

Self-Competence and Self-Liking in the Prediction of Change in Bulimic Symptoms

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Abstract: Objective: To examine the relationship of self-competence and self-liking (two distinct dimensions of self-esteem) to bulimic symptoms. **Method:** Two separate longitudinal studies were conducted on undergraduate women from two universities (Study 1, N = 129; Study 2, N = 406). Measures of self-competence, self-liking, and bulimic symptoms were administered on two occasions, separated by several weeks. **Results:** Self-competence demonstrated a stronger relationship than self-liking to change in bulimic symptoms over time. **Discussion:** These findings have significant theoretic implications for the construct of self-esteem and implications for risk for and treatment of bulimia. © 2003 by Wiley Periodicals, Inc. *Int J Eat Disord* 34: 361–369, 2003.

Key words: self-competence; self-liking; bulimia nervosa; treatment

INTRODUCTION

Self-esteem has long been considered to play an important role in developmental and maintenance models of bulimia nervosa. Theoretically, self-esteem is a core component of cognitive-behavioral models of bulimia (Fairburn & Wilson, 1993; Johnson, Connors, & Tobin, 1987; Mizes, 1988; Stice, 1994; Vohs, Bardone, Joiner, Abramson, & Heatherton, 1999). For example, Fairburn and Wilson (1993) proposed that low self-esteem may make individuals more vulnerable to pressures to be thin and, therefore, more likely to diet, which, in turn, increases the risk for the bulimic symptoms of bingeing and purging. Vohs et al. (1999) theorized and found that women who were perfectionistic and who believed they were overweight were at risk for bulimic symptoms only if they also had low self-esteem, not if they had high self-esteem. This finding suggests that low self-esteem, in the context of other variables, may increase the risk for bulimia, whereas high self-esteem may provide a buffer.

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Numerous empirical studies have found a link between low self-esteem and bulimic behavior (Baell & Wertheim, 1992; Fairburn, Kirk, O'Connor, Anastasiades, & Cooper, 1987; French et al., 2001; Fryer, Waller, & Kroese, 1997; Katzman & Wolchik, 1984; Mintz & Betz, 1988; Polivy, Heatherton, & Herman, 1988; Shisslak, Pazda, & Crago, 1990). Katzman and Wolchik (1984) reported that, compared with controls, individuals with bulimia had lower self-esteem. In addition, Shisslak et al. (1990) found that bulimic women, regardless of weight category (underweight, normal weight, overweight), exhibited lower self-esteem than nonbulimic women at similar weight levels. In their epidemiologic study, French et al. (2001) identified that a positive sense of self-esteem was protective against a broad range of health risk behaviors, including bingeing and purging and weight loss behaviors. Finally, studies have also found links between self-esteem and disordered eating attitudes and behaviors related to bulimia (Button, Songua-Barke, & Thompson, 1996; Fisher, Pastore, Schneider, Pegler, & Napolitano, 1994; Tomori & Rus-Makovec, 2000). For example, in their large sample of adolescent girls, Tomori and Rus-Makovec (2000) found that weight dissatisfaction was linked to low self-esteem, whereas Button et al. (1996) established a prospective association between self-esteem and later eating pathology.

Self-esteem generally has been conceptualized as unidimensional, that is, individuals have overall positive or negative attitudes toward the self. Such a conceptualization is represented in some of the most commonly used self-esteem measures (e.g., the Rosenberg Self-Esteem Scale [RSES]; Rosenberg, 1965). However, theorists have challenged the unidimensionality of self-esteem. They argue that global self-esteem is experienced two-dimensionally, as a generalized sense of self-worth and as a generalized sense of self-efficacy (Franks & Marolla, 1976). Furthermore, factor analyses of the purported unidimensional RSES have yielded two correlated but distinct factors (Tafarodi & Swann, 1995). Tafarodi and Swann (1995) combined the theory of the dualistic nature of self-esteem with the factor analytic results of the RSES to conceptualize global self-esteem as consisting of two dimensions: self-competence (sense of efficacy) and self-liking (sense of worth).

