Problems Applying the DSM-IV Eating Disorders Diagnostic Criteria in a General Psychiatric Outpatient Practice

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Objective: A substantial number of patients treated in specialized eating disorder programs fail to meet criteria for anorexia nervosa or bulimia nervosa, the 2 eating disorders with specified criteria in DSM-IV, and are diagnosed with eating disorder not otherwise specified (NOS). In a general psychiatric setting, where the severity of eating pathology is likely to be milder than in specialty programs, we predicted that most patients with disordered eating would fail to meet the full criteria for one of the DSM-IV eating disorders and instead would be diagnosed with eating disorder NOS.

Method: Two thousand five hundred psychiatric outpatients were interviewed with the Structured Clinical Interview for DSM-IV (SCID) upon presentation for treatment. The findings presented in this report were derived from patients interviewed from December 1995 to August 2006.

Results: Thirteen percent (N = 330) of the patients were diagnosed with a lifetime history of an eating disorder, 307 of whom received 1 diagnosis and 23 of whom were diagnosed with 2 disorders. Almost half (N = 164) of the disorders were present at the time of presentation, approximately one sixth (N = 60) were considered to be in partial remission, and slightly more than one third (N = 129) were past diagnoses. When binge-eating disorder was combined with the other forms of eating disorder NOS, as it is in DSM-IV, 90.2% (148/164) of the patients with a current eating disorder were diagnosed with eating disorder NOS.

Conclusions: The preponderance of eating-disordered patients in a general psychiatric setting were diagnosed with eating disorder NOS. This finding suggests that there is a problem with the clinical applicability of the diagnostic criteria in the DSM-IV eating disorder category.

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Two eating disorders are officially recognized and formally defined with inclusion and exclusion criteria in DSM-IV—bulimia nervosa and anorexia nervosa. A third eating disorder, binge-eating disorder, is listed in the Appendix as a disorder requiring further study for possible inclusion in the next edition of the manual.

The diagnostic criteria for bulimia nervosa and anorexia nervosa emerged from work conducted in specialty programs focusing on patients with eating disorders. Patients presenting to these treatment centers are probably more prototypic of individuals with eating disorders and therefore represent the most severe variants of these disorders. Nonetheless, even in these programs, many patients fail to meet full DSM-IV criteria for an eating disorder and are diagnosed with eating disorder not otherwise specified (NOS). Andersen and Yager[1] suggested that 30% to 50% of admissions to eating disorder programs are diagnosed with eating disorder NOS, and some studies have found that more than half of the patients presenting to eating disorder specialty services are diagnosed with eating disorder NOS.[2–4] On the basis of this previous research, we predicted that, in a general psychiatric setting, where the level of eating pathology is likely to be less severe than in centers specializing in the treatment of these disorders, most patients with disordered eating would fail to meet full criteria for one of the official DSM-IV eating disorders and instead would be diagnosed with eating disorder NOS.

The Rhode Island Hospital Methods to Improve Diagnostic Assessment and Services (MIDAS) project is the largest clinical epidemiology study ever conducted in which patients presenting for outpatient treatment are administered reliable and valid semistructured diagnostic interviews.[5] In the present report from the MIDAS project, we examine the prevalence of the DSM-IV–defined eating disorders as well as the frequency of patients who reported clinically significant disordered-eating behavior that did not meet the DSM-IV–specified diagnostic thresholds and were thus diagnosed with eating disorder NOS. If the preponderance of eating-disordered patients are diagnosed with eating disorder

NOS, that fact suggests that there is a problem with the clinical applicability of the diagnostic criteria in the DSM-IV eating disorder category.

METHOD

The MIDAS project represents an integration of research methodology into a community-based outpatient practice affiliated with an academic medical center.[5] A comprehensive diagnostic evaluation is conducted upon presentation for treatment. To date, 2500 patients have been recruited into the MIDAS project from the Rhode Island Hospital Department of Psychiatry outpatient practice. This private practice group predominantly treats individuals with medical insurance (including Medicare but not Medicaid) on a fee-for-service basis, and it is distinct from the hospital's outpatient residency training clinic, which predominantly serves lower income, uninsured, and medical-assistance patients.

The majority of the 2500 subjects, all of whom were interviewed from December 1995 to August 2006, were white (87.6%), female (60.6%), and married (41.6%) or single (31.0%) and had graduated from high school (90.2%). The mean age of the sample was 38.3 years (SD = 12.8 years).

