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# An exploration of the diagnostic criterion, etiology, and treatment of binge eating disorder

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## **Abstract**

An exploration of the DSM IV-TR research diagnostic criterion of Binge Eating Disorder (BED), its etiology, and viable treatments was conducted. The purpose of this literature review was to provide more information for mental health professionals treating clients who may fit the criteria for BED. Published research literature and treatment manuals were utilized in this review. It was concluded that there are many potential risk/maintenance factors linked to the development of BED, and that treatment interventions involving mindfulness appear to be effective in minimizing the symptoms of BED. Given the current obesity statistics among U.S. adults, it seems quite important mental health practitioners learn more about BED criterion, etiology, and treatment interventions.

An Exploration of the Diagnostic Criterion, Etiology, and Treatment of

Binge Eating Disorder

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by

Amy C. Ebert

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## Abstract

An exploration of the DSM IV-TR research diagnostic criterion of Binge Eating Disorder (BED), its etiology, and viable treatments was conducted. The purpose of this literature review was to provide more information for mental health professionals treating clients who may fit the criteria for BED. Published research literature and treatment manuals were utilized in this review. It was concluded that there are many potential risk/maintenance factors linked to the development of BED, that treatment interventions involving mindfulness appear to be effective in minimizing the symptoms of BED, and that given the current obesity statistics among U.S. adults—it seems quite important mental health practitioners learn more about BED criterion, etiology, and treatment interventions.

This Research Paper by: Amy C. Ebert

Entitled: AN EXPLORATION OF THE DIAGNOSTIC CRITERION, ETIOLOGY,  
AND TREATMENT OF BINGE EATING DISORDER

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## An Exploration of the Diagnostic Criterion, Etiology, and

### Treatment of Binge Eating Disorder

An elaborate home-cooked meal or a decadent chocolate dessert can feel like a magical elixir after a stressful day at work or school, and the temptation to overindulge can be irresistible. Most people at one time or another have used food as a means of comfort, hence the term “comfort food.” In fact, it is quite “normal” to eat excessively from time to time; the holiday season is a prime example of this. Overeating may become a problem, however, when it becomes habitual, uncontrollable, and dangerous to an individual’s mental and physical health. This is when a client’s behaviors may fit the criteria for a diagnosis of Binge Eating Disorder (BED). Given the current statistics of obesity in the U.S., BED may be more prevalent than ever. Mental health practitioners may find themselves with many clients struggling with the symptoms and consequences of BED. It is essential these counselors have a solid understanding of what BED is, why people might be struggling with binge eating, the physical and emotional ramifications of BED, and some interventions proven to be successful with treating BED.

#### *What is BED?*

The diagnostic criterion necessary of binge eating disorder (BED) is detailed in the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (2000). BED is included in Appendix B: Criteria Sets and Axes Provided for Further Study. The *DSM-IV-TR* (2000) research criterion for BED is described as followed. Separate & recurrent episodes of eating a larger amount of food than most people would eat in a comparable period of time under

comparable circumstances. (Note there is no specific amount of food cited since this may vary greatly from person to person). Individuals may report a lack of control during these episodes, as if they are not able to control how much they eat or cannot stop eating.

These binge-eating episodes are coupled with at least three of the following characteristics: (1) eating more quickly than normal; (2) eating until feeling uncomfortably full; (3) eating large amounts of food when not experiencing physical hunger; (4) eating alone due to shame over how much one is eating; and (5) feeling revolted with oneself, depressed, or significantly guilty after overeating.

Additional criterion involves the presence of obvious distress related to the binge eating and the lack of inappropriate compensatory behaviors, such as purging or excessive exercise. The binge eating also must occur at least 2 days a week (on average) and for a period of at least 6 months. A binge episode normally takes place within a limited block of time (usually less than two hours) and may not necessarily take place in just one setting. Individuals may numb out during the episode or shortly thereafter. Suspending negative emotional states, such as sadness, feelings of anxiety or stress, is often the reward of the binge eating. This mention of rewards brings to mind the topic of who is more likely to be a binge eater and why.

