Attitudes toward Eating Disorders and the Role of Body Dissatisfaction in College Women

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Katherine A. Daniels

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ATTITUDES TOWARD EATING DISORDERS AND THE ROLE OF BODY DISSATISFACTION IN COLLEGE WOMEN

by

KATHERINE A. DANIELS

APPROVED BY:

DIRECTOR OF THESIS:_____
Susan McCammon, PhD

COMMITTEE MEMBER:_____
Mary Johnson, PhD

COMMITTEE MEMBER:_____
Amy Lyndon, PhD

CHAIR OF THE DEPARTMENT OF PSYCHOLOGY:

_____
Kathleen Row, PhD

DEAN OF THE GRADUATE SCHOOL:

_____
Paul J. Gemperline, PhD

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CHAPTER 1: INTRODUCTION

The World Health Organization identifies mental illness as the number one disability worldwide; yet, in the US only one out of two people with a serious mental illness actually seeks mental health services, primarily due to the stigma that remains surrounding mental illnesses in general (President's New Freedom Commission on Mental Health, 2003). Negative public attitudes about mental health care serve as a considerable barrier for those most in need of psychiatric services. While increased attention to stigma and mental illness has brought about a great deal of research on interventions to improve public attitudes, most of this research addresses only a few severe mental illnesses (SMI), namely, schizophrenia, bipolar disorder, and major depression (Couture & Penn, 2003). To date, there has been little research on the stigma of people with eating disorders, and this research indicates that the nature of this stigma may be different than that identified for SMI. Furthermore, researchers have yet to examine the stigma of both anorexia and bulimia in a single study (Mond, Hay, Rodgers, Owen, & Beumont, 2004). The goal of the current research study is to shed further light on the nature of stigma towards eating disorders and identify possible variables that contribute to this stigma. Specifically, one's body esteem (or body dissatisfaction) is predicted to be an individual variable contributing to one's attitudes towards those with anorexia and bulimia.

Anorexia Nervosa

The main characteristics of anorexia nervosa (AN) as defined by the Diagnostic and Statistical Manual of Mental Disorders- 4th Edition, text revision (DSM-IV-TR) are a

refusal to maintain body weight normal for height and age (maintenance of body weight less than 85% of that expected); an intense fear of gaining weight or becoming "fat" even though the person is already underweight, body image disturbance (i.e.distorted view of body shape and size); denial/lack of insight as to current low body weight; undue influence of body weight and shape on self-evaluation; and in post-menarcheal females, amenorrhea (i.e., absences of at least three or more consecutive menstrual cycles). It is important to emphasize that this intense fear of becoming "fat" is not alleviated by excessive weight loss, but in fact this fear and attempts to avoid weight gain become worse and more drastic. Further, self-esteem and self-worth become based solely on one's body shape and weight; weight loss is viewed as a sign of extraordinary self-control and achievement by the individual (American Psychiatric Association, 2000).

Some combination of outpatient individual and family cognitive behavioral therapy (CBT) is considered the best treatment. Despite intense and costly therapeutic efforts, recovery from AN often becomes a lifelong battle for patients. In a follow-up study of 76 severely ill AN patients from an inpatient program aged 12-36 (at initial admission), at 10 years, only 24% (n = 18) were fully recovered and the mortality rate was 7%. Furthermore, 64% of this sample had developed binge eating at some point during their illness and at the 10 year follow-up 41% still met the criteria for bulimia (Eckert, Halmi, Marchi, & Grove, 1995).

Bulimia Nervosa

According to the DSM-IV-TR, bulimia nervosa (BN) is characterized by binge eating and inappropriate compensatory behaviors in order to avoid weight gain such as

self-induced vomiting, excessive exercise, laxative abuse, or fasting. A binge is defined as a 2 hour period of time in which an individual eats more than is normal for a similar person during a similar period of time; further, the individual feels a sense of lack of control over their eating during this episode. As with AN, the individual's self-worth is primarily determined by her weight and shape. In terms of the influence of these behaviors on weight, individuals with BN are typically within the normal weight range (though they may be either underweight or overweight), and there is some evidence to suggest that before the onset of BN these individuals are more likely to be overweight as compared to their peers. Furthermore, in BN there is a high rate of substance abuse and dependence (at least 30% of BN patients), usually in an attempt to control weight and appetite (with stimulant abuse, for instance) (APA, 2000). In contrast to AN, treatment efforts appear to be more successful in treating BN. Individual CBT focusing on distorted cognitions and behaviors related to body, shape, and weight has consistently been shown to be effective. Clinical trials have reported a reduction in almost 70% of binging and purging behavior and one-third to one-half of patients experience full remission of BN symptoms (Fairburn et al., 1995). It does appear that with relatively short-term therapy, individuals demonstrate promising improvements; however, the behaviors characteristic of BN are nonetheless dangerous to an individual's health. Further, the existence of comorbid disorders (such as substance abuse and dependence) can also create long term treatment and health implications.

Why eating disorders deserve attention

While the rates of those meeting full DSM-IV criteria for eating disorders are rather low (0.5-1.0% for AN and 1-3% for BN among normal adolescent and adult populations) eating disorders deserve attention for two major reasons (APA, 2000). First, the mortality rate for those who do meet the criteria for eating disorders is between 5 and 12%, indicating that eating disorders are indeed some of the most serious mental illnesses (Ackard, Fulkerson, & Neumark-Sztainer, 2007; Crisp, 2005). In general, "eating disorders are marked by medical complications, psychosocial impairment and comorbid psychopathology, and have the highest levels of treatment seeking, inpatient hospitalization, suicide attempts, and mortality of common psychiatric syndromes" (Stice & Shaw, 2002, p. 985).

Second, the rate of those who meet sub-threshold criteria for eating disorders is generally higher than the rate of those who meet the full threshold criteria and is therefore cause for concern. In a study of over 4,000 middle and high school youth, 16% of girls and 15.4% of boys endorsed binge eating, self-induced vomiting, laxative use and/or excessive exercise, though not meeting criteria for a full threshold ED. In contrast, only 0.3% of girls and 0.2% of boys in the sample met the full criteria for BN and only 0.04% of girls and no boys met the criteria for AN (Ackard, et al., 2007). This is particularly alarming because these sub- threshold behaviors can still seriously impact an adolescent's health and can eventually escalate to meet full criteria for AN or BN.

