation entered maternal and paternal messages about weight and shape (Messages-M and Messages-F) into the regression equation with the aforementioned putative risk factors, with eating problems as the dependent variable.

The model was significantly improved by the additions, $R^2 = .365$, $F(4, 193) = 27.679$, $p < .05$; R^2 change = .024, $F_{\text{increase}}(2, 193) = 3.606$, $p < .05$. However, neither mothers' messages, $t(193) = 1.235$, $p = .218$, nor fathers' messages, $t(193) = 1.740$, $p = .083$, was a significant predictor of eating problems. Sociocultural attitudes about appearance remained a significant predictor, $t(193) = 7.474$, $p < .05$, whereas self-esteem remained a nonsignificant predictor, $t(193) = -1.755$, $p = .081$. Thus neither full nor partial mediation

occurred with entry of the parental variables into the model. Table 4 presents a summary of the second regression equation.

Frazier et al. (2004) suggest testing mediational models by entering predictor variables as mediators and mediators as predictors. Thus, two more multiple regression equations were run with mothers' and fathers' messages entered as explanatory variables and self-esteem and sociocultural attitudes about beauty treated as mediating-like variables in order to thoroughly investigate the relationships of the risk factors, parental variables, and participants' eating patterns. Tables 5 and 6 display the results of these two equations. Regressing eating problems on mothers' messages and fathers' messages resulted in a significant model, $R^2 = .097$, $F(2, 195) = 10.460$, $p < .05$. Mothers' messages was a significant predictor of eating problems, $t(195) = 2.552$, $p < .05$; fathers' messages was a significant predictor, as well, $t(195) = 2.418$, $p < .05$. Inclusion of sociocultural attitudes and self-esteem produced a significant improvement in the model's prediction of eating problems, $R^2 = .365$, $F(4, 193) = 27.679$, $p < .05$; R^2 change = .298,

TABLE 4 Simultaneous Regression Analysis for Risk Factors, Parental Variables, and Eating Problems

Variables	R ²	F	β	SE	t	P
Self-esteem	.365	27.679*	-0.377	0.215	-1.755	.081
Sociocultural attitudes			0.974	0.130	7.474*	.000
Mother messages			0.269	0.217	1.235	.218
Father messages			0.412	0.237	1.740	.083

* $p < .05$.

TABLE 5 Simultaneous Regression Analysis for Parental Variables and Eating Problems

Variables	R ²	F	β	SE	t	P
Mother messages	.097	10.460*	0.645	0.253	2.552*	.011
Father messages			0.663	0.274	2.418*	.017

* $p < .05$.

TABLE 6 Simultaneous Regression Analysis for Parental Variables, Risk Factors, and Eating Problems

Variables	R ²	F	β	SE	t	P
Mother messages	.365	27.679*	0.269	0.217	1.235	.218
Father messages			0.412	0.237	1.740	.083
Self-esteem			-0.377	0.215	-1.755	.081
Sociocultural attitudes			0.974	0.130	7.474*	.000

* $p < .05$.

$F_{\text{increase}}(2, 193) = 40.644, p < .05$. As in the original model, self-esteem was not a significant predictor, $t(193) = -1.755, p = .081$, but sociocultural attitudes was significant, $t(193) = 7.474, p < .05$. The contribution of mothers' messages became nonsignificant, $t(193) = 1.235, p = .218$, as did fathers' messages, $t(193) = 1.740, p = < .083$. Thus full mediation occurred with entry of the sociocultural attitudes variable into the model.

DISCUSSION

The purpose of this study was to evaluate how parental emotional availability, parental acceptance, and messages from parents about weight and shape might serve as protective factors of problematic eating patterns in first and second-year undergraduate women. This study attempted to provide balance to risk and resilience research as well as knowledge that can be utilized in the development of prevention and intervention efforts surrounding disordered eating.

The results indicate that what both parents say about weight and shape is related to their college-aged daughters' eating problems and their awareness and internalization of sociocultural ideas about beauty. Low levels of hearing messages about weight and shape from mothers and fathers were related to lower levels of unhealthy eating. Although verbal communications from parents about appearance are related to daughter's eating pathology—similar to findings of Cohen (1996)—the importance of this relationship is diminished when awareness and internalization of sociocultural attitudes is taken into account. In contrast to the original hypothesis of the present study, the influence of awareness and internalization of sociocultural attitudes remained a key predictor of eating problems even when self-esteem and parental messages were considered. Furthermore, the effects of sociocultural attitudes' impact on eating did not appear to be transmitted via daughters' perceptions of their mothers' and fathers' verbalizations about dieting and appearance. However, the test of the model suggests that awareness and internalization of sociocultural attitudes act as a pathway for the impact of perceived parental messages on disordered eating. It is imperative to uncover sequencing of each variable in order to determine which variable acts as a predictor and which acts as a mediator. It is possible that additional studies would find that parental messages about weight and shape foster the awareness and internalization of sociocultural attitudes about beauty and mold how daughters begin to identify as what they "should" look like and that once this process has occurred daughters' internalization of sociocultural attitudes acts as a mediator of various phenomena's relationships with eating.

It is noteworthy to mention the nature of the construct of parental messages assessed by this study. The questions to which participants responded

regarding both maternal and paternal messages about weight and shape focused on negative or detrimental comments. It is unclear, however, as to how positive or encouraging comments about weight and shape play a role in protective processes as these types of comments were not assessed. Unfortunately, no extant scales pertaining to positive comments from mothers and fathers were available.

