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## **Binge or control? : assessment of the validity, treatment and underlying mechanisms of Binge Eating Disorder**

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## Chapter 3

# The Empirical Status of Binge Eating Disorder

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## Introduction

In the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (DSM-IV) Binge Eating Disorder (BED) is proposed as a new diagnostic category requiring further study and as an example of Eating Disorder Not Otherwise Specified (ED-NOS) (American Psychiatric Association, 1994). The criteria are described in an appendix, indicating that BED requires further research before it can be incorporated as a fully accepted category in the DSM. No comparable diagnostic category exists in ICD-10 (World Health Organization, 1992).

BED was introduced as a new eating disorder about ten years ago. The aim of this chapter is to give an overview of the results and to discuss the empirical status of BED after this decade of research. What is the empirical evidence for and against the state currently defined as BED in the DSM-IV? In this chapter I will focus on the present status of BED as an eating disorder. The issue of the relationship between BED and obesity will be discussed elsewhere in the book.

### *The Diagnostic and Statistical Manual of Mental Disorders (DSM)*

Classifying mental disorders by means of the DSM is one of the many methods of classification. Since the publication of the third edition of the DSM the taxonomy proposed by the American Psychiatric Association has become more dominant than anyone would have believed possible in the light of the limited impact of the first and second editions (American Psychiatric Association, 1952; American Psychiatric Association, 1968; Follette & Houts, 1996). In its proposal for the DSM-III the American Psychiatric Association considered mental disorders as medical disorders (American Psychiatric Association, 1980). Although there is not yet an agreement about the diagnosis and the criteria, in actual practice binge eating disorder is already accepted as an eating disorder. However, there is considerable debate about how much effort should be made to treat these patients in an eating disorder clinic. If patients with a binge eating disorder are treated within an eating disorder clinic there is also discussion about the kind of therapy, which is suited for these patients (Dingemans, Bruna, & van Furth, 2002).

Objections to this viewpoint came from the American Psychological Association. The DSM reflects the underlying model of traditional medicine. In order to gain wide acceptance of the system the task force of the DSM decided to abandon the theoretical (medical) view and to cease referring to mental disorders as a subset of medical disorders. This decision largely explains the syndrome-based and non-theoretical nature of the DSM (Follette et al., 1996).

According to the DSM-IV a mental disorder is defined as '*a clinically significant behavioural or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g. a painful symptom) or disability (i.e. impairment in one or more important areas of functioning) or with a significant increased risk of suffering death, pain, disability, or an important loss of freedom. In addition,*

*this syndrome or pattern must not be merely an expectable and culturally sanctioned response to a particular event, for example, the death of a loved one. Whatever its original cause, it must currently be considered a manifestation of a behavioural, psychological, or biological dysfunction in the individual*' (page xxi). The definition of dysfunction is crucial to the definition because something is not a disorder unless something has gone amiss in the person concerned (Follette et al., 1996).

*The proposal of Spitzer and others*

In 1991 Spitzer and others suggested that BED should be included in the DSM-IV. The rationale for their proposal was that many individuals with marked distress about binge eating could not be diagnosed as having bulimia nervosa (BN). People with the BED-syndrome have episodes of binge eating as do patients with bulimia nervosa, but unlike the latter they do not engage in compensatory behaviours such as self-induced vomiting, the misuse of laxatives, diuretics or diet pills, fasting and excessive exercise. The authors indicated that such patients are common among the obese involved in weight control programmes and/or belonging to overeaters anonymous (Spitzer et al., 1992; Spitzer et al., 1993). Although the diagnosis BED was formulated with the obese in mind, obesity is not a criterion for BED.

For inclusion in a new version of the DSM, the 'new' diagnostic is required to describe a pattern of symptoms not captured in the existing categories (Pincus, Frances, Davis, First, & Widiger, 1992). Pincus and others (1992), who served on the DSM-IV Task Force, stated that for a new category to be considered for inclusion in the DSM-IV "there must be solid evidence that the diagnosis is useful in predicting prognosis, treatment selection or outcome".

In 1993 Fairburn and others considered whether Pincus' arguments would apply to the proposed addition of BED to the DSM. One argument against new diagnoses is that if they are rare they may add unnecessary complexity to the already cumbersome system of classification and be irrelevant for clinical use. Furthermore, incorporation of new categories is likely to increase the overall prevalence of mental disorders. The addition of new and unproven diagnoses carries the risk of trivializing the construct mental disorder and/or its misuse. This is relevant for BED since we would not wish normal gluttony to be classed as a psychiatric disorder (Fairburn et al., 1993b). The criteria proposed by Spitzer et al. (1992) have been designed to minimize this risk.