### *Who is Binge Eating and Why?*

Consistent throughout the research literature is the assertion that there are many causal links and factors involved in the development and prognosis of BED. This implies just how important it is mental health practitioners know and understand some of the predominant causal factors involved-- especially when developing treatment plans for

clients diagnosed with BED. It is highly probable there is an intricate and complex web of factors linked to the development of BED symptoms for each unique client.

Understanding each client's triggers to binge eating may be useful in developing preventative measures to bingeing. The following section will include an exploration of some of the more dominant causal links to BED.

*Social Food Rituals.* People are taught, at a very young age, the importance of food in society. Food is used by parents as a comfort, reward, or pacifier, and it is very integral to basic childhood traditions. Abramson (1998) observed that there are many childhood social events involving sweet foods, such as birthday parties and Halloween, where there is much excitement over vast amounts of cake and candy being consumed. Abramson implied that perhaps the warm, fuzzy feelings derived from these childhood rituals, along with the family's practice of sweets as rewards, contribute to emotional eating in the future. Abramson also reported that a study of college students revealed their habit of eating sweet foods when they were feeling depressed. This suggests that "perhaps emotional eaters use sweet foods to bring back some of the positive feelings associated with childhood rituals" (pp. 41-42). In other words, people are reaching for food in moments of depression and stress in order to alleviate their negative feelings due to their association of food with good childhood memories.

*Role of Depression and Anxiety.* The combination of depression and anxiety appears to be rather potent. Mitchell and associates (1999) executed a study of the potential differences in the hedonics of binge eating between women with BED and bulimia nervosa. Hedonics deals with the pleasurable and unpleasurable states of consciousness. The BED subjects reported, with highest frequency, feeling anxious

about something, feeling bored, and having a depressed mood prior to a binge eating episode. They reported more often than bulimic subjects that during the episode, "... they enjoyed the food, the taste of the food, the smell of the food, and the texture of the food" (p. 168). The subjects claimed symptoms of depression and anxiety were alleviated shortly during this period. This would imply a form of escapism was present in their behavior.

*Escape From Negative Emotions.* Heatherton and Baumeister (1991) suggested, "... binge eating is motivated by a desire to escape from self-awareness" (p. 91). The authors asserted when binge eaters fall short of high self-standards, self-expectations, and the perceived-as-difficult demands of others they develop a negative self-perception along with concern for how they are viewed by others. This negative, hyper self-awareness eventually escalates to emotional distress, often including feelings of anxiety and depression. In order to escape this distress, binge eaters binge to narrow their world down to pure immediate stimuli. In this state, they concentrate primarily on the sensations felt by consuming the food. This succeeds in distracting them from their problems for awhile. The soothing effect of the food leaves a lasting imprint that encourages future binge eating episodes despite the result of increased feelings of depression and anxiety due to their self defeating behavior.

*Dissocialized and Erratic Eating Habits.* Compulsive overeating behavior may be increasing in prevalence because eating habits are becoming more dissocialized and erratic. Eating alone is becoming a common practice. In fact, fewer families are choosing to actually eat meals together, favoring an "everyone-fend-for-yourself" attitude. Gordon (2000) proclaimed that "we have become a culture of 'grazers' or 'foragers'; snacking,

usually in the form of irregularly scheduled episodes with unpredictable nutritional intake, has replaced the tradition of three-meals-a-day” (p. 186). Individuals are most likely overeating due to frenetic schedules, where they are not really thinking about what they are putting into their bodies, but about what is quick and convenient. Gordon cited that the goal of the McDonald’s franchise is to place the location of their fast food restaurants in the United States in such a way that “any consumer is only an average of eight minutes away from a Big Mac” (p. 186). So if an individual is alone, hurried, and hasn’t eaten for several hours, he or she is more likely to consume food that is easily accessible, low in nutritional value, and in larger proportions than normal.

