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College Students' Perceptions of Individuals with Anorexia Nervosa: Irritation and Admiration

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Abstract

Background: Stigmatizing attitudes against anorexia nervosa (AN) may act as barriers to treatment.

Aims: Evaluated college students' perceptions of AN as compared to major depressive disorder (MDD).

Method: One-hundred two female undergraduates read vignettes describing targets with mild or severe MDD or AN, then rated biological, vanity, and self-responsibility attributions; feelings of admiration, sympathy, and anger; and behavioral dispositions toward coercion into treatment, imitation, and social distance.

Results: AN was perceived more negatively than MDD in terms of vanity attributions, self-responsibility attributions, and feelings of anger, but more positively in terms of admiration and imitation.

Conclusions: This research demonstrates stigma-related mixed messages received by individuals with AN, which might be useful in improving eating disorders mental health literacy.

Introduction

Despite the availability of effective treatments, most persons with mental illness do not seek treatment (Kessler et al., [2005](#)), including individuals with AN (Cachelin, Veisel, Barzegarnazari & Striegel-Moore, [2000](#)). Guided by attribution theory, the present study examines stigma associated with AN, which often impedes help seeking (Corrigan, [2004](#)).

Stigma and help-seeking

Attribution theory (Weiner, [1995](#)) has been used to explain the detrimental effects of public and self-stigmas about mental illness. Public stigma comprises commonly-endorsed attitudes and attributions about persons with mental illness that often generate negative feelings and discriminatory behaviors toward these individuals (Corrigan, [2000](#)). For example, the belief that persons with mental illness are dangerous and unpredictable may produce feelings of fear and behaviors of avoidance (Bathje & Pryor, [2011](#)). Other effects of public stigma include familial, social, housing, and unemployment difficulties (Corrigan et al., [2004](#)).

Potentially more damaging is self-stigma, wherein an affected person turns public stigma towards himself or herself. Attributions of self-responsibility can lead to detrimental self-directed behavior, such as lower self-esteem and self-efficacy (Link et al., [2001](#); Watson et al., [2007](#)). Attempts to avoid self-stigmatization detract from help seeking, as some individuals refuse to acknowledge their illness (Saunders & Bowersox, [2007](#)). Moreover, if they do seek treatment, persons experiencing self-stigma are less likely to commit to or benefit from it (Corrigan et al., [2004](#)).

Stigma and anorexia nervosa

That stigma interferes with treatment is of particular concern in the case of AN. The AN imparts an elevated risk of early death (Franko et al., [2013](#)), so it is vital that affected individuals obtain treatment as soon as possible (Morgan, [2011](#)). However, help seeking for AN is inhibited by many factors (Cachelin & Striegel-Moore, [2006](#)). Persons with AN are often not distressed by the disorder, which reduces the likelihood of voluntary help seeking. Further, the secrecy and deceit that characterize the disorder interfere with identification and treatment referral by others.

Recent studies have documented that causal attributions about AN tend to be psychological. Crisp et al. ([2000](#)) found that the public endorses beliefs that persons with AN are more responsible for their illness than persons experiencing depression, schizophrenia, and panic disorder. Stewart et al. ([2006](#)) found that participants believed persons with AN “could pull themselves together if they wanted to” and are “to blame for their condition.” The public often feels more anger towards persons with supposedly self-inflicted illnesses (Corrigan et al., [2002](#)), and there is evidence that attributions of self-responsibility might likewise increase feelings of anger toward individuals with AN (Holliday et al., [2005](#)). Participants also respond to targets experiencing AN with a desire for social distance (Mond et al., [2006](#); Zwickert & Rieger, [2013](#)).

However, reactions to AN are often admiring, perhaps due to cultural pressures to be thin (Ahern & Hetherington, [2006](#)). Participants who rated a woman with AN as self-centered also expressed that AN was somewhat desirable and that they admired the target's "ability to control her weight" at least somewhat (Mond et al., [2006](#)). Students rated characters with eating disorders (EDs) as more responsible for the condition and motivated by needs for attention, yet more admirable and more likely to be imitated by others than characters with MDD (Roehrig & McLean, [2010](#)).

In summary, attitudes toward AN tend to be a mix of irritation (due to self-infliction) and admiration (due to weight loss). Both attitudes may reduce the likelihood that early, necessary treatment is received and, in turn, increase the chance of morbidity and mortality. Stigmatizing attitudes of self-responsibility and anger might result in avoidance of health services in attempts to conceal the disorder, whereas admiration might decrease peer recognition and treatment referral.