Parental emotional availability and acceptance did not relate to daughters' eating patterns. These results contradict other studies' implications regarding mothers' effects on daughters' eating. Dominy, Johnson, & Koch (2000) did not detect a relationship between binge-eating disorder in obese women and perceived maternal rejection. However, Byely et al. (2000) as well as Swarr and Richards (1996) found that positive mother-daughter relationships correlate with healthier eating patterns within daughters. Correspondingly, the lack of significant relationships between daughters' eating and paternal emotional availability as well as acceptance conflict with the few extant studies that have included paternal variables in their examinations of eating pathology. Dominy et al. found a significant, negative relationship between perceptions of paternal acceptance and binge-eating among obese women. Swarr and Richards (1996), however, found that healthier eating patterns were associated with positive father-daughter relationships for preadolescent and adolescent girls. Given that the present study did uncover significant relationships among emotional availability and acceptance from both parents and self-esteem, these parental variables should not be dismissed as unimportant to college women altogether. Despite this investigation's failure to find emotional availability or acceptance from either parent correlated with their daughters' unhealthy eating, it would be advantageous for future studies of college women's eating and general wellbeing to continue to include parental variables.

It was surprising that self-esteem and menarche did not predict or correlate with eating problems, respectively. The negative correlation between self-esteem and unhealthy eating uncovered in this study is congruent with that of researchers who found this relationship in younger female samples (e.g., Wade & Lowes, 2002). The literature about menarche has been somewhat more mixed (Graber & Brooks-Gunn, 1996; Stice, 2002; Striegel-Moore & Cachelin, 1999); the findings of this investigation support Stice's argument that early menarche is not a risk factor for eating pathology. The impact of self-esteem and menarche on undergraduate females' eating problems might work through different pathways than have been conceptualized for other populations. The construct of self-esteem, although related to eating problems, might not be a predictor of unhealthy eating within the presence of other variables. It is possible that self-esteem becomes encompassed by the impact of awareness and internalization of sociocultural attitudes, particularly with young adulthood being a time for social development and seeking to be accepted by peers. It is also possible that self-esteem is influenced

by eating pathology, or that the constructs impact each other mutually. Menarche and the effects of early menarche, such as earlier weight-gain, appear to not be as salient for college women as it is for younger girls; models that incorporate menarche as a proximal predictor of disordered eating would not be as applicable for college women. The relationship between self-esteem and eating, as well as the relationship between menarche and eating, remain complex.

Several implications arise as a product of this project. The results of this study suggest that primary and secondary prevention efforts pertaining to the development of disordered eating should incorporate education of parents regarding the impact of messages from society and themselves about what constitutes beauty. Such efforts can include discussion of the influence of verbal communications as well as environmental cues that parents might provide in their homes, such as magazines or television shows that promote the thin-ideal. Interventions with college-aged daughters, too, should involve exploration of and healing from critical statements perceived from parents and society as well as learned attitudes and behaviors from parents. Such interventions can take place in a variety of contexts, such as individual counseling or family therapy.

Limitations of this study pertain to methodology, location, and variables not included in analyses. The use of self-report renders the study vulnerable to recall bias. This might be particularly problematic for the questionnaires about participants' parents. These questionnaires measured participants' perceptions of parental attitudes and behaviors; participants' parents might have responded differently to these assessments about themselves, particularly in light of literature that suggests parent-child disagreement about the familial environment. The location of the study should be taken into consideration in the generalization of its results, too. The sample consisted of undergraduate females who matriculate at universities in coastal communities. The phenomena of eating pathology might be of a different nature and severity for this population due to the style of dress and recreational activities typical in Southern California. The potential importance of variables not selected to be included in analyses confines this study's results, as well. The relationships examined in this research might be impacted by factors such as ethnicity and sexual orientation. For example, the work of Furnham and Hussain (1999) demonstrates that the effects of parent-child conflict and care on disordered eating can depend upon the culture to which a person belongs; existing literature suggests that patterns of problematic eating might differ according to sexual orientation, also (Eliason & Morgan, 1998; French, Story, Remafedi, & Resnick, 1996; Russell & Keel, 2002; Strong, Williamson, Netemeyer, & Geer, 2000). The inclusion of participants who had relationships with their mothers and fathers leaves questions remaining about the nature of the relationships among the variables studied in college women who were raised in single-parent households or by parents of the same gender.

Future studies of female undergraduates' problematic eating and parental messages that use other research approaches would enhance knowledge about how these issues are experienced by this distinctive population. It might be that phenomena related or contributing to the eating pathology of first- and second-year college women are different than those for younger women. Additionally, the ways in which relationships between parents and their daughters evolve as their daughters begin their college years require further examination, specifically how mothers and fathers influence eating patterns. With college women at a different developmental point than girls in middle or high school, it is possible that aspects of the father-daughter and mother-daughter bonds have dissimilar saliency at this stage. Moreover, research that determines parental motivations behind rejection or critical comments about weight and shape would provide needed information about parental intentions and concerns. If parents' reports about their messages are found to be congruent with daughters' perceptions, it is unclear why parents might rebuff their daughters or make critical comments about appearance, and it is probable that these reasons vary. Parents might be encouraging their daughters to diet or focus on their appearance because they are repeating cultural messages they themselves have internalized, unaware of the harmful consequences of these messages. On the other hand, parents might promote restrictive eating in their daughters out of fear that their daughters would face rejection from society if their daughters were outside the size ideal. Such information about eating and parent-daughter relationships can be obtained by using other types of research approaches. Investigation of the variables in question using different questions, methods, and within causal frameworks would assist in gaining more of an understanding about how parents' relationships with their daughters can protect against the development of eating pathology. Although the current study and extant literature pertaining to resilience to eating-related issues have uncovered important information, more knowledge is needed to provide for a more complete conceptualization of the phenomena of disordered eating.

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