

Stigmatizing Attitudes Differ Across Mental Health Disorders

A Comparison of Stigma Across Eating Disorders, Obesity, and Major Depressive Disorder

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Abstract: The aim of the current article was to compare stigmatizing attitudes toward eating disorders (EDs), including anorexia nervosa (AN), bulimia nervosa (BN), and binge eating disorder (BED), with stigma toward another weight-related condition (obesity) and a nonweight-related mental disorder (major depressive disorder [MDD]). Participants ($N = 447$) read five vignettes describing a woman with AN, BN, BED, obesity, or MDD and responded to questionnaires examining stigmatizing attitudes. The targets with EDs were blamed more for their condition than the targets with MDD, whereas persons with obesity were held more responsible for their condition than any other target. On the other hand, the target with MDD was perceived as more impaired than any other target. Lack of self-discipline was attributed more to the development of BED and obesity than to any other condition. Stigmatizing attitudes vary across mental health disorders, and future research should aim to specifically target stigmatizing beliefs to reduce and prevent discrimination toward mental health disorders and obesity.

Key Words: Stigma, lack of self-discipline, eating disorders, obesity, major depressive disorder

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Research has demonstrated widespread stigma toward anorexia nervosa (AN; Stewart et al., 2006), bulimia nervosa (BN; Roehrig and McLean, 2010), and binge eating disorder (BED; Bannon et al., 2009). People who are stigmatized because of their eating disorder (ED) may be socially isolated (Crisp, 2005) and less likely to seek treatment (Hepworth and Paxton, 2007). Obesity stigma is also widespread (Puhl and Heuer, 2009) and increasing over time (Andreyeva et al., 2008; Latner and Stunkard, 2003). Individuals with obesity who experience stigmatization express poor body image and psychosocial functioning (Annis et al., 2004) and are at risk for depression and general psychiatric symptoms (Friedman et al., 2005). Thus, weight bias may exist on both ends of the weight spectrum. Indeed, participants have expressed similar bias in hypothetical occupational, adoption, and helping scenarios against both women with obesity and emaciated women such as those with AN (Swami et al., 2010). However, studies investigating and comparing stigma toward EDs have focused primarily on AN and BN (Wingfield et al., 2011), with few studies investigating attitudes toward BED (e.g., Bannon et al., 2009; Mond and Hay, 2008). To our knowledge, no published study has compared stigmatizing attitudes across the EDs including BED and obesity.

Studies have compared the level of stigmatization toward EDs with the level of stigmatization toward other nonweight-related mental disorders. Although stigma has been demonstrated toward

many mental disorders including depression (Crisp et al., 2000), the nature of stigmatizing beliefs may differ across disorders. Stigma toward EDs has been linked to attributions of blame and personal responsibility (Crisp, 2005; Roehrig and McLean, 2010), and, when presented with a sociocultural (versus biological) etiology for EDs, individuals hold those with EDs more responsible for their condition (Crisafulli et al., 2010, 2008). On the other hand, stigma toward depression has been associated with perceived dangerousness (de Toledo Piza Peluso and Blay, 2009) and unpredictability (Crisp et al., 2000; Wang and Lai, 2008). Jorm and Griffiths (2008) demonstrated that attributions such as “weakness of character” were related to social distance from individuals with depression. Studies comparing attitudes toward EDs with nonweight-related mental disorders found that individuals with AN or BN were perceived as being more responsible for their disorder than targets with nonweight-related mental disorders (Crisp, 2005; Roehrig and McLean, 2010). Participants also believed that individuals with AN were to blame for their condition to a greater extent than individuals with schizophrenia and asthma (Stewart et al., 2006). Similarly, individuals who believed obesity to be caused by a lack of self-discipline tended to blame people with obesity for their condition and stigmatize them accordingly (Crandall, 1994). More research is needed to examine what types of stigmatizing attitudes are endorsed and how these may differ across mental health disorders.

