

Detecting and Treating Bulimia Nervosa: How Involved Are Family Physicians?

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Background: Relatively little is known about bulimia nervosa in the primary care setting. Existing medical literature suggests that primary care physicians have limited experience with bulimia nervosa.

Methods: Experiences of family physicians with bulimia nervosa specifically and eating disorders in general were assessed by a questionnaire mailed to a representative sample (596 subjects) of Ohio family physicians. The response rate was 52.6 percent.

Results: Approximately 30 percent of the respondents had never diagnosed bulimia in a patient; 60 percent had no bulimic patients at the time of the survey. The mean career total of bulimic patients per physician was 5.3 (SD = 5.6). Younger physicians and female physicians were more likely to have bulimic patients. Having bulimic patients correlated significantly with having contact with bulimic and with anorexic persons in nonoffice settings.

Conclusions: Despite a general prevalence rate of about 1 percent for bulimia (much greater for the female population, particularly in adolescents and athletes), nearly one third of Ohio family physicians have never diagnosed bulimia in a patient, and nearly two thirds are not currently providing care for bulimic patients. Because screening is quick, inexpensive, and straightforward, all at-risk patients—athletes or those who have concerns related to paucity of menstruation, gastrointestinal symptoms, dieting or weight concerns, and depression—should be screened for bulimia. (J Am Board Fam Pract 1996;9:241–8.)

There are many reasons why eating disorders are overlooked in the primary care setting. Eating disorders are perceived as being difficult to detect and to treat. Patients often have difficulty admitting to an eating disorder, and when they do, they often struggle with complying with treatment.

Bulimia nervosa involves recurrent consumption of large quantities of food in a short period of time, followed by purging. Purging can take the form of vomiting, laxative or diuretic abuse, stringent dieting, or extreme exercise. The syndrome of bulimia nervosa is further defined by a frequency criterion (at least two binge eating episodes per week for 3 months) and overconcern with body weight and shape. Unlike those with

anorexia, the bulimic person is generally not emaciated, and patients, often secretive about and ashamed of their behavior, are unlikely to volunteer that they are bulimic. Bulimia nervosa is treatable in the primary care setting. Antidepressants are effective, as is behavioral therapy, singly or in combination. Because of issues innate to bulimia nervosa, however, success is variable regarding treatment.

Although sparse in number, research reports suggest that primary care physicians have relatively limited experience with bulimia nervosa. A retrospective study in England, using medical records of known bulimic patients, showed that few primary care physicians suspected the existence of bulimia nervosa in these patients.^{1,2} In another study using medical records in which patients' eating disorders were revealed to the primary care physician, King³ showed that these physicians generally did nothing. Patients report dropping futile hints to their physicians, hoping the physician will question them directly.⁴ Improved detection of bulimia nervosa patients in the primary care setting has been attempted; Freund et al⁵ developed a two-question screening test that discriminates bulimic subjects from controls.

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With the prevalence of bulimia nervosa thought to range from 0.5 to 1.2 percent of the general population,^{6,7} an average-sized general practice, for instance 5000 patients, could be expected to have 25 to 60 bulimic patients. Thus, it was reasoned that a questionnaire survey of a reasonable number of family physicians could yield an appropriate number having experience with bulimia nervosa and might shed light on its detection and treatment.

The purpose of this study was to examine family physicians' experiences with bulimia nervosa. Unlike previous work, which has traced known bulimic patients back to their primary physicians, this work was physician-based and, therefore, more representative of family physicians' responses to bulimia nervosa in a primary care setting.

Methods

Subjects

A sample of 596 physicians was randomly chosen from a state directory (Ohio) of all allopathic and osteopathic physicians who described themselves as family or general physicians. The number of physicians was chosen to allow a 5 percent reporting error in categorical responses based on a 20 to 80 percent split in responses to dichotomous variables and to allow for attrition.⁸ A survey packet was mailed to the physicians in late October 1992. A second packet was sent in mid-November if no response had been received. A reminder postcard was sent in late December 1992 to non-respondents of both previous mailings. Personalized mailing techniques were used each time to encourage recipients to complete and return the questionnaire.

Instrument

The questionnaire was developed specifically for this study. All respondents were asked their sex, age, type of training, years of practice, patients seen per week, and the total and current number of bulimic patients. Respondents were also asked about referral patterns and nonoffice contact with persons who are bulimic and anorexic.

