

Binge-Eating Disorder and Comorbid Conditions: Differential Diagnosis and Implications for Treatment

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Many patients with symptoms of binge-eating disorder (BED) are not diagnosed. Perhaps the biggest obstacles are the failure of physicians to recognize BED as a distinct disorder and the lack of awareness among patients that binge-eating is a well-studied abnormal behavior that is amenable to treatment. In addition, patients may avoid seeking treatment because they feel a general sense of shame over their eating habits and do not want to bring up these symptoms during visits with their physicians. In general, negative attitudes and biases regarding overweight and obesity are common. The presence of medical and psychiatric comorbidities also contributes to the challenge of diagnosis, as many doctors focus on treating those comorbidities, thereby delaying treatment for the BED and leading to suboptimal care. Once BED is diagnosed along with any comorbid conditions, medications for the treatment of the comorbidities must be carefully considered so that BED symptoms are not exacerbated.

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Binge-eating disorder (BED) is commonly associated with multiple comorbid psychiatric and nonpsychiatric medical conditions. These conditions include mood disorders, anxiety disorders, substance use disorders, and impulse control disorders, as well as obesity, type 2 diabetes mellitus, metabolic syndrome, and various pain syndromes. These comorbidities are often the primary focus of treatment, and consequently BED can go unrecognized and untreated. Patients may not volunteer their BED symptoms when seeking psychiatric and nonpsychiatric treatment, and clinicians may not ask about BED symptoms when managing the presenting disorder. As a consequence, most psychiatrists and primary care physicians have patients with BED that remain formally undiagnosed. Because BED can contribute to symptoms of depression and anxiety and can be associated with weight increase, treatment of the comorbidities will be suboptimal without the recognition and treatment of coexisting BED. Additionally, careful attention to the selection of medications for the treatment of the comorbidities is necessary in order to not exacerbate BED symptoms.

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OVERVIEW

In the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*,¹ BED is defined as the presence of recurrent episodes of binge eating that are characterized by eating a larger amount of food than typical during a “discrete period of time”^(p350) with “a sense of lack of control over eating during the episode.”^(p350) Although eating disorders are more prevalent among women than men, the gender prevalence gap is smaller for BED than for other eating disorders,^{1,2} and BED is equally prevalent across racial and ethnic groups.³ Although BED is the most common eating disorder,^{2,4} many people do not seek treatment for it specifically but instead attempt to resolve the psychological and medical issues that can co-occur with BED.⁴ Hudson and colleagues² found that less than half of those with BED sought treatment for it, meaning that clinicians must ask patients who have commonly comorbid conditions about symptoms of BED.

COMORBIDITIES

Medical Comorbidities

Numerous negative health issues are associated with BED, including obesity, sleep disturbances, pain (eg, musculoskeletal pain, headaches), gastrointestinal conditions, menstrual irregularities, shortness of breath, diabetes, hypertension, low health-related quality of life, and functional health impairments.^{5,6} Some medical conditions are associated with obesity (eg, type 2 diabetes,⁷ metabolic syndrome⁸). While less than 50% of people with BED are obese,^{2,6} medical comorbidities can also occur in those with a normal or nonobese overweight body mass index (BMI),⁹ including pain and a heightened risk for metabolic syndrome.^{9,10} Metabolic syndrome components include abdominal obesity, hypertension, low high-density

- Obesity does not always indicate the presence of an eating disorder; conversely, patients who have a normal body mass index may have binge-eating disorder.
- Patients with binge-eating disorder often also have psychiatric comorbidities such as major depressive disorder or anxiety disorders and medical comorbidities.
- Clinicians should ask patients about their eating behaviors and may choose to administer a written screening tool.

lipoprotein level, high triglyceride level, and elevated fasting blood sugar level. Individuals with BED have been found to have more than double the risk of receiving a diagnosis of 2 or more components of metabolic syndrome compared with those without BED over 5 years of follow-up.¹⁰ Pain conditions associated with BED independent of BMI include neck and shoulder pain, low back pain, and chronic muscular pain in men.⁹ Fibromyalgia and irritable bowel syndrome have also been noted as medical comorbidities.¹¹

Obesity and BED are distinct conditions; most people who are obese do not have recurrent binge-eating episodes.¹ In studies of eating habits, those with BED had higher caloric intake than weight-matched control groups of obese people without BED.¹

