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# Bulimia Nervosa and Personality: A Review

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## 1. Introduction

A relatively new approach, which tends to be applied in order to subtype eating disorders, is based on the study of personality and its disturbances. A well-known statement is that anorexia nervosa and bulimia nervosa are disorders with a high level of heterogeneity in terms of personality variables. Clinical observation has long found a link between personality and eating disorders. Despite the fact that a lot of personality profiles have been described among eating disorder patients, in case of anorexia nervosa and bulimia nervosa the personality traits tend to be described within a dimension of impulsivity-compulsivity. The study of personality in eating disorder patients seems to be useful as a subtyping strategy, this being more effective than the traditional symptoms-based categorization (diagnostic criteria), mainly in order to predict the psychosocial functioning and different clinical features (Abbott, Wonderlich, et al., 2001; Steiger & Stotland, 1996; Westen & Harnden-Fischer, 2001; Wonderlich & Mitchell, 2001).

The association between eating disorders and personality disorders has been studying mainly from the moment in which the personality disorders were included in the axis II of DSM. An improvement with regards to the study of personality disorders was the development of specific structured interviews and self-reported questionnaires in order to assess personality traits and its disturbances (Echeburúa & Marañón, 2001; Loranger, 1995; Matsunaga, Kiriike, et al., 1998; Millon & Ávila, 1998; Spitzer, Williams, et al., 1992).

Personality disorders constitute rigid and maladaptive thoughts, feelings and behaviours, all related with poor learning of effective coping strategies. As a result, patients suffering from personality disorders usually have interpersonal conflicts and severe psychosocial limitations. Moreover, these disorders imply a psychological distress and they are stable throughout life (Echeburúa & Corral, 1999; Sarason & Sarason, 1996; Vázquez, Ring, et al., 1990).

There is a shortage of reliable studies on epidemiology of personality disorders due to several facts, as the heterogeneity of the studied populations and the scarce of valid and reliable instruments. Nevertheless, all the studies usually show a common conclusion, this being the high prevalence of personality disorders (ranging from 6% in general population to 20%-40% among psychiatric outpatients) and a slightly higher prevalence among women (Echeburúa & Corral, 1999).

The frequent comorbidity between personality disorders and other pathologies of the DSM axis I may be explained by different facts: a) personality disorders may be a risk factor for suffering from mental disorders; b) personality disorders may be a consequence of any mental disorders, and c) both, personality disorders and other mental disorders may follow

an independent course (Medina & Moreno, 1998). In case of eating disorders the association with a personality disorder usually makes an early diagnostic difficult, makes the treatment more difficult, and usually is related with a poor prognostic (Díaz, Carrasco, et al., 1999).

Research has consistently linked anorexia (particularly restrictive type) to personality traits such as introversion, conformity, perfectionism, rigidity, and obsessive-compulsive features (Casper, 1990). The picture for bulimia is less clear and somehow mixed. Traits such as perfectionism, shyness, and compliance have consistently emerged in studies of individuals with bulimia or with anorexia, although research has often found bulimic patients to be extroverted, histrionic, and affectively unstable (Vitousek & Manke, 1994).

Different studies have been developed based on two points of view. As a result the focus may be on how many patients suffering from eating disorders have any personality disorders, or the focus could be how many patients with personality disorders suffer from any eating disorders. In the first case there is a wide range of comorbidity, from 21% to 97% (Dolan, Evans, et al., 1994; Skodol, Oldham, et al., 1993). Following Westen & Harnden-Fischer (2001), the comorbidity between eating disorders and personality disorders could reflect the possibility a) that many patients have the random misfortune of having two or more disorders, at least one of which is on axis I and another on axis II; b) that anorexic and bulimic behaviours are symptomatic expressions of personality pathology and hence distinctions regarding syndromes, states and traits embodied in the distinction between DSM axis I and axis II may be problematic with respect to eating disorders; or c) that some common genetic or environmental diathesis underlies both eating disorders and personality disorders.

With regards to the above-mentioned dimension of impulsivity-compulsivity, personality pathology in eating disorders is related with specific forms of neurotransmitter dysregulation, anorexia and bulimia lying at opposite ends of a personality continuum defined by compulsivity at the anorexic end and impulsivity at the bulimic (Skodol, Oldham, et al., 1993). Following this theory, patients with anorexia are most frequently diagnosed with cluster C (anxious/avoidant) personality disorders, whereas bulimic patients are more likely to receive cluster B (dramatic/erratic) diagnoses. Another usual finding refers to the association between bulimia and borderline personality disorder (Herzog, Keller, et al., 1992; Kennedy, McVey, et al., 1990; Skodol, Oldham, et al., 1993). Despite these findings, above and beyond there are a lot of studies, which fail to find a clear relationship between personality variables and eating disorders. So that, the research based on the relationships between eating disorders and personality is highly inconsistent (Gartner, Marcus, et al., 1989; Steiger, Liquornik, et al., 1991).

It is well known, that there is an extensive comorbidity of anorexic and bulimic symptoms with each other. If certain core personality traits are associated with, or contribute to, specific eating disordered behaviour, and these personality traits are in many respects polar opposites, how could one individual display both classes of symptoms, as it is represented in Figure 1? (Westen & Harnden-Fischer, 2001). In fact, patients who have a lifetime history of both disorders or who simultaneously have symptoms of both disorders more often receive a personality disorder diagnosis than patients with either bulimia or anorexia (restricting type). In addition, their personality disorder diagnoses are equally distributed in cluster B or cluster C. What could explain the inconsistency of the studies? It is possible that both, anorexia nervosa and bulimia nervosa may be linked to personality factors heterogeneously. So that, more than one type of personality could cause or contribute to the symptoms of the eating disorders (Sohlberg & Strober, 1994).

