

The Prevalence and Adverse Associations of Stigmatization in People with Eating Disorders

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ABSTRACT

Objective: To date, studies of stigma relating to eating disorders have been largely confined to surveys of the public. We sought to examine the prevalence and correlates of stigma as reported by individuals with eating disorders.

Method: An online survey designed to assess frequency of exposure to potentially stigmatizing attitudes and beliefs as well as the perceived impact of this on health and well-being was completed by a cross-national sample of 317 individuals with anorexia nervosa ($n = 165$), bulimia nervosa ($n = 66$), or Eating Disorder Not Otherwise Specified (EDNOS; $n = 86$).

Results: Participants rated two beliefs as both particularly common and particularly damaging, namely "I should be able to just pull myself together" and "I am personally responsible for my condition". Participants with bulimia nervosa more commonly experienced the belief that they had "no self-control" and male participants more commonly experienced the belief that they were "less of a man".

More frequent stigmatization was associated with higher levels of eating disorder psychopathology, a longer duration of disorder, lower self-esteem, and more self-stigma of seeking psychological help.

Discussion: Stigma towards individuals with eating disorders, as experienced by sufferers, is common and associated with numerous adverse outcomes. The perceptions that eating disorders are trivial and self-inflicted should be a focus of destigmatization interventions. Efforts to reduce stigma towards individuals with bulimia nervosa may need to focus on perceptions of self-control, whereas efforts to reduce stigma towards males with eating disorders may need to focus on perceptions of masculinity/manhood.
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Keywords: stigma; eating disorders; anorexia nervosa; bulimia nervosa; EDNOS

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Introduction

When compared with research addressing stigma relating to the "common mental disorders" and schizophrenia, research addressing stigma relating to eating disorders is in its infancy.¹ Nevertheless, findings from research investigating stigmatizing attitudes and beliefs of the public towards individuals with eating disorders suggest that the most prevalent stigmatizing attitudes center on themes of personal responsibility, attention-seeking, weakness of character, and of eating disorders being a

problem that sufferers should be able to overcome with relative ease.^{2–11} There is also some evidence that individuals with bulimia nervosa are seen to possess less self-control, be more self-destructive, and be more responsible for their condition, than individuals with anorexia nervosa.^{6,7} Given the association of anorexia nervosa with extreme dietary restriction, low body weight, and medical instability, and of bulimia nervosa with binge eating and purging, differences of this kind are not surprising.⁶

While findings from these studies are instructive, research addressing stigmatizing attitudes and beliefs towards individuals with mental health problems has been criticized as being of limited benefit in the absence of research addressing stigma as it is experienced by individuals with mental health problems themselves.¹² Hence, there is a movement towards research examining the prevalence and correlates of stigma among individuals with mental disorders. Recent studies adopting this approach have confirmed that rates of discrimination experienced by individuals with

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depression¹³ and schizophrenia¹⁴ are high and associated with greater symptom severity and functional impairment and greater reluctance to disclose mental health problems.

The primary aim of the current study was to address the gap in stigma-related eating disorder research by examining the prevalence and correlates of stigma experienced by individuals with eating disorders. Further, we aimed to examine whether and how the experience of stigma might differ between individuals with different eating disorder subtypes and between males and females. Finally, we sought to identify factors associated with increased stigmatization.

Method

Participant Recruitment and Exclusion Criteria

An advertisement for the study was circulated by eating disorder organizations predominantly located in Australia, the United States and the United Kingdom. The advertisement solicited individuals who were currently diagnosed or recovered from an eating disorder, as well as individuals who thought that they might have an eating disorder. Only data from currently diagnosed participants are analyzed here. All participants within the currently diagnosed group indicated that their eating disorder diagnosis was made by a mental health professional. Consenting organizations posted advertisements on their websites and social media accounts and included the advertisement in their physical or electronic newsletters. The advertisement contained a hyperlink to the survey. An information statement told participants that the study aimed to improve understanding of stigma toward eating disorders. Data for this study were collected between October 2013 and February 2014. Once completed the survey could not be retaken. Valid-responding checks (e.g., for validity purposes, please select “Never” as your response to this question) were embedded in the survey to ensure data integrity. The validity of Internet-derived data for health sciences is similar, and sometimes better than data collected using traditional pen-and-paper approaches.¹⁵

The initial sample constituted 338 individuals who self-reported a current diagnosis of anorexia nervosa, bulimia nervosa, eating disorder not otherwise specified (EDNOS), or binge eating disorder. Participants who self-reported a diagnosis of binge eating disorder ($n = 17$) were excluded because of insufficient numbers recruited. Four participants who failed two or more valid-responding checks were excluded. The average rate of correct responses to the valid-responding checks was 97.4%, suggesting that participants responded meaningfully to the survey.

