

Chapter 16

RECOVERY IN BULIMIA NERVOSA

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Abstract

This chapter addresses first issues in definition around the question of recovery in bulimia nervosa (BN), next the natural history, and third the outcome with treatment including predictors that may be modified to enhance remission and reduce relapse or later recurrence rates.

Remission in BN is most often defined as the absence of binge eating and purging behaviours. In addition some studies have used reduction in psychopathology as an alternate indicator of recovery. These studies were based on a quantitative measure of eating disorder weight/shape (or other) concerns e.g. being less than one standard deviation above the community mean of the global Eating Disorder Examination score. There is a consensus that remission is most likely sustained after one year and relapse after that time may be termed recurrence.

Naturalistic studies suggest that about half or more of those with BN may have a good outcome in the longer-term, but for the remainder the disorder is persistent. Treatment outcome studies indicate that for those who engage in specific interventions and evidence based treatments (particularly psychotherapies such as cognitive behaviour therapy for bulimia nervosa) developed since the 1980s the likelihood of recovery is significantly increased. Whilst there are mixed outcomes in studies of prognostic factors, consistent pre-treatment factors identified include a history of psychological adversity, borderline personality structure, depression and obesity. Consistent post-treatment prognostic features are achieving abstinence and good psychosocial adjustment. Thus treatments should address improving psychological resiliency, coping and co-morbidities.

Keywords: bulimia nervosa, prognosis, recurrence, relapse, remission, natural history.

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INTRODUCTION

Bulimia nervosa is a 'modern' eating disorder. It was first delineated in the late twentieth century and was the first eating disorder to be characterised by recurrent binge eating, namely episodes of eating unusually large amounts of food over which there is a sense of loss of control, in people of normal or above average body weight [1,2]. By definition, the sufferer of bulimia nervosa also engages in compensatory extreme weight-control behaviours. These behaviours may take the form of self-induced vomiting and/or laxative or diuretic use (purging), or fasting and/or intense exercise (the non-purging form of bulimia nervosa). Few changes to the impending revised American Psychiatric Association criteria are proposed, excepting to reduce the minimum frequency of binge eating and purging behaviours to once weekly [3]. In addition to disordered eating behaviours, people with bulimia nervosa also have specific eating disorder psychopathology whereby their self-view or self-evaluation is unduly influenced by concerns about their weight and/or shape [1].

Bulimia nervosa is common, and early cohort and clinical incidence studies [4,5] support an increase in the incidence of bulimia nervosa in the decade following its recognition in 1980, to be followed by a plateau or even a decrease in the 1990s and past decade [6]. A systematic review has put the estimated incidence of bulimia nervosa at 12 cases per 100,000 per year [7]. Findings from national surveys in North America [8] and Europe [9] indicate that the 12-month prevalence of bulimia nervosa is around 0.3-0.5% in the general population and in Australian samples current or point prevalence of bulimia nervosa is similar [10]. Bulimia nervosa is also a disorder with high morbidity. In community and clinic surveys bulimia nervosa and like eating disorders have been found to have significant impact on health related quality of life and adaptive function [11,12]. Fortunately, specific and efficacious psychotherapies and pharmacotherapies have been developed for bulimia nervosa [13]. This chapter will address first issues in definition around the question of recovery in bulimia nervosa, next the natural history, and third the outcome with treatment including predictors that may be modified to enhance remission and reduce relapse or later recurrence rates.

WHAT IS MEANT BY RECOVERY?

There are several ways to approach the question of what is meant by recovery in bulimia nervosa. Is this recovery with or without treatment? When is remission recovery? Inevitably, recovery is defined according to remission sustained over time (one year in the Kordy consensus definition [14]) such that the likelihood of relapse is remote, and after which time the term recurrence may be preferred.

Definitions of remission are problematic. In a large recent review of 79 patient series Steinhausen and colleagues found 22 synonyms for remission (including 'abstinent') [15]. Differing definitions may lead to different rates of remission being reported. For example, in a 3-year trial of 334 eating disorder patients [16] remission of the 126 participants with bulimia nervosa was 30.2% when defined as absence of extreme figure (shape) preoccupation and no vomiting/laxative use or binge-eating [14], but up to 44.4% when defined as absence of behaviours only using the criteria of Shapiro et al. (no binge-eating, vomiting or laxatives)

[17] or the Psychiatric Status Rating Scale Level 2 (i.e. does not meet DSM-IV bulimia nervosa criteria, has no binge eating, vomiting or laxative use, often has disturbing thoughts about shape and weight) [18]. Whilst it is desirable to include attenuation or elimination of core psychopathology of extreme weight and shape concern, this is delineated in diverse ways. In contrast, absence of behaviours may be more consistently applied, although how it is measured again can be problematic if self-report of binge eating is relied upon [19]. For this reason outcome meta-analyses are more often reported for binge eating/purging abstinence (e.g. those used in the National Institute for Clinical Excellence (NICE) guidelines [20] and Cochrane Library reviews [21]) than for a measure that reflects both psychological symptom reduction (e.g. that developed by Fairburn and colleagues where remission was defined according to being less than one standard deviation above the community mean of the global Eating Disorder Examination score [22]).