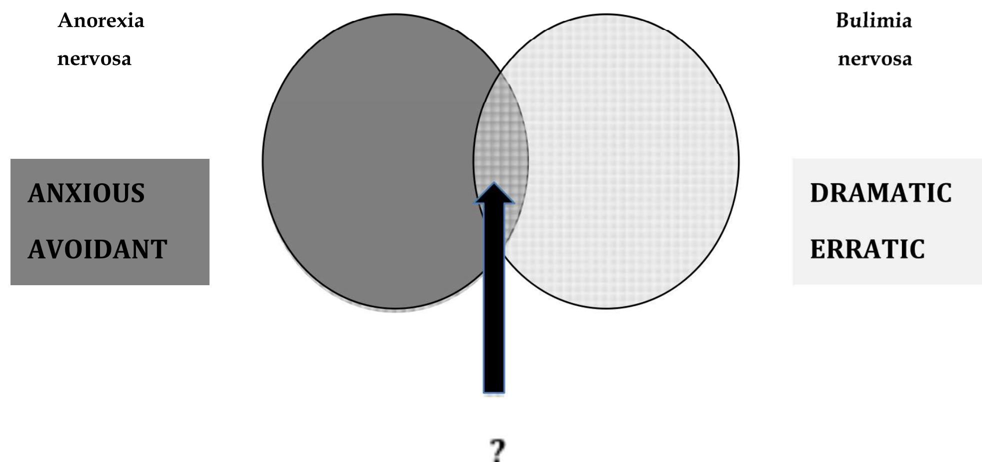


Fig. 1. Comorbidity of anorexic and bulimic symptoms with each other, and core personality traits in anorexia and bulimia.

Despite the inconsistencies across different studies, the understanding of the relation between eating disorders and personality disorders is relevant, because patients with comorbid personality pathology have a worse course, greater psychological distress, greater mood disturbances, and a slower recovery than those without comorbid personality disorders (Herzog, Keller, et al., 1992; Herzog, Keller, et al., 1992; Steiger, Leung, et al., 1993; Wonderlich & Swift, 1990).

The presence of obsessiveness, rigidity, perfectionism, dependency, social inhibition or low self-sufficiency is usual among patients with anorexia nervosa, while patients with purging-type anorexia nervosa and bulimia nervosa usually are more impulsive, and show high levels of sensitivity, emotional instability, and lower self-esteem. The association of bulimia nervosa and other disturbances (i.e., poor impulse control, self-injuries, aggressive behaviour, kleptomania, substance abuse, gambling, stealing or sexual promiscuity) is highly frequent (Braun, Sunday, et al., 1994; Gartner, Marcus, et al., 1989; Matsunaga, Kiriike, et al., 1998; Steiger & Stotland, 1996; Wonderlich & Swift, 1990).

With regards to bulimia nervosa, some researches have focused on the distinction between multi-impulsive versus uni-impulsive patients (Lacey & Evans, 1986). In case of uni-impulsive patients, binge eating is the only symptom or behaviour that could be described as impulsive. In case of multi-impulsive patients, there are a lot of symptoms or behaviours related to impulsivity (stealing, substance abuse, etc.). Multi-impulsive bulimic patients usually have significantly greater rates of borderline personality disorder and mood disorders than uni-impulsive bulimic patients (Lacey & Evans, 1986). These two groups of bulimic patients may represent very different kinds of patients, despite the fact that they have the same eating disorder symptoms. These two types of bulimic patients constitute an example of two possible subtypes within the general classification of bulimia nervosa that may not be easily differentiated by the eating symptoms. Nevertheless, they may differ in personality, aetiology, or function of symptoms (Westen & Harnden-Fischer, 2001).

The differences in personality style are related to clinical variables. Bulimic patients with borderline personality disorder (or any cluster B personality disorder of the DSM), display a poorer outcome across a wide range of treatments, including individual and group therapy,

cognitive behaviour therapy, and pharmacotherapy. Compared to bulimic patients free of personality disorders, those with cluster B disorders show more general psychopathology, drug and alcohol use, self-destructive behaviour, suicide attempts, histories of sexual/physical abuse, negative appraisals of family functioning, greater hospitalization rates, and higher use of psychotropic medication (Herzog, Keller, et al., 1992; Johnson, Tobin, et al., 1989; Rossiter, Agras, et al, 1993; Steiger & Stotland, 1996; Wonderlich & Swift, 1990).

### 1.2 Summarising

- Clinical observation has long found a link between personality and eating disorders.
- In case of eating disorders the association with a personality disorder usually makes an early diagnostic difficult, makes the treatment more difficult, and usually is related with a poor prognostic.
- Research has often found bulimic patients to be extroverted, histrionic, and affectively unstable.
- It is possible that both, anorexia nervosa and bulimia nervosa may be linked to personality factors heterogeneously. So that, more than one type of personality could cause or contribute to the symptoms of the eating disorders.
- Patients with purging-type anorexia nervosa and bulimia nervosa usually are more impulsive, and show high levels of sensitivity, emotional instability, and lower self-esteem.
- With regards to bulimia nervosa, some researches have focused on the distinction between multi-impulsive versus uni-impulsive patients. In case of uni-impulsive patients, binge eating is the only symptom or behaviour that could be described as impulsive. In case of multi-impulsive patients, there are a lot of symptoms or behaviours related to impulsivity (stealing, substance abuse, etc.).

