

When Have Eating Disordered Patients Recovered and What Do the *DSM-IV* Criteria Tell About Recovery?

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Lack of consensus about criteria for recovery from eating disorders results in greatly varying percentages of recovered patients. Outcome studies not only use different criteria for recovery, but also quite different instruments, rendering their results incomparable. The same problem occurs among studies of predictors for recovery from eating disorders. Without consensus on criteria for recovery, it is not clear which goals of treatment are important to realize full recovery. In order to develop larger consensus on criteria for recovery, this study critically analyzes the most important outcome scores and the criteria for recovery deduced from the DSM-IV.

INTRODUCTION

After developing anorexia nervosa, Suzan's weight decreased to 41 kilograms; at which point her general practitioner admitted her to the hospital where she would receive a strict regime of behavioural therapy. During the behaviour therapy program, Suzan received rewards for eating all of the food she received and for increases in her weight; and conversely, was punished for refusing to eat or losing weight. Suzan did not enjoy this therapy and wanted to go home as soon as possible. When her weight had finally increased to 50 kilograms, she could return home. On the way home from the hospital Suzan's parents and sisters wanted to stop at a restaurant to celebrate her "recovery" with coffee and cake. Suzan felt all the eyes on her, and dared not to refuse eating her cake. Before Suzan was at home, she

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had already begun thinking about how she could lose weight and restrict her food intake. After only 2 months, she was once again admitted to the hospital because her weight had dropped to 39 kilos.

According to Fennig, Fennig and Roe (2002) this case is not exceptional. When patients with anorexia nervosa are discharged from medical hospitals after achieving a target weight ("physical recovery"), but do not make any cognitive shifts, this results in a high percentage of relapses in the first year after discharge. The question is thus, whether weight restoration actually signals recovery in anorectic patients. Are rapid "relapses" justly named, or are they signals that recovery never occurred in the first place and that patients' anorectic behaviour and way of thinking has persisted all along?

To determine whether a treatment for eating disorders contributes to recovery, it is necessary to have a clear concept of recovery. However, there is no consensus among therapists and researchers on criteria for recovery (Berkman, Lohr, & Bulik, 2007; Björk, Clinton, & Norring, 2011; Couturier & Lock, 2006a and 2006b; Herzog, Rathner, & Vandereycken, 1992; Jarman & Walsh, 1999; Kordy et al., 2002; Noordenbos & Seubring, 2006; Steinhausen, 1999). This lack of consensus leads to indistinctness about the goals for treatment.

Differences in criteria for recovery also lead to large differences in the percentages of eating disorder patients who recover (Jarman & Walsh, 1999). Saccomani et al. (1989) found that when only physical aspects are regarded, 79% of the patients with anorexia nervosa could be evaluated as having recovered, but when they also looked at psychological aspects, the percentage of recovered patients dropped to 48%. In a review of 119 outcome studies (5590 patients) by Steinhausen (2002), the mean percentage of recovered anorexia patients was 46.9% with a range from 0% to 92%.

Not only are the criteria for recovery very diverse, but the instruments used to measure whether a patient has recovered are as well. Couturier and Lock (2006b) studied the stages of recovery in 86 treated anorexia patients and used different instruments, which resulted in percentages of recovered anorexia patients varying from 3% to 96%. In a follow-up study, Couturier and Lock assessed 36 patients who were free of symptoms after treatment, and found that the percentage of recovered patients varied from 57% to 94% depending on the instrument used. However, after taking comorbid disorders like depression and anxiety disorders into account, the percentage of recovered patients decreased to 30%.

In addition, Björk et al. (2011) found that in the same sample of 334 adult eating disorder patients the remission rates varied from 24% to 78% depending on the criteria used.

The lack of consensus on the criteria for recovery also presents a problem for research on the predictors of recovery from eating disorders. Keel et al. (2000) assessed the impact of different definitions of recovery in a sample of 173 women with bulimia nervosa during a follow-up of more

than 10 years after treatment. Depending on the definition of recovery used the predictors for recovery differed considerably, and no prognostic variable consistently predicted recovery across the different definitions. Keel et al. (2000) conclude that it is very important to develop a standardized definition of recovery, making it possible to identify reliable predictors for recovery from eating disorders.

