Laxative Abuse Among Women with Eating Disorders: An Indication of Psychopathology?

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Objective: *The results of the scant research on laxative abuse among women with eating disorders suggest that laxative abuse is a diagnostic indicator of greater psychopathology. We further investigated the relationship of history of laxative abuse to eating and related attitudes, impulsivity, and personality pathology.* **Method:** *Women assessed in an outpatient clinical setting and diagnosed with anorexia nervosa, binge-eating/purging type (n = 51) or bulimia nervosa, purging type (n = 280) completed measures of laxative abuse, eating and related attitudes, and personality psychopathology at intake.* **Results:** *More than one-half of both groups had abused laxatives at some point. History of laxative abuse was unrelated to eating disorder diagnostic category, current age or body weight, history of stealing, self-induced injury, having attempted suicide, interpersonal distrust, maturity fears, or compulsive or dependent personality features. Compared to nonabusers, laxative abusers demonstrated more perfectionism and avoidant personality features. Significant statistical interactions among variables revealed that bulimia nervosa patients who had abused laxatives exhibited the most pathological scores on scales measuring drive for thinness, body dissatisfaction, ineffectiveness, lack of interoceptive awareness, and passive-aggressive and borderline personality features. Anorexia nervosa patients who had abused laxatives had the highest scores on the histrionic scale.* **Discussion:** *Results are discussed with regard to past research and clinical implications. We propose that laxative abuse among eating disordered women may serve different functions depending on diagnosis and underlying personality dynamics.*

It is widely recognized clinically that a large proportion of patients with eating disorders abuse laxatives as a means of purgation and attempted weight control (Bulik, 1991;

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Johnson & Connors, 1987; Mitchell & Boutacoff, 1986; Mitchell, Pomeroy, & Huber, 1988). At any given time, more than one fourth of bulimic patients currently abuse laxatives (Tobin, Johnson, & Dennis, 1992; Waller, Newton, Hardy, Svetlik, 1990) and more than one half have done so in the past (Bulik, 1991; Garner, Garner, & Rosen, 1993; Mitchell, Hatsukami, Eckert, & Pyle, 1985; Pyle, Mitchell, & Eckert, 1981). Laxative abuse is also common in nonclinical samples of women with weight concerns (Fairburn & Cooper, 1984; Johnson & Love, 1985), yet scant research has been conducted on the clinical correlates of this form of purgation.

The results of existing research suggest relatively greater psychopathology with laxative abuse (Johnson & Love, 1985; Swain, Shisslak, & Crago, 1991). Relative to nonabusers, patients who abused laxatives were found to evidence greater likelihood of self-induced injury and having attempted suicide (Mitchell, Boutacoff, Hatsukami, Pyle, & Eckert, 1986), greater borderline personality features (Johnson, Tobin, & Enright, 1989), as well as greater drive for thinness and body dissatisfaction (Waller et al., 1990). However, given that laxative abusers frequently engage in self-induced vomiting as well (Garner et al., 1993; Mitchell et al., 1985, 1986; Tobin et al., 1992), it is possible that engaging in multiple forms of purgation, rather than laxative abuse per se, is the clinically significant indicator of psychopathology.

Tobin et al. (1992) classified their sample of bulimia nervosa patients according to whether they engaged in one type of purging behavior, two types, or three or more types. They found that self-reported borderline personality features and scores on many of the scales of the Eating Disorders Inventory (EDI; Garner, Olmsted, & Polivy, 1983) were related to the number of different purging behaviors in which the patient engaged. Given that only 2% of their sample engaged exclusively in laxative abuse, Tobin et al. (1992) concluded: "Because of the low frequency of specific combinations of [purging] behaviors, it remains difficult to determine whether it is laxative abuse per se or the combination of purging behaviors that indicates a subgroup of more pathological patients. This question is left open to future study" (p. 23). Further investigation of this issue was our focus.

We sought to determine the relationship between laxative abuse and eating and related attitudes, impulsivity, and personality psychopathology after controlling for relevant covariates such as multiple forms of purgation. We were also interested in the potential importance of laxative abuse among binging/purging anorexia nervosa patients as well as those with bulimia nervosa. It is unknown whether laxative abuse is related differentially to psychopathology as a function of diagnostic category.