However, Fairburn and others (1993b) argued that adding BED to the section of eating disorders does not make it very complex because the present scheme is relatively simple.

A second argument against adding new diagnostic categories is that new diagnoses are generally proposed by experts in the field concerned and are subsequently used by less expert assessors who may identify more false positives. These inaccurate diagnoses may lead to faulty treatments.

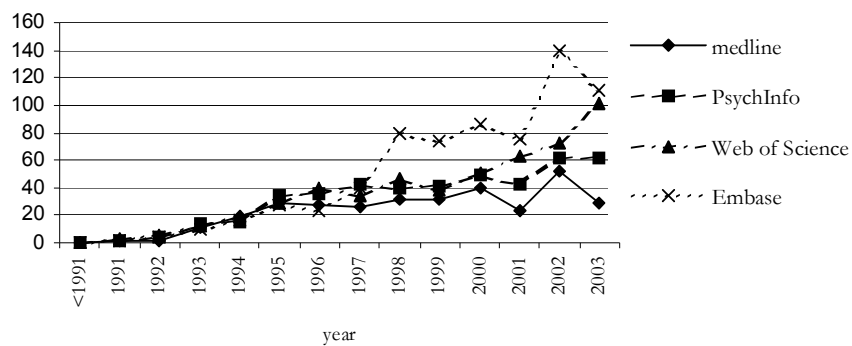
A third argument put forward by Fairburn and others is that 'adding unproven diagnostic categories may confer upon such categories an approval that they do not merit yet'.

They argue that there is no evidence to suggest that delineating BED from ED-NOS is a useful or valid approach. This delineation “may impede efforts to devise better classificatory schemes since investigators will inevitably tend to define their samples along the new lines”.

A fourth argument concerns the risk of definitional overlap across related categories. Fairburn and others (1993b) argue that the delineation of BED could cause definitional overlap between the non-purging type of bulimia nervosa and BED. Bulimia nervosa non-purging type is distinguished from BED by the presence of compensatory behaviours (fasting and excessive exercise) and/or undue emphasis on self-evaluation of body shape or body weight. Although the existence of substantial differences between bulimia nervosa non-purging type and binge eating disorder has been confirmed (Santonastaso et al., 1999), it is difficult to draw clear boundaries between these two categories. It is unclear when these distinguishing behaviours are severe enough to warrant the diagnosis of bulimia nervosa non-purging type rather than binge eating disorder.

Another reason for adding a new diagnosis to the DSM, is to initiate research in the field. The DSM-III and DSM-III-R have been facilitators of research in areas that would have remained unresearched if they had not been included in an official nomenclature. Some see this as one of the most important goals of the DSM. Others, however, think that research should drive DSM and not the other way around. It makes no sense to include a category for which there is no empirical support (Pincus et al., 1992). Once categories are included in the DSM they are not easily deleted (Blashfield, Sprock, & Fuller, 1990). The insertion of BED in the DSM-IV has led to a considerable increase in the amount of research into BED over the last decade. The term binge eating disorder was first used in a paper that appeared in 1991. The number of papers in which BED has been investigated has grown immensely over the past ten years (see overview figure 1).

Figure 1: Overview of papers with ‘binge eating disorder’ as keyword



*Classification criteria*

The Eating Disorders Work Group of the DSM-IV Task Force in conjunction with Spitzer et al. (1992) developed preliminary criteria for the new eating disorder diagnosis designed to identify “the many people who have problems with recurrent binge-eating, but who do not engage in compensatory behaviours of bulimia nervosa, vomiting or the abuse of laxatives” The criteria for the diagnosis of binge eating disorder were adapted from those for BN , extra criteria being added to define the differences between the two disorders.

The definition of binge eating (criterion A) is identical for BN and BED. However, in practice, binge eating among BED patients does not always conform to the requirement of the consumption of “a large amount” of food during a “discrete period of time”, such as two hours. Rossiter and others (1992) reported that many obese patients who overeat with a sense of loss of control consume quantities of food that would not be described as ‘large’ during any ‘discrete period of time’ but would be considered excessive over the course of the day. This pattern of overeating has been termed ‘grazing’ and is a frequent occurrence within the obese binge eating population (Marcus et al., 1992).