Participant Demographics. The post-exclusion sample of 317 participants included 13 males, 301 females, and three transgender persons ranging in age from 14 to 54 years ($M = 24.68$, $SD = 7.18$). Most participants resided in the United States of America (33.4%), Australia (30.9%), or the United Kingdom (21.4%). Remaining participants (14.3%) were residents of 11 other countries. Approximately half of participants (48.3%) were students, 35.6% were employed full- or part-time, and 6.0% were unemployed. Most participants were single (63.4%), 19.6% were “in a relationship” and 14.5% were married or cohabitating.

Participant Diagnoses. Most participants self-reported a diagnosis of anorexia nervosa ($n = 165$, 52.1%), followed by EDNOS ($n = 86$, 27.1%) and bulimia nervosa ($n = 66$, 0.8%). Of those participants with anorexia nervosa, 77.3% reported the restricting subtype, 16% reported the binge-purge subtype, and 6.7% did not know or could not recall their subtype. Most participants were currently receiving treatment for their eating disorder (57.1%), 32.8% were not currently receiving treatment but had received treatment in the past, 7.3% had never received treatment, and 2.8% selected “other/does not apply to me”.

Measures

Stigma Scale. A customized set of 18 stigmatizing attitudes and beliefs were adapted from previous research.^{2–11} These items, shown in both Figures 1 and 2, assess elements of stigmatization that research suggests are particularly relevant to eating disorders. Initially, participants were asked “How frequently have you been subjected to the following attitudes/beliefs because of your eating disorder” and given a 5-point response scale (1 = never, 5 = always). Subsequently, participants were asked “How damaging have the following attitudes/beliefs been to your psychological or physical well-being” and given a 5-point response scale (1 = not damaging at all, 5 = extremely damaging). Participants were given examples in order to aid their interpretation of the questions and to minimize cross-contamination from self-stigma: “For example, if people have never judged you as being personally responsible for your eating disorder, select “never” for the statement “I am personally responsible for my condition”.

Self-Stigma of Seeking Psychological Help. The 10-item Self-Stigma of Seeking Help scale (SSOSH)¹⁶ was used to measure the self-stigma of seeking psychological treatment. The SSOSH was shown to predict whether undergraduates sought help from a mental health professional over a 2-month period.¹⁶ Test-retest reliability of the SSOSH among undergraduates is acceptable at 0.82 over a 3-week period. Cronbach’s α was 0.87 in the present study.

FIGURE 1. The proportion of participants selecting each response option when asked to rate "How frequently have you been subjected to the following attitudes/beliefs due to your eating disorder?" Available response options were "always", "often", "sometimes", "rarely" and "never." The attitudes/beliefs are sorted in descending order based on the proportion of participants selecting "always" as their response.