## 2. Bulimia nervosa and personality

A lot of studies have found a high prevalence of disorders included in the axis II of DSM among patients with bulimia nervosa, the term co-diagnostic being more appropriate than the concept of comorbidity. This is due to the fact that the latter means the concurrence of two different disorders, which does not respond to the current knowledge about personality and its disturbances. The concept of co-diagnostic also refers to the idea of a cross-sectional and simultaneous evaluation, which could change over time, this highlighting a temporal but no stable association between the two disorders (Ponce de León, 2006).

Studies based on the association between bulimia nervosa and personality styles have been reported a great variability of results due to conceptual and methodological problems (Ponce de León, 2006). The evaluation of personality implies to assess the stability of the traits over time and in different contexts, and to control several variables closely related to the environment. Variables as age, gender, patterns of social relationships, etc., could influence the evaluation of the personality acting as confounders. The usual chronicity of bulimia nervosa may be another factor of confusion, due to the frequent changes that patients display overtime with regards to their symptoms, which could be understood as personality traits. The eating dysregulation showed by bulimic patients has neurobiological consequences and may induce changes in the environment. As a result, the evaluation

should be difficult. Many times symptoms of the eating disorders and specific symptoms of personality disorders are overlapped, making difficult a proper evaluation of the association between both bulimia nervosa and personality disorder. Another point to take into account is the fact that the majority of the samples of bulimic patients usually comprise only women (or they have a low representation of men), so that is difficult to generalize the results of the evaluations. Finally diagnostic criteria for both bulimia nervosa and personality disorders have been modified in the past years and they are usually under discussion (Ponce de León, 2006; Westen, 1997; Westen & Shedler, $1999_a$, $1999_b$; Westen & Westen, 1998).

### 2.2 How may the results about studies based on the relationship between bulimia nervosa and personality disorders be interpreted?

As it has been mentioned the prevalence of personality disorders among eating disorder patients shows a wide range of results, and in case of bulimia nervosa ranges from 4% to 84%, despite the majority of studies report prevalence between 20% and 75%. By means of instruments as MMPI, EPQ and other similar scales, it has been reported that bulimic patients have higher scores in extraversion, poor impulse control, novelty seeking or low frustration tolerance, than anorectic patients (Gargallo, Fernández, et al., 2003; Ponce de León, 2006).

Despite the fact that bulimia nervosa seems to be closely related to personality disorders of cluster B of DSM (Jáuregui Lobera, Santiago Fernández, et al., 2009), there are studies finding close links between bulimia nervosa and obsessive syndromes and disorders of cluster C (von Ranson, Kaye, et al., 1999). This seems a surprising result taking into account the dimension impulsivity-compulsivity. This surprising finding is highlighted by the fact that a relatively frequent association between bulimia nervosa and obsessive-compulsive disorder has been found (8%-33%) (von Ranson, Kaye, et al., 1999). In addition, it has been reported that this link between bulimia nervosa and obsessiveness persists after the patients are recovered from their eating disorder or when they are recovered from other associated syndromes as anxiety or depression (von Ranson, Kaye, et al., 1999).

The relationship between bulimia nervosa and borderline personality disorder remains confusing. As opposite of the obsessiveness, borderline traits are present mainly at the beginning of the bulimic symptoms decreasing over time. More over the decrease of the bulimic symptoms usually is associated with a decrease of the borderline thoughts, feelings and behaviours (Ponce de León, 2006).

Despite the fact that the dimension impulsivity-compulsivity seems to be a useful tool to represent the two main eating disorders, it is difficult to explain the concurrence of bulimia nervosa and obsessiveness, or how an eating disorder as anorexia nervosa becomes another one as bulimia nervosa. So that, studies on the association between personality and eating disorders remain controversial. But there is a consensus about the fact that in case of a history of anorexia nervosa and bulimia nervosa, and in case of a purging type-anorexia it is possible to find the highest prevalence of associated personality disorders (mainly of clusters B and C), and the poorest outcome (Bulik, Sullivan et al., 1995; Bussolotti, Fernández-Aranda, et al., 2002; Rossiter, Agras, et al., 1993).

The co-occurrence between bulimia nervosa and personality disorders ranges from 4%-80%, mainly between 20%-75% of cases, and cluster B personality disorders (DSM), especially the borderline personality disorder, is the most frequently reported (Wonderlich & Swift, 1990). It is noted in the literature on eating disorders, that comorbid personality disorders are

generally associated with various factors such as diagnosis, greater impulsivity and self-harm, more substance abuse/dependence, more suicide attempts, more frequent purging behaviours, mood disorders, sexual abuse, greater comorbidity and severity of the disorder. Also, personality disorders have been identified as predictors and worse prognosis associated with a higher frequency of treatment dropout (Herzog, Kelller et al., 1992; Steiger, Leung et al., 1993; Wonderlich & Swift, 1990).