Binge eating episodes are required to be associated with behavioural symptoms of loss of control (criterion B). Spitzer and others (1992; 1993) felt that criterion B (symptoms of loss of control) should be included so as to set a high threshold for the diagnosis of binge eating disorder and to ensure that normal gluttony would not be classed as binge eating disorder. However, this criterion does not seem to be fully distinct from criterion A (2) (a sense of loss of control) or criterion C (feeling of distress regarding binge eating). Criteria B1, B2, and B3 refer to aspects of loss of control whilst eating a large amount of food in a discrete period of time (criterion A). Criteria B4 and B5 are related to characteristics of distress described in criterion C.

The distress criterion was included in the DSM-IV proposed criteria for BED in order to minimize false positives. Removal of this criterion would have increased the number of individuals meeting criteria for the disorder by 10% in a weight control sample and by more than 100% in a community sample in Spitzer’s field trial (1992). However, it is not clear what is meant by ‘marked distress’. Distress may refer to emotional distress or impaired social or occupational functioning as a consequence of binge eating behaviour. Does distress reflect the patient’s self-report of his/her emotional state or does it also require social and/or occupational impairment due to binge eating? Furthermore, de Zwaan (1997) stated that by including the distress criterion one may identify individuals with high levels of general distress which is not directly related to binge eating. For a diagnosis of BED, binge eating is required to occur on two days a week (criterion D) whereas patients with BN are required to have two episodes per week. This definition is based on the rationale that BED patients may have more difficulty in recalling and labelling binge eating episodes than bulimia nervosa patients (Rossiter et al., 1992). The end of a binge-eating episode in BN is often characterized by purging behaviour, whereas in BED the termination of a binge episode is not punctuated by such

behaviour. However, defining the frequency of binge eating in terms of the number of days on which the binge occurs seems to allow binges to be non-episodic, lasting as long as an entire day.

The twice-weekly frequency criterion for binge eating episodes is arbitrary and has no empirical support in cases of BN or BED. Various authors have found that raising the frequency criteria of binge eating episodes from once or twice a week did not change the pattern on measures of psychopathology or treatment outcome in binge eaters (Wilson, Nonas, & Rosenblum, 1993; Striegel-Moore et al., 2000; Striegel-Moore et al., 1998; Garfinkel et al., 1995).

Two binge eating days per week are required to occur during a six-month period in BED whereas a three-month period is specified for BN. The minimum duration of six months is required in order to ensure that transitory episodes of binge eating are not diagnosed as BED. Nevertheless, BED has been found to have a natural course that has a tendency to remit (Hay, Fairburn, & Doll, 1996; Cachelin et al., 1999; Fairburn et al., 2000).

DSM-IV proposed diagnostic criterion E (which states that the diagnosis of binge eating disorder should not be made if the patient engages in regular inappropriate compensatory behaviours also seen in BN (self-induced vomiting, laxative abuse, fasting, excessive exercise) or if he/she suffers from anorexia nervosa. However, there is no clear definition of what is meant by 'inappropriate' compensatory behaviours. Some compensatory behaviour in the obese is not necessarily inappropriate. Moreover, there is no definition for the term regular. The term regular implies that some compensatory behaviour could be compatible with the diagnosis of BED.

Unlike BN, the DSM-IV research diagnostic criteria for BED do not include 'unduly influenced self-evaluation by body weight and body shape'. It is not clear why this criterion has been excluded from the proposed diagnostic criteria. However, Eldredge and Agras (Eldredge & Agras, 1996) suggest that it may be due to uncertainty regarding the impact of the level of obesity on such concerns. Although obesity is not among the diagnostic criteria for either disorder, fewer BN patients are overweight than BED patients. The strong association between BED and obesity may be related to a patient's failure to compensate for the increased calories consumed during the binge eating episodes. Despite omission of this criterion various authors have observed a significant association between binge eating disorder and an overconcern about body weight and body shape (Wilson et al., 1993; Cachelin et al., 1999; Marcus et al., 1992; Masheb et al., 2000; Striegel-Moore et al., 2000; Wilfley, Schwartz, Spurrell, & Fairburn, 2000b; van Hanswijck de Jonge, van Furth, Lacey, & Waller, 2003).

