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Intensive enhanced cognitive behavioural therapy for severe and enduring anorexia nervosa: A longitudinal outcome study

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ABSTRACT

Objective: This study aimed to evaluate short- and long-term outcomes in patients with severe and enduring anorexia nervosa (SE-AN), as compared with those with non SE-AN (NSE-AN), both treated via an inpatient programme based on a "recovery model" approach.
Methods: Sixty-six adult patients with anorexia nervosa (AN) were recruited from among consecutive referrals to a community-based eating disorder clinic offering inpatient enhanced cognitive behavioural therapy for eating disorders (CBT-E). Body mass index (BMI), and Eating Disorder Examination (EDE) and Brief Symptom Inventory (BSI) scores were recorded at admission, at the end of treatment, and at 6- and 12-month follow-ups.
Results: Thirty-two patients (48.5%) were classified as SE-AN (i.e., duration of illness >7 years), and 34 (51.5%) as NSE-AN. During the treatment, both groups displayed similarly large increases in BMI, as well as improvements in eating-disorder and general psychopathology. After discharge minor deterioration did occur, but both NSE-AN and SE-AN groups showed similar rates of 'good BMI outcome' (BM $\geq$ 18.5; 44.0% and 40.7%, respectively) and 'full response' (BMI $\geq$ 18.5 and minimal eating-disorder psychopathology; 32.0% and 33.3%, respectively) at 12-month follow-up.
Conclusions: These findings suggest that inpatient CBT-E is well accepted by patients with AN, and could also be a viable and promising treatment for those with SE-AN.

1. Introduction

When anorexia nervosa (AN) persists for more than 7 years (Touyz et al., 2013), it is usually defined as severe and enduring (SE-AN), and puts patients at risk of several serious medical co-morbidities, such as osteoporosis, cardiovascular abnormalities and structural changes to the brain (Leonard & Mehler, 2001; Wonderlich et al., 2012). Due to high levels of disability impairing their ability to work, SE-AN patients place a significant burden on their families, caregivers, and often the welfare state (Striegel-Moore et al., 2008; Strober, 2004; Treasure et al., 2001). The patients themselves experience an extremely poor quality of life (Engel, Adair, Las Hayas, & Abraham, 2009), and a reduced life expectancy. Indeed, AN features the highest mortality rate of any mental illness (Harbottle, Birmingham, & Sayani, 2008; Steinhausen, 2002).

Outcome studies on AN have shown that a long duration of illness before treatment is an unfavourable prognostic factor (Fichter, Quadflieg, & Hedlund, 2006; Steinhausen, 2002), and the high drop-out rate in patients with SE-AN has prompted some clinicians to suggest that treatments designed to address both physical and psychological recovery run the risk of misalignment with patient aims and readiness for such (Wonderlich et al., 2012). For these reasons, insurance companies often refuse to fund the treatment of patients with SE-AN who do not respond to known therapeutic options, and some specialist UK National Health Service (NHS) clinics refer these patients for either generic psychiatric interventions or no treatment whatsoever. In fact, it has even been suggested that non-specific medical palliative care may become the standard model for a large subgroup of patients with SE-AN (Kaplan & Buchanan, 2012; Lopez, Yager, & Feinstein, 2010; Strober, 2009).

Bearing in mind these challenges involved in treating SE-AN, a new treatment paradigm has been proposed to shift the aims of intervention away from a 'recovery model' to promote weight gain, towards improving retention in treatment and quality of life, minimising harm and preventing further experiences of 'failure' (Strober, 2009; Williams, Dobney, & Geller, 2010). Support for this

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approach comes from a recent randomized controlled trial comparing two psychological treatments adapted for patients with SE-AN (i.e., CBT-SE and Specialist Supportive Clinical Management [SSCM-SE]) (Touyz et al., 2013). At 6-month follow-up, despite their minimal increase in BMI, patients receiving CBT-SE displayed lower global Eating Disorder Examination (EDE) scores and greater readiness to recover than those receiving SSCM-SE. Furthermore, with the primary goal being to enhance the patients' quality of life, rather than reducing their symptoms, both treatments were associated with a low drop-out rate – only 15%.

Nevertheless, there are strong reasons to indicate that pessimism regarding the recovery prospects of patients with SE-AN may not be entirely justified, and consequently that steering away from a recovery model may be premature at this stage. First and foremost, the majority of randomized controlled trials on the efficacy of recovery-based treatment have tended to enrol individuals with only a short history of the disorder, relatively high BMI, and few, if any, previous treatment failures. Although the exclusion across the board of patients with longstanding eating disorder from clinical trials has ensured greater sample homogeneity, uncontaminated by the higher drop-out rate and worse prognosis linked to SE-AN, it has meant that there are considerable gaps in the research. For example, we have little reliable data on how patients with SE-AN do in actual fact respond to evidence-based treatments such as enhanced cognitive behavioural therapy (CBT-E) (Fairburn, 2008) or family-based therapy (FBT) (Lock et al., 2010). As a consequence, no precise thresholds have been determined as regards eating disorder duration or the number of previous treatment failures at which such treatments become ineffective. In essence, this means that we have no data on which to base a distinction between those who would benefit from a recovery-based treatment from those who would not (Bamford & Mountford, 2012).