This study compared stigmatizing attitudes across different EDs, obesity, and major depressive disorder (MDD). MDD was selected as a comparison group to examine whether specific stigmatizing attitudes (e.g., perception of dangerousness, blame) would differ depending on the type of mental disorder (weight related versus nonweight related). In addition, obesity was included as a weight condition that is not an eating disorder to examine the effect of weight on stigmatizing attitudes. On the basis of previous studies, it was hypothesized that the participants would endorse more stigmatizing attitudes toward BN, BED, and obesity than toward AN (Wingfield et al., 2011) and that the participants would show greater stigma related to blame toward EDs and obesity than toward MDD (Roehrig and McLean, 2010). This study also sought to develop a measure of stigma that can be used to assess stigmatizing attitudes across varying mental health disorders.

METHODS

Participants

The participants were recruited from psychology undergraduate classes at the University of Hawaii and received course credit for their participation. The participants ($N = 447$, 68.5% women) self-identified as Asian (59.3%), white (25.1%), Pacific Islander (10.1%), Hispanic (3.1%), African-American (1.3%), and Native American (0.2%). The participants' mean (SD) age was 21 (3.5) years, and their mean body mass index (BMI) was 23.09 (4.59) kg/m². This study was approved by the University of Hawaii Institutional Review Board, and informed consent was obtained from all participants.

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Measures

Vignettes

Five vignettes were developed, describing a 19-year-old woman with AN, BN, BED, obesity, or MDD (see *Appendix A*). This study used a within-participant design, in which all participants read and responded to stigma questionnaires for all five vignettes, presented in counterbalanced order. The AN, BN, and BED vignettes were adapted from vignettes used by Mond et al. (2004, 2006; Mond and Marks, 2007). The obesity vignette was adapted from Bannon et al. (2009), and the MDD vignette was adapted from Griffiths et al. (e.g., 2008). All vignettes were made uniform so that language and details unrelated to disorder criteria matched across the disorder types. The vignettes described cases that met full *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, criteria for AN, BN, BED, and MDD (American Psychiatric Association, 1994).

Universal Stigma Scale

A self-report stigma questionnaire was compiled by the authors to assess the participants' stigmatizing attitudes. These items were chosen from previously used items assessing depression stigma (Griffiths et al., 2008) and ED stigma (Crisp et al., 2000; Roehrig and McLean, 2010; Stewart et al., 2006). All nine items of the Depression Stigma Scale personal stigma subscale (measuring an individual's own stigmatizing attitudes), four items from Crisp et al. (2000), one item from Roehrig and McLean (2010), and one item from Stewart et al. (2006) were included in the current stigma questionnaire. The resulting Universal Stigma Scale (USS) included 15 items, rated on a 5-point Likert scale from 1, strongly agree, to 5, strongly disagree (sample items are shown in Table 1). Lower scores indicate more stigmatizing attitudes. The participants responded to the USS immediately after reading each of the five vignettes. Each questionnaire was specific to the vignette that preceded it, by including the unique name of the person described in the vignette within each question.

Lack of Self-discipline

Beliefs of personal responsibility were assessed with one additional question. After each vignette, the participants answered whether they thought that lack of self-discipline contributed to the development of each target condition. The item was rated on a 5-point Likert scale from 1, does not contribute, to 5, main causal

factor. Higher numbers reflect greater perceived contribution of lack of self-discipline to the development of a given condition.

Socially Desirable Response Style

A brief form of the Marlowe-Crowne Social Desirability Scale (MCSD; Crowne and Marlowe, 1960) was used to assess socially desirable response styles. This 13-item version of the scale has been shown to have acceptable reliability and concurrent validity, with strong correlations to the original version and to other measures of socially desirable responding (Reynolds, 1982). Higher scores indicate a more desirable response style (sample item: "No matter who I talk to, I'm always a good listener"). This measure had an internal consistency of > 0.65 in the current study.