#### *A comparison of characteristics of binge eating disorder and bulimia nervosa*

Most studies that compared BED and BN used the criteria for BN in the DSM-III-R, which made no distinction between the purging and non-purging subtypes of BN. The DSM-IV does make such a distinction between these subtypes. Purging bulimics engage in self-

induced vomiting, misuse of laxatives, diuretics or enemas. Non-purging bulimics do not purge but do use other inappropriate compensatory behaviours (i.e. fasting or excessive exercise). Several studies have compared BED patients with bulimics (with no distinction between purging and non-purging subtype) (Marcus et al., 1992; Kirkley et al., 1992; Tobin et al., 1997; LaChaussee et al., 1992; Goldfein et al., 1993; Mussell et al., 1995), and a few studies have compared BED patients to purging (Fichter et al., 1993; Mitchell et al., 1999; Masheb et al., 2000) and non-purging BN patients (Tobin et al., 1997; Hay et al., 1998; Santonastaso et al., 1999). In order to interpret the results of these studies correctly it is important to know which version of the DSM was used.

In a study in which normal weight subjects with BN (DSM-III-R) were compared to obese subjects with BED, the latter seemed less anxious about their eating patterns and bodyweight, felt less guilty about being overweight, were less preoccupied with their eating behaviour, had a better overall opinion of themselves, were able to perceive internal states more accurately, were more socially adjusted, and were more comfortable in maintaining interpersonal relationships (Raymond et al., 1995). Both obese and non-obese BED subjects have lower levels of dietary restraint than subjects with BN purging type (Masheb et al., 2000). However, Marcus and others (1992) found that obese women seeking treatment for binge eating reported levels of eating disorder psychopathology that were comparable to those of normal weight BN patients (DSM-III-R). Similarly, a cross-sectional study (van Hanswijck de Jonge, 2002) comparing BED to BN and obesity reported no significant difference between the two eating disorders on overall restraint psychopathology, eating concern psychopathology, body weight and body shape psychopathology. In all instances both BED and BN patients scored significantly higher in eating disorder psychopathology than the non-binge eating obese population.

Energy intake during an episode of binge eating seems to be different in BN (DSM-III-R) and BED. In a laboratory subjects were asked to binge on ice cream. Subjects with BN (DSM-III-R) consumed four times as much as normal weight healthy controls (LaChaussee et al., 1992). The same research group reported that subjects with BED ate only half the amount of ice cream eaten by subjects with BN (Goldfein et al., 1993). One study compared the quality and quantity of binges reported in individuals with BED and BN (Fitzgibbon et al., 2000). Binges of subjects with BN included food that was higher in carbohydrates and sugar content than the binges of subjects with BED. No difference was observed in the mean number of calories consumed.

BED patients seem to show fewer comorbid psychiatric symptoms than BN patients with either purging or non-purging subtype (Tobin et al., 1997). Schmidt and Telch (1998) have documented higher levels of depression, impulsivity, self-defeating tendencies and lower levels of self-esteem in bulimia nervosa than in binge eating disorder. Similarly, Raymond and others (1995) reported higher levels of depression and anxiety in bulimia nervosa patients than in binge eating disorder patients. Another study (Tobin et al., 1997) compared purging BN to



non-purging BN, BED and Eating Disorder Not Otherwise Specified (ED-NOS) on the Hopkins Symptom checklist and a measure of borderline syndrome and depression. The BED patients were reported to display significantly less anxiety, paranoia and psychoticism than the other three groups. No other differences were found between the groups on general psychopathology on the remaining measures. Unlike previous studies, no significant differences were found between BED and the two BN subtypes. Another study (van Hanswijck de Jonge, 2002) could not distinguish between BN and BED on general psychopathology as measured by the SCL-90-R. Furthermore, no distinction was reported between the two disorders on total levels of impulsivity. However, both BN and BED patients scored significantly higher on both general psychopathology and levels of impulsivity than did a group of non-binge eating obese patients. A study by Santonastaso and others (1999) showed no difference between nonpurging bulimics and BED subjects on clinical and psychological characteristics, such as psychiatric symptoms, frequency of bingeing, and impulsiveness traits. However, on many of the variables, the BED group showed a significantly greater variance. Webber (1994) does not document any significant differences between bulimia nervosa and binge eating disorder.

#### *Aetiology*

In a community-based, retrospective case-control study, Fairburn and others (Fairbu1998) aimed to identify specific risk factors for BED. They compared subjects with BED with healthy controls, subjects with other psychiatric disorders and subjects with bulimia nervosa. Their findings support the prediction that BED is associated with exposure to risk factors that increase the risk of psychiatric disorder in general and that increase the risk of obesity.