*Easy Fast Food Accessibility.* The fast food industry may have contributed to the vastly increasing number of compulsive overeaters in the United States. Fast food is inexpensive, tasty, and readily accessible. These factors alone make it tough to resist. Sneed (in Minirth, 1990) pointed out that the food system in the United States has changed drastically within the last fifty years, making it difficult to eat normally. Sneed further claimed that the fast food boom, combined with the increased practice of eating meals outside the home, has transformed a lot of normal eaters into compulsive overeaters. Sneed believed that “this cultural phenomenon has also produced a lot of secret eaters, especially people who eat in their cars” (p. 21). Drive-up windows at fast food chains undoubtedly make it easier for binge eaters to obtain food quickly and discreetly, allowing them to lead a secret double-life filled with perpetual food binges. Perhaps not so secret, may be the presence of an “eating buddy” within the childhood home.

*Childhood Eating Buddy Within the Home.* Many compulsive overeaters learned their behavior unconsciously during childhood. Family members often had great influence over how these individuals dealt with food and emotions, in fact, they set the example. The parents of binge eaters often had food issues themselves. Meltzer (1993) suggested that there may have been another food addict in the house. Meltzer further explained that, "If we happened to be that person's 'eating buddy,' not only his or her behavior but also the conspiratorial air and sense of camaraderie that accompanied our shared binges contributed to our growing inclination to overeat" (p.69). Meltzer basically pointed out that compulsive overeaters have psychologically inherited traits from their childhood role models, such as parents, siblings, or even friends.

*Maladaptive Parental Focus on Weight and Dieting.* Matz and Frankel (2004) described a client named Molly whose mother spent years struggling with overeating and dieting. This mother understood the pain of feeling "too fat" and wished to protect her daughter from sharing the same experiences, so she spent years focusing on Molly's body size, frequently encouraging her to diet. "Unfortunately, her attempts to help Molly actually caused her daughter great pain and contributed to a negative body image, a compulsive eating problem, and decreased self-esteem" (Matz & Frankel, 2004, pp. 194-95).

*Dieting.* The broad encouragement of dieting is another environmental factor that contributes to the ritual of binge eating. The societal pressure placed on individuals, especially women, to look a certain way often leads to unrealistic and overly restrictive diets. These restrictive diets are incredibly difficult to follow and inevitably lead to failure time after time. Fairburn (1995) claimed that these failures encourage binge

eating, due to the fact that these strict dieters give up temporarily and binge out of frustration. Fairburn asserted that, “Underpinning this reaction to the breaking of dietary rules is a thinking style characteristic of many of those who binge, so-called ‘all-or-nothing’ or ‘dichotomous’ thinking” (pp. 47-48). It appears that once these individuals have slipped in their incredibly restrictive diets, they experience a sense of self-loathing, and decide they might as well go all out for awhile. This practice leads to a perpetual cycle of compulsive overeating, again stemming from an environmental reason, which is the social pressure to be thin. This social pressure for thinness is, in fact, often enforced on women by members of their own sex.

*Confusing Messages from Female Peers.* Compulsive overeating in women is often caused due to anxiety brought about by confusing messages from other women about thinness, and what to eat or not to eat. Women often have a daily, conspiratorial lunch ritual with female friends, co-workers or family members, in which they will deliberate extensively over whether they should be good or bad in their food selection. Knapp (2003) described an oft-witnessed lunch scene where she would observe women eyeing a display case, trying to decide whether to get something sweet and gooey, or something healthy. Knapp further described the scene, “I’d overhear fragments of conversation: debates between women (I can’t eat that, I’ll feel huge), and cajolings (Oh, c’mon, have the fries), and collaborations in surrender (I will if you will)” (p. 27). This social interaction over food can be very damaging and confusing, and can lead some individuals to bouts of compulsive overeating due to sheer frustration over the situation. This concern over what others think demonstrates a link between peer modeling and eating behaviors.