It is possible to interpret the association between bulimia nervosa and personality in different ways as follows:

a. The association could be the result of an overlap between symptoms-traits, the result of methodological errors, or the concurrence of different syndromes (i.e., anxiety, depression) in bulimia nervosa.
b. Bulimia nervosa and some personality disorders could have links with regards to biology and/or environment. In this case it would be appropriate to take into account the dimension impulsivity-compulsivity.
c. It could be admitted that there are two different patients, from a clinical point of view: Those who hardly fit criteria of personality disorders (these being more closely related to compulsivity), and those more closely related to impulsivity and usually suffering from personality disorders (mainly of cluster B).

### 2.3 Summarising

- Studies based on the association between bulimia nervosa and personality styles have reported a great variability of results due to conceptual and methodological problems.
- Many times symptoms of the eating disorder and specific symptoms of personality disorders are overlapped, making difficult a proper evaluation of the association between both bulimia nervosa and personality disorder.
- The prevalence of personality disorders among eating disorder patients shows a wide range of results, and in case of bulimia nervosa the majority of studies report prevalence between 20% and 75%.
- Despite the fact that the dimension impulsivity-compulsivity seems to be a useful tool to represent the two main eating disorders, it is difficult to explain the concurrence of bulimia nervosa and obsessiveness, or how an eating disorder as anorexia nervosa becomes another one as bulimia nervosa.
- Comorbid personality disorders are generally associated with various factors such as diagnosis, greater impulsivity and self-harm, more substance abuse/dependence, more suicide attempts, more frequent purging behaviours, mood disorders, sexual abuse, greater comorbidity and severity of the eating disorder.

## 3. Impulsivity and bulimia nervosa

In bulimic patients, the association between the specific eating disorder symptoms and many psychopathological disorders whose core seems to be the poor impulse control, such as suicide attempts, hetero-aggressive behaviour, kleptomania, alcohol abuse/dependence, substance abuse/dependence, gambling or sexual promiscuity, has long been described. The study of Clinton & Glant (1992) may be illustrative due to the fact that it reports the presence of alcohol abuse in 22.2%, drug abuse in 14.4%, and suicide attempts in 21.4% (7.1 % having performed more than one attempt) of bulimic patients. Some authors state that

studies of neurotransmitters in eating disorders suggest that in both the purging type anorexic patients and bulimic patients, as well as in the binge eating disorder, exist a deficit of the serotonergic function, which, in turn, is observed often in the above-mentioned psychopathological disorders (Diaz Marsá, 1999; Steiger, Young et al., 2001). So that, it seems that impairment (primary or secondary) in the brain function would be common to these disorders, which would explain the frequency with which they appear jointly. Studies of some authors could even pose to understand bulimia as a variant of impulse control disorder that would have its outer manifestation in eating behaviour, as there are several similarities in the structure of both psychopathological disorders: the inclination to carry out a detrimental act to themselves or others, inability to resist the impulsive act, feelings of restlessness or anxiety that increases progressively before the impulsive act, which are relieved when this is done to give way to feelings of shame or guilt (Fahy & Eisler, 1993; Newton, Freeman, et al., 1993; Westen & Harnden-Fischer, 2001).

There are different points of view with respect to the relationship between bulimia nervosa and impulsivity. One of them is based on the observed prevalence of the association between bulimia nervosa and impulsivity assessed by clinical interviews. These studies propose that impulsivity among bulimic patients would be a specific eating disorder subtype. Another proposal of these studies is that impulsivity could be reflecting the association between bulimia nervosa and other psychopathological disorders. The second type of studies (mainly based on psychometric assessments) states that impulsivity and bulimia nervosa would have a common base, which would be a specific type of personality. The third group of studies relates symptoms more than diagnostics, in order to explore the possible association between bulimic symptoms and impulsivity based on biological and psychosocial common roots, in both clinical and non-clinical samples (Peñas Lledó, 2006).

The relationship between bulimia nervosa and impulsivity leads to two different diagnostics, which are usually involved in bulimic patients. Up to date, the multi-impulsive bulimia (Lacey & Evans, 1986) is not accepted as different type of bulimia nervosa, despite many authors state its undoubted clinical presence (Fichter, Quadflieg, et al., 1994; Welch & Fairburn, 1996). The use of very different criteria to assess this multi-impulsive bulimia leads to great differences of prevalence (Cook Myers, Wonderlich, et al., 2006), ranging from 18% to 80%. Despite the discussion on the real existence of this form of bulimia nervosa, there is a consensus on the fact that the more impulsive the behaviours are the worst is the prognostic of bulimic patients (Fichter, Quadflieg, et al., 1994). Another diagnostic usually involved in this field of study is the borderline personality disorder. In this personality disorder the disordered eating behaviour is only one of the criteria for the diagnostic, the rest being described as different impulse control deficits. The prevalence of this personality disorder among bulimic patients ranges from 2%-50% approximately (Marino & Zanarini, 2001; Peñas Lledó, 2006; Wonderlich & Swift, 1990). Finally a question emerges: How many patients with a borderline personality disorder and bulimia nervosa could really suffer from a multi-impulsive bulimia? (And vice versa). Some facts orientate the possible response: comparing bulimic patients with and without a borderline personality disorder, there are more impulsive behaviours (other than eating-related behaviours) among the patients with the associated personality disorder. On the other hand, comparing multi-impulsive bulimic patients and non-multi-impulsive bulimic patients the first group shows a higher prevalence of borderline personality disorder (63% vs. 13%) (Peñas Lledó, 2006).