NATURALISTIC OUTCOME STUDIES OF BULIMIA NERVOSA

It is difficult to study the natural course of bulimia nervosa. There are many longitudinal general populations and similar studies, but few include large samples of people with eating disorders and even fewer samples of people meeting criteria for bulimia nervosa. For example, Patton and colleagues [23] followed 107 adolescents with an eating disorder over a 10-year period. Their findings suggested partial eating disorders were unlikely to progress to full eating disorders, but were associated with significantly increased psychiatric comorbidity and persistent underweight. However, this study of a young cohort cannot be generalised to older samples with full syndromes of bulimia nervosa which has onset in later adolescence and young adulthood, albeit that the age of onset may be decreasing [24].

A naturalistic community based 5-year full syndrome study [25] of adult women with bulimia nervosa ($n=102$) and binge eating disorder (BED) found that 31% and 15% continued to have bulimia nervosa at 15 months and at 5 years respectively. At five years half of the bulimia nervosa sample (36 of 74) still met diagnostic criteria for an eating disorder (24 with eating disorders not otherwise specified [EDNOS]) while only 15% (5 of 34) of those with BED met diagnostic criteria. Although the McKnight longitudinal naturalistic 4-year outcome study of BED [26] indicated only a small proportion of BED recover spontaneously, a less favourable outcome for bulimia nervosa compared to EDNOS and BED has also been reported in a large ($n=385$) 4-year prospective study of a mixed sample where participants were recruited from both clinic and community settings (through media advertisement) [27]. In this study remission was defined as the first point after entry to the trial when the participant had no DSM-IV eating disorder diagnosis (during the preceding 6 months), and relapse was defined as the first time after a remission when symptoms for any eating disorder diagnosis including EDNOS were found. At the 4-year follow-up, 47% of those with bulimia nervosa were remitted compared to 78% of EDNOS, 82% of the BED group, and 57% of anorexia nervosa participants [27]. A more recent but smaller 5-year naturalistic study of 23 people with bulimia nervosa found a 74% remission at 5 years, with a 47% probability of relapse within the 5-year follow-up study of those in remission [28].

The inconsistencies in these studies, namely in the course and outcome of people with eating disorders from community samples, may occur when individuals affected do or do not

receive evidence-based or other treatments. Most of those in the Agras et al. study did receive treatment [27] but this was not the case in the Fairburn et al. study [25] where 28% of those with bulimia nervosa and only 3% of BED participants had treatment. Ben-Tovim and colleagues [29] studied the effects of treatment in a sample of people with eating disorders followed for five years after presentation to treatment services (see also below). Neither this nor the 5-year naturalistic Oxford study [25] found a relationship between receiving treatment for an eating disorder and outcome. This does not of course mean treatment is ineffective, but rather that within the myriad of factors that influence outcome in the uncontrolled setting of naturalistic studies, it is difficult to find a significant effect for specific interventions. The large number of features that may influence course (in either clinical or community populations) include psychosocial stresses, inter-current psychiatric illness and co-morbidities, and personal vulnerability from innate characteristics, such as lower levels of psychological maturity reported in women with eating disorders [30,31]. Relationships can be complex, and those important at onset or early in the illness course may differ from those that maintain and perpetuate illness. For example, Ball and Lee [32] investigated the relationship between stress and coping in a general population sample of women with disordered eating over six-months. They reported strong cross-sectional, but weak longitudinal relationships between stressful life events and eating disorder symptoms [32]. Stice [33] also evaluated longitudinal studies of mixed samples in a meta-analytic review and found some support for eating disorder attitudes, such as body dissatisfaction, perfectionism, and negative affect as maintenance factors (the last a causal maintenance factor) for bulimic symptoms. Hay and colleagues investigated the 2-year course and putative predictors of outcome of 87 young community women with disordered eating (63% with recurrent binge eating), although only 13 had full syndrome bulimia nervosa [34]. In this study eating disorder psychopathology remained high and mental health quality of life (MHQoL) remained poor over the 2 years [34]. A higher baseline level of immature defence style significantly predicted higher levels of eating disorder symptoms, poorer MHQoL and more disability as measured by 'days out of role' [34]. In addition, higher educational attainment, baseline general psychological disturbance, lower body mass index (kg/m^2 ; BMI), and having main work outside the home, were associated with poorer MHQoL.