Little is known about the family characteristics of BED patients. One study found that BED subjects rated their family environment as less supportive and cohesive, and less engendering of direct and open expression of feelings than healthy controls. The BED group scored worse than other eating disorder groups (Hodges et al., 1998). One study investigated familial tendency for BED and the risk of other psychiatric disorders, but failed to show this (Lee et al., 1999b).

In BN most individuals start dieting prior to the onset of binge eating (Mussell et al., 1997; Marcus et al., 1995; Haiman et al., 1999). However, a fairly large subgroup of the individuals with BED start binge eating prior to the onset of dieting (35-54%)(Grilo et al., 2000; Abbott et al., 1998; Spurrell et al., 1997; Mussell et al., 1995). Dieting seems to play a role in the etiology of BED, but research does not indicate that dieting is always a key factor in BED, as it seems to do in BN (Howard et al., 1999). The binge-first group seem to diet because they binge, not binge because they diet (Abbott et al., 1998). For subjects who start binge eating before dieting, binge eating seems to be the primary symptom that leads to weight

gain. Obesity is found to develop several years after the onset of binge eating (Haiman et al., 1999; Mussell et al., 1995).

#### *Course of binge eating disorder*

Two studies have investigated the natural course of BED in the general population. Fairburn and others (2000) followed 102 subjects with BED for five years. After five years only 10% of these subjects still fulfilled the criteria for BED (1 subject (3%) fulfilled the criteria for BN and 2 subjects (5%) for EDNOS . In total 18% had an eating disorder of clinical severity. At the 5-year follow-up 77% of the group was abstinent (i.e. no objective bulimic episodes). However, the group as a whole became heavier during the five years and a large proportion tended to have a BMI over 30 (obesity) (22% at recruitment compared to 39% at follow-up). It was striking that only 8% had been treated for an eating disorder during these five years.

Cachelin and others (1999) examined women with BED in the general population for a period of six months. At the six-month follow-up 52% of these women suffered from full-syndrome BED, whereas 48% appeared to be in partial remission. Treatment seeking in general did not appear to be associated with improvement in BED over a relatively short time period.

Fichter and others (1998) assessed the course and outcome of 68 women with BED over a period of six years after intense inpatient treatment. In general, the majority of these patients showed substantial improvement during treatment, a slight (in most cases non-significant) decline during the first 3 years after treatment ended and further improvement and stabilization in the 4, 5 and 6 years following treatment. At the six-year follow-up only 6% fulfilled the criteria for BED. In total 20% met the criteria for some eating disorder according to the DSM-IV.

The studies mentioned above could be taken to indicate that treatment worsens the course of BED, since a higher percentage of subjects improved without treatment. However, subjects seeking help for BED seem to have more severe problems than subjects with BED in the general population (Fairburn et al., 1996; Wilfley, Pike, Dohm, Striegel-Moore, & Fairburn, 2001). Furthermore, it is unclear from these studies whether objective binge eating behaviour is replaced by overeating or subjective binge eating behaviour (explaining weight increase) in those patients reporting abstinence from bingeing behaviour at follow-up.

#### *Treatment*

The treatment of BN has been researched extensively and there have also been numerous controlled treatment studies (Schmidt, 1998); however, far less attention has been paid to BED (Wilfley et al., 1997). Because BED is more similar to BN than to obesity without binge eating, the first generation of BED treatment research focused on examining the efficacy of those treatments that had been shown to be effective for BN: cognitive behavioural therapy

(CBT), interpersonal psychotherapy (IPT) and antidepressant medication. Many individuals with BED however seek help for overweight. Treatment of obesity focuses on the reduction of caloric intake, encourages a shift to a low fat diet, addresses any medical contribution to the condition and initiates exercise. The underlying behavioural disturbances or the social and psychological consequences of obesity are often neglected. If the treatment of obese subjects with BED focuses only on the reduction of bodyweight and does not address binge eating or underlying problems, binge eating continues or even worsens (Romano et al., 1995; Howard et al., 1999). Weight-loss programmes seem to have little effect on the reduction of binge eating in obese subjects with BED (Kirkley et al., 1992).

The studies that will be discussed here are those in which BED is classified by means of the DSM-IV. To date there have been seven randomized controlled clinical trials conducted in which the psychological treatment of BED has been evaluated (Agras et al., 1994a; Agras et al., 1995; Eldredge et al., 1997; Peterson et al., 1998; Carter et al., 1998; Peterson et al., 2001; Wilfley et al., 2002a).