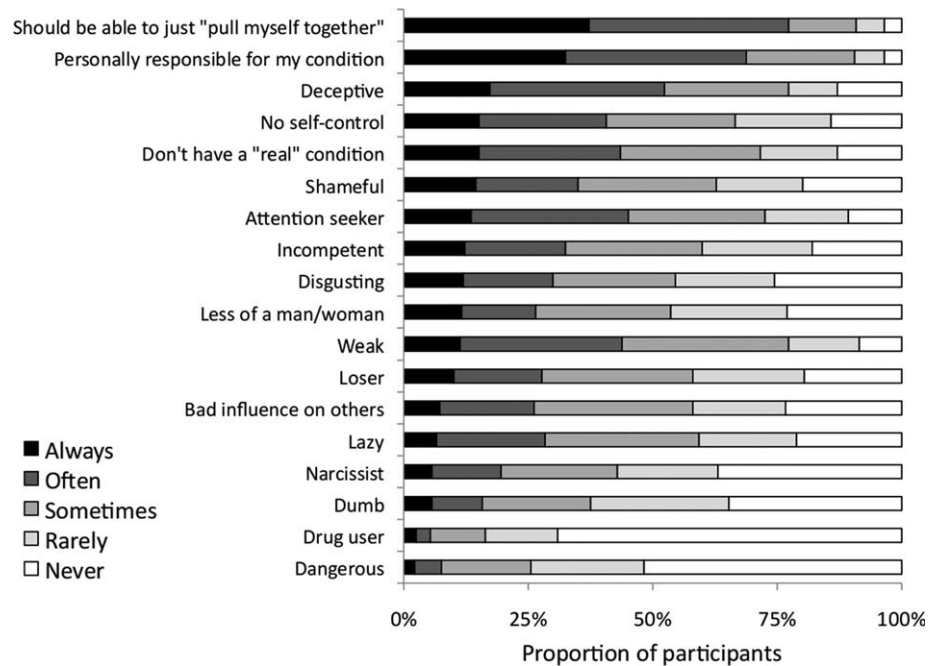


FIGURE 2. The proportion of participants selecting each response option when asked to rate "How damaging have the following attitudes/beliefs been to your psychological or physical well-being?" Available response options were "extremely damaging", "very damaging", "moderately damaging", "a little damaging", and "not at all damaging". The attitudes/beliefs are sorted in descending order based on the proportion of participants selecting "extremely damaging" as their response.

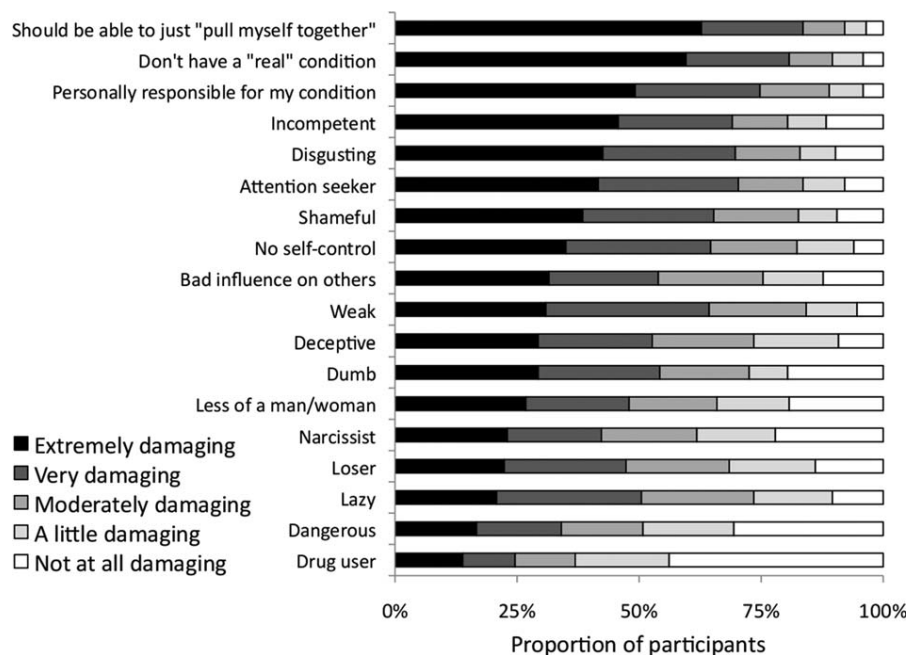


TABLE 1. Clinical data for participants indicating a current eating disorder diagnosis