Statistical Analyses

To test whether the items of the USS were assessing the same construct, principal factor analysis (PFA) with Promax rotation and Kaiser normalization were conducted on the 15 items of the USS using the SPSS Statistical Software package (SPSS; Chicago, IL). This analysis was conducted separately for each of the five versions of the scale. Group differences in stigmatizing attitudes and beliefs in the contribution of lack of self-discipline were determined by repeated-measures univariate analyses of variance (ANOVAs), which included BMI as a covariate, followed by Bonferroni's post hoc tests. Finally, Pearson's product-moment correlations were conducted to examine the relationship between stigmatizing attitudes and socially desirable response style. Significance level (alpha) was set at $p < 0.05$ for all analyses.

RESULTS

Principal Factor Analysis

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was consulted to assess the appropriateness of a factor model. The range of the KMO index is 0 to 1, with 0.6 as a suggested cutoff. The KMO statistics were higher than at least 0.75 for all five PFAs, allowing for a satisfactory factor analysis to proceed. The Bartlett's Test of Sphericity tests the null hypothesis that the correlation matrix is an identity matrix and was significant for all five PFAs, suggesting rejection of the null hypothesis. In sum, the KMO and Bartlett's Test statistics indicated that PFAs could be conducted on the current data set.

TABLE 1. Scale Items, Cronbach's Alphas for Subscales, and Factor Loadings of the 11-Item Version of the USS)

Factor	Loading (AN-Stigma)	Loading (BN-Stigma)	Loading (BED-Stigma)	Loading (Obesity-Stigma)	Loading (MDD-Stigma)
1: Blame/personal responsibility					
____ is to blame for her condition	0.44	0.52	0.55	0.48	0.75
People with a problem like ____'s could snap out of it if they wanted	0.80	0.93	0.80	0.79	0.81
A problem like ____'s is a sign of personal weakness	0.52	0.60	0.52	0.58	0.71
____ could pull herself together if she wanted to	0.76	0.75	0.86	0.77	0.75
____'s problem is not a real medical illness	0.46	0.48	0.40	0.55	0.53
Cronbach's >	0.74	0.78	0.77	0.77	0.83
2: Impairment/distrust					
People with a problem like ____'s are dangerous	0.38	0.54	0.48	0.48	0.53
I would not employ someone if I knew they had had a problem like ____'s	0.66	0.72	0.73	0.74	0.57
I would not vote for a politician if I knew they had had a problem like ____'s	0.61	0.65	0.60	0.63	0.65
____ is hard to talk to	0.60	0.56	0.44	0.55	0.50
People with a problem like ____'s are unpredictable	0.53	0.54	0.55	0.51	0.60
____ is less competent than peers	0.54	0.48	0.48	0.52	0.49
Cronbach's >	0.72	0.77	0.73	0.74	0.75

TABLE 2. Means of the USS Subscales, Repeated-Measures ANOVA Results, and Pairwise Comparison of Stigmatizing Attitudes Across Conditions

Stigma Subscale	AN	BN	BED	Obesity	MDD	<i>F</i> (<i>df</i>)	<i>p</i>
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)		
Blame/personal responsibility	3.33 ^a (0.79)	3.27 ^a (0.83)	3.12 ^b (0.81)	2.67 ^c (0.77)	3.46 ^d (0.86)	162.01 (3.49, 1460.27)	G0.0005
Impairment/distrust	3.21 ^a (0.70)	3.18 ^a (0.73)	3.46 ^b (0.69)	3.69 ^c (0.64)	2.92 ^d (0.73)	177.04 (3.56, 1425.02)	G0.0005

Lower numbers reflect more stigmatizing attitudes on the blame/personal responsibility and impairment/distrust subscales.

Means with different superscripts differ significantly from each other.