On even the most fundamental definitions of recovery, there is no consensus. Frank et al. (1991) use the term “remission” when a patient is free of symptoms, but they use the term “recovery” when the absence of symptoms is long enough to be able to state that the episode of illness has ended. In research on recovery, the concepts “partial recovery” and “full recovery” also are used, albeit not in a consistent manner. Pike (1998) uses the term “full recovery” when anorexia patients have a normal weight and regular menstruation, but according to Strober et al. (1997) this is only “partial recovery.” They speak of “full recovery” when the following criteria have persisted for the duration of 8 weeks: normal weight, no compensatory behaviours, and no disturbed attitude towards weight and figure.

The word “relapse” also is used in varying ways. Frank et al. (1991) speak of “relapse” when patients develop all symptoms again during the period of “remission.” After patients “recover” and subsequently develop an eating disorder, a “recurrence” of the disorder is said to have occurred. However, in outcome studies the words relapse and recurrence are used in different ways.

Finally, there is no consensus on length of time a patient must be symptom free before “fully recovering” from an eating disorder. Some researchers suggest a minimal duration of 4 weeks (Berkman et al., 2007; Couturier & Lock, 2006a), but Strober et al. (1997) advise a period of at least 8 weeks before “full recovery.” However, Kordy et al. (2002) advise to speak of “full remission” when anorexia nervosa patients maintain a BMI of 19 or higher for 3 months, as well as an absence of fear for weight gain, bingeing, and purging behaviour. Despite these different criteria, Cogley and Keel (2002) suggest that even a period of 12 symptom-free weeks might be too short to guarantee recovery.

Without consensus on definition and measurement of recovery from eating disorders, we cannot say which treatments are most effective, or at what rate eating disorder patients fully recover following treatment. There is a high need for larger consensus on the criteria for recovery and the instruments with which to measure recovery.

To find useful criteria, the criteria for recovery developed by Morgan and Russell (Morgan & Hayward, 1988; Morgan, Macquiere-Samson, Purgold, & Vassalis, 1992), which are used in most outcome studies of anorexia nervosa and bulimia nervosa are analysed. Because a basic definition of recovery might be that patients no longer fulfil the diagnostic criteria listed in the *DSM-IV*, these criteria are analysed and translated into criteria for recovery.

Narrow Criteria for Recovery of Anorexia Nervosa

The need for more consensus on criteria for recovery of eating disorders is not new.

Already in 1975 Morgan and Russell developed a standard for follow-up studies of anorexia nervosa in order to compare several clinics for eating disorders. The Morgan-Russell Assessment Schedule considers five categories: food intake and weight, menstruation, mental psychiatric situation, sexual attitude, socio-economic situation, and relations. This considers physical, psychological and social factors when assessing recovery. "In eating disorders any evaluation of overall outcome will need to embrace not only psychological and physical measures but complex relationship and social aspects of a patient's life situation too" (Morgan et al., 1992, p. 31). They also wrote that those criteria that can be measured most easily and reliably are not necessarily those providing the clearest picture of recovery: "To express outcome in terms of a single score may appear an oversimplification of a complex clinical problem" (Morgan et al., 1992, p. 37).

However, because of the need for a short list of clear criteria that could be measured in a standardized way, a less comprehensive set of criteria was established. The Average Outcome Score reduced the outcome to only two criteria for recovery from anorexia nervosa: weight and menses (Morgan & Hayward, 1988). Three outcome levels were developed: good, moderate, and bad. When weight was within a range of 15% of normal weight for age and height, and menses were regular for a period of 6 months, the recovery was seen as *good outcome*. When weight was lower than 85% of normal weight and menses were irregular, this was called *moderate outcome*. When weight was lower than 85% of the normal weight and menses were absent, or when the patient had developed bulimia nervosa the outcome score was *bad*. It is noteworthy that only weight and menses are used for the good and moderate outcome scores, but that bulimia nervosa was used as a third criterion for the bad outcome score only. This reduced Morgan-Russell General Outcome Score (M-R score) since then has been used very often in outcome-up studies (Eckert, Halmi, Marchi, Grove, & Crosby, 1995; Pike, 1998; Steinhausen, 1999, 2002). In the reviews of Steinhausen (1999 & 2002) the following percentages of outcome for anorexia nervosa were found: 45% had a good outcome, 33% had a moderate outcome and 20% had developed a chronic eating disorder.