Psychiatric Comorbidities

Studies have found higher rates of psychiatric comorbidity among those with BED than among weight-matched individuals without BED.¹ Psychiatric comorbidity with BED is comparable to that seen with bulimia nervosa and anorexia nervosa.¹ Using data from the National Comorbidity Survey Replication, Hudson and colleagues² analyzed the prevalence and correlates of eating disorders in a subset of 2,980 participants from a nationally representative face-to-face household survey. They found that 79% of individuals with BED met the criteria for at least one lifetime comorbid psychiatric disorder.² Forty-nine percent met criteria for 3 or more psychiatric disorders.² The rates of psychiatric comorbidities, grouped by class, were 65% for anxiety disorders, 46% for mood disorders, 43% for impulse-control disorders, and 23% for substance use disorders (Figure 1)² Impairment in role functioning was also assessed among participants with BED. Sixty-three percent of respondents reported functional impairment in any domain of the Sheehan Disability Scale (work, home, social life, or personal life) in the previous year, and 18.5% experienced severe impairment.²

A meta-analysis¹² reported a 29% prevalence of personality disorders among individuals with BED. Avoidant personality disorder was found in 12% of the BED patients, and borderline and obsessive-compulsive personality disorders each were found in 10%.¹²

Mood and anxiety disorders may be the reason that people with BED seek treatment, rather than for BED symptoms themselves.⁶ If BED goes unrecognized, treatment may be

suboptimal, given that some medications used for mood and anxiety disorders can stimulate appetite,^{13,14} potentially worsening the maladaptive eating behaviors.

STIGMA AND NEGATIVE BIASES

Like most psychiatric disorders, BED is associated with stigma and negative biases, but overweight patients with BED also experience stigma associated with negative weight-based stereotypes. Societal stereotypes include views that individuals with excess weight are lazy, undisciplined, and unintelligent.¹⁵ Such negative views occur at work, at school, and in health care settings, and obese individuals may even hold negative views of other obese people.¹⁶

Patients' Misconceptions

Perception of stigma is often internalized by individuals with BED, potentially leading them to seek treatment less often.¹⁶ People with BED may feel shame about their symptoms and believe that clinicians do not have time to discuss them; they also may have experienced unhelpful advice from clinicians who did not understand their problems.¹⁷ Patients perceive that clinicians may be focused more on resolving physical ailments than on communicating about eating habits and seem judgmental about weight problems.¹⁷ Greater negative attitudes toward obesity were found to be significantly correlated with higher levels of depression and eating pathology for all patients in a study of 221 obese patients with and without BED.¹⁶

Disclosure of symptoms. Patients may not disclose their symptoms of BED because of feelings of embarrassment, a desire to continue the behavior, or lack of knowledge about BED as a real and treatable disorder.^{17,18} Often, patients may not realize there is a problem unless they are directly asked about symptoms by a health care professional.¹⁸ Family members of patients may not even realize the extent to which the eating disorder affects their loved ones due to patients' deep desire to keep their behavior concealed.