Cognitive Behavioural Therapy (CBT) seems to cause a statistically significant reduction in binge eating compared to no treatment (reduction in number of episodes after treatment: 68-90%; abstinence from binge eating after treatment: 40-87%; reduction in number of episodes after waiting list: 8-22%).

Two studies combined cognitive behavioural therapy (CBT) with weight loss treatment (Agras et al., 1995; Eldredge et al., 1997). Treatment of obese subjects with BED seems to be more successful if binge eating is treated before any attempts are made to lose weight.

Two studies compared the efficacy of CBT versus Interpersonal Psychotherapy (IPT). Agras and others (Agras et al., 1995) investigated the efficacy of IPT in treating overweight patients with binge eating disorder who did not stop binge eating after 12 weeks of CBT. Subjects who were successful after 12 weeks CBT received weight loss treatment. IPT did not lead to further improvement in those who did not improve with CBT. Wilfley and others (Wilfley et al., 2002a) randomized 162 overweight patients with BED to either CBT or IPT. The frequency of binge eating dropped significantly in both groups after 20 weeks of treatment (abstinence: CBT= 79% versus IPT = 73%) and at one-year follow-up (abstinence: CBT = 59% versus IPT = 62%). No differences were found between the two groups.

Nauta and others (2001) investigated the effectiveness of cognitive therapy and behavioural therapy in a group of obese subjects with and without BED, who were recruited from an obese community sample. Cognitive therapy appeared to be more effective than behavioural therapy with regard to abstinence from binge eating at six months follow up (86% and 44% respectively). At the end of treatment no differences were found in the abstinence rates (67% and 44% respectively).

Two studies (Peterson et al., 1998; Carter et al., 1998; Peterson et al., 2001) examined the efficacy of a self-help format (CBT) in the treatment of BED. Self-help formats seem to be

effective (abstinence varied between 50% and 87%). However, some caution is needed with the interpretation of the high abstinence rates, because the participants in these 'self-help' studies were probably less severely ill than those in the other studies (for example, subjects in the study by Carter (1998) and others had not received any prior treatment).

Also a few double-blind placebo-controlled pharmacological trials have been conducted in patients with BED. Drugs which have been examined are selective serotonin reuptake inhibitors (SSRI's; fluoxetine, fluvoxamine, sertraline)(Greeno et al., 1996; Arnold et al., 2002; Hudson et al., 1998; McElroy et al., 2000), appetite suppressants (d-fenfluramine (Stunkard et al., 1996) and sibutramine (Appolinario et al., 2003) and an anticonvulsant (topiramate)(McElroy et al., 2003). Fluoxetine seemed to reduce dietary intake but did not affect the frequency of binge episodes. This finding suggests that fluoxetine affects satiety, not hunger (Greeno et al., 1996). In another study (Arnold et al., 2002) fluoxetine reduced binge frequency significantly compared to placebo. Fluvoxamine was found to be effective in reducing the frequency of binge episodes and in lowering Clinical Global Impression (CGI) severity scores (Hudson et al., 1998). Sertraline seemed to be effective and well tolerated, although the number of participants in that study was low (McElroy et al., 2000). D-Fenfluramine reduced the frequency of binge eating in obese women with BED, but failed to reduce their bodyweight (Stunkard et al., 1996). A significant reduction of binge eating and weight was found in the sibutramine group compared to the placebo group (Appolinario et al., 2003). Topiramate was associated with significantly greater reductions in binge frequency compared to placebo after 14 weeks (94% versus 46% respectively).

A striking finding in these pharmacological studies is a high placebo-effect. All studies had a single-blind lead-in period from 1 to 4 weeks. After this lead-in period 42 to 44% of the participants no longer met the DSM-IV-criteria for BED.

In all studies the drugs under investigation seemed to be more effective than placebo with regard to the primary outcome measures. However, no long-term effects were found. Further, drugs did not seem to bring about a reduction in bodyweight. Disadvantages of these studies were the small number of participants and the short duration of the trials.

Cognitive behavioural psychotherapy is currently the most investigated treatment for BED and consequently the treatment of choice for binge eating disorder.

#### *Category or continuum?*

The main question treated in this chapter is whether binge eating disorder can be distinguished as a separate mental disorder. In order to define a distinct eating disorder, the disorder must have well described characteristics. Is BED distinct from obesity? Another important question is whether bulimic disorders are dimensional or categorical in nature?