*Peer Modeling.* Compulsive overeating is often encouraged by the behavior of peers. For example, if there is a potluck at work and several people are observed excessively grazing throughout the day, this behavior begins to become normal to those observing. In fact, there is much encouragement amongst peers to overindulge in such incidents. Several people complain about their work environment being conducive to overeating and subsequent weight gain. This may be linked to the modeling of oneself after peers in order to fit in. Stice (2002) explained that, "Modeling . . . refers to the process wherein individuals directly emulate behaviors they observe. For instance, a woman may be more likely to use laxatives for weight control if she sees a peer engage in this behavior" (p. 103). In other words, the more often inappropriate eating behavior is displayed by those people deemed appropriate, the higher the chances of normal eaters taking on the habits of overeaters, since overeating begins to seem normal to them. This behavior can become very much like a contagious disease. Sometimes binge eating behavior is not so much linked to a desire to socially conform-- it may actually stem from quite an opposite mindset.

*Rebellion Against Societal Expectations.* Another causal link to binge eating may be an urge to rebel against societal expectations regarding size. The urge to overeat may stem from sheer rebellion against pressure from a media-oriented society to fulfill a particular ideal of attractiveness. Again, this seems representative of a dichotomous way of conceptualizing one's weight and shape. Individuals are constantly bombarded by glossy images of thin, fit people who seem to exude success, happiness, and vitality. Women, in particular, seem to be very affected by these images. Some women may rebel against an expected ideal of thinness. Orbach (in Gordon, 2000) stated, "Some women

with problems of compulsive overeating may unconsciously want to be fat; it is thinness that they fear” (p. 151). This statement suggested that some women may not even be aware that they are in rebellion, and that this is the reason for their compulsive overeating. In addition to many environmental factors, there are also biological factors linked to binge eating disorder.

*Genetic Link.* Researchers have found in recent studies that binge eating can be caused by genetics. Branson et al. (2003) concluded “binge eating is a major phenotypic characteristic of subjects with a mutation in MC4R, a candidate gene for the control of eating behavior” (p. 1096). The same study revealed, “All carriers of an MC4R mutation were given a diagnosis of binge-eating disorder, as compared with only 14.2 percent of noncarriers” (p. 1101). These research results revealed that anyone carrying a MC4R gene mutation will exhibit binge eating behavior. Not all binge eaters possess this gene mutation, but there may be other biological factors involved.

*Biochemical Feedback.* Once binge eating behavior has been established, there are biological factors involved that serve to perpetuate a destructive cycle. Yanovski (1995) identified some of these biological dynamics in her synopsis of several medical studies involving the physiological functions related to eating disorders. Larger stomach capacity, slowed gastric emptying, and diminished CCK release, in combination, were found to perpetuate binge eating via the route of providing a positive feedback loop. Cholecystokinin (CCK) is “a putative satiety hormone triggered by food in the duodenum.” Delayed gastric emptying would contribute to a lack of satiety when eating. Yanovski also communicated the discovery that those with binge eating disorder have a higher pain threshold when compared to their weight-matched controls. The author

hypothesized that either frequent binge eating and/or vomiting may lead to alterations of the vagal nerves. These specific cranial nerves tend to several bodily functions, including the digestive process. Alterations to these nerves could aid in the diminishment of satiety during a meal. They could also alleviate the sense of pain which would hypothetically occur when the stomach is overly full, thus the elevated pain threshold.

Arming a recovering client with this information may be helpful in encouraging her to be patient with the time it may take for the body to readjust to a diminished food intake. Once the binges are halted, the positive feedback loop will most likely cease as well, but this will take time and persistence. Providing a client with causal links to their bingeing behaviors may help alleviate any experienced guilt and shame, plus provide awareness of potential binge triggers. There are also many proven interventions geared towards treating BED.

### *BED Interventions*

There are several interventions proven to be successful in treating BED. Most recently, treatment models combining elements of cognitive-behavioral therapy (CBT) with mindfulness techniques have demonstrated great effectiveness in treating clients diagnosed with BED. More research needs to be conducted to further establish them as evidence-based treatment models. Although mindfulness-based treatments are derived from the ancient traditions of Buddhism, they are still relatively new to the world of psychological research. Dialectical behavior therapy (DBT), mindfulness-based cognitive therapy (MBCT), acceptance and commitment therapy (ACT), and

mindfulness-based eating awareness training (MB-EAT) are four such treatment models. (Baer, 2006).