Among college women, research indicates that 25% to 40% of undergraduate women have eating or weight-related problems not meeting diagnostic criteria, including

worrying that their eating is out of control, preoccupation with body image and weight, and difficulty with weight control. Among college women a combination of anorexic and bulimic behaviors not meeting diagnostic criteria for either disorder is commonly found (i.e., binge eating, restrictive eating, obsession with body image, rumination about food). In contrast, about six percent of college women express concern about anorexia nervosa *or* bulimia nervosa directly (Schwitzer, Hatfield, Jones, Duggan, Jurgens, Winninger, 2008). Based on such data indicating the widespread engagement of sub-threshold behaviors among adolescents and young adults, some have argued for an adjustment of the DSM-IV criteria for both AN and BN in order to make these diagnoses more inclusive and therefore jumpstart prevention and treatment efforts (Ackard et al., 2007).

Stigmatization of people with eating disorders

In addition to the harmful health risks associated with eating disordered behavior, what research that has been done on the stigma of eating disorders indicates that public beliefs about individuals with such disorders are quite different than beliefs about those with disorders such as schizophrenia, severe depression, and even drug addiction (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000). For instance, Crisp et al. (2000) had participants rate their attitudes about seven types of mental disorders based on perceptions previously identified in research as commonly associated with mental illnesses: dangerousness, being unpredictable, being difficult to talk to, feeling different than others, having only themselves to blame, could pull themselves together, not improving with treatment, and likely to never recover. Schizophrenia, alcoholism, and drug addiction elicited the most negative opinions, with 70% of the respondents believing

these conditions are dangerous to others and 80% believing those with these disorders are unpredictable. Severe depression also elicited negative opinions, with many respondents believing that those with this disorder are hard to talk to, that they could pull themselves together if they wanted to, and that recovery is unlikely. These results reflect other research on stigmatization that indicates the most widespread misconceptions about mental illness are that sufferers are dangerous, unpredictable and have only themselves to blame (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003) .

Opinions about eating disorders did not seem to fit the dangerous/unpredictable stereotype that is associated with SMI. For instance, in the Crisp et. al. (2000) study, they found that opinions about eating disorders were less negative, but those with such disorders rated highest on having themselves to blame (34.5% of respondents believing this versus 12.8% for severe depression, for example), that they could pull themselves together, and that treatment is in most cases effective. Such beliefs should be just as alarming to mental health professionals as the beliefs that those with SMI are dangerous and unpredictable. Based on what research has demonstrated about treatment and mortality rates of anorexia nervosa (AN) and bulimia nervosa (BN), these attitudes towards those with eating disorders indicate both a lack of public knowledge about these disorders as well as a tendency to trivialize these conditions (Crisp et al., 2000; Ackard et al., 2007).

Stigma of eating disorders is even more difficult to sort out given other research indicating attitudes shift depending on the *type* of eating disorder (Mond, et al. 2004; Mond, Robertson-Smith, & Vetere, 2006). Attitudes towards AN seem to be the most

ambivalent, given that "the control for which patients with anorexia receive admiration carries the cost of blame" (Stewart, Keel, & Schiavo, 2005, p. 325). For instance, if AN is a disorder of self-control, then individuals may receive most of the blame for their condition (Stewart et al., 2005). At the same time, however, some of these characteristic anorexic behaviors, such as the rigid control of caloric intake, have an ego-syntonic quality that is appealing to others, particularly in a culture where women are bombarded by an unachievable thin-ideal (Mond et al., 2006; Stice & Shaw, 2002). Indeed, Mond et al. (2006) found a general perception among their sample of women that some aspects of AN are acceptable and "might not be that bad." In another study, researchers created a questionnaire for anorexic patients to distribute to their family and friends (Branch & Eurman, 1980). They found that more often than not, these patients were met with approval by their family and friends and were described as "slender," "fashionable," and "neat." The words "emaciated" and "skinny" were each cited only once. Many respondents admitted to envying the self-control and discipline of the patient, yet at the same time, all respondents were aware of the patient's eating and exercise habits. Furthermore, all respondents expressed concern about the patients and the majority felt angry and frustrated because the patients weren't responding to their outreaches (Branch & Eurman, 1980).

It appears that with BN, people tend to be more sympathetic and view the problem as serious and disabling. Mond et al. (2004) found that most respondents were moderately sympathetic (24.5%) or very sympathetic (54.8%) to the situation described and thought it would be either very distressing (54.8%) or extremely distressing (36.1%)

to have this problem. Further, 64.4 % of the respondents had *never* thought it "might not be too bad" to be like the person described. One reason participants may be more sympathetic towards those with bulimia are the characteristics often associated with this disorder, "Whereas classic anorexics display rigidity and constraint, bulimics manifest an erratic consumatory pattern in which restraint and disinhibiton alternate, suggesting some combination of underlying compulsiveness, impulsivity, and affective instability" (Vitousek & Manke, 1994, p.137). Compared to those qualities associated with anorexia nervosa, these may seem less appealing and to less serve the ultimate goal of achieving ideal thinness. Therefore, participants may "feel sorry" for those afflicted with this disorder, but less sorry for those who obtain the qualities (though in extreme form) that allow them to achieve ideal thinness.

In the same Mond et al. (2004) study on bulimia, the authors suggest the possibility that because the person in the vignette was described as "slightly overweight as an adolescent" and currently "within the normal weight range" this may have accounted for some of the sympathetic attitudes on the part of the sample. They point to the competition for thinness among women in the general population as an explanation (Mond et al., 2004). That is, perhaps if the woman had been described as very thin or underweight, the sample may have been less sympathetic and have found some of the qualities more desirable, whereas in this scenario they were more apt to feel sorry for her because she continued to struggle with her weight. The researchers recommend another study using a vignette of AN to compare results.

The Role of Body Dissatisfaction

One cause of such ambivalence towards those with eating disorders may be in part explained by one's own personal vulnerability to such disorders: "The more vulnerable we feel ourselves to be in terms of personally developing an eating disorder, the more we may be rendered uneasy by contact with those who have 'broken down' with such a disorder" (Crisp, 2005, p. 151). Since research has not yet identified where these ambivalent attitudes towards eating disorders come from, it is worth pursuing Crisp's (2005) notion as it relates to body dissatisfaction and the internalization of the "thin ideal" that is so prevalent in Western culture.