PFA were conducted for each of the five conditions. First, the AN version of the questionnaire was examined. The scree plot showed four factors with a break in the data after components 1 and 2, followed by a flattening of the line beginning with component 3. The break appearing after component 2 suggested that only components 1 and 2 accounted for meaningful variance. This indicated that only these first two components should be retained and interpreted. The first four factors had an eigenvalue of more than 1; however, the cumulative amount of variance accounted for by the first two factors was 32.58%, whereas the last two factors accounted for only an additional 7% of the variance. Finally, when the four-factor solution was investigated, there were many items with simultaneous high loadings on multiple factors, which suggested a less-optimal solution. Therefore, a two-factor solution was chosen. Additional PFAs with Promax rotation and Kaiser normalization were conducted for the BN, BED, obesity, and MDD versions of the USS and also resulted in two-factor solutions, following the above-mentioned procedures. In the last step, four items were dropped from the scale because of low to moderate factor loadings (G0.30), resulting in a final 11-item scale representing two components. The first factor (titled "blame/personal responsibility") included five items, and the second factor (titled "impairment/distrust") included six items. The Cronbach's alphas and factor loadings for the two subscales across the five conditions are displayed in Table 1.

Stigmatizing Attitudes

Repeated-measures ANOVAs, including BMI as a covariate, with Greenhouse-Geisser corrections, determined that the mean scores on the blame/personal responsibility and impairment/distrust subscales differed between conditions. The interaction between BMI and the two stigma subscales was not statistically significant. As shown in Table 2, post hoc tests using the Bonferroni's correction revealed that individuals with obesity were blamed more for their condition than the targets in any other condition, whereas persons with MDD were viewed as least personally responsible for their condition. Persons with BED were blamed more than the targets with other EDs. On the other hand, individuals with MDD were considered as more impaired and distrusted than the targets in any other condition, whereas persons with obesity were seen as least impaired and distrusted. Further, individuals with BED were considered less impaired/distrusted than the targets with AN and BN.

Lack of Self-discipline

A repeated-measures ANOVA, including BMI as a covariate, with a Greenhouse-Geisser correction determined that the mean scores on the lack of self-discipline item differed statistically significantly between conditions ($F[3.43, 1439.36] = 6.70, p < 0.0005$). Post hoc tests using the Bonferroni's correction revealed that lack of self-discipline was perceived to contribute more to the development of BED and obesity than to AN, BN, and MDD and less to the development of AN than to any other condition. The mean scores can be seen in Figure 1.

Socially Desirable Response Style and Stigma

None of the five versions of the stigma questionnaire was significantly correlated with socially desirable response styles, as measured using the MCSD (all p 's > 0.05).

DISCUSSION

The current study compared stigmatizing attitudes toward AN, BN, BED, obesity, and MDD. In addition, this study developed a composite measure of stigma, applicable to multiple conditions. The questionnaire's factor structure and internal consistency were found to be strong, suggesting its utility for future research. The participants in the current study displayed only moderate to low levels of stigma, similar to previous studies that were conducted within student samples (e.g., Crisafulli et al., 2010, 2008; Mond et al., 2006). This indicates that stigmatizing attitudes were largely not prominent in this particular sample of university students. However, the results of the current study show that stigmatizing attitudes varied within the sample and also varied across different mental health disorders.

Consistent with previous research (Roehrig and McLean, 2010), individuals with EDs were blamed more for their disorder than individuals with MDD, suggesting that the public perceives EDs as more controllable than other mental disorders. Further, the participants held the targets with BED more responsible for their condition than the targets with AN or BN. Given that the individual with BED was described as obese, this finding is consistent with the obese target being more blamed more for her condition than any other target. It has been demonstrated that obese individuals with BED are

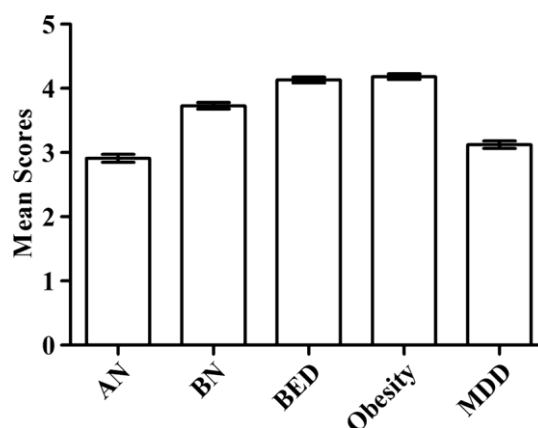


FIGURE 1. Mean ratings of lack of self-discipline. Higher numbers reflect greater perceived contribution of lack of self-discipline to the condition. All comparisons are significant at $p < 0.0005$, except for the comparison between AN and MDD ($p < 0.05$). The mean scores for BED and obesity are not significantly different. Bars display mean ratings and standard errors.