*DBT.* Dialectical behavior therapy (DBT) is based on an affect regulation model of binge eating. The basic premise of this model is that individuals engage in binge-eating to reduce the experience of negative emotions/moods since they lack more adaptive regulation skills. This version of DBT treatment includes training in mindfulness, emotional regulation, distress tolerance, and behavioral chain analysis as applied to binge eating episodes. The mindfulness skills emphasize "... nonjudgmental and sustained awareness of emotional states as they are occurring in the present moment, without reacting to them behaviorally" (p. 78). Clients would also be taught how to watch these emotions as if they were clouds moving across the sky. They are to do this without making efforts to change the emotions or engaging in self-criticism for having these experiences. Mindful eating is also taught in a raisin-eating exercise in which the participants take considerable time eating a raisin. They examine, smell, and taste the raisin carefully and slowly. The purpose of doing this is to create a fully alive, fully engaged experience. (Baer, 2006).

*MBCT.* Mindfulness-based cognitive therapy (MBCT) like DBT also focuses on cultivating nonjudgmental and nonreactive self-observation, as well as "... acceptance of bodily sensations, perceptions, cognitions, and emotions" (Baer, 2006, p. 79). Ideally, participation in MBCT would increase the ability to know when you are truly physically hungry and full, the willingness to experience the negative emotions that normally would have triggered a binge, decrease the believability of the negative thoughts common to those who binge-eat, and increase the ability to select adaptive behaviors when

experiencing stress. Some of the MBCT interventions include the following: three-minute breathing spaces, deliberately bringing difficult issues to mind while engaging in sitting meditation, cognitive therapy exercises that are not designed to change thoughts but to increase awareness that these thoughts are not necessarily truths, and relapse prevention action plans. (Baer, 2006).

*ACT.* Acceptance and commitment therapy (ACT) is very much like it sounds. The goal of this therapy is twofold. The first objective is to increase participants' nonjudgmental acceptance of thoughts and feelings. The second objective is to encourage commitment to changing evident maladaptive behavior in order to work toward valued goals and life directions. One of the described ACT mindfulness exercises is the *thought parade*. During this exercise, the participant is to imagine her thoughts on written cards carried by marchers in a parade. The participant's regular thoughts about her body or anything else disturbing to her could be written on the cards, such as "I am huge" or "I am a failure." The task is to observe the parade of thoughts as they go by without becoming absorbed in them, or believing or acting on them. The goal of this exercise is to increase nonjudgmental acceptance without the employment of eating disordered behaviors in reaction to such thoughts. (Baer, 2006).

*MB-EAT.* Mindfulness-based eating awareness training (MB-EAT) extracts from traditional mindfulness meditation techniques and guided meditation. The goal is to concentrate on specific issues affecting shape, weight, and self-regulatory processes related to eating such as appetite, gastric and taste-specific satiety. What is particularly ideal about this type of treatment is how the process of meditation is incorporated into daily activities pertaining to food craving and eating. For example, "mini-meditations"

are taught to participants and are to be practiced at key moments during each day, specifically during meal and snack times. Each of these mini-meditations is designed to bring awareness to what a participant is experiencing in that moment so he can make mindful decisions about what to eat or how much to eat. A participant could explore whether she wants to eat because she is truly hungry or because she is feeling bored or anxious. The MB-EAT treatment model is designed for nine group sessions. Each of these sessions has a particular theme. Many of these themes center on cue recognition such as binge triggers, hunger cues, taste satiety cues, and hunger satiety cues. These cues are often “lost” over time during the development of binge eating behavior, and need to be re-learned. (Baer, 2006).

