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# Towards a Comprehensive Model of Recovery

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## 1. Introduction

Most people with eating disorders do recover, but they do so according to changing diagnostic criteria and the many different definitions of recovery and the recovery process appearing in the literature. The definitions of recovery rest on various assumptions about the nature of eating disorders and the nature of "normality", risk factor research as well as on targets for change and end points developed within specific therapeutic traditions.

Another reason why people recover for different reasons rests on the issue is whether symptom reduction is sufficient for recovery, or whether one should take into account more broad domains of functioning. The symptom reduction perspective may yield highly reliable judgements but may suffer from low clinical validity. The broader perspective may be clinically valid, but stands the risk of including aspects remotely related to a recovery from eating disorders and of being highly constricted by normative assumptions.

Scientific accounts of patient experiences of recovery represent an additional perspective to the treatment and outcome literature. This perspective also contains diversity. Moreover, a patient may feel improved or even recovered, and still measure up to clinical indications of a subclinical or even a clinical condition.

Both process and end points are important to reach an understanding of the complexity of recovery. Process has been a focus in experiential studies and end point mainly within the treatment and outcome research. Recovery may also involve a change in risk conditions that initiate and contribute to maintain the eating disorder. This perspective has received little attention in the research focus on recovery. Risk factor research has evolved significantly through the years and with increasingly interesting findings.

Indeed, to reach an understanding of the complexity of recovery there are many elements to integrate to grasp the complexity, but in fact there are few (e.g. Jarman & Walsh, 1999) who have attempted to accomplish such an integration

The focus of this chapter is to develop a comprehensive model for recovery, and to propose a scoring procedure that may bring about more consistent evaluations of recovery in clinical and research contexts. The chapter ends with some suggestions for future research and clinical practice.

## 2. Measuring recovery

In principle, there are four ways of approaching the issue of defining and measuring recovery from eating disorders. The *negation approach* defines recovery as the absence of diagnostic criteria for any form of eating disorders for a specified amount of time. This approach is clear-cut and easy to administer. It has an obvious value for clearly malicious clinical features, notably medical complications. Important disadvantages of this approach are the absence of positive criteria related to well-being, interpersonal relations, coping and quality of life.

Moreover, with this approach it is easy to overlook the dimensional, gradual and process-related nature of recovery and the continuous nature of many eating disorder symptoms in terms of their severity and frequency. This creates a blurred border between the statistically normal and the normatively defined pathology. Also, a heavy reliance on the absence of diagnostic criteria may introduce variability in research as the diagnostic criteria and the number of eating disorder diagnoses change significantly over time.

The *psychometric* approach defines recovery as scores on a normal population validated instrument measuring symptoms and psychologically relevant clinical issues. Technically then, recovery is defined as scores relative to a cut-off-score or as clinical significance defined as scores proximal to a normal population mean or a range.

This approach is well known for instance in the evaluation of weight normalisation, and opens for a statistical dimensionality as opposed to normative judgements about "normality". This approach is limited by instruments developed for screening purposes and not for the purpose of recovery evaluations and by the fact that too few instruments have been validated to report community sample's normative scores. Another limitation is the inability of catching the diversity of subjective meaning of recovery in various clinical settings.

The third approach is the *clinical* one, defining recovery relative to clinically relevant features. It uses a mixture of a negation approach to symptoms and a number of positive attributes of recovery. Recovery indicators may range from global and sometimes rather unsystematic evaluations to rather specific clinical attributes derived from theoretical and therapeutic approaches to eating disorders or to mental problems in general. Like the negation approach the clinical approach may blur the border to normality, and may sometimes differentiate poorly between recovery from eating disorders and conceptions of a good life in general.

In the *experiential* approach subjective experiences define being recovered or being in a recovery process. This perspective thus means allowing patients to launch their own understanding and experiences. Subjective experiences may catch features and nuances that are poorly captured by clinicians or by instruments. This approach then, may serve as an important correction to the negation approach in the sense that patients may experience being recovered or in a recovery process despite displaying eating disorder symptoms. Hence, change in symptom frequency may be important, but not critical for recovery or at least to the recovery process. Yet, the subjective nature of experiences does contain biases, notably by errors of memory and errors of attributions. Errors of attribution may be a result of a poor understanding of the impact of denial of illness or the intrinsic nature of many

eating disorder symptoms. Using the experiential approach as an epistemological platform, however, the "bias" as a source of error is made irrelevant or non-existent through the rejecting of an "objective" reality and norm. As a consequence, some authors (e.g. Björk & Ahlström, 2008) equal the *feeling* of being recovered with *being* recovered regardless of changes according to "objective" measures.

Theoretically, the experiential approach fits well into research on subjective well-being (Diener, 2000) in the sense that subjective well-being does not presuppose a particular norm as to how people should live their lives. Rather, in this tradition one define domains or areas in life where satisfaction may be present in various degrees. If we "translate" this way of thinking to recovery, one may define recovery or the consequences of recovery in terms of *domain dominance*. On the other hand, recovery may not be equal to subjective well-being in the sense that experiential studies also reveal that being recovered also may imply facing grief, new responsibilities and a lot of challenges that the eating disorder served as a protection from.

## 3. Clinically derived elements of recovery

### 3.1 Existing indicators of recovery

Using the negation, the psychometric and the clinical approach several attempts have been made to define recovery (*e.g.* Couturier & Lock, 2006a, b; Dare *et al*., 2001; Kordy et al., 2002; Olmsted et al., 2005; Rø *et al*., 2005a,b; Vrabel et al.,2010). Here recovery is defined as percentage of patients 1) not meeting the diagnostic criteria for an eating disorder 2) without any symptoms of an eating disorder within a period of 8-12 weeks before examination, 3) above or below a specific cut-off score on a psychometric test, and 4) who achieve a defined reduction of specified symptom measures. Partial recovery may be understood as not fulfilling all the criteria or fulfilling only some criteria completely. However, less attention has been paid to the *validity* of such criteria.

Some studies however, (e.g. Noordenbos, 1989; 1992; Tozzi et al., 2003; Vanderlinden et al., 2007) have compared recovery preferences from patients and clinicians or experiences of elements in treatment contributing to recovery. Overall, small differences across such samples have been detected indicating good convergent and external validity. However, there are no attempts in this research to provide a meaningful scoring procedure.