Compared to the first list of broader criteria developed by Morgan and Russell (1975), in which not only food intake and menses were included, but also patients' psychiatric situation, sexual attitude, socio-economic situation and relations, the Average Morgan Outcome Score—in which only weight and menses remain—is very narrow. Are these also the most important criteria listed in the *DSM-IV*?

Criteria for Recovery From Anorexia Nervosa Deduced From the *DSM-IV*

The *DSM-IV* lists four diagnostic criteria for Anorexia Nervosa (APA, 1994).

- *Criterion A.* Refusal to maintain body weight at or above a minimally normal weight for age and height (e.g. weight loss leading to maintenance of body weight less than 85% of that expected; or failure to make expected weight gain during period of growth, leading to body weight less than 85% of that expected).

Criterion A mentions a psychological (refuse) and a physical aspect (normal weight). An important question is why anorectic patients refuse to maintain a normal weight. Active refusal of normal weight also is found among people who go on hunger strike for political reasons. These people differ significantly from anorectic patients however, because after the hunger strike they resume eating normally and, unlikely anorexia nervosa patients, are not afraid to regain weight. For recovery from anorexia nervosa it is important that the patient does not *refuse any longer to develop and maintain a normal* body weight but also *accepts* that weight. But is a weight of 85% of that expected for age and height the ultimate criterion? This criterion however does not guaranty that relevant physical functions of the body are restored and function in a healthy way (for example heart beat, functioning of the bowels, and other aspects of the metabolism, hormone production, etc.). For physical recovery from anorexia more criteria are necessary than having a normal weight. When we translate these comments into a criterion for recovery this might become: *The patient accepts to have a healthy weight for age and height and the physical body functions are no longer disturbed because of lack of food intake.*

- *Criterion B.* Intense fear of gaining weight or becoming fat, even though underweight.

Criterion B also is a *psychological* criterion, in which intense fear of weight gain, even when underweight, is the most central aspect. Fear of becoming fat can be observed in many people because of the negative physical, psychological, and social consequences of being fat, so this part of *criterion B* is not solely characteristic of anorexia nervosa. We might translate this criterion into the following criterion for recovery: *The patient does not have an intense fear of gaining weight or of becoming fat, regardless of whether or not he/she is underweight.*

- *Criterion C.* Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.

Criterion C is also a *psychological* criterion, because it is about the experience of body weight and shape, and the undue influence they have on patients' self-evaluation. The last part of criterion C is about the denial of their low body weight, which is also a psychological criterion. We might then deduce the following recovery criterion: *The patient has no disturbances in the experience of body weight and shape, body weight and shape no longer have an undue influence on the patient's self-evaluation, and the patient no longer denies that having a low body weight is unhealthy.*

- *Criterion D:* In post-menarchal females, amenorrhoea. That is, the absence of at least three consecutive menstrual cycles. (A woman is also considered to have amenorrhoea if her periods occur only following hormone administration.).

Criterion D is a *physical* criterion for anorexia nervosa which is only applicable for post-menarchal women, who use no oral contraceptives and this criterion is highly connected with having a healthy weight for age and height. It is striking that only extreme weight loss (criterion A) and amenorrhoea (criterion D) are mentioned as physical consequences and no other physical consequences of anorexia nervosa which can be found in anorectic women (pro- and post-menarchal) and in men, such as lack of energy, tiredness, lower body temperature, osteoporosis, etc. This comment can be translated into the following *recovery criterion D: Recovery from the physical consequences of anorexia nervosa: restoration of hormonal development normal for age and gender, and restoration of other physical consequences of the eating disorder (such as having a normal body temperature, enough energy, reduced osteoporosis, etc.).*

To summarize, we can see that the recovery criteria for anorexia nervosa deduced from the *DSM-IV* are much broader than the criteria listed in the Morgan Russell Outcome score, which include only weight and menses. The first criteria for recovery in the *DSM-IV* mention *psychological* criteria, which indicate that measurement of these outcomes be done using psychological instruments. Moreover, recovery from physical consequences should include more aspects than the recovery of weight and of menses. It can be concluded that the criteria for recovery which are used in many outcome studies are too narrow, because recovery of weight does not guarantee acceptance of body weight or shape (Windauer, Lennerts, Talbot, Touyz, Beumont, 1993). Furthermore, a normal weight does not guarantee that a patient no longer has an intense fear of gaining weight, or that their weight no longer has an undue influence on their self-evaluation (criterion C). Nor does a weight of 85% of that expected for age and height guarantee that the physical consequences of anorexia nervosa are restored. Because recovery of menses is highly related to recovery of weight, Couturier and Lock (2006a) even suggest omitting this criterion. It is a positive development that

in the concept of the *DSM-5* amenorrhoea in post-menarchal women is no longer mentioned as criterion for anorexia nervosa.