Variable	Anorexia Nervosa			Bulimia Nervosa			EDNOS			Statistical Comparison	
	Mean	Standard Deviation	Median	Mean	Standard Deviation	Median	Mean	Standard Deviation	Median	ANOVA $F(df)$ or Kruskal-Wallis $\chi^2(df)$	p
Body Mass Index	17.40	2.23	17.37	23.16	8.43	21.10	23.72	9.85	20.87	$F(2,298) 525.63$	<.001
EDE-Q Global Score	4.55	1.09	4.88	4.46	1.02	4.75	4.45	1.21	4.70	$F(2,314) 5 0.33$	.722
EDE-Q Dietary Restraint	4.46	1.34	4.80	4.01	1.51	4.60	4.08	1.50	4.40	$F(2,314) 5 3.32$	.037
EDE-Q Eating Concern	3.93	1.23	4.20	4.05	1.16	4.20	3.95	1.33	4.20	$F(2,314) 5 0.22$	.806
EDE-Q Shape Concern	5.12	1.09	5.50	5.12	1.06	5.38	5.06	1.13	5.50	$F(2,314) 5 0.10$	.905
EDE-Q Weight Concern	4.69	1.21	4.80	4.65	1.29	4.80	4.72	1.21	4.80	$F(2,314) 5 0.06$	.942
EDE-Q Purging	8.19	20.82	0	29.46	32.46	20	8.19	20.82	0	$\chi^2(2) 5 87.51$	<.001
EDE-Q Laxative use	2.09	5.90	0	2.73	6.50	0	3.40	17.30	0	$\chi^2(2) 5 4.59$	.101
EDE-Q Diuretic use	0.41	2.52	0	0.97	3.25	0	1.59	8.63	0	$\chi^2(2) 5 2.12$	.346
EDE-Q Hard exercise	9.21	13.15	4	6.83	9.01	1.50	6.02	7.93	3	$\chi^2(2) 5 2.81$	.246
EDE-Q Objective binge	3.91	13.68	0	20.27	23.76	15	3.89	6.21	0.50	$\chi^2(2) 5 100.05$	<.001
EDE-Q Subjective binge	11.57	17.74	5	11.23	11.74	10	11.25	9.91	10	$\chi^2(2) 5 1.86$	.395
DASS-21 Depression symptoms	13.70	5.68	14	13.00	5.64	13.50	11.95	5.16	12	$F(2,314) 5 2.83$	.060
SSOSH Self-stigma of seeking psychological help	2.86	0.74	2.80	2.78	0.88	2.70	2.69	0.70	2.50	$F(2,314) 5 1.38$	.253
SES Global self-esteem	8.53	4.99	8	9.86	5.44	9	9.92	4.83	4.83	$F(2,314) 5 2.88$	.058
Years since symptom onset	9.52	7.64	8	9.48	5.41	8	10.05	7.33	9	$\chi^2(2) 5 1.39$	.499
Years since diagnosis (duration of disorder)	6.21	6.42	4	5.68	5.01	4	5.25	6.07	3	$\chi^2(2) 5 3.12$	.210
Years between symptom onset and diagnosis	3.40	4.43	2	3.70	3.28	3	4.81	4.17	4	$\chi^2(2) 5 9.80$	.007

Data for EDE-Q behaviors including purging, laxative use, diuretic use, hard exercise, objective binges, and subjective binges represents the number of times the behavior occurred during the past 28 days.

Depression Symptoms

The 7-item Depression subscale of the 21-item Depression Anxiety Stress Scales (DASS-21)¹⁷ was used to measure depression symptoms. Cronbach's α was 0.92 in the present study.

Self-esteem. The 10-item Self-Esteem Scale (SES)¹⁸ was used to measure global self-esteem. Cronbach's α was 0.85 in the present study.

Eating Disorder Symptoms. The Eating Disorder Examination Questionnaire (EDE-Q)¹⁹ was used to assess disordered eating attitudes and behaviors. The attitudes component is a 22-item questionnaire that asks participants how frequently various eating attitudes have occurred during the past 28 days. Mean scores on the four subscales were averaged together to calculate a global EDE-Q score. Cronbach's α for the global score was 0.92 in the present study. The behavioral component, which measures the frequency of occurrence of various eating disordered behaviors during the past 28 days, was also administered.

Concordance Between Participants' Self-Reported EDE-Q Data, Self-Reported Diagnoses, and Population and Clinical Norms. Participants' clinical data are shown in Table 1. Participants' levels of eating disorder psychopathology were comparable to those of individuals with clinical eating disorder diagnoses receiving specialist treatment.²⁰ BMI was significantly lower for anorexia nervosa compared to bulimia nervosa and EDNOS, and significant between-subtype differences were observed

for purging and objective bingeing frequency. Participants' mean global EDE-Q scores ranged from 4.45 to 4.55, considerably higher than published population norms for young women ($M = 1.52$ – 1.74)^{21–23} and notably higher than published thresholds for clinical significance ($M = 4.06$).²³ Given evidence that eating problems are overrepresented among women who decline participation in pen-and-pencil surveys on eating disorders,²⁴ it is possible that the greater anonymity afforded by the Internet survey may have increased recruitment from this otherwise nonparticipating subgroup of sufferers, raising the overall level of eating disorder psychopathology.