An influential device to assess outcome is the Morgan- Russell assessment schedule (Morgan & Russell, 1975) later modified by Morgan & Hayward (1988). The original version captures symptom aspects, i.e. weight, food intake, and menstruation as well as family life, occupational status, sexual life and preferences as well as mental and socio-economic status. A composite score represents a psychometric measure of outcome, yet there are no indications of what score range that indicates recovery. Again the issue of validity may be raised as the instrument is highly vulnerable to normative biases from assumptions about "optimal" standards of living and quality of life. The stricter version of the Morgan-Russell instrument, however, covers only the symptom aspects. This on the other hand, may be restrictive, and some authors (e.g. Strober et al., 1997) even claim that the strict version only captures partial recovery.

Noordenbos & Seubring (2005) on the other hand, suggest 52 broader criteria for recovery within six domains, i.e. symptom reduction, body satisfaction, reduction of medical complications, self-image, emotional regulation and social functioning. The number of criteria is highly extensive and there are no attempts to use empirical methods of condensation and data reduction.

Integrating findings from patients, clinicians and researchers and using factor analyses and content analysis to address data redundancy Pettersen (2007) developed a set of multicomponent recovery features. They comprise a symptom reduction to approach normal variations, but also a change in the motives for symptoms and a change in the purposes of symptoms, e.g. to cope with stress or to regulate feelings and relations. Also, recovery was related to a change in the consequences that symptoms may bring about with respect to social functioning interpersonal relations, and the capacity to reflect on prospects and hopes for the future. Here then, recovery is defined both in terms of narrow and broad criteria, covering eating disorder symptoms as well as many psychological and interpersonal issues relevant to an understanding of the spectrum of recovery.

Despite some weaknesses, lists of items relevant to recovery represent a first step towards a comprehensive understanding of recovery. Further progress needs to overcome a problem of failure to provide knowledge accumulation usually encountered in experiential studies using qualitative methods. This may have the consequence that studies may reiterate previous studies in their findings rather than explicitly exploring more nuances of a more limited set of phenomena relevant for recovery.

Further progress also needs to overcome an overreliance on single factors at the cost of interaction effects. For instance, many single factors have been empirically derived from the field of risk and outcome, bur here there has been a movement from studying single factors to testing multidimensional models and the interaction of factors. Such a development is highly needed also to understand recovery as a state, but probably more likely as a process and an interaction between many factors which create good or vicious intrapsychic and interpersonal circles. Hence, a comprehensive model of recovery should consider elements based on findings from the risk factor research and the research on prognostic factors.

### 3.2 Risk factors

To understand recovery, we need to understand what one should recover from. The etiological factors are relevant. However, etiologic factors may be unknown or unclear. On the other hand, risk factors and prognostic factors are relevant, and in particular those that for some reasons may be modified.

*Biological factors* in terms of a significant heritability and findings related to factors associated with affective regulation and regulation of hunger and satiety (Chavez & Insel, 2007) are important to understand etiology. Interesting for the same reason is risk related to *family based premorbidity or comorbidity* of eating disorders like addiction or depression. However, as such factors may be difficult to change they may be less relevant in the pursuit of building an understanding of recovery.

*Personal history* refers to a number of risk factors that in the current context stand out as more relevant. These factors comprise a negative self-image, compulsivity and

perfectionism, as well as adverse life events like adult abuse, poor social network, a critical family climate and effects of negative comments on body weight and composition, notably from parents or other adults (Fairburn et al., 1997; 1998; 1999). Risk is related to the presence of premorbid overweight, addictive disorder, anxiety disorder or a depressive disorder as well as *developmental risk factors* related to bonding and attachment (Perry et al., 2002; 2008), the resolving of which represented in terms of symptom reduction. Hence, in a recovery perspective such findings serve as an argument for including improvement of psychological issues beyond symptom reduction as well as improvement of the quality of close interpersonal relations and social functioning.

*Cognitive risk and maintaining factors* comprise the exaggerated beliefs about the need to control one's eating habits, shape and weight (Fairburn et al., 2003). Also included are errors of reasoning resulting in errors of causal attributions and interpretations, e.g. overgeneralisations, emotional reasoning, dichotomous reasoning and negative predictions. Repeated errors of reasoning and interpretations reflect core belief predominantly about oneself, as for instance being of no value, as disgusting, worthy of shame or as an individual with some kind of deficit. While such beliefs may fluctuate through many people's minds, eating disorder patients may be convinced that they are generally and basically true. Therefore, one may more or less consciously seek for their confirmation through interpretation of events and other people's behaviours, or in one's own way of behaving, e.g. through the abuse of food. Such risk and maintaining factors are highly relevant to recovery in terms of being possible to change, notably through evidence based cognitive therapy. Recovery from this perspective implies symptom reduction as a consequence of strategies to reduce the belief in the universal and general truth of negative core beliefs and the truth of the need to control eating, weight and shape.

*Behavioural and psychological risk factors* include dieting, not perhaps so much to be thin, but to feel emotionally empty (Patton et al., 1999; Fairburn et a*l*., 2005), personality (Ghaderi & Scott, 2000), notably harm avoidance, low self-directedness, and low (anorexia nervosa) and high (bulimia nervosa) levels of novelty seeking (Fassino et al., 2002), neuroticism (Bollen & Wojciechowski, 2004) related to affective dysregulation, and personality disorders (Bulik et al., 2006; Claes et al., 2006; Johnson et al., 2006).

*Vicious risk circles* represent a multilevel or multidimensional way of thinking that may help understand important challenges of recovery. Such way of thinking illustrates the interplay between psychological and interpersonal aspects and the need for a comprehensive recovery model to accommodate for the interplay and why recovery need to address the breaching of such vicious circles. Several studies lend empirical support to models of multiple risks related to illness development (e.g. Perry et al., 2008) or maintenance (e.g. Vrabel et al., 2010). For instance, sexual abuse in combination with an avoidant personality may occur and reduce the probability of recovery unless addressed in therapy. Moreover, abuse may seriously affect the strength of the negative cognitive beliefs. Also, repetitive parental criticism about appearance may reinforce poor self-esteem and negative core beliefs, elicit dieting and set in motion negative interpersonal circles resulting in burdens related to living with or close to a sufferer of eating disorders.