The methods of the MIDAS project have been described in detail in prior reports.[5–7] Briefly, patients were interviewed by a diagnostic rater who conducted a comprehensive evaluation that included the Structured Clinical Interview for DSM-IV Axis I Disorders, Patient Edition (SCID-I/P).[8] The diagnostic raters were highly trained and monitored throughout the project to minimize rater drift. Diagnostic raters included Ph.D.-level psychologists and research assistants with college degrees in the social or biological sciences. Throughout the MIDAS project, ongoing supervision of the raters consisted of weekly diagnostic case conferences involving all members of the team. Written reports of all cases were reviewed by M.Z., who also reviewed the item ratings of every case. The Rhode Island Hospital Institutional Review Committee approved the research protocol, and all patients provided informed, written consent.

The core of the diagnostic evaluation was the January 1995 DSM-IV Axis I disorders, SCID-I/P. The Axis I version of the SCID covers 3 DSM-IV eating disorders: the 2 defined in the eating disorder category (anorexia nervosa and bulimia nervosa) and one that is defined in the Appendix (binge-eating disorder) and is currently considered under the eating disorder NOS rubric. We also diagnosed eating disorder NOS in patients with clinically significant disordered eating that did not meet the DSM-IV criteria for any of these 3 disorders. We reviewed the evaluations of patients diagnosed with eating disorder NOS to determine the reason(s) they did not meet the criteria for one of the DSM-IV–defined disorders. The following course specifiers were used: current (i.e., meeting full criteria at the time of the evaluation), partial remission (i.e., symptoms improved but still present, with full criteria not met), and past (i.e., a prior history of meeting full criteria for the disorder, with no current criteria present).

Table 1. Current and Lifetime Rates of DSM-IV Eating Disorders in 2500 Psychiatric Outpatients

	Current		Partial Remission		Past	
Disorder	N	%	N	%	N	%
Anorexia nervosa	0	0.0	12	0.5	25	1.0
Bulimia nervosa	16	0.6	23	0.9	29	1.2
Binge-eating disorder	64	2.6	18	0.7	15	0.6
Eating disorder NOS	84	3.4	7	0.3	60	2.4

Abbreviation: NOS = not otherwise specified.

As an ongoing part of the MIDAS project, joint-interview diagnostic reliability information has been collected for 61 participants. The frequency of anorexia nervosa and bulimia nervosa in this subsample was too low to examine reliability. The κ coefficients of reliability for any current (N = 3) or lifetime (N = 9) eating disorder were 1.0. The reliability coefficients for current (N = 2) and lifetime (N = 6) eating disorder NOS were $\kappa = .79$ and $\kappa = .91$, respectively.

RESULTS

Three hundred thirty patients (13.2%) were diagnosed with a lifetime history of an eating disorder, 307 of whom received 1 diagnosis and 23 of whom were diagnosed with 2 disorders. The majority of the patients with an eating disorder were female (85.2%, N = 281). The mean age of the eating disorder sample was 34.3 years (SD = 11.0 years). Among the 330 patients with a lifetime eating disorder diagnosis, almost half (N = 164) had a current eating disorder, approximately one sixth (N = 60) had an eating disorder in partial remission, and slightly more than one third (N = 129) had a past diagnosis.

The data in Table 1 show that the most frequent eating disorder diagnoses were eating disorder NOS and binge-eating disorder. The current and lifetime prevalence of anorexia nervosa and bulimia nervosa were low.

Of the 84 patients with current eating disorder NOS (other than binge-eating disorder), 17 (20.2%) could be considered to have subthreshold anorexia nervosa, 17 (20.2%) subthreshold bulimia nervosa, and 27 (32.1%) subthreshold binge-eating disorder. Thus, three quarters of the patients diagnosed with eating disorder NOS were so diagnosed because they fell below the threshold of 1 of the 3 DSM-IV–defined eating disorders. Fourteen of the 17 patients with subthreshold anorexia nervosa failed to meet the DSM-IV criteria because they denied sustained amenorrhea (criterion D). An additional 2 patients did not meet DSM-IV criterion A for anorexia nervosa, which suggests

that individuals weigh less than 15% of ideal body weight, as well as criterion D. The respective weights and heights for these patients were 106 lb at 64 in and 110 lb at 63 in. And 1 patient, who met the weight loss criterion, was subthreshold on criteria B and C and did not meet criterion D. The DSM-IV weight threshold of 15% below ideal body weight is a suggested example, not a rigid requirement, and no patient failed to meet the anorexia nervosa criteria because of narrowly missing this threshold.

For subthreshold bulimia nervosa, 11 of the 17 patients did not meet the DSM-IV criteria because the frequency of bingeing or compensatory behavior was less than 2 times per week over a 3-month period. For these patients, these behaviors occurred, on average, 3 times per month. Four patients reported bingeing and engaging in compensatory behavior twice per week, but the duration was less than 3 consecutive months. The remaining 2 patients did not meet criterion D (body image disturbance).