Different psychometric studies on impulsivity as a dimension of personality usually (but non always) show that bulimic patients have higher scores on impulsivity than control participants do.
Regarding the impulsivity symptoms and bulimic symptoms, may be that both have a common base. On the other hand these symptoms would have a function, which could be the seeking of well-being and/or the avoidance of negative thoughts/emotions. Many times this function reaches a high psychopathological severity due to its self-destructive power. Impulsive behaviours as well as bingeing are usually related to intolerable negative emotions, and many times both people who binge and those with other impulsive behaviours present higher scores on coping strategies focused on emotions (Peñas Lledó, 2006; Peñas Lledó & Waller, 2001)
As it was mentioned above, a neurobiological base of the impulsivity has been proposed, this being based on the serotoninergic regulation. In all disorders with this type of dysregulation, pharmacological treatments which act on serotoninergic receptors has shown proved efficacy.

### 3.1 Summarising

- Some authors state that studies of neurotransmitters in eating disorders suggest that in both the purging type anorexic patients and bulimic patients, as well as in the binge eating disorder, exist a deficit of the serotonergic function.
- The same is referred to some psychopathological disorders whose core seems to be a poor impulse control, such as suicide attempts, hetero-aggressive behaviour, kleptomania, alcohol and other substance abuse/dependence, gambling or sexual promiscuity among others.
- Some authors propose to understand bulimia as a variant of an impulse control disorder, which would have its outer manifestation in eating behaviour.
- Some studies propose that impulsivity among bulimic patients would be a specific eating disorder subtype. Another proposal is that impulsivity could be reflecting the association between bulimia nervosa and other psychopathological disorders.
- Another type of studies (mainly based on psychometric assessments) states that impulsivity and bulimia nervosa would have a common base, which would be a specific type of personality.
- Up to date, the multi-impulsive bulimia is not accepted as a different type of bulimia nervosa despite many authors state its undoubted clinical presence.

## 4. Multi-impulsive bulimia nervosa

The high impulsivity associated with bulimia nervosa leads to a worse prognostic, and patients with different impulsive behaviours linked to bulimic symptoms were said to comprise a subgroup, which was named as multi-impulsive bulimia nervosa. In this concept (Lacey & Evans, 1986) were included some impulsive behaviours as aggressiveness (self/hetero) expressed by suicide attempts, purging behaviours, self mutilations, burns, other forms of self-harm, sexual promiscuity, stealing, substance abuse/dependence, reckless driving or physical aggressions. In addition to the absence of consensus with regards to the reality of this type of bulimia nervosa as a clinical subgroup, there are a lot of methodological problems for its conceptualization, the main being the weak consensus on

the definition of the different involved behaviours and the heterogeneity of the samples in which the studies have been based on.

Fichter et al. (1994) defined the characteristics of multi-impulsivity, by the fact that bulimic patients should have three or more of the following impulsive behaviours:

a. One or more suicide attempts
b. One or more self-harm episodes
c. One or more stealing episodes (other than those related to food)
d. Alcohol abuse/dependence
e. Substance abuse/dependence
f. Sexual promiscuity (having sexual relations with five or more different partners in the two last years, or ten or more since the puberty)

Besides these behaviours, patients with multi-impulsive bulimia nervosa show interpersonal relations, which are unstable (fluctuating between idealization and devaluation), self-identity problems, labile emotions, low frustration tolerance, empty feelings, etc. (Fernández Aranda, 2006).

As it was said, the biological base of the impulsivity highlights the role of the serotoninergic system, and despite the research on candidate genes, there are no relevant conclusions up to date. The prevalence of this multi-impulsive bulimia nervosa ranges from 16%-80%. Such a wide range is due to severe methodological problems, which make it difficult to obtain a clearer conclusion. It seems that after applying the Fichter's criteria we would obtain 18%-30% of multi-impulsive bulimia nervosa among the bulimic patients (Fernández Aranda, 2006; Fichter, Quadflieg, et al., 1994; Lacey & Evans, 1986). With regards to the personality characteristics of these patients, they show a poorer self-esteem, low level of assertiveness, and high levels of hostility among others less relevant ones. A relevant point with respect to multi-impulsive bulimia nervosa is the fact that these patients show less treatment adherence and, in general, a worse prognostic.

### 4.1 Summarising

- With regards to the reality of this type of bulimia nervosa as a clinical subgroup, there is no consensus up to the date.
- Besides impulsive behaviours, patients with multi-impulsive bulimia nervosa show interpersonal relationships, which are unstable (fluctuating between idealization and devaluation), self-identity problems, labile emotions, low frustration tolerance, and empty feelings.
- It is accepted that applying the Fichter's criteria we would obtain 18%-30% of multi-impulsive bulimia nervosa among the bulimic patients.
- Patients with multi-impulsive bulimia nervosa usually show less treatment adherence and, in general, a worse prognostic.

## 5. Bulimia nervosa and substance abuse/dependence

Patients with bulimia nervosa and substance abuse/dependence usually show high levels of psychopathology, impulsivity (expressed by the previously commented different behaviours), more physical problems, more hospitalizations, and poorer treatment adherence and prognostic. The risk for substance abuse/dependence among bulimic patients is much higher when bulimia nervosa is associated with other psychopathological

disorders. Depending on the associated disorder that risk may be increased from 2 (depression) to 7 times (bipolar disorder) (Bulik, Sullivan, et al., 1997; Holderness, Brooks-Gunn, et al., 1994).