One example of a circle is the avoidant personality disorder and dysfunctional perfectionism creating low social interaction as well as personal insecurity. This may interact poorly with having parents who, due to their personality organisation or burdens, have poor care taking

competence and less ability to provide support and social stimulation. Another example is when parents actually are applauding an introverted and inhibited way of being and when such way of being fits well with family values of avoiding conflicts and of being polite. In such a family climate, there is little room for real or imagined failures or shortcomings, and criticism may be experienced as a serious correction. Then, there is a huge potential for vulnerability for negative affects, strict emotional regulation and for developing ideas that at least the body can or shall be perfect. This may also represent a poor psychological protection against sociocultural pressures towards thinness, hazels during puberty as well as undue criticism about body appearance and body changes as a result of biological maturity or immaturity. The driving force in such vicious circles of undue perfectionism and avoidance is low self-esteem, and some authors (e.g. Waller, 2008) advocates that eating disorder symptoms may serve the same purpose as avoidance strategies in anxiety disorders.

Taken together, risk factors and an interactive understanding of such factors focus on *behavioural aspects, interpersonal relations*, *social functioning* and *psychological issues.* As most of these factors may be possible to change they may become relevant elements in an understanding of recovery.

### 3.3 Prognostic factors

Outcome studies searching for factors predictive of recovery or a failure to recover are taking a clinician or researcher perspective. Several reviews (e.g. Steinhausen, 2002) show that a majority of patients do recover fully (47%) or partially (34%) from eating disorders. Adolescents tend to fare better than adults, particularly if given outpatient treatment (Fisher, 2003). Increasing the duration of follow-ups generally tend to increase the percentage who recover, but also the risk for mortality (Arcelus et al., 2011). Variations in the proportions who recover have been detected (Couturier & Lock, 2006a). Some proportion variations may be accounted for with reference to variations in design, sample characteristics, size and statistical power, the duration of follow-up, dropout, and in procedures for data collection. Another and perhaps more important source of variation refer to *definitions of outcome and recovery*.

Recovery is repeatedly, yet not consistently related to an early age of onset, short duration of illness before treatment, a need for brief therapeutic intervention, no readmissions as well as a high educational and socioeconomic level (Steinhausen, 2002). Such factors may point to clinical severity as the underlying factor that needs to be addressed to accomplish recovery notably bingeing, vomiting and purgative abuse as well as extreme weight loss (Fichter et al., 2003; Steinhausen, 2002).

Furthermore, the journey of recovery may be longer and steeper given a high load of interpersonal problems (Fichter et al., 2003), notably with parents and family members (Berkman et al., 2007), and if daily life activities are hampered by compulsivity. Also, failure to recover is related to a passive rather than an active coping approach to problem solving (Fichter et al., 2003).

Previous and concurrent symptom disorders other than eating disorders are also related to a poor prospect of recovery. In particular such disorders comprise addictive problems (Berkman et al., 2007; Keel & Brown, 2010), alcohol abuse during follow-up (Keel *et al*., 2003), obsessive-compulsive disorder and depression (Berkman et al., 2007).

Depression is highly indicated by the fact that the rate of suicide and suicide attempts is significantly more frequent than in the general population (Arcelus et al., 2011; Keel et al., 2003). The negative impact of such disorders generally increases with their clinical severity, notably if hospital treatment is required.

Psychiatric comorbidity is also related to personality disorders occurring in 60% of eating disorder patients and in almost three of four inpatients (Rosenvinge et al., 2000). Frequently observed are the avoidant, obsessive-compulsive and borderline disorder (Fichter et al., 2003; Råstam, 1992, Vrabel et al., 2010; Wentz, 2000).

However, comorbidity represents a challenge with respect to whether the comorbid condition is causally related to the eating disorder. A valid conception of recovery from an eating disorder should exclude the possibility of post hoc developed symptom or personality disorder that may be remotely associated with the eating disorder. A causal attribution should rest on prospective clinical and scientific follow-up investigations. In clinical settings these judgements may be unsystematic in nature and may rest on etiological assumptions. Hence, requiring absence or improvement in concurrent mental problems stands out as an uncertain element in a model of recovery. However, comorbid conditions may act as mediator or moderator variables.

## 4. Experientially derived elements of recovery

### 4.1 Ambivalence, engagement and commitment

Ambivalence to change relates to the cost and benefit of *change* and the cost and benefit of *illness*. The costs of illness related to eating disorders are represented by for instance a realisation of medical complications and lack of opportunities within educational, social and interpersonal domains of life. Benefits comprise psychological issues of feeling unique, receiving support and comfort or using the disorder to control emotions and relations. Costs and benefits may be invariably realised throughout the course of illness (Freedman et al., 2006) and may elicit mixed feelings due to human individual differences in personality traits like novelty seeking versus fear of the unpredictable. Such individual differences are related to experiences of costs and benefits of change per se.

Experiential studies (Pettersen, 2007; Pettersen et al. 2008; 2011) show that mixed feelings range from shame to pride. Shame is related to symptoms and compensatory and concealing strategies. Shame may be more profound than in many other clinical groups (Frank, 1991; Sanfther & Crowther, 1998), and may also predict more symptom severity (Burney & Irwin, 2000). Shame may foster ambivalence to change, i.e. a drive to recover to abolish shame counteracted by self-stigmatisations (Gowers & Shore, 1999) and the triggering of cognitive beliefs ("because I do shameful things, I am a shameful person, and a shameful person doesn't deserve treatment or to get well") resulting in a decaying motivation to seek help to recover (Hepworth & Paxton, 2007). In fact, individuals who feel shame and self-stigmatisation may continue doing the shameful behaviours as an unconscious wish to confirm the truth of the beliefs of being a shameful person.

Patients also report concomitant feelings of pride (McLeod, 1989). Pride includes feelings of being unique, physically attractive and being able to control the body and one's weight, being able to control other people's concern and attention. Such feelings and experiences are

important forces that block a process of recovery. Understanding eating disorders as a control strategy also involves symptoms as an avoidance strategy for coming into contact with dysfunctional perfectionism and negative core beliefs (Waller, 2008) may foster a fear of new challenges without eating disorders, a resistance to give up symptoms and to explore alternative ways of coping and survival.