Statistical Analyses

All statistical analyses were conducted using SPSS version 21.

ANOVA and Contrasts. A series of univariate ANOVAs were conducted to examine differences in the frequency and damage of stigmatization based on eating disorder subtype. Significant ANOVAs were followed-up with contrast analyses. These analyses were repeated using participant sex as the independent variable to explore sex differences in stigmatization. The Holm-Bonferroni method was used to control the family-wise error rate.

Correlations. A Spearman correlational analysis was conducted to determine whether stigmatization frequency was associated with damage because of stigmatization, self-stigma of seeking help, self-esteem, eating

TABLE 2. Statistically significant contrasts showing differences in either the frequency of stigmatization or damage due to stigmatization as a function of eating disorder subtype or participant sex

Stigmatizing Attitude	Nature and Direction of Difference	<i>F</i> (1, 314)	<i>p</i>	Partial η^2
Bad influence on others Less of a man/woman	More frequent for anorexia than EDNOS	10.07	.002	.03
	More frequent for males than females	11.42	< .001	.04
No self-control	More frequent for anorexia than EDNOS	12.69	< .001	.04
	More frequent for bulimia than anorexia	28.79	< .001	.08
	More frequent for bulimia than EDNOS	9.10	.003	.03

Contrasts compared (i) anorexia nervosa to bulimia nervosa, (ii) anorexia nervosa to EDNOS, (iii) bulimia nervosa to EDNOS, and (iv) males versus females. Non-significant contrasts are not reported here. Effect size is given as partial eta squared (η^2).

disorder and depression symptoms, and duration of disorder.

Exploratory Factor Analysis and Multiple Regression. An exploratory factor analysis was conducted on the 18 items assessing frequency of stigmatization using principal axis factoring with Oblimin rotation. A parallel analysis and scree-plot analysis suggested that the data were unidimensional. For the scree-plot, the ratio of the first to second eigenvalue was 5.37, considerably higher than the unidimensionality threshold of 3.0.²⁵ The proportion of variance explained by the single factor representing frequency of stigmatization was 40.13%.

Subsequently, the factor representing frequency of stigmatization was entered as the outcome variable in a simultaneous multiple regression with sex, eating disorder subtype, treatment status, duration of disorder, eating disorder symptoms, depression symptoms, self-esteem, and self-stigma of seeking psychological help as independent variables. Potential interactions were tested, including sex by treatment status, sex by self-stigma of seeking help, and duration of disorder by treatment status. The assumptions of multiple regression were satisfied: independent residuals (Durbin-Watson statistic 5 2.15), no multicollinearity (VIF statistics < 2), linear relationships between the independent variables and the outcome variable, homogeneity of variance, and no outliers.

Results

The frequency with which participants reported having experienced different stigmatizing attitudes and beliefs is shown in Figure 1. Participants' self-reports of the damage these attitudes and beliefs caused to their physical and psychological well-being are shown in Figure 2.

Contrasts

Table 2 shows the results of the contrast analyses. Only significant contrasts have been reported and interpreted. A notable finding was that participants with bulimia nervosa were more frequently

stigmatized as having no self-control than participants with anorexia nervosa (a medium-to-large effect) and EDNOS (a small effect). In addition, male participants were more frequently stigmatized as being less of a man than female participants were stigmatized as being less of a woman (a small-to-medium effect).

Correlations

As shown in Table 3, an increased frequency of stigmatization was consistently associated with more damage to well-being, more eating disorder and depression symptoms, more self-stigma of seeking psychological treatment, and lower self-esteem. Frequency of stigmatization was inconsistently associated with duration of disorder.

Multiple Regression

The regression model was significant and accounted for 28.1% of the variance in frequency of stigmatization, $F(9, 296) 512.85, p < .001$. Further statistical outcomes of the regression are shown in Table 4. Increased frequency of stigmatization was associated with lower self-esteem, greater self-stigma of seeking psychological help, more marked eating disorder symptoms, and a longer duration of disorder. Non-significant associations were observed for depression symptoms, sex, treatment status, and eating disorder subtype.

