

Comorbidity of Bulimia Nervosa, Eating Disorder NOS, and Generalized Anxiety Disorder: Is emotion regulation the connection?

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INTRODUCTION

Recent findings indicate a link between the eating disorders and dysregulation of emotion, particularly of the binge-purge type. Bulimia nervosa (BN) is an eating disorder characterized by binge eating and purging. The DSM-IV also delineates diagnostic criteria for Eating Disorder Not Otherwise Specified (EDNOS), based upon combinations of the various eating disorder behaviors. Heatherton and Baumeister (1991) postulate that binge eating serves to regulate affect. Their theory posits that individuals with BN are oversensitive to their environment and social demands—leading to negative affect and increased anxiety. Binge eating, in turn, serves to escape the negative affect generated by such experiences. Although not as effective, purging is also recognized as a way to temporarily enhance mood and regulate emotion. Wisner and Telch (1999) suggest that, within an emotion regulation framework, binges originate with the threat or presence of an unwelcome emotional experience. In support of this assertion, Arnow, Kennedy, and Agras (1992) found that women who binge learned that binge eating can be a quick fix to numb painful emotions.

Generalized anxiety disorder (GAD) is a chronic and debilitating anxiety disorder characterized by persistent and excessive worry. Although, there is little disagreement that worry is the hallmark feature of GAD, contemporary approaches to GAD de-emphasize the importance of worry in favor of also considering emotion and other factors (Mennin, Turk, Heimberg, & Fresco, 2002; Newman et al., in press). Specifically, these models propose that individuals with GAD find emotionally evocative experiences toxic and thus utilize verbal and linguistic control strategies, such as worry, which serve to avoid the emotional content of situations (Mennin et al., 2002).

By applying an emotion regulation framework to both GAD and eating disorders, there is a potential parallel between the function of worry in GAD and the function of bingeing and purging in the eating disorders. That is, worry in GAD and bingeing/purging in eating disorders may serve the function of deadening or soothing emotional upset in the short run—providing an escape from emotionally evocative situations. The other potential linkage between GAD and the eating disorders may be in the reported rates of comorbidity in treatment seeking samples. Schwalberg et al. (1992) found a 55% comorbidity rate for BN and GAD, and 36% for BED and GAD.

HYPOTHESES

Thus, the present study sought to address three questions. First, we wished to examine rates of overlap between GAD and eating disorders, using DSM-IV criteria in a non-clinical sample. Second, we sought to discover differences among BN and the EDNOS subtypes. Thirdly, we sought to examine how the presence of GAD and/or an eating disorder were associated with patterns of emotion regulation.

METHODS

Participants

- 1878 college students
- Screened using the BULIT-R (Thelen, et al, 1996), and/or the EDQ (Crowther, 1992), and the GAD-Q-IV (Newman et al., 2002).
- Participants positive for one or more self-reported disorders and a random subset of participants with no self-reported disorder assessed with the Structured Diagnostic Interview for DSM-IV (SCID; First et al., 1996) and completed a packet of self-report measures of emotion regulation.
- Comorbidity results presented here are based on 90 female participants assessed with the SCID. Emotion regulation results presented here are based on a subset ($n = 66$) of female participants who completed the self-report measures.

Measures

The *Bulimia Test* (BULIT-R; Thelen, Mintz, & Vander Wal, 1996): a self-report measure of bulimia nervosa symptomatology.
The *Eating Disorders Questionnaire* (EDQ; Crowther, 1992): a self-report inventory that assesses DSM-IV criteria for the eating disorders.
The *Generalized Anxiety Disorder Questionnaire - IV* (GAD-Q-IV; Newman et al., in press): a self-report measure assessing DSM-IV criteria for GAD.
The *Affective Control Scale* (ACS; Williams, Chambless, & Ahrens, 1997): a self-report measure assessing fear of emotions and attempts to control emotional experience.
The *Toronto Alexithymia Scale-20* (TAS; Bagby, Parker, & Taylor, 1994a; Bagby, Taylor, & Parker, 1994b): a self-report measure that generates three factor-analytically derived subscales.
The *Trait Meta-Mood Scale* (TMMS; Salovey, et al., 1995): a self-report measure of emotional intelligence.
The *Berkeley Expressivity Questionnaire* (BEQ; Gross & John, 1997): a self-report measure that assesses the strength of emotional response tendencies and negative and positive emotional impulses.
The *Responses to Depression Questionnaire—Rumination Scale* (Nolen-Hoeksema & Morrow, 1991): a self-report measure of depressive rumination.
The *Structured Clinical Interview for DSM-IV, Research Version* (First et al., 1996): a used semi-structured interview for current and lifetime diagnoses of Axis I disorders. Only the GAD and Eating Disorders modules were administered.