Body dissatisfaction is defined as the negative evaluation of one's physical body, including weight, shape, stomach, and hips. In Western cultures, appearance is a central evaluative element in young women's lives and women are bombarded from various directions espousing the current thin-ideal for women (Stice & Shaw, 2007). Internalization of the thin-ideal refers to the extent to which a person "buys into" the socially defined ideals of attractiveness for women. Such internalization is reinforced by family, friends, and the media, through actions or statements that promote this thin-ideal (e.g., teasing about weight, glorification of ultra-thin models or encouraging one to diet) (Thompson & Stice, 2001). Internalization of the thin-ideal leads to body dissatisfaction because this ideal is virtually unattainable for most females (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Importantly, body dissatisfaction is also thought to play role in the development of eating disorder symptomology, generally

moderating the relationship between dieting and negative affect (Stice & Shaw, 2002; Thompson & Stice, 2001).

Hypotheses

Based on the above research, I propose that one of contributors to stigma towards those with eating disorders is one's own body dissatisfaction. As stated, Crisp (2005) suggests that one of the origins of judgmental attitudes towards those with eating disorders is one's own vulnerability to that disorder. Therefore, it makes sense that one's own body dissatisfaction, given such an intense competition for thinness among women in the general population and the often "appealing" or ego-syntonic qualities particularly of AN (such as rigid self control), would influence one's attitude towards those who have this disorder (Mond et al., 2006). Women who have internalized the thin-ideal and are insecure about their own physical appearance may be less tolerant and sympathetic towards someone who has seemingly achieved an ideal weight. They may also see the characteristics of the anorexic as more appealing. Further, this will also reflect a lack of public knowledge about the severity of anorexia. More specifically, I hypothesize that those with higher body dissatisfaction will be less sympathetic towards a person presenting with AN than BN, view the problem as less serious than BN and see the qualities of AN as acceptable or even desirable.

On the other hand, participants may be more sympathetic towards those with bulimia given the more ego-dystonic characteristics associated with this disorder, namely, impulsivity, lack of control, and normal weight. The specific behaviors characteristic of bulimia such as binging, vomiting, laxative use, fasting, and excessive exercise may be

seen as less appealing and less likely to serve the ultimate goal of ideal-thinness. At the same time, women who have greatly internalized the messages of ideal-thinness may be more sympathetic towards those with BN because they can both relate to the struggle to maintain one's weight (since those with BN are generally of normal weight). Based on the research of the stigma of BN, I hypothesize that those who have higher body dissatisfaction will be more sympathetic towards a person presenting with BN, view the problem as more serious and less desirable, and will view the person as more impulsive.

I will also attempt to address several of the gaps in stigma and eating disorder research. First, no studies to date have allowed their sample to distinguish between anorexia and bulimia (i.e., generally studies combine these two disorders or do separate studies on each). This is particularly important because appears that stigmatization of these two disorders may have differing origins (Crisp, 2005). Related to this, the *nature* of stigma towards people with bulimia and anorexia is unclear, as are the variables that influence and shape attitudes towards these two disorders (Mond, et. al). I hypothesize that individual body dissatisfaction is an individual variable that contributes to the expression of stigma, related to Crisp's (2005) suggestion that personal vulnerability to a disorder (in terms of high body dissatisfaction) may increase negative attitudes towards someone with that disorder.

Lastly, most research on eating disorders uses vignettes to paint a picture of symptoms and elicit participants' responses and reactions. Reinke, Corrigan, Leonhard, Lundin, and Kubiak (2004) examined two mediums of contact with mental illness, in vivo and videotaped presentation, to assess the impact on stigma based on desire for

social distance. They found that both videotaped and in vivo contact led to significant change in desire for social distance (in that participants desired *less* social distance) and that there was no significant difference between these two groups in the change in attitudes. Therefore, since in vivo contact is more difficult to arrange, I used videotaped contact in the hopes that it would be more effective in maintaining the participants' attention and make the story more personal (i.e., to give a human face to the symptoms) than simply reading a vignette. One video clip was of a woman describing her bulimic symptoms and the other was of a another woman describing her anorexic symptoms.

CHAPTER II: Method

Participants

Undergraduate female students from a large Southeastern university were drawn from the Psychology Department participant pool. Students received 2 credit points towards fulfillment of a research experience requirement.

Materials

Body Esteem Scale. The Body Esteem Scale (Franzoi & Shields, 1984) measures body satisfaction as a multidimensional construct and includes different scales for men and women. It consists of 35 items based on a 5 point Likert scale, with scores of 1 indicating strong negative feelings and scores of 5 indicating strong positive feelings. The subscales for women include sexual attractiveness (e.g. body scent, sex drive, sex organs, face, body hair), weight concern (e.g. appetite, weight, hips, figure/physique) and physical condition (e.g. physical stamina, muscular strength, energy level). The number of items on each of these subscales differs; the maximum possible score for sexual attractiveness is 64, the maximum for weight concern is 49, and the maximum for physical condition is 45. Higher scores on each of these scales indicate greater satisfaction (lower body dissatisfaction).

Cronbach's alpha for women were .78 for the attractiveness factor, .87 for the weight concern factor, and .82 for the general physical condition factor. The three female factors explained 39% of the total variance. To assess discriminant validity of the Body Esteem Scale, women diagnosed with anorexia nervosa and women without any eating disorder diagnosis completed the survey. It was predicted that those with anorexia would differ from the non-anorexic women in their responses to the weight concern subscale,

but not on any other factor. Results did show that only the weight concern subscale discriminates anorexic from non-anorexic females (lambda = .86, $p < .001$, canonical correlation = .37). In order to determine convergent validity, the scale was administered alongside the Rosenberg Esteem Scale, which is a general measure of self-esteem with high scores indicating positive self-esteem and low scores indicating negative self-esteem. Except for the weight concern factor, there was a moderate correlation between general self-esteem and the two other female body esteem factors (sexual attractiveness $r = .32$, physical condition $r = .35$, $p < .05$).