more stigmatized than individuals without BED (Bannon et al., 2009). Contrary to this, the present study indicates that obese individuals with BED are held less personally responsible for their condition than obese individuals without BED. Future studies would benefit from including a condition with a normal-weight individual suffering from BED, even though such cases are clinically rare, to further examine the impact of weight on stigma toward BED.

Although individuals with EDs were blamed more for their condition than the targets with MDD, the participants believed that the target with MDD was more impaired and unpredictable. This finding indicates not only that individuals with EDs are held more personally responsible for their condition than individuals with other mental health disorders but also that the public underestimates the serious nature of EDs. In addition, individuals with AN and BN were perceived as more impaired than individuals with BED, which may indicate that the severity of BED may be unrecognized among the public. Studies comparing the level of impairment in BN and BED have resulted in mixed results, with some studies indicating that BN is associated with higher levels of impairment than is BED, and other studies suggesting similar levels of impairment in BN and BED (Latner and Clyne, 2008).

Consistent with the participants' attribution of personal responsibility for obesity, lack of self-discipline was perceived to contribute more to the development of BED and obesity than to any other condition. Previous research has demonstrated that individuals with obesity are believed to lack self-discipline (Rothblum et al., 1988), and the current study indicates that similar beliefs exist about BED.

Although the current study had several strengths, such as a large and ethnically diverse sample, certain limitations should be noted. Because of the study's large sample size, smaller effects may have led to statistically significant differences that may not reflect accurate real-world differences in stigmatizing attitudes. However, given the significant implications that subtle forms of stigma may have on individuals with EDs, even small statistical differences and varying attitudes may have an important clinical impact and should be further examined in additional samples. The participants in this sample were from a college population, limiting the generalizability of the findings. Future studies would benefit from including samples with a wider range of ages and levels of education, increasing the generalizability of the results. In addition, the inclusion of specific populations that may be more prone to stigmatizing attitudes (e.g., individuals with a lower educational background) or may be interacting regularly with individuals with EDs (e.g., physicians) would increase the study's clinical utility. Lastly, the current study provides a brief measure of stigma that may be useful in subsequent research; however, future construct validation of the USS would increase its utility.

CONCLUSIONS

The current study adds to the growing literature on stigma toward EDs by including BED instead of solely focusing on AN and BN and by comparing stigma toward these conditions with stigma toward another weight-related condition and a nonweight-related mental disorder. Individuals with BED seem to be blamed more for their condition than people with AN and BN and are also perceived as lacking in self-discipline. At the same time, persons with BED are viewed as less impaired and distrusted than individuals with other forms of EDs. Further, the current study presents an important contribution to research on stigma toward mental health disorders in general. The results suggest that it is important to examine different aspects of stigma, including to what degree patients are blamed for their conditions and how impaired they are perceived to be. Efforts to prevent stigma of mental health disorders may benefit from targeting interventions to specific beliefs held by the public, including beliefs

that individuals with EDs are responsible for their condition and that people with MDD are distrusted. Future research should continue to focus on ways to reduce and ultimately prevent stigma toward all mental health disorders and conditions such as obesity.

DISCLOSURES

The authors declare no conflict of interest.

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APPENDIX A: VIGNETTES

Anorexia Nervosa Vignette

Katie is a 19-year-old second-year art student. Although she was always thin as an adolescent, upon starting college, she joined a fitness program at the gym and started running daily. Through this effort, she gradually began to lose weight. At the same time Katie started to "diet," avoiding all fatty foods, not eating between meals, and trying to eat set portions of "healthy foods" each day. On some days she doesn't eat anything at all. Through this combination of dieting and exercise, Katie has been able to further reduce her weight, making her well below average for her age and height. Her periods have now stopped. Despite her increasingly thin and gaunt appearance, Katie denies that she is underweight. She is terrified of becoming "fat" and refuses to make any effort to put weight back on. As a result, the relationship between Katie and her friends and parents has become strained and her grades at school have started to slip.