Current study

The current study examined public stigma toward vignette targets affected with mild or severe AN or MDD. Although several studies have examined cognitive attributions, emotional reactions, or behavioral dispositions independently, this study examines the association between all three simultaneously. Further, in prior studies the severity of AN was not manipulated. However, since societal norms deem some amount of weight loss as desirable, the current study manipulated disorder severity to determine if there exists an amount of weight loss that is considered "acceptable" (i.e., attitudes are predicted to be less negative toward targets with mild rather than severe AN, but these differences will not exist in MDD targets).

As supported by Crisp et al. ([2000](#)), it was predicted that participants would attribute the cause of AN to psychological factors (vanity, self-responsibility) and the cause of MDD to biological factors. Consistent with attribution theory, it was also predicted that psychological attributions would be associated with negative emotional reactions (anger) and behavioral dispositions (social distance), and also feelings of admiration toward AN (Mond et al., [2006](#)). Further, it was expected that participants would endorse more anger and less sympathy toward AN than MDD (Roehrig & McLean, [2010](#)). It was also predicted that participants would express more willingness to imitate targets with AN than targets with MDD (Mond et al., [2006](#); Roehrig & McLean, [2010](#)). Finally, an exploratory hypothesis predicted that participants would report more willingness to coerce into treatment individuals with AN, since the illness would be seen as self-inflicted and thus changeable.

Method

Participants

Participants included 102 female college students (age: $M = 19.8$, $SD = 0.98$). 70.6% of participants reported knowing someone diagnosed with AN. Participants were recruited through a psychology subject pool ($n = 44$), for which they received extra credit, and through email ($n = 58$), for which they received no compensation.

Materials

Vignettes

Participants were randomly assigned to read one of four vignettes describing a female target exhibiting symptoms of mild MDD ($n = 25$), severe MDD ($n = 26$), mild AN ($n = 24$), or severe AN ($n = 27$). See Appendix A for vignettes.

Study measures

Due to the lack of existing measures, scales were created independently, although some items were inspired by Mond et al. (2006). Scales assessing cognitive attributions include a Biological Attributions Scale, Vanity Attributions Scale, and Self-Responsibility Attributions Scale. Scales assessing emotional reactions include an Admiration Reaction Scale, Sympathy Reaction Scale, and Anger Reaction Scale. Scales assessing behavioral dispositions include a Coercion into Treatment Scale, Imitation Scale, and Social Distance Scale. Scale scores were created by taking the arithmetic average of the items. See Appendix B for scale items.

Procedure

After providing informed consent, participants read an assigned vignette and completed the scale items outlined above, in addition to demographic measures. The study received approval from the Marquette University IRB.

Results

Means for all subscales are displayed in Table 1. Two-way multivariate analyses of variance (MANOVAs) examined whether these ratings differed between conditions. If the MANOVA was significant, univariate main effects and interactions were examined. Alpha was set at 0.01 due to the multiple comparisons.

Table 1. Mean scale scores.

		Severity		
		Mild	Severe	Row Total
Scales	Illness	M (SD)	M (SD)	[M (SD)]
Cognitive attributions				
Biological	MDD	4.25 (1.39)	5.13 (1.00)	[4.70 (1.28)]
	AN	4.10 (1.48)	4.38 (1.24)	[4.25 (1.35)]
Column total [M (SD)]		[4.18 (1.42)]	[4.75 (1.18)]	[4.47 (1.33)]
Vanity				
	MDD	1.79 (0.58)	1.95 (0.86)	[1.87 (0.74)]*
	AN	2.81 (1.19)	3.20 (1.08)	[3.02 (1.14)]*
Column total [M (SD)]		[2.29 (1.05)]	[2.58 (1.16)]	[2.44 (1.11)]
Self-responsibility				
	MDD	2.92 (0.90)	2.79 (0.73)	[2.85 (0.81)]*
	AN	4.30 (1.12)	3.79 (0.83)	[4.03 (1.00)]*
Column Total [M (SD)]		[3.59 (1.22)]	[3.30 (0.93)]	[3.44 (1.08)]
Emotional reactions				
Admiration	MDD	1.92 (0.75)	1.59 (0.82)	[1.75 (0.79)]*
	AN	3.71 (1.26)	2.10 (0.87)	[2.86 (1.33)]*
Column total [M (SD)]		[2.80 (1.36)]**	[1.85 (0.87)]**	[2.30 (1.23)]***