According to Tafarodi and Swann (1995), self-liking is the part of self-esteem that is socially dependent. It reflects one's feelings of being loved, likeable, and socially worthy. Self-competence is the overall sense of oneself as capable, effective, and in control. Stated otherwise, self-liking is a judgment of self-worth based on an internalized sense of positive regard from others, whereas self-competence is an evaluation of one's ability to bring about desired outcomes. Self-competence and self-liking are conceptualized as global measures (i.e., not domain-specific) that make up global self-esteem. They are substantively distinct because they demonstrate differential relationships to theoretically linked constructs (Tafarodi & Swann, 1995). However, they are not completely independent. For example, it seems reasonable that demonstrated competence may elicit positive appraisals from others, which would foster a sense of social worth/self-liking. Conversely, high self-liking likely promotes confidence for goal-seeking in social contexts. Empirically, these two dimensions are highly intercorrelated, which requires that, in specifying the distinctive relationships to each dimension, the other dimension be held constant (Tafarodi & Swann, 1996).

Support for this proposed dichotomy exists in the Tafarodi and Swann (1996) cross-cultural study. In that study, they predicted and found that Chinese students (coming from a highly collectivist culture that promotes the development of self-liking/social worth at the expense of self-efficacy) had lower self-competence but higher self-liking than U.S. students (coming from a highly individualistic culture that promotes assertiveness and self-efficacy at the expense of self-liking). Tafarodi and Swann (1995) developed a scale to assess self-liking and self-competence (Self-Liking/Self-Competence Scale [SLSC]) and demonstrated that items from the two RSES factors correspond to this dichotomy of global self-esteem.

Burgeoning work on the multidimensionality of self-esteem warrants a new look at the link between self-esteem and bulimic behavior. Is self-liking associated more strongly with bulimic symptoms or is self-competence the more influential factor? Although research has not identified specifically self-liking as a variable of interest, theoretical and empirical work has evaluated the link between self-efficacy (i.e., self-competence) and bulimic behavior. Bandura's self-efficacy theory (Bandura, 1977) proposes that a person's beliefs about his/her abilities will affect his/her emotional reactions, thoughts, and behavior. It seems likely that low self-efficacy may contribute to negative feelings of helplessness, which may motivate escape through binge eating (Heatherton & Baumeister, 1991) or may contribute to the all-or-nothing mentality that facilitates a dietary "slip" turning into overeating. Bardone, Abramson, Vohs, Heatherton, and Joiner (2002) tested their theoretically derived interactive model with self-efficacy in place of self-esteem and found results consistent with this view: Women high in perfectionism who believed they were overweight were at risk for bulimic symptoms only if they had low self-efficacy. According to this model, perfectionistic women who encounter a weight discrepancy but who doubt their abilities to achieve their standards (low self-efficacy) will likely experience aversive self-awareness and negative affect, relief of which might be sought in bulimic behaviors (Heatherton & Baumeister, 1991). Perfectionistic women who encounter a self-standard discrepancy for weight but who believe they can achieve their standards (i.e., those with high self-efficacy) will not demonstrate bulimic behavior. Instead, they might adopt a reasonably healthy diet and exercise.

Additional empirical work supports the relationship between general self-efficacy and bulimic behavior (Bennett, Spoth, & Borgen, 1991; Cooley & Toray, 1996; Etringer, Altmaier, & Bowers, 1989; Gormally, Black, Daston, & Rardin, 1982; Mizes, 1988; Shisslak et al., 1990; Striegel-Moore, Silberstein, Frensch, & Rodin, 1989). Mizes found that helplessness, a concept related to low self-efficacy, related strongly to bulimic symptoms. Similarly, Etringer et al. (1989) found that women with bulimia had a much lower sense of general efficacy, including less confidence in problem-solving capacities, than nonbulimic women. In their 7-month longitudinal study of female college freshmen, Cooley and Toray (1996) found that individuals who reported more bulimic symptoms reported more feelings of ineffectiveness concurrently and that ineffectiveness predicted an increase in bulimic symptomatology. Similarly, Striegel-Moore et al. (1989) reported an association between a high sense of ineffectiveness and worsening of eating disorder symptoms.

The purpose of this study is to clarify the relationship between self-competence and self-liking, the theorized and empirically supported components of global self-esteem, and bulimic symptomatology. To our knowledge, this is the first time that self-esteem has been "dismantled" to investigate possible distinctive relationships with bulimic symptoms. Because self-competence and self-liking are substantively distinct, differential relationships with bulimic symptoms would have implications for etiologic models and targets in treatment. We investigated the association between self-competence and self-liking and change in bulimic symptoms in two prospective studies that were carried out independently.