Attitudes Survey. The Anorexia Stigma Survey (Mond et al., 2006) was developed to assess stigma towards people anorexia nervosa and consists of 20 items based on a 5-point Likert scale, with scores of 1 indicating more positive attitudes or more negative attitudes (depending on the question). Items were reverse scored as appropriate. The 20 questions cover categories of perception of the eating behavior described in a vignette; the categories include self-centeredness (four questions), severity (four questions), contribution to society (five questions), desirability (two questions), and social distance (five questions). Cronbach alphas for each scale were: self-centeredness 0.64; severity 0.71; contribution to society 0.91; desirability 0.71; social distance 0.65. Questions for the Anorexia Stigma Survey were derived from Jorm et al. (1999), Crisp et al. (2000), Corrigan et al. (2003), and Mond et al. (2003). In the present study, I used the item content from the Anorexia Stigma Survey (Mond et al., 2006), with the addition of the item, "How impulsive do you think this person is?" (to address one of the most common

stereotypes about bulimia), to assess respondent attitudes about anorexia and about bulimia.

Video presentation. The video clip of the woman with anorexia was taken from YouTube, a public online database of videos. The clip was modified for time and content so that just her symptoms are included. The second clip was taken from the HBO documentary "Thin" by Lauren Greenfield which follows women from the Renfrew Center, an inpatient eating disorder treatment center. This clip was also modified for time and content so that the woman is only describing a typical binge-purge event.

Procedure

This study was reviewed by the University and Medical Center Institutional Review Board (UMCIRB) and was granted approval (See Appendix). Participants were informed with regard to the confidentiality of their responses and their consent was obtained for participating in the study. They were also informed that if any time they felt uncomfortable they were free to leave and that an alternate assignment was available so that they could still receive their credit. The first task participants completed was the Body Esteem Scale. Once all participants finished, this survey was collected and the video clips followed. The presentation of the clips was counterbalanced as to minimize order effects. Therefore, participants saw either the anorexia clip first or the bulimia clip first. The videos were presented on a large screen in a media enabled classroom. After the first clip, participants completed the Attitudes Survey. Following this, they were shown the second clip and completed the Attitudes Survey once again. After all participants

completed the final survey, materials were collected. Participants were given a debriefing sheet and the experimenter briefly discussed the objective of the study.

CHAPTER III: Results

Descriptive Statistics

The total number of participants was 94 (n = 94). Four participants were dropped from further analysis due to incomplete data. Sixty-percent of the sample were age 18 and 78% were freshman. Seventy-eight percent of the sample were Caucasian, 14% African-American, 2% mixed, 2% Hispanic, 2% Asian, and 1% was Native American.

Body Esteem Scale (BES). The average score on the Sexual Attractiveness factor was 48.7 (out of 64) (*SD* = 7.44); the average Weight Concern score was 31.3 (out of 49) (*SD* = 8.51); the average Physical Condition score was 32.4 (out of 45) (*SD* = 7.26). Descriptive statistics are presented in Table 1. In the final analysis, the weight concern scale was used as a the measure of body dissatisfaction.

Identification of AN and BN. For the anorexia clip, 61% were able to identify that the woman exhibited symptoms of anorexia. Fifty-eight percent believed that a doctor would also diagnose the woman with anorexia. For the bulimia clip**,** 82% were able to identify that the woman exhibited symptoms of bulimia. Seventy-four percent believed that a doctor would also diagnose the woman with bulimia.

Familiarity with AN and BN. On questions regarding contact or familiarity with anorexia, 93% of the sample had seen a movie where a person with anorexia or a similar person was depicted; 1% had a job that involved helping a person with anorexia; 57% had observed a person with anorexia; 1% currently *have* anorexia or a similar problem; 9% has *had* anorexia or a similar problem; 26% have a friend or relative who *has*

anorexia or a similar problem; 47% have a friend or relative who has *had* anorexia or a similar problem; and 7% have lived with some who has anorexia or a similar problem.

For the contact/familiarity with bulimia, 94% of the sample had seen a movie where a person with bulimia or similar problem was depicted; 1% had a job that involved helping a person with bulimia; 33% had observed a person with bulimia; 0% *has* bulimia or a similar problem; 4% has *had* bulimia or a similar problem; 19% have a friend or relative who *has* bulimia or a similar problem; 46% have a friend or relative who has *had* bulimia or a similar problem; and 3% have lived with someone who has bulimia or a similar problem. The percentage of participant responses to each item on both the anorexia survey and the bulimia survey are presented in Table 2.

Attitudes Surveys. The frequencies of responses to each item on both the AN and BN Attitudes Surveys are reported in Table 2. In responding to questions about Lucy (the name given to the woman depicted in each video), participants choose descriptors that were somewhat negative and indicated that the participants viewed these conditions as serious. For instance, most participants indicated that for both AN and BN, the women were somewhat or moderately vain and somewhat self-centered, but that it was also very important for them receive attention from others. Participants found the woman with BN very much to blame for her condition and the woman with AN moderately to blame for her condition.

Regarding severity of the disorders, the participants indicated that for both AN and BN, these disorders were very severe and that it would be very distressing to have these disorders. Participants also indicated that for both disorders, they never thought it

would not be too bad to have the problems described and they did not at all admire either woman's weight control methods. In addition, respondents indicated that in both conditions, the women depicted were moderately impulsive.

Most participants had mixed feelings about having the women as a best friend and mixed feelings about interviewing for a job. Only slightly more participants would be willing to rent to both women than had mixed feelings about renting. However, most participants indicated that *with treatment*, it was likely that the women would have good friendships, be understanding of others, have a good marriage, be a good parent, and be a productive worker.

Identification of Factors. The next step in analyzing the responses to the attitude questions on the anorexia and bulimia surveys was to examine the correlations between the questions for each survey. Two 21 x 21 correlation matrices were constructed. A cutoff of 0.30 was used, so that any question falling below this cutoff was determined to be unrelated to any of the other questions and therefore deleted from further analyses. For the anorexia survey, four questions (how important is it for Lucy to receive attention; how distressing would it be to have the problem; how impulsive is Lucy; should Lucy be forced into treatment) fell below this cutoff. For the bulimia survey, three questions fell below this cutoff (how important is it for Lucy to receive attention; how distressing would it be to have the problem; should Lucy be forced into treatment).