Several researchers plead for a broader definition of recovery from anorexia nervosa; one in which the following aspects are included: eating behaviour, physical functioning, and psychological aspects concerning body attitude, self-esteem, and social relations (Couturier & Lock, 2006a, 2006b; Kordy et al., 2002; Noordenbos & Seubring, 2006).

Criteria for Recovery From Bulimia Nervosa

The Morgan-Russell General Score was developed for anorexia nervosa. For this reason, the M-R-Scale was transformed into the Morgan-Russell-Hayward (M-R-H) scale in which binges and purging behaviour were added to the existing scales dieting behaviour, and worrying about weight and figure (Morgan et al., 1992).

Most of the outcome studies of bulimia nervosa however only use two criteria for recovery: less binges and less purging behaviour. Steinhausen (1999) did a meta-analysis of patients treated for bulimia nervosa and found the following results: 47.5% of bulimic patients had a good outcome, 26% had a moderate outcome and 26% were chronic. Also for bulimia nervosa the question is whether these two criteria are sufficient for recovery.

Criteria for Recovery From Bulimia Nervosa Deduced From the *DSM-IV*

The *DSM-IV* lists five diagnostic criteria for Bulimia Nervosa (APA, 1996). In contrast to the criteria for Anorexia Nervosa, the diagnostic criteria for Bulimia Nervosa are more about eating behaviour and compensatory behaviour.

- *Criterion A.* Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following: a) eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances. b) a sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).

This *DSM* criterion provides no specifics of a binge in terms of quantity of food consumed or duration, and this is often relative to what patients were accustomed to eating. The second aspect however is a clear *psychological* criterion, namely the sense of loss of control over eating during a binge. Translated into a criterion for recovery, this might become: *The patient no longer exhibits episodes of binge eating and does not feel a loss of control over food intake.*

- *Criterion B.* Recurrent inappropriate compensatory behaviour in order to prevent weight gain, such as self-induced vomiting, misuse of laxatives, diuretics, enemas, or other medication, fasting, or excessive exercise.

This is a very clear criterion, which can be transformed into the following criterion for recovery: *The patient exhibits no compensatory behaviours such as self-induced vomiting, misuse of laxatives, diuretics, enemas, or other medication, fasting, or excessive exercising to prevent weight gain.*

- *Criterion C.* The binge eating and inappropriate compensatory behaviours occur, on average, at least twice a week for 3 months.

This criterion is quite difficult, because it might implicate that patients no longer have bulimia nervosa if they binge once a week, followed by compensatory behaviour. It might be clearer not to set limits for the frequency with which binges occur. The criteria for recovery from bulimia nervosa might be: *The patient does not have any binge eating episodes followed by compensatory behaviour.*

- *Criterion D.* Self-evaluation is unduly influenced by body shape and weight.

This is a clear *psychological* criterion comparable with criterion C for anorexia nervosa. Translated into a criterion for recovery this might be *D: The patient's self-evaluation is no longer unduly influenced by body weight and shape.*

- *Criterion E.* The disturbance does not occur exclusively during episodes of Anorexia Nervosa.

This criterion does not lead to an extra criterion for recovery for bulimia nervosa, so four criteria for recovery are implicated in the *DSM-IV* criteria for bulimia nervosa.

In outcome studies of recovery from bulimia nervosa, the criterion about self-evaluation (criterion D) is rarely mentioned, even though it may be the most important criteria for recovery (Cogley & Keel, 2003). According to Fairburn et al. (1993), the persistent worrying about weight and shape is an important predictor for relapse of bulimia nervosa: 45.2% of the bulimic patients who worried severely about their weight and shape had a relapse. Also Cogley and Keel (2003) found that this was the most important predictor for relapse in bulimia nervosa, indicating that it is very important to include this criterion for recovery from bulimia nervosa.