METHOD

Participants and Procedures

Study 1

One hundred thirty-seven women attending an introductory psychology class at a large southern state university participated in this study in exchange for class credit.

There was no selection criterion for participation other than being female. The mean age of the participants was 19 years (range = 18–26). The sample comprised 76% Caucasians, 16% African Americans, 7% Hispanics, and 1% Asian Americans.

Upon arrival at the questionnaire session, participants were informed that they would be filling out questionnaires about their personal views, feelings, and attitudes as part of a 5-week study on health and behavior. Five weeks later, participants returned, completed an identical questionnaire, and were debriefed. Eight women attended the first but not the second session. The current report focuses on the 129 women who attended both sessions (a 94.2% retention rate). The women who returned for the second session did not differ from the women who did not return on any study variable.

Study 2

Four hundred and twenty-six women attending an introductory psychology class at a large midwestern state university participated in this study in exchange for class credit. There was no selection criterion for participation other than being female. The mean age of the participants was 18 years 7 months (range = 17–25). The sample comprised 92% Caucasians, 3% Asian/Asian Americans, 2% Hispanics, 1% African Americans, and 1% other ethnicities.

Participants completed identical questionnaire packets at Times 1 (T1) and 2 (T2), spaced 11 weeks apart, as part of a study on women's health and lifestyles. Twenty women attended the first but not the second session. The current study focuses on the 406 women who attended both sessions (a 95.3% retention rate). Women who returned for the second session did not differ from the women who did not return on T1 levels of bulimic symptoms or self-competence. The groups differed only on initial levels of self-liking. The noncompleters reporting significantly lower self-liking ($M = 11.35$, $SD = 4.50$) than the completers ($M = 14.86$, $SD = 4.48$), $t(424) = 3.40$, $p < .01$.

Measures

The RSES is a reliable and well-validated 10-item scale that assesses global self-esteem. Tarafodi and Swann (1995) demonstrated that factors corresponding to self-competence and self-liking were valid and discernible dimensions of global self-esteem. Following their approach, we summed RSES Items 1, 2, and 4 to obtain an index of self-competence and Items 8, 9, and 10 to obtain an index of self-liking. In Study 1, self-competence had a coefficient alpha of .90 and self-liking had an alpha value of .84. In Study 2, self-competence had an alpha value of .79 and self-liking had an alpha value of .75. Scores were computed such that higher scores corresponded to more self-competence and self-liking.

The Eating Disorders Inventory (EDI; Garner, Olmstead, & Polivy, 1983) is a frequently used 64-item self-report measure of eating-related attitudes and traits. It yields eight subscales: Drive for Thinness, Bulimia, Body Dissatisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, Interoceptive Awareness, and Maturity Fears. The scale is reliable and has been validated extensively (Garner et al., 1983). The current study focused on the Bulimia subscale, which measures bulimic attitudes and behaviors. The Bulimia subscale consists of seven items. Higher scores reflect greater bulimic tendencies.

RESULTS

Study 1

Means and standard deviations and zero-order correlations among all measures for the entire sample are presented in Table 1. Self-competence correlated more strongly with T1 Bulimia ($r = -.31, p < .05$) and T2 Bulimia ($r = -.29, p < .05$) than self-liking ($r = -.20, p < .05$ for T1 Bulimia, $r = -.03, p = ns$ for T2 Bulimia). Following Meng, Rosenthal, and Rubin (1992), a Z (normal curve) test for the significance of the difference between the T1 Bulimia/self-competence correlation and the T1 Bulimia/self-liking correlation ($-.31$ vs. $-.20$) did not reach statistical significance ($Z = -1.03, p = ns$), whereas the difference between the T2 Bulimia/self-competence correlation and the T2 Bulimia/self-liking correlation ($-.29$ vs. $-.03$) was statistically significant ($Z = -2.29, p < .05$).

Prediction of Change in Bulimic Symptoms

Consistent with the recommendations of Cohen and Cohen (1983), a setwise hierarchic multiple regression procedure was used to test the relations of self-competence and self-liking to change in bulimic symptoms over time. T2 Bulimia served as the dependent variable. T1 (baseline) Bulimia scores were entered first into the regression equation, thereby creating residual change scores in bulimic symptoms from T1 to T2. Next, T1 self-competence and self-liking scores were entered simultaneously into the regression equation as predictors of change in bulimic symptoms.