Although the CBT strategy of encouraging patients to play an active role in their own treatment and change may seem to be a huge challenge in the face of the entrenched ambivalence of patients with SE-AN (Bamford & Mountford, 2012), and, similarly, the FBT strategy of involving parents in taking control of patients' eating (Lock et al., 2010) may be inappropriate for adults with SE-AN, several clinical reports (Byrne, Fursland, Allen, & Watson, 2011; Noordenbos, Oldenhave, Muschter, & Terpstra, 2002; Wade, Treasure, & Schmidt, 2011) have shown that even patients who have had AN for many years can benefit from additional treatment, going on to achieve complete recovery. In light of these encouraging findings, we set out to provide a direct comparison of patients with SE-AN and those with a shorter duration of illness (NSE-AN) in terms of the short- and long-term outcomes of an inpatient treatment based on a recovery model, namely evidence-based CBT-E.

2. Methods

2.1. Participants

The sample comprised adult patients with AN admitted to the inpatient eating disorder Unit of Villa Garda Hospital (northern Italy). The patients had been referred from all over Italy by general practitioners or eating disorder specialists. For admission, patients had to be aged between 18 and 65 years; to meet all the DSM-IV diagnostic criteria for AN except for the amenorrhea criterion (American Psychiatric Association, 1994); and to require inpatient treatment, either because the eating disorder could not be managed safely on an outpatient basis, or due to previous outpatient treatment failure(s). No patients with active substance abuse or acute psychotic disorders were accepted on the programme. A senior specialist (R.D.G) assessed the eating disorder diagnosis and the presence of the comorbid conditions during an eligibility interview, conducted before admission.

Patients were considered eligible when they met the following inpatient admission criteria (Dalle Grave, 2013; Dalle Grave, Bohn, Hawker, & Fairburn, 2008): (i) poor response to well-delivered outpatient-based treatment; and (ii) presence of features that make outpatient eating disorder treatment inappropriate (e.g., BMI<14; marked medical complications, such as pronounced oedema, severe electrolyte disturbance or hypoglycaemia; significant suicide risk; and/or marked interpersonal difficulties). Of the 106 patients assessed for eligibility, 81 (76.4%) met both criteria. Among eligible patients, 5% (4/81) were excluded for their acute psychotic state (n = 2) or significant substance misuse (n = 2). Eighty-one percent (66/81) of the remaining patients agreed to undergo the treatment, while 13.6% (11/81) declined to participate.

The ethics committee of the Local Health Unit (22 – Bussolengo, Verona), approved the study, and all participants gave informed written consent to the anonymous use of their personal data.

2.2. Inpatient treatment protocol

The treatment, described in detail elsewhere (Dalle Grave, 2013; Dalle Grave et al., 2008), comprises an adapted inpatient version of CBT-E – an enhanced form of CBT designed to treat the psychopathology of eating disorder. The treatment has three main goals: (i) to remove the eating-disorder psychopathology; (ii) to correct the mechanisms that have been maintaining the psychopathology; and (iii) to ensure that the changes achieved are lasting. The programme is administered over a fixed period of 20 weeks–13 weeks of inpatient treatment followed by 7 weeks in day-hospital. Patients receive dietician-assisted eating and progressive increases in the daily energy content of their diet from 1500 to 2500 kcal until they reach a BMI of 18.5 kg/m^2. The goal is to achieve a steady weight gain of 1–1.5 kg per week. Once a patient's BMI reaches 19.0 kg/m^2, their daily calorie intake is adjusted to enable them to maintain a stable body weight within a 3-kg range of this target. No psychotropic drugs are prescribed as part of the treatment, and those being taken by patients at admission are gradually phased out during the first 2 weeks of hospitalisation. After discharge patients are referred to their local outpatient eating disorder clinical services to address the residual eating disorder features and prevent relapse.

2.3. Assessment and measures

All data were collected in the first week of inpatient admission, in the last week of the day-hospital phase before discharge, and after 6- and 12-month follow-ups.

2.3.1. Demographic and clinical variables

Demographic and clinical variables were obtained by direct interview. Weight was measured on calibrated scales, and height using a stadiometer. The patients' BMI was then calculated via the standard formula – body weight in kilograms divided by height in meters squared. Patients were weighed and measured wearing underwear but no shoes.

2.3.2. Eating-disorder psychopathology

A validated Italian version of the Eating Disorder Examination (EDE) 12.0D (Calugi et al., 2015; Fairburn, Cooper, & O'Connor, 2008) was used to assess the psychopathological features of each patient's eating disorder. The interview was administered by purpose-trained and supervised assessors, who had no further involvement in the treatment programme. Change in global EDE score, a measure of the overall severity of a patient's eating-disorder features, was taken as the main outcome variable.