In order to determine the factors for both the anorexia and bulimia surveys, a principal components analysis (PCA) with varimax rotation was run separately for each survey. Estimates of factor scores were computed with SPSS and manually by summing

the responses to the questions that loaded heavily (≥ .40) on each factor and dividing by the number of questions in that factor. For the anorexia survey, the five factors and the questions that loaded heavily on each factor were as follows: Factor 1: Assuming Lucy received appropriate treatment, how likely do you think it would be that Lucy, in the long term: would have good friendships; be understanding of other people's feelings; have a good marriage; be a productive worker; be a good parent; Factor 2: willing to have Lucy as a best friend; willing to hire Lucy; willing to rent an apartment; Factor 3: How vain; how self-centered; how irritating; how much to blame; Factor 4: might not be too bad; admire weight control methods; Factor 5: how severe; ability to get over; just a phase. The five factors identified for the anorexia survey were as follows: Factor 1: *Long-term outcomes* (predictions of whether a person with this problem can be expected to experience positive long term outcomes); Factor 2: *Social distance* (with what types of social proximity would the respondent be comfortable); Factor 3: *Blame* (how much the person with the problem is responsible for having it); Factor 4: *Admiration* (admiration of the qualities of self-control or restraint); Factor 5: *Minimizing* (this problem is not too serious). Results of the PCA for the AN and BN factors are presented in Table 3 and Table 4, respectively.

For the bulimia survey, the five factors and questions that loaded heavily on each were as follows: Factor 1: Assuming Lucy received appropriate treatment, how likely do you think it would be that Lucy, in the long term: would have good friendships; be understanding of other people's feelings; have a good marriage; be a productive worker; be a good parent; Factor 2: How vain; how self-centered; how irritating; how much to

blame; how impulsive; Factor 3: willing to have Lucy as a best friend; willing to hire Lucy; willing to rent an apartment; Factor 4: how severe; ability to get over; just a phase; Factor 5: might not be too bad; admire weight control methods. The five factors identified for the bulimia survey were as follows: Factor 1: *Long-term outcomes*; Factor 2: *Blame*; Factor 3: *Social distance*; Factor 4: *Minimizing*, and Factor 5: *Admiration*. To assess the internal consistency of the factors that were created manually, Cronbach's alpha for each of the 5 anorexia factors and each of the 5 bulimia factors was computed (Tables 5.1, 5.2). Initial descriptives of the factors were computed as well (Tables 6.1, 6.2).

Inferential Statistics

The next step in the analysis was to examine the correlations between the five anorexia factors and the BES weight scale as well as the correlations between the five bulimia factors and the BES weight scale (Table 7.1, 7.2). For the anorexia factors, significant correlations emerged between long term outcomes and the weight scale (r = 0.248) and social distance and the weight scale (r = 0.261). For the bulimia factors, significant correlations emerged between long term outcomes and the weight scale (r = 0.242), social distance and the weight scale (r = 0.232), and admiration and the weight scale (r = -0 .323).

CHAPTER IV: Discussion

Main Hypotheses

Results indicate that the main hypotheses regarding participants with high body dissatisfaction were not supported. That is, results did not support the hypotheses that for anorexia nervosa (AN), women with higher body dissatisfaction would be less sympathetic, view the problem as less serious, and see the qualities as more desirable. Similarly, the results did not support the hypotheses that for bulimia nervosa (BN), women with higher body dissatisfaction would be more sympathetic, view the problem as serious, and see the qualities as undesirable. However, results indicated that participants who were more satisfied with their weight had more positive attitudes relating to long term outcomes and social distance than those who were less satisfied with their weight. Participants who had a high body esteem (and therefore low body dissatisfaction) were more likely to believe that if the woman in the clip had appropriate treatment, in the long term she could likely have a good marriage, be a good parent, have good friendships, and so on. In addition, these participants also required less social distance from the woman in the anorexia clip, in that they would be more likely to hire her, have her as a best friend, and rent an apartment to her.

For attitudes towards women with bulimia nervosa, as with anorexia, those who were more satisfied with their weight rated the woman in the bulimia clip as capable of having more positive long-term outcomes and desired less social distance than those who were less satisfied with their weight. In addition, the hypothesis that bulimia would be seen as less desirable than anorexia was partly confirmed, at least for women who had

higher body esteem. Participants who were more confident with their weight were *less* likely to admire the woman's weight-control methods than those who were less satisfied with their weight. It is possible that to a woman who is comfortable with her weight, the idea of binging and purging may appear even more foreign and disconcerting than to someone who struggles with their weight, who might be more apt to relate.

Identification and Familiarity with AN and BN

Participants' ability to identify the symptoms in the anorexia video clip is consistent with previous research (Mond et al., 2006); over half of the participants in both studies agreed that the target's main problem was AN. The Mond et al. study used a written vignette to describe the symptoms but the survey items where essentially the same in both studies. In the current study, the rate of participants who indicated they had or currently have AN was higher than the rate in the general population, though this could be expected given that this sample was taken from a college population. However, the Mond et al. study had almost two times the amount of participants who indicated they had had the problem described in comparison to this study. Although, more participants (almost three-fourths) in this study indicated they had a friend or relative who has or had had AN or a similar problem compared to respondents (50%) in the Mond et al. study. Thus familiarity might drive these attitudes. For instance, it is possible that since more women in the current study had contact with people with AN, they had more realistic attitudes about the disorder. Finally, rates in both this and the Mond et al. study were comparable for those who had seen a television show or movie where a person with this disorder was depicted; the media appears to be the most common medium through which

people are exposed to eating disorders. Again, it could be a combination of contact through friends/relatives and the media that shaped the current sample's attitudes.

In the current study, participants were better able to identify the symptoms in the bulimia video clip as BN compared to previous research (Mond et al., 2004), where almost half of the participants indicated that the main problem was "low self esteem" rather than BN. This could have been influenced by the nature of the stimulus; video and television media can be a more realistic and potent source of information rather than a written vignette. In the present study, more participants were able to identify the bulimia symptoms as BN than those who were able to identify the anorexic symptoms as AN, and again, this could have been influenced by the quality of the video clips. While the video clips were matched as much as possible for similarity in terms of DSM-IV symptom criteria and presentation, the symptoms presented in the AN video clip were somewhat more vague and subtle than those in the BN clip. However, this could have also been do to the nature of the disorders themselves; as research has already indicated (Mond et al., 2006), the symptoms of AN can be perceived as more acceptable and not very serious and so perhaps participants were more hesitant to diagnose her with AN. The symptoms of BN are more unusual and unpleasant than AN (bingeing and purging as compared to restrictive eating) and so perhaps the diagnosis of BN seemed more obvious to participants.