Regression analysis indicated that self-liking was not related to residual changes in bulimic scores from T1 to T2, $pr = -.03, t(125) = -0.36, p = ns$. By contrast, self-competence was related to changes in bulimic symptoms at the level of nonsignificant trend, $pr = -.17, t(125) = -1.93, p = .056$.

Study 2

Means and standard deviations and zero-order correlations among all measures for the entire sample are presented in Table 2. Contrary to the findings in Study 1, self-liking correlated more strongly with T1 Bulimia ($r = -.31, p < .01$) and T2 Bulimia ($r = -.27, p < .01$) than self-competence ($r = -.19, p < .01$ for T1 Bulimia, $r = -.22, p < .01$ for T2 Bulimia). Using the Meng et al. test for comparing correlations, the difference between the T1 Bulimia/self-competence correlation and the T1 Bulimia/self-liking correlation ($-.19$ vs. $-.31$) reached statistical significance ($Z = 2.66, p < .01$), whereas the difference

Table 1. Means and standard deviations of and intercorrelations among all measures: Study 1

Measures	1	2	3	4
1. Self-competence	11.79 (3.66)			
2. Self-liking	.21*	12.03 (2.69)		
3. T1 Bulimia	-.31*	-.20*	6.83 (5.29)	
4. T2 Bulimia	-.29*	-.03	.43*	6.83 (5.02)

Note: Means and standard deviations (in parentheses) on the diagonal. Self-competence and self-liking indices were computed from the Rosenberg Self-Esteem Scale (RSES). Bulimia indices were computed from the Eating Disorders Inventory (EDI). In Study 1, the RSES was scored on a 1–5 scale and EDI Bulimia on a 0–5 scale. T1 = Time 1; T2 = Time 2.

* $p < .05$.

Table 2. Means and standard deviations of and intercorrelations among all measures: Study 2

Measures	1	2	3	4
1. Self-competence	18.68 (2.29)			
2. Self-liking	.55*	14.86 (4.48)		
3. T1 Bulimia	-.19*	-.31*	12.45 (4.27)	
4. T2 Bulimia	-.22*	-.27*	.78*	9.83 (3.06)

Note: Means and standard deviations (in parentheses) on the diagonal. Self-competence and self-liking indices were computed from the Rosenberg Self-Esteem Scale (RSES). Bulimia indices were computed from the Eating Disorders Inventory (EDI). In Study 2, the RSES was scored on a 1–7 scale and EDI Bulimia on a 1–6 scale. T1 = Time 1; T2 = Time 2.

* $p < .01$.

between the T2 Bulimia/self-competence correlation and the T2 Bulimia/self-liking correlation ($-.22$ vs. $-.27$) did not ($Z = 1.09$, $p = ns$).

Prediction of Change in Bulimic Symptoms

Using the same hierarchic multiple regression procedure described above, T1 (baseline) Bulimia was entered first into the regression equation, followed by the simultaneous entry of T1 self-competence and self-liking scores. T2 Bulimia was the dependent variable. Regression analysis indicated that self-liking was not related to residual changes in bulimic scores from T1 to T2, $pr = .01$, $t(402) = .23$, $p = ns$). By contrast, self-competence was related to changes in bulimic symptoms at the level of nonsignificant trend, $pr = -.10$, $t(402) = -1.93$, $p = .054$.

Combining Findings on Prediction of Change in Bulimic Symptoms across the Two Studies

Rosenthal (1984) provided formulae for combining probabilities associated with two or more effect sizes. We utilized the method of adding probabilities (p. 94, Eq. 5.2) to assess the combined results from our two studies. In contrast to the near-significant probabilities of $p = .056$ and $p = .054$ associated with the effect of self-competence on changes in bulimic symptoms in the two studies taken separately, the probability associated with the combined effect of self-competence on changes in bulimic symptoms was $p = .003$ (respective p value for self-liking effect was ns), which is supportive of self-competence, rather than self-liking, as predictive of changes in bulimic levels.

DISCUSSION

The aim of this study was to clarify the relationship between self-competence and self-liking and bulimic symptomatology. The cross-sectional results show that both self-competence and self-liking were correlated significantly and negatively with bulimic symptoms, that is, lower levels of both self-competence and self-liking were associated with higher levels of bulimic symptoms. When assessed cross-sectionally, there was little evidence that one or the other dimension of self-esteem was related preferentially to bulimic symptoms.