The questionnaire was designed originally with four subscales, each containing 11 to 13 items. Two of these subscales were answered only by those who had ever diagnosed bulimia in a patient. The other two subscales were answered by all respondents. To ascertain internal reliability,

we performed factor analyses on the responses to the respective sets of subscales using a principal component extraction method with varimax rotation. Cronbach's alpha for the resulting factors ranged from 0.47 to 0.83; the average was 0.60.

The questionnaire was validated by two experts in bulimia nervosa, an endocrinologist and a family physician, both of whom had extensive experience with eating-disordered patients. It was pilot tested with medical students, residents, and attending physicians, and preliminary reliability checks were made. Finally, the revised questionnaire and study design were approved by the Human Subjects Committee at The Ohio State University.

Data Analysis

As stated in the introduction, the purpose of our study was to examine family physicians' experiences with bulimia nervosa. Additionally, we wanted to develop, validate, and establish reliability parameters for a multiscale instrument that could be used to discriminate between physicians regarding their experiences with bulimic persons. Hence, we chose a product-moment correlation analysis of the data rather than another potential approach as, for example, chi-square. For both purposes we also used such descriptive statistics as frequencies, percentages, means, and standard deviations.

Results

Of the 596 survey packets mailed to the physicians, 79 (13.3 percent) could not be delivered because of changed addresses. We received 272 (52.6 percent) completed questionnaires, of which 240 (88.2 percent) were usable. Most responses were received from the first mailing (70.4 percent). The second and third mailings accounted for 27.1 percent and 2.5 percent of the responses, respectively.

Demographics

Descriptive data are summarized in Table 1. Respondents were predominantly male, ranged in age from 28 to 80 years (mean = 46.8 years, standard deviation [SD] = 11.9 years), and had been in practice from 1 to 55 years (mean = 16.9 years, SD = 12 years). More than one half (56.3 percent) had been trained in a 3-year residency, and about one fourth (24.2 percent) had internship training only. Individual respondents saw between 12 and

Table 1. Demographics of Survey Respondents (n = 240).

Characteristics	Number	Percent
Sex*		
Male	199	84.0
Female	38	16.0
Age (years)†		
< 35	30	13.0
36-45	94	40.9
46-55	48	20.9
> 55	58	25.2
Years of practice		
< 5	27	11.3
5-15	112	46.7
16-25	42	17.5
> 25	59	24.6
Training		
Internship only	58	24.2
3-year residency	135	56.2
Other	47	19.6
Patients per week		
Unknown	5	2.1
< 100	66	27.5
100-200	144	60.0
> 200	25	10.4

*Respondents = 237.

†Respondents = 230.

400 patients per week (mean = 120, SD = 58.8).

Because age and years of practice usually are significantly correlated (in our case, $r = 0.87$, $P < 0.001$), we report correlations with age but not for years of practice. Not surprisingly, older physicians were less likely to be residency trained ($r = -0.14$, $P = 0.04$). Residency-trained physicians saw fewer patients per week ($r = -0.16$, $P = 0.015$). Female physicians were younger ($r = -0.27$, $P < 0.001$), saw fewer patients per week ($r = -0.23$, $P = 0.001$), and were less likely to refer bulimic patients ($r = -0.15$, $P = 0.05$). There were no other significant demographic correlations ($P < 0.05$).

Physician Contact with Eating Disorders

We used office contact to indicate interactions in a patient care setting, including office and hospital contact. Nonoffice contact indicates interactions that occur outside the patient care setting.

Almost one third of respondents (28.8 percent) reported no past or current office contact with bulimic patients (Table 2). More than one third (35.0 percent) had a career total of 1 to 3 bulimic patients. About one fifth (16.7 percent) had treated 4 to 6 bulimic patients, while about one sixth (13.8 percent) had treated more than 6 bulimic patients. Twelve respondents (5.0 percent) reported career

totals that ranged from 15 to 30 bulimic patients. One family physician respondent, also trained as a bariatrician, reported a career total of more than 100 bulimic patients.

At the time of the survey, 60.0 percent of the respondents reported having no bulimic patients; about one third (32.5 percent) reported 1 to 3 bulimic patients; and 13 (5.4 percent) reported more than 3 bulimic patients (Table 2). Excluding the one respondent with more than 100 bulimic patients, the mean total number of career bulimic patients was 5.3 (SD = 5.6), while the mean number of current bulimic patients was 2.4 (SD = 1.9). Those with current bulimic patients had a higher overall career total ($n = 7.6$, SD = 11.8). Those who previously had bulimic patients, but did not have bulimic patients at the time of the survey, reported a mean career total of 3.9 (SD = 4.6).