Discussion

A primary goal of the current study was to determine the prevalence and correlates of stigmatizing attitudes and beliefs as they are experienced by individuals with eating disorders. Two beliefs, namely, "I should be able to just pull myself together" and "I am personally responsible for my condition", were found to be both particularly often experienced (often or always: 77.3% and 68.8%, respectively) and particularly damaging (very or

TABLE 3. Spearman correlations between the frequency of subjection to stigmatizing attitudes and damage to well-being, depression symptoms, eating disorder symptoms, self-stigma of seeking psychological help, global self-esteem and duration of disorder

Frequency of Subjection to Stigmatizing Attitudes	Damage to Well-Being	Depression Symptoms	Eating Disorder Symptoms	Self-Stigma of Seeking Help	Self-esteem	Duration of Disorder
Attention seeker	0.41***	0.16**	0.25***	0.19**	20.22***	0.05
Bad influence on others	0.39***	0.24***	0.31***	0.27***	20.26***	0.10
Dangerous	0.28***	0.14*	0.22***	0.11	20.10	0.10
Deceptive	0.25***	0.26***	0.35***	0.24***	20.31***	0.11
Disgusting	0.34***	0.17**	0.30***	0.13*	20.19**	0.11
Don't have a "real" condition	0.32***	0.21***	0.29***	0.27***	20.21***	0.11*
Drug user	0.21***	20.07	0.04	0.03	0.06	0.07
Dumb	0.35***	0.17**	0.25***	0.27***	20.22***	0.02
Incompetent	0.47***	0.32***	0.39***	0.33***	20.40***	0.14*
Lazy	0.25***	0.21***	0.17**	0.12*	20.16**	0.02
Less of a man/woman	0.52***	0.27***	0.29***	0.23***	20.25***	0.19**
Loser	0.41***	0.29***	0.39***	0.17***	20.33***	0.18**
Narcissist	0.38***	0.10	0.17**	0.13*	20.18**	0.07
No self-control	0.35***	0.22***	0.23***	0.16**	20.22***	0.07
Personally responsible	0.18**	0.12*	0.29***	0.29***	20.17**	0.15**
Pull myself together	0.43***	0.23***	0.30***	0.22***	20.26***	0.06
Shameful	0.44***	0.29***	0.38***	0.20***	20.31***	0.10
Weak	0.29***	0.32***	0.29***	0.23**	20.27***	0.03

* $p < .05$ ** $p < .01$ *** $p < .001$.

TABLE 4. Statistical outcomes of the simultaneous multiple regression with frequency of stigmatization as the outcome variable

Independent Variable	<i>b</i>	SE <i>b</i>	<i>B</i>	<i>t</i> (296)	<i>p</i>	Partial η^2
Eating disorder symptoms	0.217	0.056	0.242	3.89	< .001	0.05
Depression symptoms	0.002	0.012	0.010	0.15	.884	< 0.01
Duration of disorder	0.017	0.008	0.106	2.11	.036	0.02
Self-esteem	20.036	0.013	20.192	22.79	.006	0.03
Self-stigma of seeking psychological help	0.274	0.068	0.217	4.02	< .001	0.05
Bulimia ^{REF} vs anorexia	0.171	0.124	0.073	1.38	.169	< 0.01
EDNOS ^{REF} vs anorexia	20.074	0.114	20.034	20.65	.516	< 0.01
In treatment ^{REF} vs not in treatment	20.005	0.098	20.003	20.05	.960	< 0.01
Male ^{REF} vs female	20.226	0.236	20.048	20.96	.340	< 0.01

REF, the reference group. Bold 5 statistically significant at $\alpha = 0.05$.All tested interactions were non-significant and are not shown here. Effect size is given as partial eta squared (η^2).

extremely damaging: 83.6% and 74.8%, respectively).

The high proportion of participants who reported these forms of stigmatization raises an important question: Who is perpetrating this stigma? Interestingly, in the largest population-based survey of mental illness stigma to include eating disorders, Crisp and colleagues³ found that more than one-third of British adults believed that individuals with eating disorders “only had themselves to blame” (34.5%) and should be able to “pull themselves together” (38.1%). More recently, a study of Australian adults found that 30.3% reported slight to complete agreement regarding the personal responsibility of bulimia nervosa sufferers.⁹ Health professionals may also be at fault. A