However, when regression analyses allowed the identification of distinctive relationships between each self-esteem dimension and change in bulimic symptoms (i.e., the variance in bulimic symptomatology accounted for uniquely by one self-esteem dimension, after having partialled out the variance accounted for by the other self-esteem

dimension), the findings suggested that self-competence had the stronger relationship. When the studies were examined separately, there was a trend suggesting that levels of self-competence predicted change in bulimic symptomatology, whereas levels of self-liking did not predict change in bulimic symptoms. When the findings of the two studies were combined using methods described by Rosenthal (1984), self-competence was a significant predictor of changes in bulimic symptoms ($p < .01$), whereas self-liking was not. Regarding the theoretic and clinical implications of our findings, these analyses provide further construct validity for the bidimensional view of self-esteem (cf. Tafarodi & Swann, 1995). Stated differently, they directly challenge one-factor models.

The self-competence findings provide additional support to the general self-efficacy findings of previous research studies of bulimic symptoms. It is possible that an individual's low self-competence may contribute more to greater negative affect and aversive self-awareness than low self-liking, possibly motivating escape through binge eating (Heatherton & Baumeister, 1991). It could also be that individuals with low self-competence have a paucity of coping skills, which leaves them with a more limited behavioral repertoire in responding to stress. The self-liking findings suggest that believing that one is unlikable is not related to change in bulimic symptoms over time. This component of self-esteem may contribute to other stages of bulimia (e.g., the maintenance of bulimic symptoms), but in these studies it did not uniquely predict change in symptomatology. It could be that self-liking does influence change in bulimic symptoms, but only through shared variance with self-competence. In our regression analyses, we evaluated the unique variance in bulimic symptoms accounted for by each self-esteem dimension.

In terms of treatment implications, the findings of this study suggest that challenging cognitive distortions related to self-competence (and, to the degree that it is a maintaining factor, self-liking) should be helpful in reducing bulimic symptoms. In line with cognitive-behavioral therapy (CBT) for bulimia (Fairburn et al., 1995), a therapeutic focus on self-competence may directly rehabilitate pathogenic cognition and increase motivation and lead to less attrition from therapy. In their study of the mechanisms of action of CBT for bulimia, Wilson, Fairburn, Agras, Walsh, and Kraemer (2002) reported that self-efficacy at midtreatment predicted posttreatment outcome and proposed that self-efficacy may be a mediator of change.

These studies have both strengths and limitations. The different longitudinal lengths (5 and 11 weeks) and the different geographic settings (southern, midwestern) help provide some generalizability to the results. A related strength is that these two studies were performed independently and yet resulted in similar findings. Furthermore, new areas are being explored as these studies are the first to reinvestigate the link between self-esteem and bulimic behavior via the dimensions of self-competence and self-liking. They are limited in their use of only self-report. In addition, because the noncompleters in Study 2 had significantly lower self-liking scores than the completers, readers may want to consider this when interpreting these findings. Because this group difference occurred only in one study and yet results were similar, we do not believe the group difference in Study 2 was a major influence. Finally, these studies extracted self-competence and self-liking items from the extant RSES (as supported by previous empirical work; see Tafarodi & Swann, 1995) rather than using a measure specifically created to measure these constructs.

Future research should replicate this finding using the SLSC (Tafarodi & Swann, 1995), a scale designed to measure the global dimensions of self-liking and self-competence. In addition, the roles of self-competence and self-liking at different stages of bulimic symptomatology (i.e., onset, maintenance, exacerbation, and recovery) and their roles in

interaction with other relevant variables (e.g., perfectionism and body dissatisfaction) need to be investigated further. Finally, because self-efficacy theorists stress the importance of domain-specific self-efficacy, domain-specific self-competence and self-liking should be considered in future studies of bulimic symptomatology in addition to global measures of these constructs. Research suggests that lower self-efficacy for eating is associated with higher levels of bulimic symptoms (Bennett et al., 1991; Cooley & Toray, 1996; Goodrick et al., 1999; Mizes, 1988; Phelan, 1987).

To conclude, we found support for the prediction of different relations of self-competence and self-liking to bulimic symptoms. This is the first study to attempt to dismantle self-esteem with relation to bulimia. Results supported the view that, over time, self-competence, but not self-liking, uniquely predicts change in bulimic symptomatology. These results not only have theoretic implications for the construct of self-esteem and for risk for bulimic symptoms, but also may inform clinical assessment and therapy.

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