The overwhelming majority (86.9 percent) of physicians who have ever had bulimic patients tended to care for these patients medically but to refer them for counseling (Table 2); 9.7 percent chose to refer all aspects of care, while only 3.4 percent chose to manage all aspects. From these data, we determined a clear pattern of referral in

Table 2. Respondents' Contact with Eating Disorders in Office and Nonoffice Settings.

Contact	Number	Percent
Office, had or has bulimic patients		
Unknown	14	5.8
None	69	28.8
1-3	84	35.0
4-6	40	16.7
> 6	33	13.8
Office, has bulimic patients now		
Unknown	5	2.1
None	144	60.0
1-3	78	32.5
> 3	13	5.4
Office, referral patterns for bulimic patients		
Manage all aspects	5	3.4
Manage medically, refer for counseling	126	86.9
Refer all aspects	14	9.7
Nonoffice, bulimia		
Unknown	17	7.1
None	142	59.2
Acquaintance	44	18.3
Close friend, family, or self	37	15.4
Nonoffice, anorexia		
Unknown	13	5.4
None	134	55.8
Acquaintance	50	20.8
Close friend, family, or self	43	17.9

Table 3. Variables Correlated with Having Bulimic Patients.

Variable	Has or Had Bulimic Patients		Has Bulimic Patients Now	
	<i>r</i>	<i>P</i> Value	<i>r</i>	<i>P</i> Value
Nonoffice contact with bulimic patients	0.31	< 0.001*	0.22	0.001*
Nonoffice contact with anorexic patients	0.22	0.001*	0.21	0.002†
Age	-0.07	0.306	-0.23	< 0.001*
Sex	0.08	0.215	0.15	0.025‡
Patients per week	0.14	0.035‡	0.16	0.018‡
Refer	-0.27	< 0.001*	-0.30	< 0.001*

*Significant at $P \leq 0.001$.†Significant at $P \leq 0.01$.‡Significant at $P \leq 0.05$.

physicians regarding bulimic patients. Physicians who currently have bulimic patients and who also have a higher career total are less likely to refer various aspects of care ($r = -0.30$, $P < 0.001$).

Table 2 shows that a majority of respondents had no nonoffice contact with bulimic (59.2 percent) or anorexic (55.8 percent) persons. Of the respondents, 33.7 percent stated that they knew someone who had bulimia, and 38.7 percent knew someone who had anorexia; in 6 cases the respondents themselves had been anorexic or bulimic. Two respondents (1 male, 1 female) had a history of anorexia, 2 (1 male, 1 female) had a history of bulimia, and 2 (both male) had a history of both anorexia and bulimia. Thus, for the respondents of this survey, the lifetime prevalence is 1.8 percent for bulimia and 1.8 percent for anorexia. Regarding those respondents who are or have been both bulimic and anorexic, the lifetime prevalence is 0.9 percent.

Having Bulimic Patients

Table 3 indicates that respondents who knew bulimic persons in a nonoffice setting were also more likely to have had bulimic patients ($r = 0.31$, $P < 0.001$). Those who knew anorexic persons in a nonoffice setting were also likely to have had bulimic patients ($r = 0.22$, $P = 0.001$). From the information in Table 2 and Table 3, we determined that 54 percent of the respondents who knew someone with bulimia in a nonoffice setting have had 4 or more bulimic patients, whereas only 9 percent of this group have had no bulimic patients. Conversely, of those who have never known someone with bulimia outside a patient care setting, many (40 percent) have never had a bulimic patient, and only 25 percent have had 4 or more bulimic patients. Of the 6 respondents who

had a history of bulimia or anorexia, 5 have had bulimic patients and 1 currently had bulimic patients. One of the 6 reported no bulimic patients; he was older, male, and had a history of anorexia only.