1992 study of medical and nursing staff found that 51.5% and 59.3% believed that individuals with anorexia nervosa and bulimia nervosa were personally responsible for their condition, respectively. A 1999 study of gynaecologists and obstetricians found that 31% believed that anorexia and bulimia nervosa represented “abnormal behavior in the context of a weak, manipulative or inadequate personality”.²⁶ Mental health professionals, however, appear less likely to stigmatize. A 2012 study of psychiatrists found that 7.8% believed that anorexia nervosa represented “abnormal behavior in the context of a weak, manipulative or inadequate personality”.²⁷

Several differences were observed between the different eating disorder subtypes for the frequency

of individual stigmatizing attitudes. Participants with bulimia nervosa were more frequently stigmatized as having no self-control than participants with anorexia nervosa, and to a lesser extent, participants with EDNOS. This finding is consistent with research exploring the attitudes and beliefs of undergraduates towards individuals with bulimia nervosa.^{6, 7} Further, males with eating disorders reported that they were more frequently stigmatized as being less of a man than women were stigmatized as being less of a woman. This finding is consistent with research showing that stigma toward males with eating disorders is closely tied to perceptions of masculinity.⁴

The current study identified several adverse outcomes associated with eating disorder stigmatization. More frequent stigmatization was associated with more marked eating disorder symptoms, a longer duration of illness, lower self-esteem, and greater self-stigma of seeking psychological help. No significant interactions were observed. We stress that the direction of these effects is unclear; an individual with more marked eating disorder symptoms may be more visible and thus attract more stigma. Alternatively, frequent stigmatization may adversely affect the well-being of an individual, potentially increasing the severity of their eating disorder. Further, a heightened sensitivity to stigmatization among individuals with low self-esteem or high self-stigma may contribute to perceptions of more frequent stigmatization.

Several limitations of the current study are noted. First, participants' self-reported diagnoses were not confirmed. Second, the study was cross-sectional, precluding conclusions about causality. Third, our power to detect sex differences was limited by the low number of males in the study. Fourth, although we provided participants with response examples in order to minimize cross-contamination between stigma originating from others and self-stigma, there remains the potential that participants' responses reflected a general tendency to self-stigmatize. Further, this self-stigma may have been exacerbated by factors not measured in the current study, such as perfectionism. Fifth, the study sample may have underrepresented individuals who lacked Internet access, who were acutely unwell, or who were unaffiliated with eating disorder organizations. Finally, an insufficient amount of data from individuals with binge eating disorder forced their exclusion from the analyses.

In conclusion, the findings of the current study highlight the tendency for eating disorders to be viewed as trivial and/or self-inflicted. The findings

extend those of Crisp and colleagues³ and other population-based research in suggesting that the stigmatizing attitudes and beliefs concerning eating disorders held by the public are same as those most widely experienced by individuals with eating disorders themselves. The perception that eating disorders are trivial and/or self-inflicted should be a focus of efforts to reduce stigmatization towards individuals with eating disorders. Efforts to reduce stigma toward individuals with bulimia nervosa and toward males with eating disorders should focus additionally on perceptions of self-control and masculinity/manhood, respectively. Further, targeting the experience of this stigma may be beneficial in the clinical management of eating disorders, for example, in working through issues of stigma internalization.²⁸