The finding that it was very important for the women to receive attention from others corresponds with previous research (Mond et al., 2006) and can also be linked to the idea that such disorders are self-inflicted with the purpose of receiving attention from

others. Indeed, this study found that most participants found the woman with BN very much to blame for her condition and the woman with AN moderately to blame for her condition.

Regarding severity of the disorders, the participants indicated that for both AN and BN, these disorders were very severe and that it would be very distressing to have these disorders. Further, the majority of participants also indicated that for both disorders, they *never* thought it would okay to have the problems described and they did not at all admire either woman's weight control methods. Again, this contrasts with the original hypotheses and even previous research (Mond et al., 2006; Stice & Shaw, 2002; Branch & Eurman, 1980) that indicates participants would be more likely to judge the qualities of AN as "not too bad" and even acceptable and the qualities of BN as undesirable. Interestingly, most participants also found both women were moderately impulsive; it was expected that the woman with BN would be seen as more impulsive than the woman with AN and it is not entirely clear what might have contributed to this finding.

The ambivalence towards those with AN and BN appears more prominent when considering that most participants had mixed feelings regarding most of the social contact questions. However, despite this hesitancy towards social contact with either woman, most participants indicated that *with treatment*, it was likely that the women would be able to lead productive lives. So, while they recognized the general effectiveness of treatment in the *long term*, they were less clear as to how willing they would be to engage in social contact knowing of the women's disorders and when they themselves were a

direct recipient of the social contact (i.e., having the woman as *their* best friend versus judging her ability to have good friendships in general).

Attitude Surveys

Overall, the pattern of responses on the AN surveys and the pattern of the responses on the BN surveys were similar. Namely, the pattern of responses tended to reflect the idea that AN and BN are serious and not desirable conditions, but treatment is effective and therefore positive long term outcomes are possible; that receiving attention from others may be a factor in these disorders, thereby implying some amount of self-infliction; and that people are unsure as to the amount of social distance they would prefer from women with AN or BN. In addition, it appears that body dissatisfaction does not play as an important as role as expected in the formation of people's attitudes towards these disorders. Women who have higher body esteem appear to have more positive attitudes with regard to some aspects of AN and BN, but no relationships emerged between low body esteem and negative attitudes. Since body dissatisfaction was not found to be a significant predictor of attitudes towards women with AN and BN, future research can determine other variables that may be predictors of these attitudes.

Based on the survey items, five factors were identified for both the anorexia survey and the bulimia survey; these factors were the same for both surveys (long term outcomes, social distance, blame, minimizing, and admiration) and only in a slightly different order for AN and BN. One extra question, regarding how impulsive the woman in the video was, loaded on the BN blame factor and did not load on any of the AN factors. Although on the item-by-item analysis most participants judged both women as

being moderately impulsive, the factor analysis revealed that the impulsive item was related more to the other BN blame factor items. Therefore, this partly confirmed the hypothesis that the person with bulimia would be perceived as more impulsive. These factors were similar to the five identified by Mond et al. (2006) on AN: contribution to society, severity, self-centeredness, social distance, and desirability. Therefore, because both the previous and current study found similar factors, these five constructs appear to be central to women's characterization of people with eating disorders.

Explanation and Implications

The above results could have been influenced in part by the fact that a large percentage of the sample identified themselves as having had or currently having anorexia and/or bulimia or a similar problem. Therefore, these women may have identified with the distress displayed in both of the video clips (i.e., recognizing the severity, the need for treatment, and so on). However, the women could also have been responding to the "or a similar problem" part of the survey question that asked whether they have or have had anorexia or bulimia or a similar problem. Research indicates that anywhere from 25-40% of college women have eating- or weight-related problems not meeting diagnostic criteria for anorexia or bulimia (Schwitzer et al., 2008). Such findings have caused researchers not only to advocate for new diagnostic criteria for anorexia and bulimia, but also to alter the focus of prevention and treatment of eating-related problems. For instance, education programs regarding eating disorders may increase knowledge about these disorders, but they may not necessarily lead to any changes in eating behavior or body image. Therefore, some researchers propose that increasing people's knowledge

of eating disorders may be valuable not so much for prevention but for *recognition*; that is, knowing what signs to look for in certain populations so that those showing signs of eating problems can be referred to treatment before any serious damage to health occurs (Hunt & Rothman, 2007). Because these video clips of real-world women appeared so effective for this sample, perhaps such media can be incorporated into future efforts.

Interestingly, the women in this sample also identified themselves as being relatively satisfied with their weight (based on the average score of the BES weight concern scale), which is especially surprising given the percentage who identified themselves having struggled with eating disordered behaviors. In fact, the average score on the BES weight concern scale for this sample was slightly higher than the average found with the original sample used when the BES was created (Franzoi & Shields, 1984). This contrasts with previous research that indicates body dissatisfaction is one of the predictors of eating disorders (Stice & Shaw; Thompson & Stice, 2001). It is possible that since the women filled out the BES as their first task, they were more inclined to answer positively for social desirability purposes. However, once they were shown the video clips and then asked to fill out the AN and BN surveys, they identified with the symptoms described or reflected on their own insecurities about their bodies. For instance, one study indicated that exposure to "fat talk" (i.e., expressing a desire to lose weight or talking solely about weight) by an ultra-thin confederate lead to an increase in female participants' body dissatisfaction compared to exposure to a confederate who discussed a neutral topic (Stice, Maxfield, & Wells, 2003). So, being exposed to someone discussing weight in a negative manner might trigger one to think about their own weight and at

least temporarily increase body dissatisfaction. Perhaps if the video clips and surveys were completed first followed by the BES, the rate of body dissatisfaction would have been higher as a result of order effects. A future study might alter the order of stimuli and see if results were affected.