Although female physicians and younger physicians were more likely to have bulimic patients at the time of the study (Table 3), the total number of bulimic patients did not correlate significantly with sex and age. Physicians who saw more patients per week tended to have more bulimic patients. This finding appears to be a function of volume, as these physicians did not have a higher percentage of bulimic patients. Physicians who had bulimic patients at the time of the survey had a lifetime average of 7.6 bulimic patients ($SD = 11.8$), and physicians who did not have bulimic patients at the time of the survey had a lifetime average of 3.9 bulimic patients ($SD = 4.6$). Thus, those who see more patients per week had a greater number of both current and total bulimic patients.

Discussion

Prevalence of Bulimic Patients

The most striking results of this study are that nearly one third (28.8 percent) of the respondents indicated they have never had a bulimic patient and that almost two thirds (60.0 percent) indicated they currently have no bulimic patients, despite a prevalence of 0.5 to 1.2 percent in the general population^{6,7} and a prevalence of 1 to 4 percent among high school and college students.⁹⁻¹⁵ Recent work involving women seeking health care for other reasons showed a lifetime prevalence of eating disorders (mostly bulimia) of about 5 percent. About one half of these patients were currently bulimic.⁵ Thus, one might expect that virtually all family physicians would have patients who are bulimic.

One other study was found from which we could derive the prevalence of eating disorders in general practice.¹⁶ One third (33 percent) of the 53 physicians surveyed reported they had not referred to an eating disorders clinic because they had never had an appropriate patient, and 57 percent indicated they had no appropriate patients in the past 6 months. These percentages are almost identical to the results of our study.

That high school and college students generally see physicians less often than do children and older adults could account in part for the lack of bulimic patients. Also, few patients reveal their disorders to their primary care physicians. Martin and Wollitzer² surveyed 277 female patients in a family practice clinic and found that 16.2 percent had a history of vomiting or laxative abuse, 4.7 percent of whom were purging at least once a week. Only 1 survey respondent, however, had told her family physician. Only 2 of 23 women attending a self-help group for bulimia were questioned specifically about an eating disorder by their physician; more than one quarter of their physicians were unaware of their bulimia.⁵

It might seem unusual that there were more respondents who reported nonoffice exposure to anorexic persons (38.7 percent) than there were who reported nonoffice exposure to bulimic persons (33.7 percent), when bulimia is roughly 10 times more common than anorexia nervosa.^{5,11,17,18} This finding should not be so surprising, however, because severe anorexia nervosa is more easily recognized as a result of excessive thinness, whereas even severe bulimia nervosa would have no obvious signs.

Respondents' remarks indicated clear awareness of diagnostic difficulty. "Both [anorexia and bulimia] are underdiagnosed and are very resistant to treatment." and, "[I spend] 50% of [my] time in adolescent medicine. I think many young adults are never diagnosed as bulimic." These types of responses illustrate the axiom that increased knowledge and personal experience yield more accurate diagnoses; that is, knowledgeable and experienced physicians treat diagnosed diseases; others treat symptoms.

Who Has Bulimic Patients?

Younger physicians were significantly more likely to have bulimic patients. Since bulimia was defined for the first time in 1980,¹⁹ it would seem

that younger, more recently trained physicians would be more aware of bulimia. Residency training, however, did not correlate with having bulimic patients.

There was a statistically significant correlation between being a female physician and having bulimic patients. Apparently patients disclose bulimic behavior preferentially to female physicians. It has been shown that patients report engaging in more question asking and information giving about both medical and psychosocial topics when seeing female physicians,²⁰ and female physicians have been reported to be more attentive and nondirective with patients.²¹ Alternatively, female physicians might be more likely to inquire directly about bulimic behaviors. Persons with bulimia often feel their behavior is embarrassing and unattractive and might feel more comfortable confiding this behavior to someone of the same sex.

There is a very strong correlation between having bulimic patients and knowing persons with bulimia or anorexia outside the office setting. It is not surprising that contact with eating disorders in one's personal life would increase a physician's awareness of eating disorders in professional life.

Is Screening for Bulimia Worthwhile?

Because the prevalence of bulimia nervosa is 0.5 to 1.2 percent in the general population,^{6,7} a general practice of 5000 patients could be expected to contain 25 to 60 bulimic patients. Either persons with bulimia do not go to family physicians, or family physicians are not making this diagnosis because bulimic patients do not volunteer that they have the illness.

This raises the question of whether family physicians should attempt to screen for undisclosed bulimia. The US Public Health Service²² presents criteria (described by Frame and Carlson²³) for a useful screening test; these criteria are generally met in the case of bulimia nervosa:

1. The condition must have a significant effect on the quality and quantity of life.
2. Acceptable methods of treatment must be available.
3. The condition must have an asymptomatic period during which detection and treatment substantially reduce morbidity and/or mortality.