Sympathy	MDD	5.80 (0.91)	6.03 (0.86)	[5.92 (0.88)]*
	AN	4.29 (1.65)	5.14 (1.22)	[4.74 (1.48)]*
Column total [M (SD)]		[5.06 (1.51)]	[5.57 (1.14)]	[5.33 (1.35)]
Anger	MDD	2.07 (0.83)	2.32 (0.84)	[2.20 (0.84)]*
	AN	2.57 (1.48)	3.25 (1.24)	[2.93 (1.38)]*
Column total [M (SD)]		[2.31 (1.21)]	[2.79 (1.15)]	[2.56 (1.20)]
Behavioral dispositions				
Coercion into	MDD	3.28 (1.43)	3.84 (1.35)	[3.56 (1.40)]
Treatment	AN	3.28 (1.61)	3.71 (1.29)	[3.51 (1.45)]
Column total [M (SD)]		[3.28 (1.50)]	[3.77 (1.31)]	[3.54 (1.42)]
Imitation	MDD	2.58 (1.19)	2.19 (1.11)	[2.38 (1.15)]*
	AN	4.02 (1.65)	3.07 (1.24)	[3.52 (1.51)]*
Column total [M (SD)]		[3.29 (1.59)]	[2.64 (1.25)]	[2.95 (1.45)]
Social distance	MDD	3.09 (0.74)	3.16 (0.72)	[3.13 (0.73)]*
	AN	2.11 (0.70)	2.69 (0.90)	[2.42 (0.85)]*
Column total [M (SD)]		[2.61 (0.87)]	[2.92 (0.84)]	[2.77 (0.87)]

All results significant at $p < 0.01$. Closer to 1 = low endorsement. Grand total = italicized parentheses [M (SD)].

*Main effect – illness type.

**Main effect – illness severity.

***Interaction effect.

Regarding cognitive attributions, MANOVA results indicated a significant main effect for illness type (Wilks' $\lambda = 0.606$, $F[3,96] = 20.80$, $p < 0.001$). Subsequent analyses revealed that targets with AN had higher Vanity Attributions scores and higher Self-Responsibility Attributions scores than targets with MDD ($p < 0.001$).

Regarding emotional reactions, MANOVA results indicated significant main effects for illness type (Wilks' $\lambda = 0.602$, $F[3,96] = 21.17$, $p < 0.001$) and illness severity (Wilks' $\lambda = 0.758$, $F[3,96] = 10.23$, $p < 0.001$), as well as an interaction (Wilks' $\lambda = 0.887$, $F[3,96] = 4.09$, $p = 0.009$). Follow-up analyses indicated that all three scales significantly differed between illness types. Participants assigned targets with AN higher Admiration and Anger Reaction scores, but lower Sympathy Reaction scores ($p < 0.001$). The main effect for illness severity was exhibited only on the Admiration Reaction Scale, as participants gave lower scores to severely ill targets. Finally, there was a significant interaction on the Admiration Reaction Scale, such that the target with mild AN had significantly higher scores than the other groups ($p < 0.001$).

Regarding behavioral dispositions, results indicated a significant main effect for illness type (Wilks' $\lambda = 0.718$, $F[3,96] = 12.59$, $p < 0.001$). Participants gave AN targets higher Imitation scores and lower Social Distance scores than MDD targets ($p < 0.001$).

Results of correlational analyses among the subscales are displayed in Table 2. Significant associations between Vanity Attributions and Admiration and Sympathy Reactions were non-significant when examining the AN subsample, whereas non-significant associations between Vanity Attributions and Coercion into Treatment were significant. With the AN subsample only, Self-Responsibility Attributions

and Coercion into Treatment were negatively correlated. Further, in the AN subsample, the Anger Reaction was more positively correlated with Coercion into Treatment and Social Distance.

Table 2. Subscale correlations.

Scales	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cognitive attributions									
Biological (1)	–	–0.08	–0.28**	–0.19	0.33**	0.04	0.20*	–0.08	0.15
Vanity (2)	–0.01	–	0.45**	0.29**	–0.28**	0.55**	0.19	0.18	0.14
Self-responsibility (3)	–0.24	0.10	–	0.56**	–0.60**	0.12	–0.18	0.24*	–0.26**
Emotional reactions									
Admiration (4)	–0.18	–0.14	0.44**	–	–0.52**	0.03	–0.23*	0.44**	–0.41**
Sympathy (5)	0.37*	0.10	–0.47**	–0.36**	–	0.06	0.40**	–0.31**	0.31**
Anger (6)	0.14	0.50**	–0.14	–0.27	0.37**	–	0.28**	–0.03	0.33**
Behavioral dispositions									
Coercion into treatment (7)	0.24	0.37**	–0.36**	–0.29*	0.62**	0.41**	–	–0.11	0.28**
Imitation (8)	0.15	–0.15	0.04	0.38**	–0.19	–0.28*	–0.06	–	–0.34**
Social distance (9)	0.13	0.56**	–0.10	–0.42**	0.25	0.72**	0.36**	–0.28*	–

Top-right = full sample; bottom-left = AN only.