Most previous studies (e.g. Geller & Drab, 1999; Serpell et al., 1999; 2004) of patient's accounts of ambivalence to change and recovery have focused on the initial phases of illness. Here, ambivalence may be related to experiences of immediate benefits and rewards, a low recognition of longer term costs and burdens, fear of loosing benefits as well as rather unrealistic expectations about life without the eating disorder (Beresin et al., 1989; Nilsson & Hägglöf, 2006).

In later stages unrealistic expectations may have been tempered by experiences with life as less impacted by the eating disorder and the challenges one need to confront in the phase of remission. Moreover, as times go by, "benefits" may be outnumbered by accumulated experiences of the negative aspects (Pettersen et al., 2008). Recent studies (Pettersen et al., 2011) however, indicate that ambivalence may be present also in later stages of the recovery process.

In the later phases ambivalence and mixed feelings are less related to shame and pride and more to grief and reconciliation. Grief refers to the sadness of loosing unrealistic ideas about the carefree nature of life without the eating disorder as well as loosing the benefits from the eating disorder, but also the grief over irreversible events and losses, and over events that did *not* happen as a result of being preoccupied with eating disorder symptoms (Pettersen et al., 2011). Because patients in their later stages of recovery may have good reasons for their grief (e.g. irreversible losses), this low-tempered state of mind may represent a normal acquisition of reconciliation, and not necessarily a comorbid depressive condition or a pathological process. Hence, scores in a pathological range on measures of depression and general maladjustment may be false positives, and may contribute to a failure to acknowledge a process of recovery.

Some patient accounts describe change as some kind of decision (Hsu et al., 1992). In some cases a shift of focus may be more sudden as a consequence of realising that severe medical complications could occur and with a fatal outcome. Then an interest in existential issues of life and death, and hopes for the future may be stimulated (Nilsson & Hägglöf, 2006; Patching & Lawler, 2009). Recent studies (Pettersen et al., 2008, 2011) however, have questioned the notion of decision as a cognitive phenomenon (see section 6.3) and that it needs to be sudden. Rather, the term *engagement* may be more appropriate, picturing the change of focus as a gradual process. A gradual process may also explain why symptoms still persist despite a wish to change.

### 4.2 Changes in state of mind and focus of interest

Patients tend to report that recovery means a change of focus and focus of interest. This often implies starting an ongoing fight against negative thinking about oneself and the ability to tolerate negative affects (Federeci & Kaplan, 2008).

Related to improvement in negative self-perceptions is another marker of recovery - the ability to really care for oneself and providing self-comfort (Björk & Ahlström, 2008;

Pettersen et al., 2011). This is consistent with a finding that women who recover report that they are more able to accept and regulate affects like anger or grief and report a courage to express and talk about such affects (Federici & Kaplan, 2008). The most beneficial is when the courage of expression comprises close relations. An important end point of this fight against negative thinking is for many to realise that the origin of negative thoughts is projected perfectionism and undue self-expectations rather than expectations genuinely produced by other people (Nilsson et al., 2007; Patching & Lawler, 2009). A sign of a more fruitful end point then is to adopt a "good-enough" way of thinking (Lamoreux & Bottorff, 2005). As a consequence, one may also believe in the credibility of other people's positive comments about oneself.

In the later phases of illness, recovery is a matter of being reconciled (see section 5.1). Several studies of patient's accounts (e.g. Weaver et al., 2005; Rahkonen & Tozzi et al., 2003; Federici & Kaplan, 2008; Pettersen et al., 2011) report that patients being recovered equalised recovery as a movement away from being a trapped by the eating disorder and towards taking a more active role in designing daily life and the future.

### 4.3 Changes in self-image and experiences of identity

Changes in self-identity are an important aspect of recovery. "Finding me" as detached from "the eating disordered me" is a psychological and existential feature of recovery (Björk & Ahlström, 2008; Weaver et al., 2005) representing a change of focus from fat, appearance and the counting of calories to a search for meaning and purpose in life (D'Abundo & Chally, 2004; Matusek & Knudson, 2009). Many women describe recovery as being more than just an individual with a preoccupation with food calories and appearance (Lamoureux & Bottorff, 2005) or being preoccupied with the planning of binges and developing plans to conceal them (Pettersen et al., 2008). Recovered women thus tend to report a distance to the eating disorder, realising that it no longer help them to attain life goals and aspirations.

Finding an identity detached from the eating disorder represents a complex interplay between psychological states of mind and social relations. Social relations tend to mirror and confirm states of mind, and states of mind may "design" how other people respond to ways of behaving. Hence, being recovered highly depends on whether other people will confirm a self-presentation beyond being a former or current "case" of eating disorders (Pettersen & Rosenvinge, 2002; Weaver et al., 2005). However, this depends on the validity and credibility of the commitment to change (Rahkonen & Tozzi et al., 2003), and to rediscover own resources, interests or relations (Weaver et al., 2005) and to reduce self-loathing (Garrett, 1997) in order to being able to accept the positive reinforcement from other people as genuine (see section 4.2). Many former patients have described this as a way out of a life of avoiding anxiety and fear of failures through the dysfunctional perfectionism in terms of the preoccupation of being thin (Lamoureux & Bottorff, 2005).

### 4.4 Changes in social relations

Recovery has also been associated with a reduced feeling of being detached from others (Garrett, 1997), and the access to loving and supporting relations, where disclosure is possible without fear of being criticized or condemned (Federici & Kaplan, 2008; Weaver et al., 2005; Woods, 2004). Disclosure may then be helpful as a confirmation or validation of

oneself as a human being and not just as an individual with an eating disorder (see section 4.3).

One change in social relations associated with recovery has been described as a "cleaning-up" process. This means to abandon relations that only serve the purpose of satisfying other people's needs, without stimulating hope and vitality (D'Abundo & Chally, 2004), or leaving turbulent and destructive relations to parents or partners.

This change is highly related to a change in psychological focus. Patient's account of recovery comprises a defocus on food, weight and calories, and in fact active attempts to redirect social relations and interpersonal conversations away from such a focus. In particular, the social support is elicited by redefining romantic and family relations, and to change one's behaviours in order to elicit other people's support. Moreover, activities and life events appearing independent of the eating disorder also seem important for recovery (Nilsson & Hägglöf, 2006; Pettersen & Rosenvinge, 2002; Tozzi et al., 2003), and may include completing education, get a job, establishing a romantic relationship or having children.