References

1. Mond JM. Eating disorders "mental health literacy": An introduction. *J Ment Health* 2014;23:51–54.
2. Mond JM, Robertson-Smith G, Vetere A. Stigma and eating disorders: Is there evidence of negative attitudes towards anorexia nervosa among women in the community? *J Ment Health* 2006;15:519–532.
3. Crisp AH, Gelder MG, Rix S, Meltzer HI, Rowlands OJ. Stigmatisation of people with mental illnesses. *Br J Psychiatry* 2000;177:4–7.
4. Griffiths S, Mond JM, Murray SB, Touyz S. Young peoples' stigmatizing attitudes and beliefs about anorexia nervosa and muscle dysmorphia. *Int J Eat Disord* 2013;47:189–195.
5. Mond JM, Arrighi A. Gender differences in perceptions of the severity and prevalence of eating disorders. *Early Interv Psychiatry* 2011;5:41–49.
6. Wingfield N, Kelly N, Serdar K, Shivry VA, Mazzeo SE. College students' perceptions of individuals with anorexia and bulimia nervosa. *Int J Eat Disord* 2011;44:369–375.
7. Mond JM, Hay PJ, Rodgers B, Owen C, Beumont PJV. Beliefs of women concerning the severity and prevalence of bulimia nervosa. *Soc Psychiatry Psychiatr Epidemiol* 2004;39:299–304.
8. Roehrig JP, McLean CP. A comparison of stigma toward eating disorders versus depression. *Int J Eat Disord* 2010;43:671–674.
9. McLean SA, Paxton SJ, Massey R, Hay PJ, Mond JM, Rodgers B. Stigmatizing attitudes and beliefs about bulimia nervosa: Gender, age, education and income variability in a community sample. *Int J Eat Disord* 2014;47:353–361.
10. Stewart MC, Schiavo RS, Herzog DB, Franko DL. Stereotypes, prejudice and discrimination of women with anorexia nervosa. *Eur Eat Disorders Rev* 2008;16:311–318.
11. Stewart MC, Keel PK, Schiavo RS. Stigmatization of anorexia nervosa. *Int J Eat Disord* 2006;39:320–325.
12. Thornicroft G, Rose D, Kassam A, Sartorius N. (2007). Stigma: Ignorance, prejudice or discrimination? *Br J Psychiatry* 2007;190:192–193.
13. Lasalvia A, Zoppei S, Bortol TV, Bonetto C, Cristofalo D, Wahlbeck K et al. Global pattern of experienced and anticipated discrimination reported by people with major depressive disorder: A cross-sectional survey. *Lancet* 2013;381:55–62.
14. Thornicroft G, Brohan E, Rose D, Sartorius N, Leese M. Global pattern of experienced and anticipated discrimination against people with schizophrenia: A cross-sectional survey. *Lancet* 2013;373:408–415.
15. Lara DG, Ottoni GL, Frozi J, de Carvalho HW, Bisol LW. Development and validity data of the Brazilian Internet Study on Temperament and Psychopathology (BRAINSTEP). *J Affect Disorders* 2012;141:390398.

16. Vogel DL, Wade NG, Haake S. Measuring the self-stigma associated with seeking psychological help. *J Couns Psychol* 2006;53:325–337.
17. Henry J, Crawford J. The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *Br J Clin Psychol* 2005;44:227–239.
18. Rosenberg M. *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press, 1965.
19. Fairburn, CG, Beglin SJ. Assessment of eating disorders: interview or self-report questionnaire? *Int J Eat Disord* 1993;16:363–370.
20. Mond JM, Owen C, Hay PJ, Rodgers B, Beumont PJV. Assessing quality of life in eating disorder patients. *Qual Life Res* 2005;14:171–178.
21. Luce KH, Crowther JH, Pole M. Eating Disorder Examination Questionnaire (EDE-Q): Norms for undergraduate women. *Int J Eat Disord* 2008;41:273–276.
22. Mond JM, Hay PJ, Rodgers B, Owen C. Eating Disorder Examination Questionnaire (EDE-Q): Norms for young adult women. *Behav Res Ther* 2006;44:53–62.
23. Welch E, Birgegård A, Parling T, Ghaderi A. Eating disorder examination questionnaire and clinical impairment assessment questionnaire: General population and clinical norms for young adult women in Sweden. *Behav Res Ther* 2011;49:85–91.
24. Beglin SJ, Fairburn CG. Women who choose not to participate in surveys on eating disorders. *Int J Eat Disord* 1992;12:113–116.
25. Morizot J, Ainsworth AT, Reise SP. Toward modern psychometrics: Application of item response theory models in personality research. In: Robins RW, Fraley C, Krueger RF, editors. *Handbook of Research Methods in Personality Psychology*. New York, NY: The Guilford Press, pp. 407–423.
26. Morgan, JF. Eating disorders and gynecology: Knowledge and attitudes among clinicians. *Acta Obstet Gynecol Scand* 1999;78:233–239.
27. Jones WR, Saeidi S, Morgan JF. Knowledge and attitudes of psychiatrists toward eating disorders. *Eur Eat Disord Rev* 2012;21:84–88.
28. Griffiths S, Mond JM, Murray SB, Thornton C, Touyz S. Stigma resistance in eating disorders. *Soc Psych Psych Epid* 2014. Available at: http://download.springer.com/static/pdf/13/art%253A10.1007%252Fs00127-014-0923-z.pdf?auth66=1409105930_99e655a41f3668a1d7f2892979bfd0ee&ext5.pdf.

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