

The Associations between Laxative Abuse and Other Symptoms among Adults with Anorexia Nervosa

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Abstract: **Objective:** *The purpose of the current study was to examine the association between laxative abuse and other symptoms and features among adult patients presenting with anorexia nervosa.* **Method:** *One hundred and seventeen patients with anorexia nervosa were studied. Laxative abusers and nonabusers were compared.* **Results:** *Compared with nonabusers, laxative-abusing patients had higher ratings on the Ineffectiveness, Body Dissatisfaction, and Drive for Thinness subscales on the Eating Disorders Inventory (EDI), as well as more depressive and somatization symptoms. There was an association between laxative abuse and low self-esteem.* **Discussion:** *Laxative abuse appears to be associated with especially severe psychopathology and low self-esteem among subjects with anorexia nervosa.* © 2004 by Wiley Periodicals, Inc. *Int J Eat Disord* 36: 224–228, 2004.

Key words: *laxative abuse; anorexia nervosa; self-esteem*

INTRODUCTION

Anorexia nervosa is an important disorder that varies from the mild to the life-threatening. Greater severity and a poor prognosis may depend on factors such as comorbid personality disorder, severe low self-esteem, and general psychopathology (Garfinkel & Garner, 1982; Nakijama, Nakano, Tsuboi, & Tsutsui, 1994). Subjects with anorexia nervosa of the binge-purge subtype (as defined in the 4th ed. of the Diagnostic and Statistical Manual of Mental Disorders [DSM-IV; American Psychiatric Association, 1994]) have more general disturbance than subjects with the pure restricting subtype. Dowson (1992) found that anorexia nervosa patients with self-induced vomiting had higher scores on measures of borderline and antisocial personality disorders compared with patients without self-induced vomiting. Favaro and Santonastaso (2000) found more

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self-injurious behavior and suicide attempts among purging patients who induced vomiting and abused laxatives compared with nonpurging patients. Furthermore, an association between purging behavior and depression and general psychopathology was found by Cachelin, Fary, and Maher (1998) and by O'Kearney, Gertler, Conti, and Duff (1998).

The symptom of laxative abuse has received relatively little attention, especially as a feature of anorexia nervosa. However, Pryor, Wiederman, and McGilley (1996) showed that anorectic patients who abused laxatives had the highest scores on a histrionic scale. Other studies of eating-disordered patients supported the finding that laxative abuse was associated with greater general disturbance or severity (Turner, Batik, Palmer, Forbes, & McDermott, 2000; Wiedermann & Pryor, 1996).

The aim of the current study is to examine the associations of laxative abuse among adults with anorexia nervosa. In particular, we will report associations with results on measures of other eating disorder features, general psychopathology, and self esteem.

METHOD

Participants

We studied 117 patients with anorexia nervosa as defined in the 3rd Rev. ed. of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III R; American Psychiatric Association, 1987). They were a consecutive series of adult patients 16 years or older who presented to the Leicester Eating Disorders Service. Complete data were available for all patients. Their mean age was 25 years ($SD = 9.44$, range = 16–60), their mean body mass index (BMI) was 15.52 ($SD = 1.91$, range = 10.6–17.4), and their mean duration of illness was 4.5 years ($SD = 5.1$ months, range = 3 months to 26 years).

Procedure

Information about the presenting features of these patients had been collected routinely at the time of first clinical assessment. These data included age, BMI, duration of eating disorders, and ratings on the Clinical Eating Disorder Rating Instrument (CEDRI; Palmer, Christie, Cordle, Davies, & Kenrick, 1987). The CEDRI rates the symptoms or features of the patient manifest in the month before assessment. The ratings were 0 for never, 1 for mild, 2 for moderate or typical of eating-disordered subjects, and 3 for severe. The CEDRI item "laxative abuse for weight control" was used to define the subgroup of patients for study. At the first assessment, each participant completed three self-report questionnaires aimed at measuring specific eating disorder features, general psychopathology, and self-esteem.

Specific psychopathology and associated features were measured using the Eating Disorder Inventory (EDI; Garner, Olmsted, & Polivy, 1983). The EDI comprises eight subscales: Bulimia, Drive for Thinness, Body Dissatisfaction, Maturity Fears, Interoceptive Awareness, Perfectionism, Interpersonal Distrust, and Ineffectiveness.

General psychopathology was measured using the Symptom Checklist-Revised (SCL-90-R; Derogatis, 1983). This instrument has nine subscales: Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism.

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) was used to measure self-esteem. It has been found to be useful among eating-disordered populations (Griffith et al., 1999).

Data Analysis

Subjects were divided into two groups, according to whether they reported laxative abuse in the previous month. *t* Tests were used for parametric variables and Mann-Whitney *U* tests were used for nonparametric variables. Given the presence of multiple tests, *p* values for the EDI and SCL-90-R were adjusted for chance findings using Bonferroni corrections.

To find the predictors of laxative abuse, we used a logistic regression model/backward Wald stepwise method. The EDI subscales, the SCL-90-R global value, and the RSES were included in the model.

RESULTS

Of the 117 patients, 22 (18.8%) used laxatives for weight control. No difference was found between laxative abusers and nonabusers in BMI, age, or duration of illness.