### 4.5 Treatment factors

At least with respect to bulimia nervosa and binge eating disorder, there is compelling evidence for the effect of many treatments, notably cognitive therapy, interpersonal therapy, family therapy and guided self-help (Fairburn & Harrison, 2003; Shapiro et al., 2007). Unfortunately, treatment effects could for many reasons not be equalised with recovery (Keel & Mitchell, 1997; Strober et al., 1997; Keel & Brown, 2010). Moreover, patient experiences of helpful elements of therapy may not concur with the therapeutic ideology or theory about therapeutic factors contributing to recovery.

Nevertheless, patient perspective studies (e.g. Pettersen & Rosenvinge, 2002; Rahkonen & Tozzi, 2005; Tozzi et al., 2003) provide compelling evidence that treatment do contribute to recovery or a recovery process.

A robust finding across samples is that patients tend to experience treatment contributing to recovery if it facilitates improvement in terms of *interpersonal relations* as well as a number of *psychological issues* (i.e. self-esteem, self assertion, body experience as well as problem solving skills and affect regulation (Noordenbos, 1992; Vanderlinden et al., 2007). Also important for recovery is patient's experiences of being included in decisions about treatment content, e.g. the speed of weight gain, number of daily meals or routines for physical exercise (D'Abundo & Chally, 2004). Being included such decisions may increase the autonomy required for facilitating intrinsic motivation to change (see section 5.3) and to start a recovery process (Federici & Kaplan, 2008). In accordance with psychotherapy research, patients also tend to highlight the facilitating impact of *g*-factors, i.e. experiencing the therapist as competent, empathic, warm, and respectful and appreciating the individuality of the patient, and interestingly not necessarily reflecting actual competence on eating disorders (Pettersen, 2007).

### 4.6 Non-helping factors

Few experiential studies have specifically asked patients about factors unrelated or negatively related to recovery. In general, findings tend to support a notion that such factors represent the opposite of positive factors. Hence, non-helping factors comprise being

negatively judged by others, the feeling of being stigmatized, feeling of sadness, distress and hopelessness and being "stuck" as well as denying the severity of illness, being focused on food and meal times, and experiencing the benefits of the eating disorder outnumbering the negative aspects (Nordbo, 2010). Moreover, negative thoughts about one's body, one's self-worth and dignity have also been highlighted as aspects associated with a failure to recover (Federici & Kaplan, 2008).

## 5. Integration - towards a comprehensive understanding of recovery

### 5.1 Content aspects and end points

In the following, we suggest a comprehensive model that may integrate factors and features relevant for understanding recovery. The model makes a distinction between necessary and sufficient elements of recovery.

A *necessary element* for recovery comprises reduction in frequency of dieting, bingeing and compensatory behaviours approaching general population means, in addition to a weight normalisation. Also, there is a need for reduction of the belief in the truth of certain cognitive beliefs about the necessity of controlling eating, weight and shape. For a state of recovery it is not the frequency per se, but how much a given frequency is approaching normal variations in the population. This is clearly opposed to a negation approach. On the other hand, a negation approach is appropriate when judging recovery in terms of absence of medical complications or symptoms clearly disparate from statistically normal variations of behaviour frequency (e.g. vomiting or using laxatives for compensatory purposes).

The model suggests four domains, i.e. psychological issues, existential issues, as well as interpersonal and social aspects. Changes and recovery within the four domains may be regarded as *sufficient.*

Hence, a comprehensive model of recovery must include changes the four domains, but changes in the domains may not be a valid conception of recovery of *eating disorder* unless accompanied by symptom and core pathology changes On the other hand only measuring symptom reduction may miss important indices of recovery.

*Psychological aspects*

An overarching issue is to what extent the individual feels, and is clinically judged as being committed to challenge core beliefs and symptom frequency. Thus, recovery in this domain implies a gradual less belief in the truth of core beliefs, a reduction of dysfunctional perfectionism, the increment of subjective well-being, self-esteem and body acceptance and the improvement in coping strategies and problem solving strategies, i.e. by not involving the use of eating disorder symptoms to regulate or communicate emotions. Furthermore, psychological aspects include an understanding of why the eating disorder developed and what purposes it served.

*Social aspects*

Social aspects of recovery include the ability to take part in social activities or viewing such activities as true rewarding and not just to please others. Having an eating disorder often prevent taking part in such activities, and they are usually difficult and are avoided because such activities elicit feelings of being stigmatised, disgraced or simply the feeling of being

fat. Moreover, in a recovered state, eating disorder symptoms do not occupy mind and attention in a manner that makes it difficult or demanding to attend school or work on a regular basis. Social aspects also include the ability to move around in the society in order to attend to personal and social need.

*Existential aspects*

Existential aspects relates to taking an interest in forming a personal future, seeking meaning and purpose of life beyond the pursuit of food, body and thinness, coming to terms with grief through reconciliation as well as reflecting about identity beyond the identity shaped by the eating disorder. Another psychological aspect is to feel able to fulfil own potential and not just to conform to expectations from others.

*Interpersonal aspects*

Recovery from an interpersonal point of view means that symptoms do not disrupt family and close relations. Disruption may take place through being so preoccupied with symptoms that relations cannot be attended, or being preoccupied with the concealing of symptoms to avoid contact with the fear of disgrace, rejection and stigmatisation. In the illness phase relations are often contaminated by charades and cover up stories, as well as mutual distrust, allegations or histories of other people's dysfunctional control of symptoms in the pursuit of caring. Interpersonal conflicts may still be present in a recovered state, but their origins are not related to eating disorders. Another aspect of recovery from an interpersonal point of view is to (re)establish relationships that serve to reinforce positive core beliefs and to elicit social support sometimes as a part of the "cleaning-up" process (see section 4.4).

*Symptom aspects and core beliefs*

Such aspects overlaps much with psychological issues, and comprise core eating disorder related cognitive beliefs about oneself-and about the need to control food intake, weight and shape, frequency of core symptoms, *i.e.* restrictive eating, overeating, vomiting, body checking, excessive exercising or laxative abuse, as well as weight status, general condition, and somatic complications. Cognitive beliefs may be rigid and resistant to the change needed in order to recover. Recovery from a symptom perspective implies that symptom frequency approaches normal population means, and that the individual report a significant drop in the believing of the truth of core beliefs. This is clearly an alternative to the negation approach (section 2.0), yet such an approach must be used to assess medical complications.