* $p < 0.05$ (2-tailed). ** $p < 0.01$ (2-tailed).

Discussion

This study examined students' perceptions of fictional characters with mild or severe AN or MDD in terms of cognitive attributions, emotional reactions, and behavioral dispositions.

Results were generally consistent with previous research and hypotheses. Participants were more likely to attribute AN to vanity and self-responsibility (Crisp et al., [2000](#); Mond et al., [2006](#); Roehrig & McLean, [2010](#)). However, participants were most likely to attribute both disorders to biological factors, especially when severe.

Overall, sympathy was the most endorsed emotional reaction. As predicted, respondents' emotional reactions were stronger toward targets with AN, who were viewed with more admiration, more anger, and less sympathy (Mond et al., [2006](#); Roehrig & McLean, [2010](#)). The mild AN target was most admired, whereas the severe AN target generated the most anger. As hypothesized, raters view a certain amount of weight loss as acceptable and even admirable, whereas greater weight loss engenders anger and sympathy. In contrast, neither severity level of MDD generated admiration.

Participants were most willing to coerce into treatment targets with severe illnesses, suggesting that persons with developing AN would not be seen as needing treatment. Participants were also more willing to imitate targets with AN, further perpetuating the belief that the disorder is controllable (Roehrig & McLean, [2010](#)). Contrary to prior research (Mond et al., [2006](#); Zwickert & Rieger, [2013](#)), however, participants in this study were less desiring of social distance from AN targets, perhaps perceiving AN as more socially normative than MDD.

Based on attribution theory, it was predicted that emotional reactions would be congruent with causal attributions. Results generally supported this prediction. Attributions of self-responsibility were associated with greater admiration but less sympathy, whereas vanity attributions were associated with anger. This indicates that admiration toward AN may be the result of discounting the severity of the disorder, by perceiving affected individuals as responsible and motivated by vanity. Further, self-responsibility and vanity attributions were not correlated in the AN subsample. Respondents see AN as due to one or the other, and the attribution determines their reaction (for self-responsibility, admiration; for vanity, anger).

Results supported the extension of attribution theory in which it was predicted that respondents would indicate behavioral dispositions consistent with cognitive attributions. In the AN subsample, if the attribution was vanity, respondents intended to coerce the target into treatment. Conversely, if the attribution was self-responsibility, participants were unwilling to coerce the target. Likewise, emotional reactions of sympathy and anger were positively correlated with coercion, but admiration had the opposite effect.

Limitations

Several limitations of the study should be recognized. First, findings must be considered tentative until replicated with a representative sample. Further, the process of social desirability may have skewed responses toward expressing less negativity. This concern is aggravated by the sample age group, who not only have heightened desires for social acceptance, but are also often aware of the detriments of expressing negative attitudes toward affected individuals. In addition, the Imitation Scale contains only two items with fairly low reliability. Finally, while vignette-based research is common in stigma-related studies, observing field reactions would increase validity.

Implications

These results suggest that causal attributions about AN influence reactions toward affected individuals, creating mixed signals. As long as the illness is mild, affected individuals are admired, but if too much weight loss occurs, they are considered vain and reacted to with anger. Either attitude might interfere with an individual's reaction to the problem. In the first instance, the problem might be not only ignored but even exacerbated, as peers react with admiration, especially if the weight loss is perceived as intentional. In the latter instance, when a problem becomes more obvious and severe, the individual might attempt to avoid accusations of vanity and reactions of anger by hiding the disorder (Becker et al., [2004](#)). Peers may also hinder help seeking by expressing a desire for imitation in the early stages of the illness, but as the problem gets worse, they might confront the individual with anger, lessening chances of treatment referral.