Strengths and Limitations

The overarching advantage of this study was the methodology: the use of video clips as opposed to written vignettes appeared to influence the results. Perhaps allowing participants to see the emotional process behind these two disorders overrode common misconceptions about eating disorders and those who have them. For instance, research indicates that many women believe that achieving the "thin-ideal' will make them happier, successful, and more socially competent (Englen-Maddox, 2006). Further, such expectations regarding thinness can lead to body dissatisfaction and even eating disordered behavior (Thompson & Stice, 2001). However, based on the responses to the AN attitudes survey, most of the women in this sample thought it would be *very* distressing to have the problem, the problem was *very* severe, they *never* thought it would not be too bad to have the problem described, and that they did *not at all* admire the woman's weight control methods. The video clip, therefore, appeared to demonstrate for them the drastic downside to having achieved "ideal thinness."

The design of the study also allowed the same participants to examine their attitudes toward two eating disorders and this had both advantages and disadvantages. The fact that the video clips were taken of real women who were suffering from AN and BN added to the ecological validity of the study. However, as mentioned before, the clips

could not be identical given the symptoms of each disorder and the fact that different women were presented in each clip. So, even with a within-subjects design, because the stimuli were not exactly the same, the difference in each subject's attitudes towards women with AN and BN could not be formally tested. A future study could use a between-groups design of video clips of the same person describing symptoms of AN and BN as presented in the DSM-IV-TR, though this may reduce the ecological validity and the effectiveness of the video stimuli.

Future Research

Since the main hypotheses were not supported, future research should focus on what variables contribute to attitudes towards women with anorexia and bulimia. Perhaps contact or familiarity with eating disorders is a more influential factor in shaping attitudes, since so many of the women had contact in one way or another with AN and BN. Or perhaps having a history of AN or BN influences ones attitudes towards others with the same problem.

Further, based on the pattern of responses on the AN and BN surveys, attitudes towards the two disorders tend to be more similar than expected. It is possible that the use of different stimuli—the video clips— are really what drove the results. A future study might still have the same participants rate their attitudes about AN and BN, but alternate between using a written vignette and a video presentation to judge whether the method of stimulus presentation influences the results.

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Table 1. Body Esteem Scale (BES) descriptive statistics.

	Minimum	Maximum	Mean	Standard Deviation
Sexual attractiveness	29	64	48.70	7.44
Weight concern	12	49	31.26	8.51
Physical condition	14	45	32.38	7.26

Table 2. Frequency of Responses for AN and BN Survey

	Anorexia Survey		Bulimia Survey	
Item Responses	**Frequency**	**Percent (%)**	**Frequency**	**Percent (%)**
1. not at all **vain**	28	20.9	26	19.4
somewhat	25	18.7	**29**	**21.6**
moderately	**29**	**21.6**	28	20.9
very	10	7.5	9.0	6.7
extremely	2.0	1.5	2.0	1.5
2. not at all **self-centered**	30	22.4	26	19.4
somewhat	**31**	**23.1**	**37**	**27.6**
moderately	20	14.9	22	16.4
very	9.0	6.7	8.0	6.0
extremely	4.0	3.0	1.0	0.7
3. not at all important to receive **attention**	5.0	3.7	5.0	3.7
somewhat	9.0	6.7	17	12.7
moderately	18	13.4	18	13.4
very	**32**	**23.9**	**36**	**26.9**
extremely	30	22.4	18	13.4
4. never thought it **wouldn't be too bad to have problem**	**57**	**42.5**	**65**	**48.5**
rarely	22	16.4	19	14.2
occasionally	11	8.2	9.0	6.7

often	2.0	1.5	1.0	0.7
always	2.0	1.5	0.0	0.0
5. not at all **admire**	**85**	**63.4**	**85**	**63.4**
somewhat	2.0	1.5	5.0	3.7
moderately	5.0	3.7	2.0	1.5
very	1.0	0.7	1.0	0.7
extremely	1.0	0.7	0.0	0.0
6. not at all **irritating**	6.0	4.5	4.0	3.0
somewhat	**32**	**23.9**	26	19.4
moderately	16	11.9	18	13.4
very	29	21.6	**27**	**20.1**
extremely	11	8.2	19	14.2
7. very unwilling to have as **best friend**	7.0	5.2	7.0	5.2
unwilling	11	8.2	9.0	6.7
mixed feelings	**48**	**35.8**	**53**	**39.6**
willing	25	18.7	19	14.2
very willing	3.0	2.2	6.0	4.5
8. very unwilling to **interview**	8.0	6.0	14	10.4
unwilling	22	16.4	23	17.2
mixed feelings	**48**	**35.8**	**38**	**28.4**
willing	15	11.2	16	11.9
very willing	1.0	0.7	3.0	2.2

9. not at all **distressing**	5.0	3.7	4.0	3.0
somewhat	4.0	3.0	3.0	2.2
moderately	10	7.5	11	8.2
very	31	32.8	33	24.6
extremely	**44**	**32.8**	**43**	**32.1**
10. very unwilling to **rent**	3.0	2.2	3	2.2
unwilling	5.0	3.7	8.0	6.0
mixed feelings	37	27.6	37	27.6
willing	**44**	**32.8**	**42**	**31.3**
very willing	5.0	3.7	3.0	2.2
11. not at all to **blame**	3.0	2.2	4.0	3.0
somewhat	25	18.7	17	12.7
moderately	**37**	**27.6**	32	23.9
very	26	19.4	**36**	**26.9**
extremely	3.0	2.2	5.0	3.7
12. not at all **severe**	0.0	0.0	0.0	0.0
somewhat	5.0	3.7	0.0	0.0
moderately	12	9.0	7.0	5.2
very	**40**	**29.9**	**49**	**36.6**
extremely	3.0	2.2	38	28.4
13. not at all **impulsive**	9.0	6.7	0.0	0.0
somewhat	16	11.9	27	20.1
moderately	**33**	**24.6**	**32**	**23.9**

very	27	20.1	0.0	0.0
extremely	9.0	6.7	20	14.9
14. definitely not **able to get over**	14	10.4	15	11.2
probably not	**50**	**37.3**	**43**	**32.1**
mixed feelings	17	12.7	25	18.7
probably able	13	9.7	11	8.2
definitely able	0.0	0.0	0.0	0.0
15. definitely not **just a phase**	37	27.6	34	25.4
probably not	**40**	**29.9**	**43**	**32.1**
mixed feelings	13	9.7	9.0	6.7
probably	4.0	3.0	8.0	6.0
definitely	0.0	0.0	0.0	0.0
16. definitely should not be **forced into treatment**	1.0	0.7	1.0	0.7
probably not	6.0	4.5	7.0	5.2
mixed feelings	15	11.2	12	9.0
probably	32	23.9	32	23.9
definitely	**40**	**29.9**	**42**	**31.3**
17a. Very unlikely to have **good friendships**	1.0	0.7	4.0	3.0
unlikely	9.0	6.7	4.0	3.0
neither likely or unlikely	8.0	6.0	10	7.5
likely	**51**	**38.1**	**50**	**37.3**
very likely	25	18.7	26	19.4