Figures 1 and 2 illustrate the interrelationship between the psychological, social, interpersonal and existential domains. Figure 1 intends to depict a situation or state where clinically significant symptoms of eating disorders "contaminate" the domains. In the illness phase then, symptom frequency may lower the amount and quality of social and interpersonal relations, it may affect the interpretation of inner states and events, as well as the interest in, or the thinking about existential issues. Experientially, this has been described as some kind of "carpet ". The carpet then, is the eating disorder symptoms. In addition to deprive and to reduce quality of relations, the carpet also serves the purpose of regulating relations (see section 3.1 and 4.2). Other dual functions (i.e. positive and negative purposes) are to disturb, distract as well as to dissociate or temper engagement and activity within the four domains. The dual functions are the psychological platform for the ambivalence to change and recovery discussed in section 5.3 below.

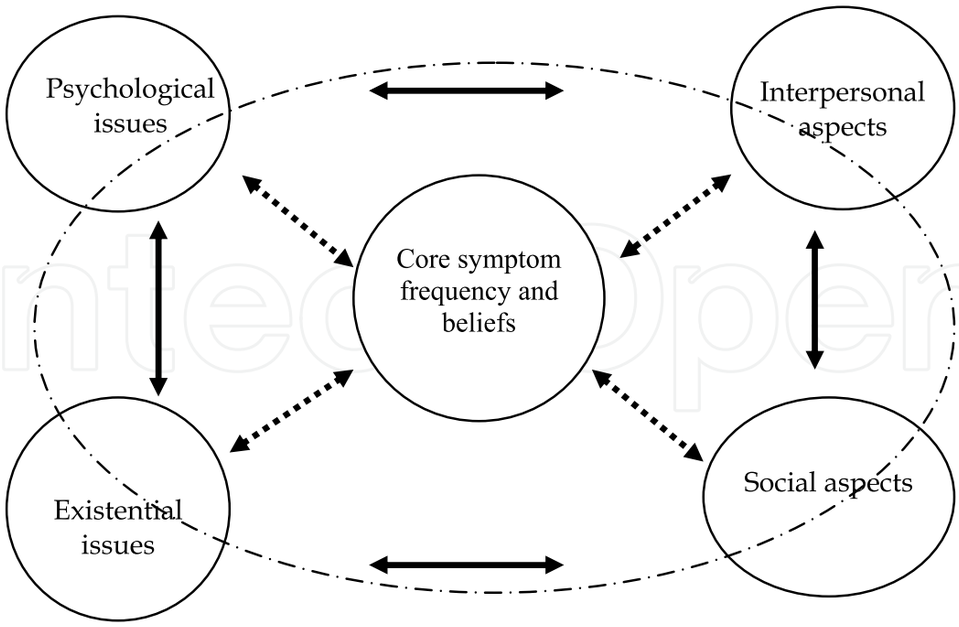



Fig. 1. The model of understanding recovery from eating disorders comprising the four domains (i.e. psychological issues, existential issues, interpersonal aspects and social aspects) and showing a state of non-recovery. Solid arrows indicate stable interrelations between the four domains (i.e. psychological issues, existential issues, interpersonal aspects and social aspects). Dotted arrows indicate how domains are influenced by core symptoms and beliefs. The dotted circle indicates how symptoms diffuse into the four domains.

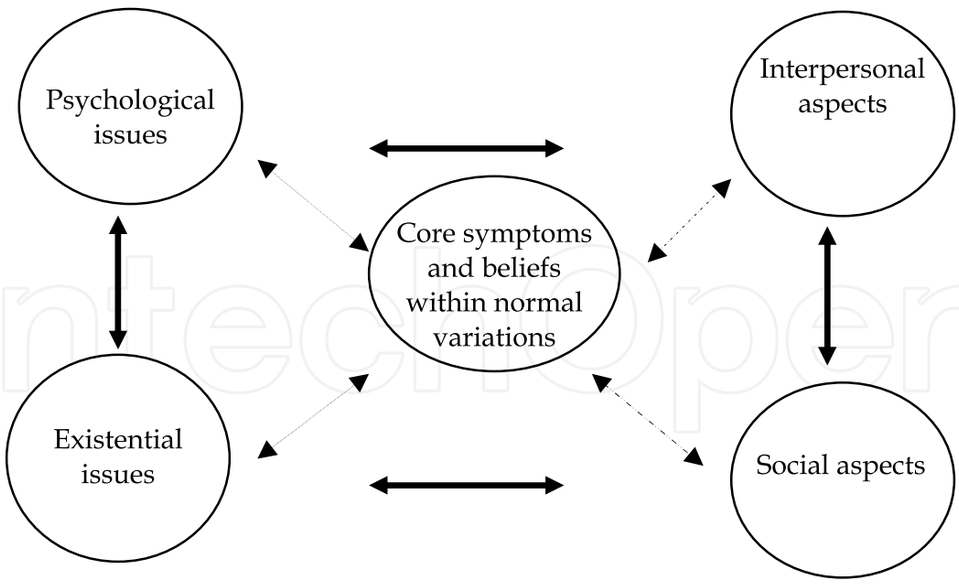



Fig. 2. The model of understanding recovery from eating disorders illustrating the relationship between model elements in a state of recovery. Solid arrows illustrate the stable interrelationship between the four domains (i.e. psychological issues, existential issues, interpersonal aspects and social aspects). Light dotted lines of various shapes indicate variations in the weak influence of core symptoms and beliefs on the four domains.

A life without an eating disorder still implies the need to confront challenges within the four domains. However, if the confronting strategy no longer comprises or are blurred or disturbed by a preoccupations with food, eating, shape and weight and believing in the need to control them, general challenges and problems may be more or less detached from the personal history suffering from eating disorders. Rather, they may be better accounted for as challenges of life. Lack of influence on the domains may indicate that symptoms no longer divert focus away from an engagement in existential, social and interpersonal issues, or that one's thinking and interpretation of issues related to these domains are not coloured by the eating disorder. Figure 2 illustrates a situation of recovery along this way of reasoning. Different shapes of the light dotted lines intend to illustrate that the impact of the inner circle aspects may be different on each of the four basic domains.