Retrospective nationwide community based twin studies of outcome have also been conducted by Wade and colleagues (in Australia) [35] and Keski-Rahkonen and colleagues [36] (in Finland) with consistent findings. The first paper identified 29 women with bulimia nervosa from a survey of 1002 twins, of whom 13 were asymptomatic based on abstinence and low eating disorder concerns on the EDE criteria (similar to Fairburn et al. above [22]). Onset of bulimia nervosa was a mean of 13.65 (SD6.3) years prior to assessment and this study suggested that over 50% were fully recovered at longer term outcome. The latter paper based definitions of recovery on Field et al 1997 [37] findings that suggested likelihood of relapse declined markedly after 12-months of binge eating and purging abstinence. Thus, their definition of clinical recovery was 12-month abstinence plus BMI of at least 19. In this study 59 of the 2281 women met the DSM-IV [1] and the proposed DSM-V [3] criteria for bulimia nervosa i.e. having weekly or more binge eating/purging behaviours. Of these 59, 61% met recovery during the study period and 55% met recovery criteria at 5-years. Whilst only 32% of cases were detected by health professionals, and this did not significantly change outcome, no significant predictors of outcome were identified [36].

Taken together, these ‘naturalistic’ studies suggest that about half or more of those with bulimia nervosa may have a good outcome in the longer-term but for the remainder the disorder is persistent. Genetic and socio-cultural features (especially body dissatisfaction) are relevant predispositions, and symptom severity. In addition, poor psychological resiliency, poor health literacy, and past sexual abuse are putative maintaining factors. Whilst it has proven difficult to show an effect on a population level for such prognostic features or treatment, interventions that have reduced symptoms and morbidity remain important for the individual and society they live in. This will be discussed in the next section which addresses outcomes with treatments and identified prognostic attributes.

OUTCOMES WITH TREATMENT

The majority of longitudinal studies of outcome in bulimia nervosa have in fact been from clinical case series and other treatment samples rather than naturalistic or community samples as described in the previous section. For example, in the NICE [20] systematic review only two of more than 20 outcome studies identified in bulimia samples were not from a treatment series. Findings have similarly been mixed or inconsistent and studies have been of widely varying duration.

Two longer-term 10-year studies of BN following treatment [38,39] report a generally positive outcome. The first study (n=50) people followed participants after a placebo-controlled trial of mianserin treatment. They reported 52% of participants receiving placebo or drug had fully recovered, 39% were in partial remission, and only 9% continued to experience full symptoms of bulimia nervosa. The second, and larger (n=222) study combined outcomes from a cohort of patients following clinic treatment and a cohort of patients following a controlled (antidepressant and structured intensive group psychotherapy) treatment trial. At mean follow-up of 11.5 years they also found 41.6% were in full remission (at least 6 months binge/purge abstinence and absence weight/shape concerns) and 28.3% were in partial remission. Those that still had an eating disorder were more likely to suffer from EDNOS than bulimia nervosa. Only 11% still met criteria for bulimia nervosa.

Franko et al. [40] followed 554 women (110 with bulimia nervosa) seeking treatment in a catchment area of New England between October 1987 and June 1990. The focus of the report was on suicide and its predictors rather than recovery. However, it is of note that they found co-morbidity (such as depression) and suicide risk in bulimia nervosa to be high (10.9% suicided) over nearly 9-year period. A large 5-year South Australian study of women who had presented for treatment included 88 with bulimia nervosa [28]. Whilst it failed to demonstrate effects of treatment (see above), the study found little crossover between diagnostic groups, and a generally better outcome for bulimia nervosa than in other series with 74% having no eating disorder at five years.

From a set of 220 published studies identified in a systematic search, a large and current review [15] has pooled data of 79 patient series (n=5653 patients) published between 1981 and 2007. Studies were included if they reported at least one of five outcome measures for bulimia nervosa and had a follow-up of 6-months post-treatment episodes. Fourteen additional studies were also included, that reported only on prognostic factors. The mean age of onset (n=2508 patients) was 17.2 years (SD=1.7), at follow-up was 28.4 years (SD=4.3),

and duration of follow-up was 3.2 months (SD=3.3, 6 months to 12.5 years). The vast majority were women, there being only 75 or 3830 (1.9%) men reported. The five-outcome criteria were recovery (with 22 synonyms), improvement (mostly reported with recovery), chronicity (with 21 synonyms), mortality (all crude, none standardised), and crossover to another DSM-IV criteria eating disorder. In 27 studies (n=1235 patients) the mean percent recovery rate was 44.9% (SD 15.5, range 5-73), improvement was 27.0% (SD 12.9, range 4-67), and chronicity was 22.6% (SD 15.1, range 2-70). In 6 studies (n=383 patients) mean percent crossover was 5.1 (SD=8.6, range 0-28). The crude mortality rate was 0.32% (14 deaths in 4309 patients).

