Psychiatry Research 237 (2016) 175–181

Contents lists available at ScienceDirect

Psychiatry Research

journal homepage: www.elsevier.com/locate/psychres

Multi-dimensional self-esteem and magnitude of change in the treatment of anorexia nervosa

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ARTICLE INFO

Article history:
Received 19 February 2015
Received in revised form
2 December 2015
Accepted 21 January 2016
Available online 22 January 2016

Keywords:
Anorexia nervosa
Self-esteem
Treatment outcome
Inpatient treatment

ABSTRACT

Self-esteem improvement is one of the main targets of inpatient eating disorder programmes. The present study sought to examine multi-dimensional self-esteem and magnitude of change in eating psychopathology among adults participating in a specialist inpatient treatment programme for anorexia nervosa. A standardised assessment battery, including multi-dimensional measures of eating psychopathology and self-esteem, was completed pre- and post-treatment for 60 participants (all white Scottish female, mean age = 25.63 years). Statistical analyses indicated that self-esteem improved with eating psychopathology and weight over the course of treatment, but that improvements were domain-specific and small in size. Global self-esteem was not predictive of treatment outcome. Dimensions of self-esteem at baseline (Lovability and Moral Self-approval), however, were predictive of magnitude of change in dimensions of eating psychopathology (Shape and Weight Concern). Magnitude of change in Self-Control and Lovability dimensions were predictive of magnitude of change in eating psychopathology (Global, Dietary Restraint, and Shape Concern). The results of this study demonstrate that the relationship between self-esteem and eating disorder is far from straightforward, and suggest that future research and interventions should focus less exclusively on self-esteem as a uni-dimensional psychological construct.

1. Introduction

The concept of self-esteem is concerned with a person's most basic, general, evaluative feelings about him/herself (O'Brien and Epstein, 1988). Individuals with eating disorders are widely regarded as lacking in self-esteem, and research findings support the pivotal role of low self-esteem as a predisposing, precipitating, and perpetuating factor (e.g., Fairburn et al., 1999; Gual et al., 2002; Jacobi et al., 2004). Silverstone (1992) proposed that low self-esteem is a pre-requisite to an eating disorder, and that aetiological factors leading to eating disorders all act via low self-esteem. Several studies have revealed low self-esteem in patients with anorexia nervosa specifically (Cervera-Enguix et al., 2003; Jacobi et al., 2004; Silverstone, 1990; Wilksch and Wade, 2004). Low self-esteem has been found to be a significant predictor of early drop out (Halmi et al., 2005), poor treatment outcome (Halvorsen and Heyerdahl, 2006), and co-morbidity in anorexia nervosa (Karatzias et al., 2010).

There have been ongoing concerns that the concept of self-esteem was poorly defined and measured, with many self-esteem instruments correlating poorly with one another (Blascovich and Tomaka, 1993). The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) is a widely-used measure in the eating disorder literature, with good reliability (Blascovich and Tomaka, 1993). However, studies using RSES within anorexic populations at pre- and post-treatment have demonstrated conflicting results. For example, Karpowicz et al. (2009) reported that self-esteem, as measured by RSES, significantly improved in line with eating psychopathology, as measured by the Eating Disorders Inventory-2 (EDI-2; Garner, 1991) from pre- to post-treatment, in a specialist eating disorders service. In contrast, Mehl et al. (2013) found that whilst BMI and quality of life had significantly increased after Multi-Family Therapy, RSES self-esteem had significantly decreased. This demonstrated the potential negative impact of recovery from eating

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http://dx.doi.org/10.1016/j.psychres.2016.01.046
0165-1781/

disorders: patients may experience a sense of loss, as they no longer have the disorder as a coping mechanism to regulate underlying issues, such as suppressed negative emotions. Additionally, self-esteem in anorexia may be contingent on low body weight. This incongruity has been supported by findings from qualitative studies that patients with anorexia nervosa feel proud, powerful, special, and superior, in reaction to their weight loss (Garner and Bemis, 1982; Serpell et al., 1999).

As discussed, most eating disorder studies have employed the uni-dimensional measure RSES. Tafarodi and Swann (1995), however, combined the theory of the dualistic nature of self-esteem with the results of factor analyses of the uni-dimensional RSES, in order to conceptualise a two-dimensional Self-liking and Self-competence Scale (SLSC). Furthermore, researchers have proposed that these broad dimensions may contain multiple specific dimensions characterising facets of self-esteem. Few studies have employed a bi-dimensional measure of self-esteem when investigating eating disorders. In a longitudinal study of 77 participants receiving inpatient treatment, Surgenor et al. (2007) investigated the association between self-liking and self-competence, and symptoms of anorexia nervosa. At pre-treatment, severity of eating disorder disturbance (EDI total score) was significantly, negatively, associated with both self-liking and self-competence. Eating psychopathology, BMI, and self-competence significantly improved over the treatment episode, while self-liking tended towards improvement. Interestingly, one in three participants reported reduced self-liking or self-competence post-treatment. Change in total EDI was significantly negatively correlated with change in both self-esteem dimensions. Change in specific eating disorder symptoms were also differentially associated with change in self-esteem dimensions, leading the authors to conclude that different symptoms have different effects on self-esteem. This study demonstrated the utility of investigating self-esteem as a dynamic, two-dimensional variable, however, the short average treatment episode ($M=50$ days) may limit detectable changes over time. Furthermore, the self-esteem dimensions were extrapolated from Tafarodi and Swann's (1995) bi-dimensional conception of the purported uni-dimensional RSES.