In a few cross-sectional studies (Fichter et al., 1993; Kirkley et al., 1992; Howard et al., 1999) patients with BED were compared to matched samples of patients with BN purging

type and of patients with obesity (BMI > 30). The scores of patients with BED had an intermediate position between BN and obesity but were closer to BN than to obesity. In a series of cross-sectional studies (van Hanswijck de Jonge, 2002) patients with binge eating disorder were compared to patients with bulimia nervosa and non-binge eating obesity on eating disorder psychopathology, general psychopathology, personality pathology (categorical and dimensional). The study revealed a dichotomy between binge eaters (bulimia nervosa and binge eating disorder) and non-binge eaters (obesity) rather than a continuum of severity between the groups on all measures of psychopathology.

Williamson and others (1992) identified three relatively homogeneous subgroups of subjects who had been diagnosed with EDNOS using two cluster analytic procedures. The three atypical subgroups were contrasted with two groups of subjects with anorexia nervosa and bulimia nervosa. These groups were very similar to the descriptions of sub threshold anorexia nervosa, non-purging BN and BED. Subjects in the 'BED' group were morbidly obese but did not report extreme motivation for thinness. They reported significant problems with binge eating, including significant concern about loss of control over eating. These subjects did not resort to extreme weight control methods such as purging or extremely restrictive eating. Estimations of current body size were closer to norms and ideal body weight preferences were larger than those predicted from norms. Members of the group also were less biased in their assessment of actual and ideal weight than those of the other clinical groups. They expressed a more realistic dissatisfaction with obesity.

In another study Williamson and others (2002) found further empirical support for conceptualizing BN and BED as discrete syndromes. Three factors were found to account for 66% of the variance in eating disorder symptoms: binge eating, fear of fatness/compensatory behaviours and drive for extreme thinness. The bulimia nervosa group scored high on the features of binge eating and fear of fatness/compensatory behaviours but not on drive for thinness. The binge eating disorder group scored high on binge eating but not on the other two features. Furthermore, persons with a diagnosis of an eating disorder appeared to differ (at least partly) from persons with no pathological eating behaviours in kind rather than simply in degree.

Hay and others (1996) investigated the presence of clinically meaningful subgroups among subjects with recurrent binge eating recruited from the general population. They identified four subgroups by means of a cluster analysis. The results supported the concept of bulimia nervosa and its division into purging and non-purging subtypes. The study failed to provide evidence to support the construct "BED". A possible explanation is that the population under investigation was too young (16-35 years). Patients with BED seem to present themselves for therapy in a later stage, when they are in their thirties and forties, whereas subjects with the other eating disorders seek help when they are generally much younger. The same population was re-analyzed by classifying the subjects according the DSM-IV (Hay et al., 1998). A number of subjects were excluded from the analysis because they did

not meet the DSM-IV criteria for any eating disorder. It was found that subjects with BN purging type did not differ from those with BN non-purging type and the latter did not differ from those with BED. There was a significant difference between subjects with BN purging type and BED.

There seems to be some evidence that subjects who binge without purging are different from subjects who binge and purge. Much research has focused on binge eating as the core psychopathological feature of bulimic disorders. Some state that compensatory behaviour ought to be the focal clinical feature of bulimia nervosa rather than binge eating (Tobin et al., 1997). Few studies (O'Kearney, Gertler, Conti, & Duff, 1998; Garfinkel et al., 1996; Walters et al., 1993; McCann, Rossiter, King, & Agras, 1991) have investigated the differences between BN purging type and BN non-purging type. The overall evidence is that there is a difference between these two subtypes. So far, no study has found evidence for the division of bulimic eating disorders into the three distinct DSM categories such as BN purging type, BN non-purging type and BED.

Others assume that bulimic disorders differ in degree rather than in kind. There is some support for the notion that bulimic eating disorders exist on a continuum of clinical severity, which starts with BN purging type (most severe), passes through BN non-purging type (intermediate severity), and finishes with BED (least severe).

#### Discussion

The aim of this chapter has been to evaluate the empirical status of binge eating disorder as defined by the DSM-IV. Ten years ago Spitzer and others (1991) reported that there was no classification taxonomy in the DSM for the many individuals who engage in binge eating but do not engage in inappropriate compensatory behaviours. The present discussion considers Pincus' arguments for and against the inclusion of a new diagnostic category in the DSM following a decade of research in the field of binge eating disorder.