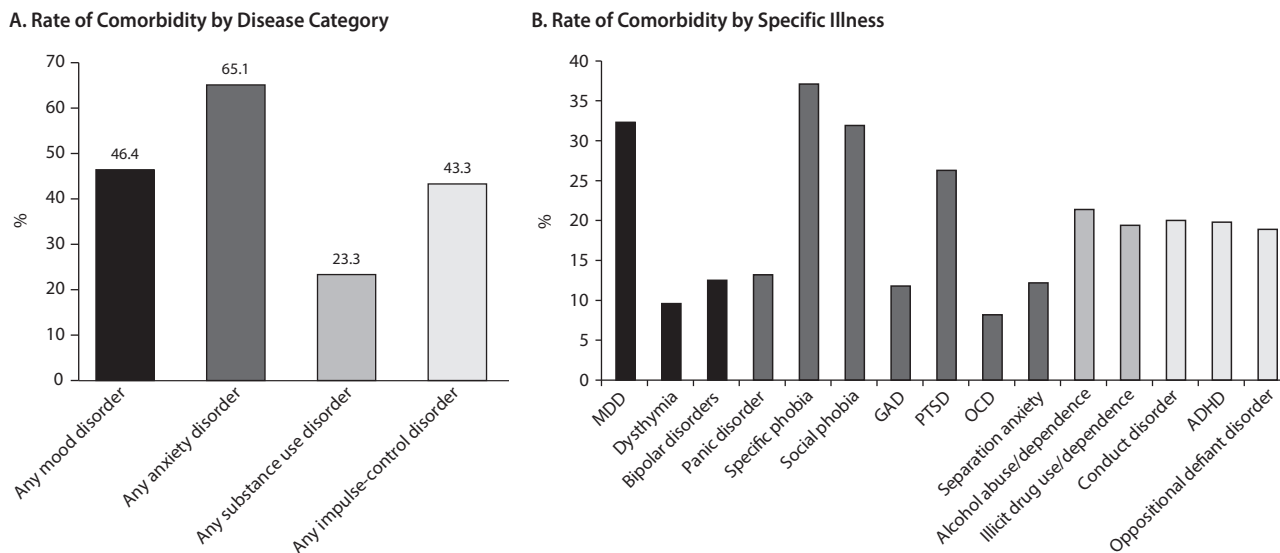
Clinicians' Misconceptions

Research has shown that health care providers may view their obese patients negatively, have less respect for them the greater their BMI is, and believe the patient will be noncompliant or that treatment efforts will prove futile.¹⁵ A study of 329 health care professionals who were currently treating patients diagnosed with eating disorders reported results from an anonymous, online self-report questionnaire.¹⁵ A majority of clinicians (56%) reported that they had heard negative comments about obese patients from other professionals in their field, and 42% of respondents believed that other practitioners often hold negative stereotypes about obese patients.¹⁵

Underdiagnosis. Research suggests that clinicians may be underdiagnosing patients with BED. A recent study by Cossrow et al¹⁹ reported results of an Internet survey of more than 22,000 respondents; among those respondents who met DSM-5 criteria for BED, only 3.2% had ever been

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Figure 1. Prevalence of Psychiatric Comorbidities in Patients With Binge-Eating Disorder^a



^aData from Hudson et al.²

Abbreviations: ADHD = attention-deficit/hyperactivity disorder, GAD = generalized anxiety disorder, MDD = major depressive disorder, OCD = obsessive-compulsive disorder, PTSD = posttraumatic stress disorder.

diagnosed with BED by a health care provider. Clinicians need to familiarize themselves with the diagnostic criteria of BED and useful screening instruments.

DIFFERENTIAL DIAGNOSIS

The *DSM-5* made many changes regarding the diagnostic criteria for eating disorders. Now, BED is classified as a separate diagnosis instead of being categorized as “eating disorder not otherwise specified” as it had been in past editions. This change has allowed clinicians to better determine which, if any, eating disorder their patients have and provides clearly defined symptoms for BED.

For example, recurrent inappropriate compensatory behaviors (eg, purging, excessive exercise, laxative abuse) that are symptoms of bulimia nervosa are absent in patients with BED.¹ Additionally, although many patients with BED may report frequent attempts at dieting, they do not display marked or sustained dietary restrictions, unlike those with bulimia nervosa. When considering a potential BED diagnosis in obese individuals, clinicians should consider that levels of overvaluation of body weight and shape, as well as rates of psychiatric comorbidity, are higher in those with BED than in those without BED.¹

Patients with bipolar disorder or major depressive disorder may report symptoms of increased appetite and weight gain, but increased eating in the context of a mood episode may not be associated with a loss of control as in BED.¹ Clinicians hoping to differentiate BED from borderline personality disorder should note that binge eating is described as an impulsive behavior in the criteria for borderline personality disorder.¹

Screening Instruments

Clinicians have a number of screening instruments available when assessing patients for potential eating disorders.

SCOFF Questionnaire. One tool is the SCOFF questionnaire, a 5-question screening tool, that has been shown to be an effective method for clinicians to quickly identify patients’ problematic symptoms.¹⁸ However, this questionnaire is not specific to BED. It is called the SCOFF questionnaire based on identifying words in each of the following questions¹⁸:

- Do you make yourself **Sick** because you feel uncomfortably full?
- Do you worry you have lost **Control** over how much you eat?
- Do you believe yourself to be fat when **Others** say you are too thin?
- Have you recently lost more than **Fourteen** pounds in 3 months?
- Would you say that **Food** dominates your life?

One point is given for every “yes” answer, and a score of at least 2 should signal the potential presence of an eating disorder and warrants further questioning.

Parker and colleagues¹⁸ investigated the sensitivity and specificity of the questionnaire in 305 participants; 66.7% of people who tested positive for an eating disorder actually did have one, while 88.7% of those who tested negatively actually did not have a disorder. The authors found a sensitivity of 53.3% and a specificity of 93.2%.¹⁸ A similar study by Morgan et al²⁰ also viewed the SCOFF questionnaire as an

effective tool, with a 12.5% false positive rate but with 100% sensitivity; the study included only patients with bulimia nervosa or anorexia nervosa, not BED, and controls.