Bulimia Nervosa Vignette

Lucy is a 19-year-old second-year art student. Although mildly overweight as an adolescent, Lucy's current weight is within the normal range for her age and height. However, she thinks she is overweight. Upon starting college, Lucy joined a fitness program at the gym and also started running regularly. Through these efforts, she gradually began to lose weight. Lucy then started to "diet," avoiding all fatty foods, not eating between meals, and trying to eat set portions of "healthy foods," mainly fruit and vegetables and bread or rice, each day. Lucy also continued with the exercise program, losing several more pounds. However, she has found it difficult to maintain the weight loss and for the past 18 months her weight has been continually fluctuating, sometimes by as much as 10 pounds within a few weeks. Lucy has also found it difficult to control her eating. While able to restrict her dietary intake during the day, later on she is often unable to stop eating. She may binge eat, for example, on an apple, two slices of cheesecake, a bag of cookies, a jam sandwich and three glasses of milk in one sitting. Later in the evening she will eat dinner and sometimes she loses control with this also and eats the extra helping that she was planning to save for the next day. To counteract the effects of this binge eating, Lucy takes laxative tablets. On other occasions, she vomits after overeating. Because of her

strict routines of eating and exercising, Lucy has become socially isolated.

Binge Eating Disorder Vignette

Emily is a 19-year-old second-year art student. Emily has been overweight since she was an adolescent but in recent years this has increased to the point where she has severe obesity. Over the years Emily has tried a number of diet and healthy eating plans; however, she has never stayed with the recommendations for very long. Emily lives by herself and often feels lonely; to counteract these feelings Emily likes to "treat" herself with luxurious foods such as chocolate and cheesecake. Emily's diet is generally regular, with three meals a day, and it contains a wide variety of foods. When Emily gets home from school she often goes to the fridge for a small snack; however, Emily finds that after eating the snack she is unable to stop eating and continues to eat a large amount of food. She may binge eat, for example, on an apple, two slices of cheesecake, a bag of cookies, a jam sandwich and three glasses of milk in one sitting. Later in the evening she will eat dinner and sometimes she loses control with this also and eats the extra helping that she was planning to save for the next day. Emily feels guilt and sadness after she has eaten like this and despises the shape of her body. Emily has never told anyone about the way she feels or the way she loses control of her eating.

Obesity Vignette

Valerie is a 19-year-old second-year art student. Valerie has been overweight since she was an adolescent but in recent years this has increased to the point where she has severe obesity. Over the years Valerie has tried a number of diet and healthy eating plans; however, she has never stayed with the recommendations for very long. So she feels helpless to take off the weight. Exercising is much harder as well. She used to love to play tennis, but no longer. Part of the problem is that she ends up eating the kind of foods her boyfriend and friends eat. These include pastas, sugary cereals, cookies and other unhealthy and fattening foods. None of her friends are overweight, nor is her boyfriend, who also loves pasta. So, Valerie is constantly surrounded by fattening food. It is very hard to resist. She also tends to eat unhealthy foods under times of stress and when she is upset. This is when her diets tend to fail.

Major Depressive Disorder Vignette

Mary is a 19-year-old second-year art student. She has been feeling unusually sad and miserable for the last few weeks. Even though she is tired all the time, she has trouble sleeping nearly every night. It is really hard for her to get out of bed in the morning and she often feels like she just wants to hide under the covers and not talk to anyone. Exercising is much harder as well. Mary used to love to play tennis, but no longer. She also doesn't feel like eating and has lost weight. She cannot keep her mind on her studies and puts off making any decisions. Mary is no longer interested in meeting new people and spends most of her time home alone. Even day-to-day tasks seem too much for her and she feels as if she lost all her energy. As a result, the relationship between Mary and her friends and family has become strained and her grades at school have started to slip.