Firstly, Pincus argued that rare diagnostic categories might add unnecessary complexity to the already cumbersome system of classification. However, epidemiological studies have shown that 1 to 3% (Hay, 1998; Spitzer et al., 1993; Spitzer et al., 1992) of the general population has binge eating episodes but does not engage in inappropriate behaviours. The prevalence is higher in obese populations (1.3 - 70%). Furthermore, BED seems to be more prevalent as the degree of obesity increases (Spitzer et al., 1992; Spitzer et al., 1993; Ramacciotti et al., 2000; Basdevant et al., 1995; Ricca et al., 2000; Varnado et al., 1997). Therefore, BED does not rank as a rare diagnostic disorder.

Secondly, Pincus argued that new diagnoses are generally proposed by experts and are subsequently used by less expert assessors who may identify more false positives. Clinical practice has indeed shown difficulties can arise in attempting to differentiate between binge eating and emotional overeating in obese patients; such difficulties can lead to high false positive diagnoses. A clear operationalisation of the criteria of a binge eating episode is needed.

Thirdly, Pincus argued that 'adding unproven diagnostic categories may confer upon such categories an approval that they do not merit yet'. Many studies have indicated that BED does represent a distinct diagnostic entity. The characteristics of subjects with BED differ significantly from those of subjects with bulimia nervosa and from those of obese subjects without binge eating. Furthermore, taxonomic studies have shown that there is a distinct category of BED, which differs from other clinical eating disorder categories. In day-to-day clinical practice BED is a generally accepted category and various eating disorder clinics have developed programmes for the treatment of BED.

Pincus' fourth and last argument concerned the definitional overlap across related categories. To date it has been difficult to distinguish BED from non-purging BN. Various studies have shown that there is a significant difference between the BN purging subtype and BED. Non-purging BN seems to occupy an intermediate position between these two categories, not differing significantly from either of them (Hay et al., 1998). It is not yet clear whether non-purging BN bears a closer resemblance to purging BN (supporting continued classification under BN) or a closer resemblance to BED (supporting a merger of BED and non-purging BN) (Striegel-Moore et al., 2000). Research is needed to clarify this issue.

Although there is evidence to suggest that BED represents a distinct eating disorder category, the criteria as currently described would benefit from some major revision. Criterion A as currently defined should be maintained. Binge eating episodes should be characterized by the consumption of a large amount of food within a discrete period with a sense of lack of control over eating. Criterion B seems to be superfluous. Criterion B measures binge eating characteristics, which overlaps with criterion A (binge eating characteristics) and criterion C (feelings of distress regarding binge eating). It is not clear what is meant by the term distress (criterion C) as currently described. Distress may refer to an emotional state with regard to binge eating or it may describe impairment in social or occupational functioning due to binge eating. I suggest that both types of distress should be operationalised in the revised version of criterion C. The DSM guidelines state that impairment in functioning is crucial in the definition of any mental disorder.

For a diagnosis of binge eating disorder, binge eating is required to occur on two days a week (criterion D) rather than in the form of two episodes per week. This is based on the rationale that binge eating disorder patients may have more difficulties in recalling and labelling binge eating episodes due to the absence of purging behaviours punctuating the termination of an episode. However, counting the number of days allows binges to last an entire day (in theory). In a population characterized by a high percentage of compulsive overeaters (without loss of control), this may complicate the separation of the diagnoses of binge eating episodes and compulsive overeating. Therefore, I suggest counting the number of binge eating episodes rather than counting the number of days.

I suggest eliminating the term 'regular' as mentioned in criterion E. The elimination of this term ensures clearer boundaries between bulimia nervosa and binge eating disorder.

Existing studies support the need for cognitive criteria in addition to the existing behavioural diagnostic criteria for binge eating disorder. Hitherto, various existing studies have argued for the inclusion of overconcern with body weight and body shape in self-evaluation (Eldredge et al., 1996; Wilson et al., 1993; Wilfley et al., 2000b).

Furthermore, future research needs to clarify the impact of obesity on the psychopathology of BED and vice versa. Although obesity is not a criterion for the diagnosis of BED, the classification for BED was created with the obese in mind (Spitzer et al., 1991). Future research will show whether obesity should be admitted as a criterion for BED in the same way as underweight was included as a criterion for anorexia nervosa.

In summary, I believe that BED represents a distinct eating disorder category and suggest that it be admitted into the next version of the DSM.



Empirical status BED