### 5.2 A composite scoring procedure

Apart from psychometrically validated instruments, scoring procedures are generally lacking in many attempts to generate lists of features relevant for evaluating recovery. Scoring procedures should be meeting several demands, like parsimony, construct validity and discriminative validity. Provisionally we suggest a scoring procedure inspired by the Global Assessment of Functioning Scale from the DSM-IV as follows:

0 no information

1-10 presence of medical complications, weight outside normal population range, symptom frequency fulfilling diagnostic criteria, dysfunctional core beliefs, low understanding of the need to change and a low commitment or engagement in making changes, concurrent low understanding of the need to change and a low commitment or engagement in making changes, and eating disorder symptoms grossly impairing all of the four domains

11-20 less medical complications, some extrinsic control over symptom frequency, but scores on measures of core psychopathology is within the clinical range

21-30 no medical complications, an understanding of alternatives to eating disorders in terms of coping, affect regulation and the prospect of a future without an eating disorder, no change in interpersonal relations or social functioning

31-40 a commitment to explore alternatives core beliefs about self image and about the truth of the need to control eating, weight and shape, starting to disclose symptoms to family or close friends

41-50 all changes comprised by scores comprising 11-40, and in addition, weight is within normal range, scores on measures of symptoms and core psychopathology approaching the normal population range, challenging core beliefs

51-60 as 41-50, and in addition that symptoms affect interpersonal relations and social functioning to a lesser degree, less need to control weight and shape as well as improved body acceptance.

61-70 as 51-60 but added that close relations are less disrupted by eating disorder symptoms and compensatory behaviours. Also close relations may be established without a reference to the eating disorder. The individual may feel grief related to

being preoccupied with eating disorder and the related burdens, costs and lost opportunities.

71-80 as 61-70 but added improvement of concomitant problems related to anxiety, depression personality disorders, or abuse/trauma, better quality of interpersonal relations due to disclosure of symptoms and sustained symptom improvement

81-90 as 71-80 but added reconciliation related to grief, active reflections over existential issues, displaying hope and expectations for the future, and no unrealistically positive expectations about a future without the eating disorder, and social activities are not longer impossible or difficult because they are not longer disturbed by symptom behaviours like bingeing, or by feeling disgraced or simply fat.

91-100 as 81-90 but added that scores on measures of core psychopathology are within the normal population range, significant subjective well-being, a major change in core cognitive beliefs, interpersonal relations are not affected by eating disorder symptoms, if presence of other mental problems, they are not clearly attributable to the former eating disorder, as well as experiencing life as meaningful.

We also suggest that no change comprises scores 1-20, that being in a recovery process is indicated by scores 21-50, that partial recovery is indicated by scores 51-80 and that a full recovery will require scores from 81-100. This creates variability, but such variability may accommodate for the possibility of multiple facets of a state of recovery.

The model is multidimensional in content, but also with respect to levels of measurement outlined in section 2, i.e. a clinical, a psychometric, a negation and an experiential approach. Hence, validated rating scales and self-report instruments should be used to measure improvement or recovery with respect to symptoms and core beliefs, standard medical procedures should be used to determine the presence or absence of medical complications while recovery with respect to the four domains may be requiring a combination of all the levels of measurement.

### 5.3 Process elements and potentials for change

While change in core symptoms is necessary conditions for *recovery as a state*, commitment and motivation represents the necessary conditions for the *process of recovery*. Still it is important to notice that interventions aiming to increase motivation have a far less impact on recovery than the motivation that is created by taking part in evidence based treatments (Waller, 2011; Geller et al., 2011).

An influential motivational theory (Prochaska & DiClemente, 1982) posits a stage model starting with a stage of not recognising a problem, problem recognition, contemplating about pros and cons for change, an action stage and a feedback control loop of consolidating the changes. It stands out as rather self evident and the scheme has been used many psychological arenas where change is at focus, e.g. addiction problems and smoking cessation, but can be found in theories of identity development through adolescence (Marcia, 1966) as well as for eating disorders (Geller & Drab, 1999; Serpell et al., 2004). The model rests on recovery initiated by some kind of a cognitive decision and a weighting of immediate benefits (e.g. consolation, affect regulation, regulating of relations) against longer

term costs (e.g. loss of quality of life). This kind of decision may be elicited through life event but as well as through therapy. A first sign of recovery then would be a commitment or a decision to explore new psychological frontiers. Such frontiers may be to seek an identity beyond being an eating disordered individual, to challenge the fear of stigmatisation when speaking openly about eating disorder symptoms and to challenge core beliefs. The effect is thus to break vicious circles of dieting, bingeing and purging. A problem with this theory is that although the succession of stages may seem logical and self-evident, patients actually may move back and forth in a very situation-dependent way (Waller, 2011). Another major problem is that being in an action stage does not tell us anything about whether the action (e.g. eating more to gain weight) is done for own purposes of gaining weight or for external reasons (e.g. to get out of the hospital) or just to please others.

The Self-Determination Theory (SDT) of motivation (Deci & Ryan, 2002) however, posits that motivators may be *intrinsic and extrinsic* and that the golden way to change is all therapeutic (and other) endeavours to make extrinsic motives become intrinsic. Apart from being a rather comprehensive theory, the extrinsic-intrinsic distinction is suitable for eating disorders where many symptoms may be intrinsically motivated and incorporated in lifestyle and because eating disordered individuals tend to make changes towards recovery for reasons not integrated in their true belief system. Hence, it has been argued (Vansteenkiste et al., 2005) that SDT may be a suitable overarching framework to understand change in eating disorders. SDT thus allows a focus on how to make externally motivated actions (introduced by for instance a therapist) intrinsic. This may be more efficient than to make the patient aware of illness costs and to just focus on or to search for intrinsic motivation to change, a motivation that may be absent or vague in the first place.

Intrinsically motivated behaviours are activities that are performed for their own sake and for pleasure or excitement. Within the model of recovery, a commitment and mental activity to explore new aspects of identity and aspirations about the future beyond being "an eating disorder individual" or being engaged in rewarding social activities may be intrinsically motivated. Extrinsic motivation on the other hand relates to instrumental behaviours relative to a specific purpose, governed by gaining an external reward, meeting external expectations or avoiding punishment. For instance keeping a normal weight through healthy eating habits can be extrinsically motivated by others, providing positive material or immaterial reinforcements. When reinforcement terminates, the behaviour however, will sooner or later drop in frequency as the behaviour is poorly integrated in the individual's structures of values and core beliefs.