In general, the rates of substance abuse/dependence are higher among patients with eating disorders and this association is greater among women with bulimia nervosa and anorexia nervosa purging-type, for both alcohol and illicit drug disorders. With respect to the onset of each disorder, it seems that there is a bidirectional association. Some patients report the onset of a substance abuse/dependence to precede the eating disorder and vice versa (Baker, Mitchell, et al., 2010).

Up to date the reason of such a frequent association remains unclear, and different biological and psychological explanations have been proposed. As a result of families and twin studies, it seems that there are shared genetic influences between bulimia nervosa and substance abuse/dependence. With respect to bulimia nervosa and alcohol abuse/dependence distinct genetic factors have been reported. In addition to the diagnostics, some common genetic factors have been described for the covariance between bulimic symptoms and substance abuse/dependence symptoms, and this relationship could be more relevant than the relation between diagnostics is. In fact, the more severe the eating disorder symptoms, the greater the number of substance types used (Baker, Mitchell, et al., 2010).

Recent literature has shown that patients with bulimia nervosa are two to three times more likely to have an alcohol or illicit drug abuse/dependence. In many cases bulimia nervosa manifests before a substance abuse/dependence, binge eating preceding symptoms of substance abuse/dependence. With respect to specific symptoms, the concern about weight and shape in women with a history of binge eating is usually associated with different substance abuse/dependence (increasing risk by 2). It seems that binge eating, purging behaviours, and body image would be associated with alcohol use disorder and that purging behaviours would be associated with illicit drug use disorders. Some results on the association between symptoms of bulimia nervosa and substance abuse/dependence have lead to the hypothesis of bulimia nervosa as an addictive disorder, and it could be that there is a general vulnerability to bulimia nervosa and substances misuse and that additional factors (e.g., personality) determine which behaviours arise. (Bulik, 1987; Holderness, Brooks-Gunn et al., 1994; Kaye, Lilenfeld, et al., 1996).

### 5.1 Summarising

- Patients with bulimia nervosa and substance abuse/dependence usually show high levels of psychopathology, impulsivity, more physical problems, more hospitalizations, and poorer treatment adherence and prognostic.
- The rates of substance abuse/dependence are higher among patients with eating disorders and this association is greater among women with bulimia nervosa and anorexia nervosa purging-type.
- Up to date the reason of such a frequent association remains unclear, and different biological and psychological explanations have been proposed.
- Some results on the association between symptoms of bulimia nervosa and substance abuse/dependence have lead to the hypothesis of bulimia nervosa as an addictive disorder.

## 6. Bulimia nervosa and self-harm

Among causes for death, suicide and medical problems related to the nutritional status are the most relevant in bulimia nervosa. It is said that mortality in bulimia nervosa (mean 0.3%) is lower than in anorexia nervosa. Having bulimia nervosa a shorter course than anorexia nervosa, it is difficult to state clear conclusions about mortality because the rates of mortality increase when the periods of follow-up are longer. The suicide, as cause of death in bulimia nervosa, represents the 20% of mortality. Among the patients with bulimia nervosa, almost 30% commit life-long suicide attempts. These patients seem to be different from the rest of patients with bulimia nervosa with respect to their personality and psychopathological symptoms other than the specific eating disorder symptoms (Bulik, Sullivan, et al., 1999; Corcos, Taieb, et al., 2002; Favaro & Santoanastaso, 1996).
The relationship between self-harm behaviours and bulimia nervosa shows that the more frequent the presence of self-harms is the higher is the prevalence of bulimic symptoms. Some studies have found increased rates of self-harm associated with bulimia nervosa, but the same rate of self-harm in bulimia nervosa and in binge eating disorder. That could mean that self-harm may be associated with some common symptoms (e.g. bingeing) more than with a specific diagnostic. Among patients who binge, the presence of self-harm seems to be higher in those who have a history of physical or sexual abuse. In fact, different studies have found higher levels of impulsive behaviour (substance abuse, self-harm) in individuals who have been abused, and a high likelihood of physical or sexual abuse in individuals with eating disorders (Mitchell, Hatsukami, et al., 1988; Schmidt, Hodes et al., 1992; Suzuki, Takeda et al., 1995; Welch & Fairburn, 1996).
The relationships between eating disorders and suicidal behaviour and non-suicidal self-harm have been examined primarily in eating disorder samples. Some studies suggest that suicide attempts and non-suicidal self-harm are found in more than half of bulimic patients (Franko & Keel, 2006; Svirko & Hawton, 2007). These rates appear higher in bulimia nervosa compared to anorexia nervosa, although it seems that there are similar rates of this behaviour in the anorexia nervosa purging-type as in bulimia nervosa (Favaro & Santonastaso, 2000; Nagata, Kawarada et al., 2000). In binge eating disorder, suicidal behaviour appears higher than that in obese non-binge eating disorder controls (Grucza, Przybeck, et al., 2007). Anorectic and bulimic patients with suicidal behaviour or non-suicidal self-harm usually report greater numbers of other disorders such as drug or alcohol abuse/dependence, anxiety disorders and depression (Fedorowicz, Falissard, et al., 2007; Franko, Keel, et al., 2004). Other studies with eating disorder patients have found that anorexia and bulimia are associated with major depression (Berkman, Lohr, et al., 2007), and anorexia nervosa purging-type and bulimia nervosa are frequently associated with alcohol use disorders (Bulik, Klump, et al., 2004).
Empirical studies confirm that there is a strong correlation between self-harm and eating disorders despite there are wide variations in prevalence. In fact, the reported incidence of self-harm in eating disorder patients varies in a range of 13%-68%. A higher incidence of self-harm in bulimia nervosa and anorexia nervosa purging-type than in the anorexia nervosa restrictive type has been reported. Possible common factors are impulsivity, obsessive-compulsive traits, dissociation, trauma, conflict in the family environment and sensitivity to cultural factors, among others. Both self-harm and eating disorders may represent failures in emotion regulation, and both forms of body practices could act as an attempt to a more affective coping (Dohm, Striegel-Moore, et al., 2002; Franko & Keel, 2006; Levitt, Sansone, et al., 2004; Svirko & Hawton, 2007).