## Discussion

The following was just a small sample of the many effective treatments available for treating BED. Each mental health practitioner will need to explore what treatments align best with his personal counseling style and the history, personality characteristics, and treatment goals of the client. What may perhaps be more important is the increased awareness of both the general public and mental health professionals to the prevalence and impact of BED. Hudson, Hiripi, Pope Jr., and Kessler (2007), between the years of 2001 and 2003, conducted a survey on over 9,000 subjects to assess the prevalence and correlates of eating disorders within the general population. The authors discovered some startling results about binge eating disorder, which is reflected in the following quote from their article:

Binge eating disorder also appears more common than either of the other two eating disorders, exhibits substantial comorbidity with other psychiatric disorders, and is strongly associated with severe obesity. Collectively, these findings suggest that binge eating disorder represents a public health problem at least equal to that of the other 2 better-established eating disorders, adding support to the case for elevating binge eating disorder from a provisional entity to an official diagnosis in DSM-V. (p. 355)

More than a 1/3 of U.S. adults (over 72 million people) were obese from 2005 to 2006, according to the Center for Disease Control and Prevention (CDC). These results have serious health implications. Obesity is linked to many dangerous diseases and other health conditions such as coronary heart disease, Type 2 Diabetes, and stroke. Hopefully, this information will get the attention of mental health workers everywhere. It may be normal to overeat occasionally, especially during the holidays, but when binge eating becomes a regular ritual and a client's health is at risk—it may be time to assess for a diagnosis of BED. Possessing some prior knowledge of the criterion for a DSM diagnosis of BED, its potential risk and maintenance factors, along with some viable treatment interventions will most likely be beneficial for mental health practitioners and their clients in the pursuit for wellness.

## References

- Abramson, E. (1998). *Emotional eating: What you need to know before starting another diet* (2<sup>nd</sup> ed.). San Francisco: Jossey-Bass.
- Baer, R. A. (Ed.). (2006). *Mindfulness-based treatment approaches: Clinician's guide to evidence base and applications*. Amsterdam: Elsevier.
- Branson, R., Potoczna, N., Kral, J. G., Lentes, K. U., Hoehe, M. R., & Horber, F. F. (2003). Binge eating as a major phenotype of melanocortin 4 receptor gene mutations. *New England Journal of Medicine*, *348*(12), (1096-1103).
- CDC National Center for Health Statistics. (2007, November 28). *Obesity among adults in the United States—no statistically significant change since 2003-2004*. Retrieved March 2, 2009, from <http://www.cdc.gov/nchs/pressroom/07newsreleases/obesity.htm>
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4<sup>th</sup> ed.). Washington, DC: Author.
- Fairburn, C. G. (1995). *Overcoming binge eating*. New York: Guilford.
- Gordon, R. A. (2000). *Eating disorders: Anatomy of a social epidemic* (2<sup>nd</sup> ed.). Oxford, England: Blackwell.
- Heatherton, T. F., & Baumeister, R. F. (1991). Binge eating as escape from self-awareness. *Psychological Bulletin*, *110*(1), 86-108.

- Hudson, J. I., Hiripi, E., Pope Jr., H. G., & Kessler, R. C. (2007). The prevalence and correlates of eating disorders in the national comorbidity survey replication. *Biological Psychiatry*, *61*, 348-358.
- Knapp, C. (2003). *Appetites: Why women want*. New York: Counterpoint.
- Matz, J., & Frankel, E. (2004). *Beyond a shadow of a diet: The therapist's guide to treating compulsive eating*. New York: Brunner-Routledge.
- Meltsner, S. (1993). *Body and soul: A guide to lasting recovery from compulsive eating and bulimia*. Center City, MN: Hazelden.
- Minirth, F., Meier, P., Hemfelt, R., Sneed, S., & Hawkins, D. (1990). *Love Hunger*. Nashville: Thomas Nelson.
- Mitchell, J. E., Mussell, M. P., Peterson, C. B., Crow, S., Wonderlich, S. A., Crosby, R. D., et al. (1999). Hedonics of binge eating in women with bulimia nervosa binge eating disorder. *International Journal of Eating Disorders*, *26*, 165-170.
- Stice, E. (2002). Sociocultural influences on body image and eating disturbance. In C. G. Fairburn & K. D. Brownell (Eds.), *Eating disorders and obesity: A comprehensive handbook* (2<sup>nd</sup> ed.), (pp. 103-107). New York: Guilford.
- Yanovski, Zelitch S. (1995). Biological correlates of binge eating. *Addictive Behaviors*, *20*(6), 705-712.