CONCLUSION AND DISCUSSION

The need to develop more consensus on the criteria for recovery from eating disorders is high and should be a priority in future research (Berkman et al., 2007). Without clear and universal criteria for recovery from eating disorders, recovery rates cannot be determined, factors predicting relapse or improvement are more difficult to identify, and meaningful comparisons of various treatments cannot be made. Moreover, without consensus on the criteria for recovery, it is not clear what the main goals of treatment for eating disorders should be.

It is remarkable that in the first criteria for recovery developed by Morgan and Russell (1975) not only eating behaviour, weight, and menses were deemed important, but also psychological, sexual, and social factors. However, this broad list of criteria was reduced to only two or three physical criteria, leaving out the psychological and social criteria. The lists of criteria for recovery used in most outcome studies are too narrow and only consider weight and menses. They do not take into account crucial psychological criteria such as fear of gaining weight, acceptance of a body weight that is normal for age, height, and gender, or the undue influence of weight and figure on self-evaluation. Regaining a normal weight is not enough for recovery from anorexia nervosa, and can even lead to a negative body image and negative self-evaluation, which in turn leads to the wish to lose weight.

When we analyse which criteria for recovery can be deduced from the diagnostic criteria for anorexia nervosa in the *DSM-IV*, we see that the first three criteria mention psychological criteria, while only two physical consequences are mentioned in criteria A (normal weight) and criterion D (amenorrhoea) which are highly related. For recovery from bulimia nervosa, psychological criteria concerning body and self-evaluation are very important as well.

Consensus on criteria for recovery from eating disorders is not only important to measure the level of recovery, but also to develop larger consensus on the goals of treatment (Couturier & Lock, 2006b). Does treatment have to strive for normal food intake and normal weight? Or must it also attempt to improve self esteem, body satisfaction, emotion regulation, and social relations (Noordenbos & Seubring, 2006)? The goals for treatment of eating disorders also have implications for the duration of treatment, because it takes a shorter period to restore the weight of eating disorder patients, but much longer time to realize the psychological factors of recovery, such as developing higher self-esteem and a more positive body evaluation (Clausen, 2004). In a naturalistic study, Strober et al. (1997) found that physical recovery was realized after a mean of 57 months (4.6 years), but psychological recovery took a mean of 79 months (6.7 years) to realize. In patients treated in a clinic for eating disorders, Couturier and Lock (2006b) also found that more time was required to recover from psychopathology:

a mean of 11.3 months were necessary to restore weight, while a mean of 23.3 months were necessary for psychological recovery.

Consensus about the criteria for recovery and the goals of treatment also have implications for the professionals who have to be included in the treatment (medical doctors, psychiatrists, dieticians, therapists, social workers) and what their specific knowledge can contribute to recovery.

When can a treatment for anorexia or bulimia nervosa claim to be effective or at least to contribute to the recovery from eating disorders? These questions can only be answered when there is a basic consensus about the core criteria for recovery. The same can be said for predictors of good or poor recovery. Is increased weight a good predictor for full and stable recovery? Or are improved self-esteem and a more positive body image better predictors for full recovery?

It is highly important to use more uniform criteria for recovery from anorexia and bulimia nervosa for which the diagnostic criteria in the *DSM-IV* and the new criteria in the *DSM-5* (APA, 2010) offer a good starting point. The question however is whether the criteria in the *DSM-IV* or *5* are sufficient for full and long lasting recovery. A problem is that the *DSM-IV* and *5* criteria do not give information about the length of time a patient must be symptom free before she or he can be evaluated as full recovered: might that be 8 weeks, three months, six months or even one year before the patient has fully recovered? (see Cogley & Keel, 2002; Kordy et al., 2002; Strober et al., 1997).

Having consensus about criteria for recovery is not only important for therapists and researchers, but primarily for patients and their families. Patients and their families have the right to be informed about what to expect from treatment and what the goals of treatment are. Information about a broad range of treatment goals also can have an impact on the motivation of patients. When they expect that the treatment will only focus on changing their eating behaviour and increasing their weight, they might resist entering treatment because of the fear to lose their coping strategy and feeling of control. However, if informed that treatment will also aim to increase their self-esteem, improve their social capacities, and offer them better coping strategies to deal with negative emotions, their motivation for treatment might greatly improve. For future research about criteria for recovery also the patients perspective has to be included.

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