### 6.1 Summarising

- The suicide, as cause of death in bulimia nervosa, represents 20% of mortality. Among the patients with bulimia nervosa, almost 30% commit life-long suicide attempts.
- The more frequent the presence of self-harms is the higher is the prevalence of bulimic symptoms.
- Self-harm may be associated with some common symptoms (e.g. bingeing) more than with a specific diagnostic.
- Different studies have found higher levels of impulsive behaviour (substance abuse, self-harm) in individuals who have been abused, and a high likelihood of physical or sexual abuse in individuals with eating disorders.
- A higher incidence of self-harm in bulimia nervosa and anorexia nervosa purging-type than in the anorexia nervosa restrictive type has been reported.

## 7. Bulimia nervosa and borderline personality disorder

It seems to have a consensus on the fact that borderline personality disorder (BPD) is the most characteristic in patients with eating disorders, mainly in those with bulimia nervosa with a range of prevalence between 2%-50%. Such a wide range has lead to state that there might be a conceptual confusion between BPD and bulimia nervosa, due to the frequent overlap of their symptoms. With regards to anorexia nervosa, this BPD is more frequent in the purging-type. Different behaviours, which are frequent among bulimic patients (e.g., impulsivity, lack of control, self-harm), also are common in the BPD, this suggesting the possible conceptual confusion between the two disorders.

The presence of BPD in bulimic patients causes a poor prognostic, and this BPD has been mainly related to the presence of purging behaviours (bulimia nervosa and anorexia nervosa purging-type) (Gargallo, Fernández Aranda, et al., 2003).

### 7.1 Main facts with regards to the association between bulimia nervosa and BPD

a. BPD is the most frequently associated with bulimia nervosa.
b. Patients with bulimia nervosa and BPD show a high level of psychopathology.
c. Patients with bulimia nervosa and BPD have a poor prognostic.
d. Patients with both disorders show a poor treatment adherence.
e. The wide range of co-occurrence between bulimia nervosa and BPD could indicate severe methodological problems, as well as conceptual confusion.
f. In those patients with bulimia nervosa and BPD, the association with other disorders (e.g., depression, substance abuse/dependence) is frequent.
g. Patients with bulimia nervosa and BPD usually refer a history of sexual abuse, self-harm during their adolescence and hostile family environment.

## 8. Bulimia nervosa and personality disorders. Brief conclusions

- There is a high comorbidity between bulimia nervosa and personality disorders.
- The high variability observed with respect to this comorbidity is usually associated with methodological biases and the used diagnostic criteria, as well as with the biases introduced by the heterogeneity of the analysed samples.
- The presence of a personality disorder in these patients is associated with a higher severity of the disorder, being indicative of a worse prognosis.

- The type of personality disorder most frequently observed in patients diagnosed with bulimia nervosa is the borderline personality disorder.
- Impulsivity is the most consistent distinguishing finding described in bulimia nervosa.
- Patients with bulimia nervosa and personality disorders often have an additional Axis I disorder, the most common being major depression and/or substance abuse/dependence.

## 9. A model of a new approach: Eating disorders and coping strategies

In initial studies it was considered that the role played by coping strategies in eating behaviours was not clear (Wolff, Crosby, et al., 2000). Later on, it has been indicated that difficulties on emotion control explain better the occurrence of binge eating than eating restriction or weight and corporal image overestimation do (Whiteside, Chen, et al., 2007), so that in a binge disorder explanatory model emotional vulnerability and deficient strategies for the regulation of emotions would be included. Patients with eating disorders are more inclined to avoid affection than to the acceptance and control of emotions (Corstorphine, Mountford, et al., 2007).

Coping strategies have been related to the prognostic of eating disorders and it has been observed that impulsiveness, present in some of its forms, is connected to maladaptive strategies of emotional regulation (Nagata, Matsuyama, et al., 2000).

The specificity of deficient coping strategies found in patients with eating disorders has also been discussed. With respect to bulimia nervosa, it has been observed that the tendency to avoidance, understood as a coping strategy, could be more related to a depressive than to a bulimic symptomatology. However, other strategies such as problem solving or cognitive restructuring do not seem to differ depending on depressive symptoms (Tobin & Griffing, 1995).

The problem to be confronted when it´s time to assess how different coping strategies with a determined symptomatology or personality styles relate to each other lies in the fact that interrelations among different strategies are very frequent. (Folkman & Moskovitz, 2004). The studies which have related coping strategies and personality usually conclude that emotionally stable, extrovert and responsible people tend to solve situations or change the meaning of these situations perceiving their coping as efficient, while unstable and introvert people are used to withdraw from society and usually wish the situation had not occurred, perceiving little efficiency in their coping (Bouchard, 2003; Cano, Rodríguez, et al., 2007; David & Suls, 1999).