RESULTS

Table 1. Rates of Interviewer assessed Comorbidity between GAD and Eating Disorders

	No GAD	GAD	Totals
No ED	40	20	60
Any ED	15	15	30
BN	4	3	7
AN w/out Amenorrhea	1	0	1
AN Normal Wt.	0	1	1
Subthreshold BN	7	9	16
BED	1	4	5

CONCLUSIONS

- High rates of comorbidity between the eating disorders and GAD were observed by interviewer assessment.
- The presence of ED and GAD tended to be associated with higher levels of maladaptive emotion regulation as compared to having no current diagnosis or either ED or GAD.
- Contrast analysis indicated that most of the emotion regulation deficits could be attributed to the presence of GAD even when GAD was comorbid with ED

Table 1. Means and (SD) of emotion regulation measures

	Control (a)	GAD (b)	ED (c)	Both (d)	Omnibus E (3,62)	Pairwise	GAD Contrast	ED Contrast
BEQ								
Impulse Strength	27.71 (5.96)	30.05 (3.46)	29.60 (4.03)	30.83 (6.40)	1.53	—	.37	.21
Negative Expressivity	21.39 (4.96)	23.81 (4.96)	23.20 (4.28)	20.50 (4.85)	1.47	—	.10	.15
Positive Expressivity	19.21 (3.93)	21.56 (2.31)	20.90 (3.17)	20.16 (3.10)	1.84	—	.23	.04
ACS								
Anger	3.56 (0.84)	3.43 (0.68)	3.42 (0.64)	4.40 (0.86)	4.38**	a = b < c < d	.52	.50
Positive Emotion	3.01 (0.72)	2.90 (0.55)	2.96 (0.87)	3.70 (0.65)	3.65*	a = b < c < d	.43	.51
Depression	3.43 (0.89)	3.43 (0.73)	3.52 (0.88)	4.48 (0.80)	5.02**	a = b < c < d	.55	.65
Anxiety	3.33 (0.97)	4.02 (0.90)	3.54 (0.86)	4.44 (0.56)	5.25**	a < c < d	.87	.34
TAS								
Difficulty Identifying Emotions	2.35 (0.77)	2.56 (0.60)	2.16 (0.41)	3.17 (0.75)	5.10**	a = c < d	.85	.28
Difficulty Describing Emotions	2.92 (0.78)	3.08 (0.60)	2.80 (0.57)	3.35 (0.59)	1.53	—	.50	.10
TMMS								
Attention to Emotions	3.76 (0.37)	3.92 (0.45)	3.88 (0.40)	3.77 (0.30)	0.70	—	.05	.10
Clarity of Emotions	3.27 (0.63)	3.02 (0.34)	3.30 (0.52)	2.91 (0.47)	1.82	—	.57	.03
RRS								
Brooding	10.28 (2.88)	11.25 (2.54)	11.30 (3.06)	13.67 (1.55)	4.60**	a < c < d	.60	.61
Pondering	9.83 (2.52)	10.13 (3.22)	11.80 (3.49)	10.41 (2.84)	1.64	—	.14	.42

Note: BEQ = Berkeley Expressivity Questionnaire; ACS = Affective Control Scale; TAS = Toronto Alexithymia Scale; TMMS = Trait Meta-Mood Scale; RRS = Ruminative Response Scale; * $p < .05$; ** $p < .005$; Contrasts aggregate No GAD vs. GAD or No ED vs. ED. Statistics are Cohen's (1988) d ; Small = .20; Medium = .50; Large = .80

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