Variations in definition of outcomes, size of study and the inclusion of studies, from early periods when bulimia nervosa had just been described and specific interventions not yet developed, all likely contributed to the wide range of percent outcomes found in this review [15]. When examined, recovery was significantly higher where dropout rates were low (49.8% versus 36.8%), where follow-up was more than 4 years (66.6% if > 4years, or 44.0% if >1 years versus 39.2% if < 4 years), and where patients received psychotherapy (versus medical therapy or behaviour therapy, 62.89% compared to 49.21% or 31.89% respectively). Although the last figures were derived from only 10 patient series, the outcome for psychotherapy are strong and support the need to engage patients actively in evidence based therapies such as specific cognitive behaviour therapy developed for bulimia nervosa by Fairburn and colleagues (see also Chapter 8) [22] which is has the best evidence for early and sustained improvements [13].

There are four current systematic reviews of pre- and post-treatment prognostic factors, namely the reviews by Steinhausen and colleagues [15], NICE [20], Keel and Brown [41], and Berkman and colleagues [42]. The consistent findings from these are summarised in Table 1.

Table. Pre and post treatment (after treatment has commenced) unfavourable prognostic factors consistently found in four current systematic reviews [15, 20, 41, 42]

Pre-treatment	Post-treatment
Borderline personality structure	Poor social adjustment ¹
Depression	Early engagement ²
Low motivation	Continued high level eating disorder symptoms ^{1, 2}
History of obesity	Non-abstinence at end treatment ¹
Problematic familial environments e.g. abusive	Psychiatric co-morbidity & depression ¹
Poorer adaptive function	
Cumulative psychiatric co-morbidity	

- 1. Distinguished in NICE review [20]
- 2. Distinguished in Steinhausen et al. review [15]

The list of inconsistent features or features that have not been found to predict treatment outcome is very long and includes duration of illness, pre-treatment levels, binge eating &/or

purging, pre-treatment weight and/or shape concerns, BMI, history of weight fluctuations, age of onset, history of anorexia nervosa, low self-esteem, co-morbid substance misuse, neuroticism, obsessionality and a history of self-harm or suicidality (excepting where there is borderline personality structure – see Table 1).

However, prognostic factors that have been consistently found are potentially remedial. In particular, the role of problematic interpersonal function, often with a history of poor early life attachment and/or abuse, and features of borderline personality structure are receiving attention in treatment developments such as the ‘transdiagnostic’ broad cognitive behaviour therapy [22]. This therapy has additional modules addressing clinical perfectionism, mood intolerance, interpersonal function, and low self-esteem. It has been found to offer advantage for subgroups of normal weight eating disorder patients with bulimia nervosa and other eating disorders concurrent with these vulnerable personality traits [22].

Obesity is an increasing public health problem and also likely associated with the rise in particularly binge eating problems in Western societies [10,43] and is also a consistent prognostic factor in bulimia nervosa outcome. Preventative programs that address both disordered eating and obesity cannot be un-helpful in thus improving outcomes for bulimia nervosa. Attention to putative strategies that enhance engagement and minimise treatment drop-out (e.g. more frequent appointments in the first weeks of treatment, actively treating and not neglecting co-morbidities) will also likely lead to an improved result.

POST-TREATMENT RECOVERY RATES

Keel and colleagues [44] for nine or more years have followed 136 women with anorexia nervosa and 110 with bulimia nervosa who sought treatment, to specifically examine factors that might reduce likelihood of relapse. Over the time of follow-up 96% received treatment, 83 (75%) of those with bulimia nervosa achieved remission, and of these 29 (26% of total) relapsed. Whilst remission rates were higher in bulimia nervosa, relapse rates were similar for both eating disorders i.e. just over a third of those who remitted relapsed. The two variables that emerged as significant in predicting relapse in the multivariate model were psychosocial function and level of weight and/or shape concerns. The authors concluded that (as in treatment) relapse prevention interventions should test approaches that may reduce body image concerns but also improve adaptive function and resiliency to stress.

CONCLUSION

Naturalistic and treatment outcome studies indicate that between a third and a half of people with bulimia nervosa will recover and a quarter or more will significantly improve in the medium to longer-term. It is likely that specific interventions and evidence based treatments (particularly psychotherapies such as cognitive behaviour therapy for bulimia nervosa combined with SSRI treatment) developed since the 1980s increase the likelihood of recovery. In addition, to optimise treatment specific to the eating disorder addressing concurrent problems, improving psychological resiliency and coping are promising areas for increasing recovery and reducing relapse.

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