BEDS-7. Another screening instrument is the 7-item Binge-Eating Disorder Screener (BEDS-7).²¹ This questionnaire is a brief, patient-reported screening tool that was developed to help identify individuals with probable BED symptoms for further evaluation or referral to a specialist. This tool is specific to BED symptoms and was shown to have 100% sensitivity and 39% specificity in patients.²¹ The items were developed based on input from criteria in the *DSM-5*, input from clinicians skilled in this area, and other existing BED tools, and then the screener was refined in debriefing interviews with patients.²¹

EDE-Q 6.0. The Eating Disorder Examination Questionnaire (EDE-Q)²² was established as a self-report form of the Eating Disorder Examination and is scored the same way. Widely considered as the “gold standard” for eating disorder screening tools, the original examination was extremely time-consuming and required physicians to be trained to administer it.²³ The EDE-Q questionnaire is much longer than the SCOFF questionnaire or the BEDS-7. Studies have shown that, while it has good retesting potential over the course of treatment for female patients, it is less reliable when assessing behavior in men.²⁴

QEWP-5. The Questionnaire on Eating and Weight Patterns (QEWP)²⁵ was originally developed in 1992 to help clinicians assess patients for symptoms of eating disorders. It was revised in 1993 and again in 2015 to incorporate the criteria added to the *DSM-5*.²⁵ For information about more screening tools, see “Epidemiology, Recognition, and Differential Diagnosis of Binge-Eating Disorder in Psychiatry and Primary Care” by Susan G. Kornstein, MD.²⁶

Additional questions to ask. It may be helpful for clinicians to construct a list of questions to ask patients regarding their eating habits in order to quickly identify those with potential symptoms of eating disorders for whom a questionnaire would be useful. Such questions as “Have you felt like some of your eating has seemed out of control?” “Have you had any concerns about your eating behaviors or your relationship with food?” and “Are there times when you eat more rapidly than usual or eat alone because of embarrassment about others seeing how much or how you eat?” may provide clinicians with opportunities to candidly discuss symptoms with their patients. Clinicians should be diligent in asking patients questions about BED behaviors if patients make statements such as, “I’m on a diet but can’t seem to lose weight” or “I stay up late after my spouse goes to sleep” (which can be a time when binge eating occurs). These comments may be red flags for BED. In my clinical experience, I have found that certain questions yield more thorough answers than others. Some of the questions that I have found to be effective include: “Are there times when you eat in secret?” “Does your weight fluctuate?” and “Do you eat more when you are stressed or anxious?”

It is also important to note that not all binge-related foods are “junk foods.” Individuals can binge on fruit and yogurt

and may not consider these instances as binge eating because they are eating healthy foods.

CONCLUSION

To diagnose BED, clinicians must understand that it is different from simply overeating. The diagnosis requires the presence of specific distinguishing features, such as loss of control and strong feelings of shame or guilt, which are not typically associated with overeating. Both men and women can have BED,^{1,2} and it can occur across racial and ethnic groups.³ Although BED is commonly associated with obesity, many patients with BED have a healthy body weight or are overweight but not obese.

Psychiatric and somatic comorbidities with BED are very common, as are functional impairments. However, BED may go undiagnosed for many years because patients seeking treatment for psychiatric or somatic disorders are not always specifically asked about their eating behaviors. Unrecognized and untreated BED will render management of the presenting comorbidities all the more difficult, as the BED can contribute to health issues associated with weight gain. Unrecognized BED may lead to suboptimal choices of medications to treat the comorbidities, such as those with a propensity for increase in appetite and subsequent weight gain.

Disclosure of off-label usage: Dr Citrome has determined that, to the best of his knowledge, no investigational information about pharmaceutical agents that is outside US Food and Drug Administration–approved labeling has been presented in this activity.