METHOD

Subjects

Participants were 331 female patients who presented at our clinic for evaluation and met diagnostic criteria (DSM-IV; American Psychiatric Association, 1994) for anorexia nervosa, binge-eating/purging type (n = 51) or bulimia nervosa, purging type (n = 280). The mean age of the total sample was 23.90 years (SD = 6.87).

Procedure

Upon presentation at the clinic, 2-hr diagnostic assessments were conducted by clinicians experienced in the evaluation and treatment of eating disorders. These assessments began

with a semistructured interview conducted by a psychologist and concluded with a second diagnostic interview conducted by the staff psychiatrist. Diagnoses were based on the 2-hr diagnostic evaluation. Finally, participants completed the paper-and-pencil measures used in the current study.

Participants completed the Diagnostic Survey for Eating Disorders-Revised (DSED-R; Johnson, 1985), the EDI (Garner, Olmsted, & Polivy, 1983), and the Millon Clinical Multiaxial Inventory (MCMI; Millon, 1983). Patients were categorized as having a history of laxative abuse if they responded positively to the DSED-R question, "Have you ever used laxatives to control your weight or 'get rid of food'?" In the DSED-R, respondents were also asked separate questions regarding lifetime duration of laxative abuse, whether they were currently abusing laxatives, and had ever engaged in stealing, self-injurious behavior, or attempted suicide.

RESULTS

Women who had abused laxatives did not differ from those who had not with regard to age, $F(1,329) = 1.17$, $p < .29$, or body mass index (BMI; Beaumont, Al-Alami, & Touyz, 1988) at presentation, $F(1,327) = 2.62$, $p < .11$. Descriptive statistics regarding laxative abuse are presented in Table 1. The majority of both diagnostic groups had abused laxatives and a substantial minority of the sample (31.9%) were abusing laxatives up to the point of the intake evaluation. Neither diagnostic group was more likely to abuse laxatives. The two diagnostic groups did not differ with regard to age of onset (age 20), or duration (nearly 3 years), of laxative abuse, but bulimia nervosa patients were more likely than anorexics to have engaged in a combination of self-induced vomiting and laxative abuse rather than laxative abuse only.

Depending on the nature of the dependent variable, logistic (Norusis, 1990) or multiple (Pedhazur, 1982) regression analyses were conducted to ascertain whether laxative abuse was an indicator of psychopathology. Predictor variables were diagnosis, number of purgation behaviors (1 = laxatives only or vomiting only, 2 = both vomiting and laxatives), laxative abuse, the interaction of diagnosis and number of purgation behaviors, and the interaction of diagnosis and laxative abuse.

Separate logistic regression analyses were conducted to predict history of stealing, self-induced injury, or suicide. In all three analyses none of the independent variables

Table 1. Laxative abuse in the current sample and comparisons between anorexia nervosa and bulimia nervosa patients

Variables	Total Sample (N = 331)	Anorexia Nervosa (n = 51)	Bulimia Nervosa (n = 280)	p value for group differences
Had abused laxatives	193 (58.3%)	26 (51.0%)	167 (59.6%)	.32*
Currently abusing	104 (31.9%)	20 (40.8%)	84 (30.3%)	.20*
M (SD) age of onset of laxative abuse	20.02 (4.95)	19.39 (4.42)	20.12 (5.04)	.30
M (SD) duration of laxative abuse (in months)	32.63 (39.09)	39.58 (51.91)	31.58 (36.60)	.33
Types of purgation				.00001
Laxative abuse only	17 (5.1%)	9 (17.6%)	8 (2.9%)	
Vomiting only	138 (41.7%)	25 (49.0%)	113 (40.3%)	
Both vomiting/laxatives	176 (53.2%)	17 (33.3%)	159 (56.8%)	

*Corrected for continuity.

(diagnosis, number of purging behaviors, laxative abuse, or interaction terms) were predictive and are not presented here. The statistically significant results of stepwise multiple regression analyses to predict scores on the EDI and MCMI scales are presented in Table 2. Only those MCMI scales which corresponded to the most frequent personality disorders exhibited by eating disorder patients (Vitousek & Manke, 1994) were considered, namely Avoidant, Dependent, Histrionic, Compulsive, Passive-Aggressive, and Borderline.