17b. Very unlikely to be **understanding of others**	2.0	1.5	4.0	3.0
unlikely	8.0	6.0	6.0	4.5
neither likely or unlikely	12	9.0	5.0	3.7
likely	**41**	**30.6**	**54**	**40.3**
very likely	31	23.1	25	18.7
17c. Very unlikely to have a **good marriage**	2.0	1.5	3	2.2
unlikely	12	9.0	10	7.5
neither likely or unlikely	19	14.2	13	9.7
likely	**43**	**32.1**	**52**	**38.8**
very likely	18	13.4	16	11.9
17d. Very unlikely to be a **productive worker**	3.0	2.2	2.0	1.5
unlikely	8.0	6.0	8.0	6.0
neither likely or unlikely	19	14.2	14	10.4
likely	**44**	**32.8**	**53**	**39.6**
very likely	20	14.9	17	12.7
17e. Very unlikely to be a **good parent**	3.0	2.2	3.0	2.2
unlikely	10	7.5	8.0	6.0
neither likely or unlikely	17	12.7	17	12.7
likely	**47**	**35.1**	**50**	**37.3**
very likely	17	12.7	16	11.9

Table 3: Results of principal components analysis of anorexia attitudes survey.

	Factors and Factor Loadings				
	1	2	3	4	5
Questions	Long-Term Outcomes	Social Distance	Blame	Admiration	Minimizing
17e. Be a good parent	0.918				
17c. Have a good marriage	0.911				
17d. Be a productive worker	0.888				
17b. Be understanding of people's feelings	0.849				
17a. Have good friendships	0.813				
8. If you were an employer and you knew of Lucy's condition, how willing would you be to interview her for a job?		0.854			
10. If you were a landlord and knew of Lucy's condition, how willing would you be to rent an apartment to her?		0.782			
7. How willing would you be to have Lucy as a best friend?		0.771			
1. Do you think Lucy is vain?			0.846		
2. Do you think Lucy is self-centered?			0.652		
6. Would you find Lucy's behavior irritating?			0.57		
11. To what extent do you think Lucy has only herself to blame?			0.486		
5. How much do you admire Lucy's weight control methods?				0.854	
4. Have you ever thought it may not be too bad to have Lucy's problem?				0.791	
15. To what extent do you think that Lucy's problem is "just a phase"?					0.848
14. To what extent do you think that Lucy should be able to just "pull herself together" and "get over it"?					0.744
12. How severe do you think Lucy's problem is?					-0.666

Table 4: Results of principal components analysis of bulimia attitudes survey.

	Factors and factor loadings				
	1	2	3	4	5
Questions	Long-term outcomes	Blame	Social Distance	Minimizing	Admiration
17c. Have a good marriage	0.936				
17d. Be a productive worker	0.935				
17e. Be a good parent	0.903				
17b. Be understanding of people's feelings	0.898				
17a. Have good friendships	0.84				
1. Do you think Lucy is vain?		0.861			
2. Do you think Lucy is self-centered?		0.785			
13. How impulsive do you think Lucy is?		0.587			
6. Would you find Lucy's behavior irritating?		0.542			
11. To what extent do you think Lucy has only herself to blame?		0.448			
8. If you were an employee and you knew of Lucy's condition, how willing would you be to interview her for a job?			0.900		
10. If you were a landlord and knew of Lucy's condition, how willing would you be to rent an apartment to her?			0.809		
7. How willing would you be to have Lucy as a best friend?			0.798		
15. To what extent do you think that Lucy's problem is "just a phase"?				0.819	
14. To what extent do you think that Lucy should be able to just "pull herself together" and "get over it"?				0.785	
12. How severe do you think Lucy's problem is?				-0.669	
5. How much do you admire Lucy's weight control methods?					0.849
4. Have you ever thought it may not be too bad to have Lucy's problem?					0.765

Table 5.1 Reliability (Cronbach's alpha) for anorexia factors.

	Reliability (Cronbach's alpha)
1. Long-term outcomes	0.936
2. Social distance	0.779
3. Blame	0.598
4. Admiration	0.700
5. Minimizing	0.638

Table 5.2 Reliability (Cronbach's alpha) for bulimia factors.

	Reliability (Crohnbach's alpha)
1. Long-term outcomes	0.954
2. Blame	0.673
3. Social distance	0.822
4. Minimizing	0.657
5. Admiration	0.582

Table 6.1 Descriptive statistics for anorexia factors.

Anorexia Factors	Mean	Std. Deviation
1. Long-term outcomes	3.8	0.900
2. Social distance	3.111	0.717
3. Blame	2.681	0.724
4. Admire	1.428	0.725
5. Minimizing	2.015	0.642

Table 6.2 Descriptive statistics for bulimia factors.

Bulimia Factors	Mean	Std. Deviation
1. Long term outcomes	3.8311	0.89539
2. Blame	2.9511	0.67993
3. Social distance	3.0407	0.80235
4. Minimizing	1.963	0.63294
5. Admire	1.2889	0.51373

Table 7.1 Pearson correlations for anorexia factors and BES weight concern scale.

Anorexia factors	BES weight scale
1. Long-term outcomes	0.248*
2. Social distance	0.261*
3. Blame	-0.138
4. Admire	-0.200
5. Minimizing	0.000

Table 7.2 Pearson correlations for bulimia factors and BES weight concern scale.

Bulimia factors	BES weight scale
1. Long-term outcome	0.242*
2. Blame	-0.117
3. Social distance	0.232*
4. Minimizing	-0.018
5. Admiration	-0.323**

* *correlation is significant at 0.05 level (two-tailed)*

***correlation is significant at 0.01 level (two-tailed)*

APPENDIX: IRB APPROVAL