Table 4. Questions for Detection of Bulimia Nervosa.**Indirect screening questions**

- Are you pleased with your eating behavior?
- Do you ever eat in secret?

Other indirect but less specific questions

- Are you dissatisfied with your weight?
- Do you want to weigh less?

Direct questions

- Do you make yourself throw up?
- Do you use laxatives, water pills, fasting, or several hours of exercise daily to control your weight?

4. Treatment in the asymptomatic phase must yield a therapeutic result superior to that obtained by delaying treatment until symptoms appear.
5. Tests that are acceptable to patients must be available, at a reasonable cost, to detect the condition in the asymptomatic period.
6. The incidence of the condition must be sufficient to justify the cost of the screening.

Bulimia nervosa affects quality and quantity of life. It has a prevalence of 1 to 4 percent in the most at-risk group—those who are female between 13 to 49 years. The medical consequences, which include electrolyte disorders, amenorrhea, osteoporosis, bleeding due to esophageal tears, and arrhythmias, can be fatal.²⁴ There is definite association with depression and drug and alcohol use.²⁵ Patients with severe bulimia nervosa might not be able to hold a job.

Bulimia nervosa is treatable using antidepressants and counseling. Both behavioral and cognitive therapy are recognized as effective.²⁶ Patients treated with antidepressants decrease or stop bingeing,²⁷ even those who are not depressed. Serotonin-reuptake inhibitors are particularly effective, and patients are more likely to be compliant with a medication that does not promote weight gain. The long-term likelihood of sustained improvement in bulimia is directly linked to a shorter duration of illness.^{25,27-29}

A simple two-question screening test that does not ask directly about bulimic behaviors has been found to be both sensitive and specific.⁵ Table 4 includes this screening test as well as other questions that have been found to be useful. Dissatisfaction about one's weight and a desire to weigh less can also be clues for eating disorders.³⁰ Positive responses to such questions indicate that further questioning about eating, especially bingeing

and vomiting, is appropriate. Asking directly and nonjudgmentally about vomiting is also effective and can yield additional history. Even if the patient lies about self-induced vomiting, asking about it could facilitate a discussion about this "undiscussable" topic at some time in the future.

Patients who are female between 13 to 49 years are at increased risk for eating disorders. Amenorrhea, gastrointestinal complaints, or weight concerns should increase the physician's suspicion for this group. Depression is a warning sign because it is associated with bulimia. Depression might even be caused by bulimia. Dancers and athletes, especially in sports where body image is important, are also at increased risk.³¹⁻³³ This is true of both males and females.³⁴ Those who engage in bingeing and/or purging, even occasionally, are at very high risk to progress to bulimia.³⁵ Table 5 summarizes these associations.

Conclusions

Despite the prevalence of bulimia nervosa, nearly one third of the physicians responding to this survey never recognized a patient as bulimic, and almost two thirds had no bulimic patients in their practice at the time of the survey. Anecdotally, however, respondents strongly endorsed the role

Table 5. High-Risk Associations for Bulimia Nervosa.**Patient characteristics**

- Female
- Young to middle-aged adult
- Body-weight conscious
- Dieting
- Athlete, especially for whom low body weight is important (male too)
- Dancers
- Gymnasts
- Runners
- Skaters
- Wrestlers

Complaints that increase index of suspicion

- Depression
- Fatigue
- Gastrointestinal complaints
- Paucity of menstruation
- Weight loss desired (especially > 12 lb)

Very high risk behaviors

- Bingeing and purging
- Purging alone

Other associations

- Alcohol or drug use
- Family history of depression
- Previous eating disorder
- Psychiatric comorbidity

of family physicians in treating bulimia. The respondent trained as a bariatrician stated emphatically that, "These patients are very secretive. But family physicians can treat this if they listen!" A female respondent stated, "In my own experience—without the help of an involved family physician and counseling—these diseases can ruin or even kill you!"

Bulimia nervosa is sufficiently widespread to make screening by family physicians worthwhile, particularly since screening can involve as little as asking one or two questions. Screening can also control medical costs. Expensive and complicated workups of the reproductive and gastrointestinal system may be better focused when the diagnosis of bulimia explains a patient's complaints.

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