Almost all (88.9%) of the 27 patients with subthreshold binge-eating disorder did not meet criterion D, which specifies that the binges must occur at least 2 times per week over a 6-month period. More specifically, 18 patients reported fewer than 2 binge-eating episodes per week, 5 patients reported 2 binge-eating episodes per week for fewer than 6 months, and 1 patient failed to meet both the frequency and duration criteria. Two patients did not meet criterion C (clinically significant distress). One patient failed to meet criterion B (associated consumption behaviors) along with criterion D.

DISCUSSION

The results of the present study, based on a large sample of psychiatric outpatients administered semistructured interviews by highly trained diagnostic raters, suggests that the DSM-IV criteria for eating disorders have limited clinical utility[9] in general psychiatric outpatient settings. Most patients diagnosed with an eating disorder did not meet the specified criteria for anorexia nervosa or bulimia nervosa. Binge-eating disorder, currently considered in DSM-IV to be a type of eating disorder NOS, although with criteria proposed for further study included in the Appendix of the manual, was more frequently diagnosed than either anorexia nervosa or bulimia nervosa. When binge-eating disorder is combined with the other forms of eating disorder NOS, 90.2% (148/164) of the patients with a current eating disorder were diagnosed with eating disorder NOS.

Beginning with DSM-III, all of the major diagnostic classes have included a NOS category to provide a means of diagnosing individuals with clinically significant symptoms that do not meet the threshold for a disorder with specified inclusion and exclusion criteria. The NOS category was intended to be a residual category, providing clinicians with a diagnostic option for those relatively infrequent instances in which formal diagnostic criteria were not met. Our finding that eating disorder NOS cases predominated suggests a problem with the DSM-IV nomenclature for this class of disorders. Moreover, the predominance of NOS diagnoses may be unique to this diagnostic class. We previously examined the frequency of personality disorders in 859 psychiatric outpatients and found that less than one third of the patients with a personality disorder diagnosis were diagnosed as personality disorder NOS.[10] In a study of the frequency of comorbid disorders in 479 depressed outpatients, we found that approximately 20% of the patients with an anxiety disorder were diagnosed with anxiety disorder NOS.[11] Thus, the predominance of NOS diagnoses that characterizes the eating disorders does not seem to cut across diagnostic classes. Consistent with the results of the present study, studies of patients presenting to centers specializing in the treatment of eating disorders have also found that a majority of patients were diagnosed with eating disorder NOS.[2,3,12] A distinction between the criteria for specific eating disorders and the anxiety and personality disorders is the greater specification of frequency of events for the eating disorders. For example, the criteria for bulimia nervosa and binge-eating disorder specify how often the binges and compensatory behaviors must occur, whereas this is not the case for the anxiety and personality disorders. Perhaps this greater specificity also reduces clinical judgment and results in more individuals diagnosed with an NOS disorder because of failure to meet the quantified threshold.

Were the subthreshold eating disorder diagnoses made in the present study clinically significant? One method of ascertaining clinical significance is to determine if patients want treatment for the disorder.[13] While only 10 (12.0%) of the 84 patients diagnosed with a current eating disorder NOS had it as the principal diagnosis, more than half (53.6%) indicated that they nonetheless wanted treatment to address this problem. This was similar to the percentage of patients with current bulimia nervosa (61.1%) who wanted treatment to address their disordered eating. Additionally, the vast majority (81.3%) of patients diagnosed with current binge-eating disorder wanted treatment. This suggests that, from a consumer perspective, the patients perceived eating disorder NOS to be clinically significant. The most frequent principal diagnoses in patients with a current eating disorder NOS who wanted treatment for it were mood (62.2%) and anxiety disorders (17.8%).

Our results are consistent with other studies suggesting that the criteria for bulimia nervosa, anorexia nervosa, and binge-eating disorder should be broadened to include subthreshold variants.[14–19] The most frequent reason for not diagnosing anorexia nervosa was that patients reported an absence of amenorrhea. Some researchers have suggested that this criterion should be eliminated, because

patients who otherwise meet the anorexia criteria are generally indistinguishable from individuals who do not meet the criteria.[14,17,20,21] For bulimia nervosa and binge-eating disorder, we found that the vast majority of patients with a NOS disorder were diagnosed accordingly because they did not meet the frequency criteria. The frequency and duration thresholds to diagnose bulimia nervosa and binge-eating disorder have also been suggested to be too restrictive.[3,15,19]

A limitation of the present study is that it was conducted in a single outpatient practice in which the majority of the patients were white and female and had health insurance. Replication of the results in other clinical samples with different demographic characteristics is warranted. Strengths of the study are the large sample size and the use of highly trained diagnostic interviewers to reliably administer a semistructured diagnostic interview. In fact, the high reliability in diagnosing eating disorder NOS, a diagnosis without specified criteria, further suggests that these "subthreshold" conditions were recognizable as clinically significant.

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