These results support the view of Mond ([2014](#)) that improving public understanding of EDs may be important in improving uptake of mental health care among affected individuals, and possibly reducing the community health burden of EDs. These results suggest that there exist fairly simplistic ideas about AN, for instance that a problem exists only if a certain amount of weight loss occurs. Education about the cognitive aspects of the disorder, such as debasing attributions of vanity and self-responsibility, may therefore be essential to emphasizing the severity of AN. Treatment programs for AN might also seek to address the stigma-related mixed messages encountered by affected individuals.

Declaration of interest

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Appendix A

Vignettes

“Marie is a first-year college student at a small, private, Midwestern university. This is her second semester...”

Mild MDD: Marie did well her first semester, just like she did throughout high school. So far this semester, however, she has not been doing as well. She has been feeling a little down since school restarted. She has not been sleeping or eating well. As a result, Marie has lost almost five pounds. She is having some difficulty focusing on her schoolwork. She is attending classes, but she has a hard time mustering up the energy to be enthusiastic. As a result, her grades are starting to slip. Marie has made many new friends, but lately when she hangs out with them she feels like she is “going through the motions.”

Severe MDD: Marie did not enjoy her first semester away from home, but she decided to give it another try. So far this semester, things have not improved. She has continued to feel quite down. Her sleeping has not improved. She has very low energy levels, and also a small appetite. As a result, Marie has lost about 15 pounds since starting college. She is having a lot of difficulty focusing on her schoolwork. Unlike high school where she did well academically, she is having trouble getting good grades at college. Marie has made friends at college, but when she hangs out with them she feels like she is “going through the motions.” Lately, she has considered ending her life.

Mild AN: Marie is in the physical therapy program, and as such she is very physically active. Marie never misses a day of exercise, and sometimes she exercises twice in one day if she can muster the energy to make it to the gym one more time. She is conscious of maintaining a well-balanced diet. In classes, she learned that the recommended daily caloric allowance for females her age is about 1800–2000, so she never consumes more than 1700 calories per day. Marie has lost a little weight, almost five pounds since starting school. Sometimes she feels a little tired, or even light-headed. However, she blames it on the low blood pressure that runs in her family.

Severe AN: Marie is in the physical therapy program, and as such she is very physically active. Marie exercises at least twice a day, sometimes three if she can muster the energy to make it to the gym one more time. She is conscious about her appearance. In classes, she learned that the recommended daily caloric allowance for females her age is about 1800–2000, so she never consumes more than 1200 calories per day. She has lost over 15 pounds since starting school, and she feels happy about this. Marie has also stopped menstruating, and she often feels weak and dizzy. However, she blames it on the low blood pressure that runs in her family.

Appendix B

Questionnaire Items

Rated from 1 (Strongly Disagree) to 7 (Strongly Agree).

Biological Attributions $\alpha = 0.79$

- Marie's condition is a result of ...
- Biological factors.
- Chemical imbalance in the brain.
- Genetic factors.

Vanity Attributions $\alpha = 0.86$

- This disorder is caused by vanity.
- Marie is self-centered.
- Marie desires attention from others.
- Marie is vain.
- Marie is self-obsessed.
- Marie is self-absorbed.
- Marie's actions show that she is narcissistic.

Self-Responsibility Attributions $\alpha = 0.75$

- This disorder is caused by self-discipline.
- Marie could pull herself together if she wanted to.
- Marie is to blame for her condition.
- Marie has self-control in this situation.
- Marie is responsible for her actions.

Admiration Reaction $\alpha = 0.80$

- I do not think it would be too bad to be in Marie's situation.

- I admire Marie's characteristics.
- I wish I could be more like Marie.
- I wish I could feel more like Marie does about herself.

Sympathy Reaction $\alpha = 0.84$

- I would feel sorry for Marie.
- I would feel bad for Marie.
- I would have sympathy for Marie.

Anger Reaction $\alpha = 0.74$

- I find Marie's behavior irritating.
- I would feel angry with Marie.
- I would be aggravated with Marie.

Coercion into Treatment $\alpha = 0.86$

- Marie should be forced to go into treatment for her condition.
- Marie should be forced to seek counseling.
- Even if she doesn't want it, Marie should be given treatment.
- Others should force Marie to seek treatment.

Imitation $r = 0.35$

- I feel similar to Marie.
- Others would choose to imitate Marie's behavior.

Social Distance $\alpha = 0.73$

- If I were an employer, I would hire Marie. (*reverse-scored*)
- I would be willing to be friends with Marie. (*reverse-scored*)
- Others would be unwilling to be friends with Marie.
- I would not want to be around Marie.
- If I saw that Marie was calling, I would not answer.