REFERENCES

1. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. Fifth Edition. Washington, DC: American Psychiatric Publishing; 2013.
2. Hudson JI, Hiripi E, Pope HG Jr, et al. The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biol Psychiatry*. 2007;61(3):348–358.
3. Marques L, Alegria M, Becker AE, et al. Comparative prevalence, correlates of impairment, and service utilization for eating disorders across US ethnic groups: implications for reducing ethnic disparities in health care access for eating disorders. *Int J Eat Disord*. 2011;44(5):412–420.
4. Saules KK, Carey J, Carr MM, et al. Binge-eating disorder: prevalence, predictors, and management in the primary care setting. *J Clin Outcomes Manag*. 2015;22(11):512–528.
5. Bulik CM, Reichborn-Kjennerud T. Medical morbidity in binge eating disorder. *Int J Eat Disord*. 2003;34(suppl):S39–S46.
6. Kessler RC, Berglund PA, Chiu WT, et al. The prevalence and correlates of binge eating disorder in the World Health Organization World Mental Health Surveys. *Biol Psychiatry*. 2013;73(9):904–914.
7. Wang Y, Rimm EB, Stampfer MJ, et al. Comparison of abdominal adiposity and overall obesity in predicting risk of type 2 diabetes among men. *Am J Clin Nutr*. 2005;81(3):555–563.
8. Palaniappan L, Carnethon MR, Wang Y, et al. Insulin Resistance Atherosclerosis Study. Predictors of the incident metabolic syndrome in adults: the Insulin Resistance Atherosclerosis Study. *Diabetes Care*. 2004;27(3):788–793.
9. Reichborn-Kjennerud T, Bulik CM, Sullivan PF, et al. Psychiatric and medical symptoms in binge eating in the absence of compensatory behaviors. *Obes Res*. 2004;12(9):1445–1454.
10. Hudson JI, Lalonde JK, Coit CE, et al. Longitudinal study of the diagnosis of components of the metabolic syndrome in individuals with binge-eating disorder. *Am J Clin Nutr*. 2010;91(6):1568–1573.
11. Javaras KN, Pope HG, Lalonde JK, et al. Co-occurrence of binge eating disorder with psychiatric and medical disorders. *J Clin Psychiatry*. 2008;69(2):266–273.
12. Friberg O, Martinussen M, Kaiser S, et al. Personality disorders in eating

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- disorder not otherwise specified and binge eating disorder: a meta-analysis of comorbidity studies. *J Nerv Ment Dis.* 2014;202(2):119–125.
13. Flament MF, Bissada H, Spettigue W. Evidence-based pharmacotherapy of eating disorders. *Int J Neuropsychopharmacol.* 2012;15(2):189–207.
 14. Hay PJ, Claudino AM. Clinical psychopharmacology of eating disorders: a research update. *Int J Neuropsychopharmacol.* 2012;15(2):209–222.
 15. Puhl RM, Latner JD, King KM, et al. Weight bias among professionals treating eating disorders: attitudes about treatment and perceived patient outcomes. *Int J Eat Disord.* 2014;47(1):65–75.
 16. Barnes RD, Ivezaj V, Grilo CM. An examination of weight bias among treatment-seeking obese patients with and without binge eating disorder. *Gen Hosp Psychiatry.* 2014;36(2):177–180.
 17. Herman BK, Safikhani S, Hengerer D, et al. The patient experience with DSM-5-defined binge eating disorder: characteristics, barriers to treatment, and implications for primary care physicians. *Postgrad Med.* 2014;126(5):52–63.
 18. Parker SC, Lyons J, Bonner J. Eating disorders in graduate students: exploring the SCOFF questionnaire as a simple screening tool. *J Am Coll Health.* 2005;54(2):103–107.
 19. Cossrow N, Pawaskar M, Witt EA, et al. Estimating the prevalence of binge eating disorder in a community sample from the United States: comparing DSM-IV-TR and DSM-5 criteria. *J Clin Psychiatry.* 2016;77(8):e968–e974.
 20. Morgan JF, Reid F, Lacey JH. The SCOFF questionnaire: assessment of a new screening tool for eating disorders. *BMJ.* 1999;319(7223):1467–1468.
 21. Herman BK, Deal LS, DiBenedetti DB, et al. Development of the 7-Item Binge-Eating Disorder Screener (BEDS-7). *Prim Care Companion CNS Disord.* 2016;18(2). 10.4088/PCC.15m01896
 22. Fairburn CG. *Cognitive Behavior Therapy and Eating Disorders.* New York, NY: Guilford Press; 2008.
 23. Aardoom JJ, Dingemans AE, Slof Op't Landt MCT, et al. Norms and discriminative validity of the Eating Disorder Examination Questionnaire (EDE-Q). *Eat Behav.* 2012;13(4):305–309.
 24. Rose JS, Vaewsorn A, Rosselli-Navarra F, et al. Test-retest reliability of the eating disorder examination-questionnaire (EDE-Q) in a college sample. *J Eat Disord.* 2013;1:42.
 25. Yanovski SZ, Marcus MD, Wadden TA, et al. The Questionnaire on Eating and Weight Patterns-5: an updated screening instrument for binge eating disorder. *Int J Eat Disord.* 2015;48(3):259–261.
 26. Kornstein, SG. Epidemiology and recognition of binge-eating disorder in psychiatry and primary care. *J Clin Psychiatry.* 2017;78(suppl 1):3–8.

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