Univariate Comparison of the EDI, SCL-90-R, and RSES between Laxative Abusers and Nonabusers

Using univariate comparison, patients with the symptom of laxative abuse were rated higher on the Ineffectiveness, Body Dissatisfaction, and Drive for Thinness subscales of the EDI and on the Depression, Somatization, and global scores on the SCL-90-R compared with patients without the symptom of laxative abuse. They also scored higher on the RSES, indicating lower self-esteem. Results are shown in Table 1.

Logistic Regression Analysis

The relationship between laxative abuse and eating-related and general psychopathologic symptoms was explored using a logistic regression model. In this series of adults with anorexia nervosa, Body Dissatisfaction ($p = .002$) and RSES scores ($p = .033$) were significant predictors of laxative abuse. Results are shown in Table 2.

DISCUSSION

The symptom of laxative abuse has importance in its own right. Especially when the intake of laxatives is high, there may be considerable risk through physical complications such as dehydration and electrolyte imbalance. Severe hypokalemia is a particular danger (Palla & Litt, 1988). Furthermore, laxative abuse is commonly believed to be associated with edema during refeeding and there may also be longer term effects on gut motility (Winston & Stafford, 2000).

The current study suggests that in addition to these direct consequences, laxative abuse in anorexia nervosa tends to be associated with more severe eating disorders in general. In our series, we found that laxative-abusing subjects reported more general psychopathology with more depression and somatization symptoms, more ineffectiveness, more dissatisfaction with their bodies, a stronger drive for thinness, and lower self-esteem

Table 1. Comparison of the RSES, EDI, and SCL-90-R subscales between patients with anorexia nervosa who did and did not report laxative abuse

	Laxative Use (<i>M</i> ± <i>SD</i>)	No Laxative Use (<i>M</i> ± <i>SD</i>)	<i>U</i>	<i>p</i>
RSES	5.5 ± 0.85	4.22 ± 1.80	537	.001*
EDI				
Drive for Thinness	17.09 ± 3.96	12.5 ± 6.30	616	.003*
Bulimia	3.77 ± 3.75	2.0 ± 3.97	603	.001*
Ineffectiveness	18.59 ± 5.85	11.08 ± 7.69	455	.000*
Body Dissatisfaction	22.31 ± 5.86	14.49 ± 8.90	532	.000*
Perfectionism	8.18 ± 5.50	6.12 ± 4.98		n.s.
Interpersonal Distrust	8.09 ± 4.87	6.36 ± 5.14		n.s.
Interoceptive Awareness	13.7 ± 5.57	9.97 ± 7.50	690	.013
Maturity Fears	6.9 ± 5.50	5.1 ± 5.09		n.s.
SCL-90-R				
Somatization	1.89 ± 0.90	1.22 ± 0.85	3.09**	.002*
Obsessive-Compulsive	2.00 ± 0.81	1.53 ± 0.98		n.s.
Interpersonal Sensitivity	2.55 ± 0.84	1.96 ± 0.99		n.s.
Depression	2.81 ± 0.61	1.90 ± 0.98	3.69**	.000*
Anxiety	1.84 ± 0.84	1.36 ± 0.93	2.11**	.037
Hostility	1.29 ± 0.80	1.08 ± 0.86		n.s.
Phobic Anxiety	1.1 ± 0.98	0.78 ± 0.83		n.s.
Paranoid Ideation	1.35 ± 0.89	1.13 ± 0.82		n.s.
Psychoticism	1.4 ± 0.76	1.09 ± 0.73		n.s.
Global	1.96 ± 0.62	1.43 ± 0.75	2.89**	.005*

Note: RSES = Rosenberg Self-Esteem Scale; EDI = Eating Disorders Inventory; SCL-90-R = Revised Symptom Checklist; n.s. = not significant.

*Significant after bonferroni correction.

***t*-Test values.

compared with subjects who did not abuse laxatives. Indeed, multivariate analysis showed that low self-esteem and body dissatisfaction were predictors of laxative abuse.

Therefore, laxative abuse should be taken seriously both of itself and as a sign of severity. Inducing diarrhea, often involving pain and sometimes risking incontinence, is likely to be used only by subjects who feel desperate. It may have a range of meanings for them. Many patients report that the feeling of having emptied themselves is associated not only with gratifying, apparent weight loss but also with a sense of purification. Some also value the suffering involved as a kind of punishment. The effectiveness of this type of purgation as a true weight control method is questionable because most of what is passed is fluid (Lacey & Gibson, 1985). However, such logic may not impress the patient for whom any apparent change in the reading on the weighing scales is rewarding and for whom the use of laxatives has come to be meaningful of itself. Our results support the view that patients with anorexia nervosa who resort to laxative abuse are likely to be in a state where low-self esteem, sometimes amounting to self-loathing, becomes thoroughly entangled with their body dissatisfaction, which may lead to self-hatred. Together, they motivate behavior characterized by self-punishment.

Table 2. Logistic regression: prediction of laxative abuse

	<i>SE</i>	Wald	<i>df</i>	<i>B</i>	Significance	Exp(<i>B</i>)
Rosenberg Self-Esteem Scale	.271	4.541	1	0.578	.033	1.783
Body dissatisfaction	S.E.	10.025	1	0.139	.002	1.150
Constant	1.713	16.815	1	-7.022	.000	.001

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