In the current study, an established multi-dimensional measure of self-esteem is employed, to better investigate the associations among facets of self-esteem and eating psychopathology. We will thus determine whether components of self-esteem have differential predictive power for changes in eating psychopathology, and, accordingly, have different implications for treatment. Drawing on previous findings on uni-dimensional and bi-dimensional self-esteem, the current research hypothesises that multi-dimensional self-esteem will improve after inpatient treatment for anorexia, concurrent with BMI and eating psychopathology. We also hypothesise that associations will exist between dimensions of self-esteem and eating psychopathology, at pre- and post-treatment. Finally, we hypothesise that both baseline, and magnitude of change in, multi-dimensional self-esteem will predict magnitude of change in eating psychopathology. The unique contribution of this study to the literature is two-fold: Firstly, in its consideration of self-esteem as a multi-faceted construct, and secondly, in its consideration of the impact of both baseline self-esteem, and changes in self-esteem over time, on the changes observed in eating psychopathology.

2. Methods

2.1. Participants

The sample for this study was the same as that used in a study reported by Collin et al. (2010) and consisted of 80 of 208 consecutive admissions to an adult inpatient eating disorders unit with a primary diagnosis of anorexia nervosa. Diagnosis according to DSM-IV criteria (American Psychiatric Association, 1994) was confirmed by the nurse manager of the unit during the first week following admission using the Structured Clinical Interview for DSM-IV (SCID; First et al., 2002), which has good inter-rater reliability for eating disorders (Lobbestael et al., 2010).

Unless considered by the clinical team to be too unstable, or incapable of giving informed consent, all patients diagnosed with anorexia nervosa aged 18 or over were approached by a research assistant and invited to participate in the study. Patients were advised that participation was voluntary and that non-participation would not affect their treatment in any way. A total of 91 admissions opted to participate. As nine patients participated twice and one participated three times, this constitutes a sample of 80 unique patients. Only data from first admissions were included in analyses to ensure independence of data.

Of the remaining 118 admissions that did not participate in the study, 69 were deemed ineligible for reasons including: age, diagnoses of bulimia nervosa or binge eating disorder, significant addiction problems or psychosis, or having been admitted for short crisis intervention only. Another 39 cases declined to participate in the study for personal reasons, and 10 cases were missed due to staff absences.

All participants were female and the majority were either single, separated or divorced (83.3%), and living with parents (60.0%). The mean age of participants was 25.63 years (SD=7.04) and many were in some form of education (36.7%). Of the 60 admissions comprising the sample, 55.8% were of the restricting subtype of anorexia nervosa and 44.2% were of the binge-eating/purging subtype, and the mean BMI on admission was 14.91 (SD=2.42). The mean age of eating problem onset reported was 17.09 years (SD=4.81), with an average duration of eating disorder of 8.63 years (SD=7.80). Of the sample, 46.7% had received inpatient treatment for their eating problem on at least one previous occasion.

2.2. Treatment programme

The Eating Disorders Service at Priory Hospital Glasgow comprises a 27-bedded, specialist, high dependency unit, providing intensive, multidisciplinary, inpatient treatment for patients with severe and complex eating disorders and their co-morbid conditions. The programme encompasses a wide range of both individual and group therapies such as anxiety management and relaxation, problem solving, self-awareness and body image work, and social skills and assertiveness training, combined with specialist dietetic management including eating pattern normalisation and weight restoration, art therapy, drama therapy, and behavioural milieu adaptations aimed at addressing eating disorder symptoms. Interventions are highly structured and predominantly cognitive-behavioural.

Of the 80, 60 (75.0%) completed their treatment, while 20 patients dropped out prior to discharge, and their data are therefore excluded from analyses. The average length of treatment episode for these 60 admissions was 140.0 days (SD=64.2)

2.3. Measures

Participation in the study involved completing a battery of standardised assessment measures, as detailed below. Demographic and historical information was also obtained. Members of the nursing team routinely monitored and recorded BMI throughout treatment, using the formula: weight in kilograms divided by height in metres squared.