Knowledge about coping strategies in patients with eating disorders is relevant and this relevance does not only lie in a theoretical interest or in its relationship with comorbidity or personality characteristics but also in a therapeutic interest. Hence, learning of new and more adaptive forms of coping with problems and emotions is essential in some treatment forms for these pathologies (Foa & Wilson, 1991; Peterson, Wonderlich, et al., 2004).

In a recent study (Jáuregui Lobera, Estébanez, et al., 2009), it was observed that patients with eating disorders showed more self-criticism, social withdrawal, inadequate control centred upon emotions and inadequate control in general. On the contrary, a group of students showed bigger scores at problem solving, social support, cognitive restructuring, adequate control centred upon problems, and adequate control in general. Perceived self-efficacy was greater in the student group too. Regarding personality features in the group of patients, punctuation in introversion was significantly greater, while in the group of students

punctuations are greater in the trustful, convincing and impulsive scales. The comparison between two groups of patients (eating disorders and other mental disorders) did not reveal the existence of differences in coping styles except at self-criticism, style in which patients' scores with eating disorders were relevantly greater than those obtained in other mental disorders. Regarding personality styles, punctuations at inhibited and impulsive personalities were greater in the patients with other mental disorders than in the group of eating disorders.

Comparing patients with anorexia and bulimia, patients with anorexia nervosa obtained higher scores at self-criticism, and also at convincing, respectful and sensitive personality. Patients with bulimia nervosa scored more at impulsive personality.

In the same study, a cluster analysis revealed the existence of two groups of patients. One group showed greater self-criticism, wishful thinking, social withdrawal, inadequate control centred upon emotions and inadequate control in general. In this group introversion, inhibition, sensitivity and impulsivity prevailed. In this group, 53.1% of the patients suffered from bulimia and 69% suffered from anorexia. In the other group, scores were higher in problem solving, social support, perceived self-efficacy, adequate control centred upon problems and adequate control in general. In this group scores at sociable, trustful, convincing and respectful personality were higher. In this group, 46.5% of the patients suffered from bulimia and 31% suffered from anorexia.

With respect to personality features, this study confirmed what has been highlighted by other authors (Cano, Rodríguez, et al., 2007) in the sense that stability-extroversion is associated to more adequate coping strategies, while unstable-introvert people present greater inadequacy. However, studies on personality and eating disorders have proven controversial because they have serious methodological deficiencies (Echeburúa & Marañón, 2001). For the future, coping strategies studies could be proposed as something more operative than the idea of associating eating disorders to this or that personality style and making prognostic inferences on the basis of it. In fact, the result of the cluster analysis executed, using the dispositional (personality) as well as the contextual (coping strategies) ratify such findings as those of other authors (Strober, Salkin, et al., 1982; Westen & Harnden-Fischer, 2001) in the sense that there is presence of subgroups of patients with eating disorders with worse coping strategies and prevailing of introversion-instability.

## 10. Main conclusions of the chapter

- Research has often found bulimic patients to be extroverted, histrionic, and affectively unstable. It is possible that both, anorexia nervosa and bulimia nervosa may be linked to personality factors heterogeneously. So that, more than one type of personality could cause or contribute to the symptoms of the eating disorders.
- Despite the fact that the dimension impulsivity-compulsivity seems to be a useful tool to represent the two main eating disorders, it is difficult to explain the concurrence of bulimia nervosa and obsessiveness, or how an eating disorder as anorexia nervosa becomes another one as bulimia nervosa.
- Up to now, the multi-impulsive bulimia is not accepted as a different type of bulimia nervosa despite many authors state its undoubted clinical presence.
- Some results on the association between symptoms of bulimia nervosa and substance abuse/dependence have lead to the hypothesis of bulimia nervosa as an addictive disorder.

- A higher incidence of self-harm in bulimia nervosa and anorexia nervosa purging-type than in the anorexia nervosa restrictive type has been reported.
- The presence of borderline personality disorder in bulimic patients causes a poor prognostic, and this BPD has been mainly related to the presence of purging behaviours (bulimia nervosa and anorexia nervosa purging-type).
- For the future, coping strategies studies could be proposed as something more operative than the idea of associating eating disorders to this or that personality style and making prognostic inferences on the basis of it.

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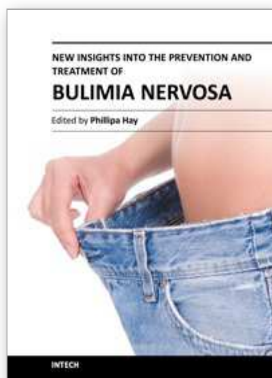


**New Insights into the Prevention and Treatment of Bulimia Nervosa**
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Bulimia nervosa and eating disorders are common cause of distress and health related burden for young women and men. Despite major advances over the past three decades many patients come late to treatment and find that the therapy is incompletely addressed to the complex psychopathology and co-morbidities of the illness. The present book brings timely and contemporary understandings of bulimia nervosa to aid in current thinking regarding prevention and treatment. It will be read by therapists interested in enhancing their current approaches and those interested in earlier and more effective prevention and closing the gap between illness onset and accessing treatment. They will find practical guidance but also new ideas and ways of thinking about bulimia nervosa and the illness experience in this book.

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