One gateway to integration may be through mindfulness (Didonna, 2009), by which one may come into contact with suffering and the wish for another life than being an eating disordered individual. Another gateway would be to urge (extrinsic motivation) the individual to perform a non-enjoyable behaviour like adopting healthy eating habits. According to theories of attribution, cognitive dissonance and learning, the reward should be minimalistic and provided intermittingly. In this way, individuals turn to internal attributions, i.e. constructing an intrinsic motive as an explanation for doing the behaviour (healthy eating habits) because it is impossible to explain it as a response to a huge external reinforcer. Nevertheless, one may guard against oversimplifications in terms of overlooking

fear of changes, strong intrapsychic and interpersonal symptom maintaining factors mediated or moderated by personality traits.

Personality traits may hamper, but in some cases also facilitate the recovery process, and there are individual differences across eating disorder diagnoses in how patients with eating disorders display facilitating personality factors (i.e. agreeableness, prosocial behaviours, resilience and control) or factors hampering recovery like neuroticism, dysregulative traits, harm avoidance, low novelty seeking, high persistence and low self-directedness (Claes et al., 2006; Fassino et al., 2002; Holliday et al., 2006). Obviously, facilitating personality traits may relate positively to the ability of acting according to ones own purposes or determination while harm avoidance and neuroticism may be more associated with reinforcement through extrinsic motivation. Hampering or facilitating personality traits has an additional process-related effect in terms of contributing to beneficial or vicious interpersonal circles that are vital for whether the outcome of the process is recovery or not.

Along with certain personality traits, poor prognostic factors and a failure to change their negative psychological impact reduce the probability to recover and the probability of developing an engagement and commitment to searching for alternatives to eating disorders and to replace drive for thinness with a drive for harmony, vitality and well-being. This comprise a failure to address sexual or other kinds of abuse, a failure to address anxiety, depression and personality disorders, notably of a borderline and avoidant form.

A longer duration of illness is generally associated with a poor prospect of recovery but this is not necessarily the same as to say that a shorter duration is beneficial. It may even be the case that it is not the duration per se that is important but to what extent the individual has a contact with feelings of suffering, whether symptoms and compensatory behaviours are integrated in one's lifestyle and value system, and whether one is able to consider the balance between the immediate rewards and the longer term consequences.

## 6. Implications

### 6.1 Research implications

The model is multidimensional to accommodate for the multidimensional nature of eating disorders. However, the model needs future statistical and clinical testing. Specifically there is a need to explore the interrelationship between the core aspects and the four general domains at various time points in a recovery process and the construct and discriminative validity. Another prospect for the future investigation is to study whether a mediating or a moderator model may best explain the nature of process elements related to motivation, engagement and commitment. Also the mediator or moderator role of personality factors, resiliency, symptom disorder (anxiety and depression) and personality disorder (avoidant and borderline) comorbidity and prognostic factors, notably the duration of illness should be investigated. It may be the case that some of these factors may strengthen or weaken the recovery process (a mediator model) or that recovery may take place only in the presence or absence of one of these factors (a moderator model).

In clinical work, focusing on promoting recovery, the model suggests that all the five domains should be targeted. Like in research on outcome and recovery, an evaluation of recovery in clinical settings should adopt a non-normative approach. For instance with

respect to social functioning, the issue is how the individual experiences the quality of social interactions and the motivational source of such contacts and not for instance imposing a norm with respect to the number of contacts.

Similarly, in clinical work promoting recovery should address and change the frequency and duration of symptoms, but should equally much address subjective experiences of strategies to conceal symptoms in daily life interactions and to evaluate to what extent symptoms do not longer hamper social functioning, affect interpersonal relations, decrease engagement in the future and the experience of life with a purpose beyond the pursuit of thinness.

## 7. Conclusions

Recovery comprises both eating disorder features close to the diagnostic criteria as well as in many domains of life. It is important to avoid normative judgements based on conceptions of a "good life" as people do live their lives in many ways, think in many ways and act accordingly.

In this chapter a comprehensive model is suggested to conceive and assess recovery as a multidimensional phenomenon. In contrast to previous multidimensional measures (e.g. Morgan & Russell, 1975; Morgan & Hayward, 1998) the model intends to be non-normative in not specifying content or nature of domain changes or suggesting absence of symptoms with a distribution in the general population. Also a scoring procedure is proposed.

The model may hopefully contribute to a valid evaluation of recovery in clinical practice. Also, the model may inspire to a tighter integration of fields of research that may profit from mutual benefits. There is a need to bridge a gap between outcome research and patient experiences to understand elements of recovery. The present chapter is limited by the current research. Future research however, may focus on which aspects from the experiential research tradition that could be formally tested in prospective outcome research using multivariate methods, and how good prognostic factors may be elaborated and nuanced through experiential studies. Finally, factors that promote or characterise recovery should be integrated in treatment studies.

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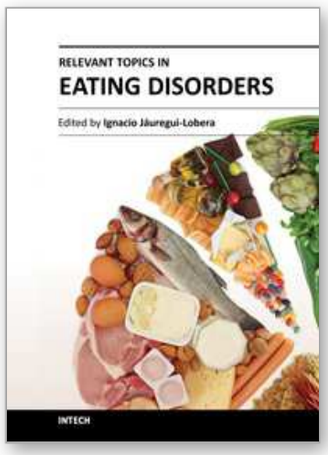
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Eating disorders are common, frequently severe, and often devastating pathologies. Biological, psychological, and social factors are usually involved in these disorders in both the aetiopathogeny and the course of disease. The interaction among these factors might better explain the problem of the development of each particular eating disorder, its specific expression, and the course and outcome. This book includes different studies about the core concepts of eating disorders, from general topics to some different modalities of treatment. Epidemiology, the key variables in the development of eating disorders, the role of some psychosocial factors, as well as the role of some biological influences, some clinical and therapeutic issues from both psychosocial and biological points of view, and the nutritional evaluation and nutritional treatment, are clearly presented by the authors of the corresponding chapters. Professionals such as psychologists, nurses, doctors, and nutritionists, among others, may be interested in this book.

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