Those patients with a history of laxative abuse had higher scores on the Perfectionism (EDI) and Avoidant personality scales (MCMI). In four instances, the interaction of eating disorder diagnosis and laxative abuse was predictive of EDI scores: Bulimia nervosa patients who had abused laxatives exhibited the highest scores on Drive for Thinness, Body Dissatisfaction, Ineffectiveness, and Interoceptive Awareness. With regard to MCMI scores, anorexia nervosa patients who had abused laxatives exhibited the highest scores on the Histrionic scale, whereas bulimia nervosa laxative abusers had the highest scores on the Passive-Aggressive and Borderline scales. History of laxative abuse was unrelated to scores on the Bulimia, Interpersonal Distrust, and Maturity Fears scales of the EDI and unrelated to scores on the Dependent and Compulsive scales of the MCMI.

DISCUSSION

Even after controlling for effects of diagnostic category, as well as effects of engaging in multiple purging behaviors (Tobin et al., 1992), we found that history of laxative abuse was predictive of perfectionism and avoidant personality features. Also, laxative abuse was predictive of particular forms of psychopathology as a function of eating disorder diagnostic category. Thus, it appears that laxative abuse may serve different functions for anorexia nervosa versus bulimia nervosa patients.

Table 2. Results of stepwise multiple regression analyses to predict scores on the scales of the EDI or the MCMI

EDI or MCMI Scale	Statistically Significant Predictors
EDI Drive for Thinness	$R = .25$, $R^2 = .06$, $F\ (1,324) = 21.56$, $p = .0000$
Interaction of diagnosis/laxatives	
EDI Body Dissatisfaction	$R = .33$, $R^2 = .11$, $F\ (1,324) = 38.45$, $p = .0000$
Interaction of diagnosis/laxatives	
EDI Ineffectiveness	$R = .30$, $R^2 = .09$, $F\ (1,324) = 31.49$, $p = .0000$
Interaction of diagnosis/laxatives	
EDI Perfectionism	$R = .23$, $R^2 = .05$, $F\ (1,324) = 17.97$, $p = .0000$
History of laxative abuse	
EDI Interoceptive Awareness	$R = .26$, $R^2 = .07$, $F\ (1,324) = 23.76$, $p = .0000$
Interaction of diagnosis/laxatives	
MCMI Scale 2-Avoidant	$R = .25$, $R^2 = .06$, $F\ (1,306) = 19.83$, $p = .0000$
History of laxative abuse	
MCMI Scale 4-Histrionic:	$R = .19$, $R^2 = .04$, $F\ (2,305) = 5.70$, $p = .004$
Diagnosis	
Interaction of diagnosis/laxatives (−)	
MCMI Scale 8-Passive-Aggressive	$R = .22$, $R^2 = .05$, $F\ (1,306) = 15.80$, $p = .0001$
Interaction of diagnosis/laxatives	
MCMI Scale C-Borderline	$R = .21$, $R^2 = .04$, $F\ (1,306) = 14.16$, $p = .0002$
Interaction of diagnosis/laxatives	

Note: EDI = Eating Disorder Inventory (Garner et al., 1983); MCMI = Millon Clinical Multiaxial Inventory (Millon, 1983). Diagnosis: 1 = anorexia nervosa, 2 = bulimia nervosa. All predictor variables $p < .05$. Complete statistics regarding the regression analyses are available from the authors.

In matching our findings with our clinical observations, it appears that women with eating disorders may abuse laxatives for different reasons or as manifestations of different forms of psychopathology. In our experience, laxative abusers do not constitute a homogeneous group but do appear to fall into three general groups. One group appears to be highly rigid, perfectionistic, and avoidant, and may abuse laxatives in compulsive, ritualistic ways to relieve the tension produced by their obsessive thoughts and fears around retaining food in their bodies. A second group we have observed, typically anorexia nervosa patients, have abused laxatives as a histrionic way to draw attention to their eating disorder, often allowing their parents or spouse to "find" the laxatives so that a confrontation will ensue. The last general group which we have found to abuse laxatives are those bulimia nervosa patients with more extreme personality psychopathology and, frequently, a history of sexual abuse. In our clinical observation, these individuals seem to be more likely to exhibit borderline personality features and/or passive-aggressive tendencies.

The results of the current study, coupled with our clinical experience, indicate that laxative abuse among women with eating disorders may be a phenomenon more psychodynamically complicated than has been suggested by others. We hope that our report both emphasizes the need to consider laxative abuse in light of eating disorder diagnosis and presentation of other symptoms and personality dynamics, as well as stimulates further study of the psychological functions of laxative abuse.

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