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Symptomatology long-term evolution after hospitalization for anorexia nervosa: Drive for thinness to explain effects of body dissatisfaction on type of outcome

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ABSTRACT

Anorexia nervosa (AN) is a serious psychiatric disorder associated with the highest mortality rate. Body dissatisfaction (BD) is now considered as an important risk factor for AN onset and relapse. Recent results lead to the hypothesis according to which AN and drive for thinness (DT) are related to body dissatisfaction. The primary aim of this current study was to identify whether DT mediated the relationship between BD and AN symptoms several years after hospitalization. As a secondary aim, self-reported Body Shape Questionnaire, Eating Attitude Test, Eating Disorder Inventory and Beck Depression Inventory scores were compared between the 48 women with a history of severe AN and 73 matched controls. A mediation analysis didn't show evidence of a direct effect of BD on eating disorder symptomatology after controlling for DT suggesting a full mediation of DT on the association between BD and eating disorders symptomatology. Results also showed that patients with a bad outcome had a higher score of DT than controls, which was not the case of patients with a good outcome. These findings highlight the potential importance of DT and the usefulness of targeting this dimension in therapeutic interventions for AN patients if further research confirm these results.

1. Introduction

A major feature of patients with Anorexia Nervosa (AN) is body image concerns (Mizes et al., 2004; Probst et al., 2008; Stice and Shaw, 2002; Striegel-Moore et al., 2004), which represent a compulsory diagnosis criteria for AN in the DSM-5 (American Psychiatric Association, 2013). Body image has been conceptualized as a multifaceted construct which refers to the internalized representation of one's weight, shape and appearance (Mitchell and Peterson, 2005). Two types of body image distortions implicated on AN have been identified (Cash and Deagle, 1997; Skrzypek et al., 2001): a) cognitive distortions, and b) body dissatisfaction. An example of cognitive distortions could be that when AN patients estimate their size as larger than it is objectively true. Body Dissatisfaction can be defined as a negative subjective evaluation of any part of the body (Stice and Shaw, 2002). Throughout the last decade, an increasing amount of research has been carried out on body dissatisfaction and it is now considered an important risk factor for eating disorders onset (Stice and Shaw, 2002; The McKnight Investigators, 2003), and relapse (Keel et al., 2005).

To date, body dissatisfaction changes after treatment has mainly been studied in a short-term perspective (less than two years; Sala et al., 2012; Striegel-Moore et al., 2004), with few studies dealing with long-term evolution of body dissatisfaction after an acute phase of AN. The results of these studies are inconsistent. For some authors, several years after initial AN care, patients' body dissatisfaction did not differ from non-clinical controls (Lautenbacher et al., 1997; Saccomani et al., 1998; Sullivan et al., 1998). Other researchers report that body dissatisfaction remained higher in patients having recovered from AN than in community samples (Windauer et al., 1993).

Moreover, following Sala et al. (2012), in remitted AN patients, significant reduction in body dissatisfaction was related to improved scores for drive for thinness. Drive for thinness has been defined as the desire to be thinner or to be objectively thin, and is an important ED

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risk factor (Chernyak and Lowe, 2010). Indeed, this characteristic is related to weight concerns and dieting, negative affect or internalizing symptoms such as anxiety or depression. Drive for thinness is particularly important for people with fear of weight gain (Peñas-Lledóet al., 2015). The results presented by Sala et al. (2012) lead to the hypothesis according to which AN and drive for thinness are related to body dissatisfaction. Sala et al. (2012) also highlighted the key importance of drive for thinness in eating disorders. Based on research already carried out in this field, it appears that a more precise analysis of the relationship between drive for thinness, body dissatisfaction and the evolution of AN would be particularly relevant to understand the psychological processes involved in the remission or relapse of AN patients.

The primary aim of the current study was to identify whether drive for thinness mediated the relationship between body dissatisfaction and eating disorder symptoms in an AN patients follow-up study. Highlighting this mechanism may give potential explanations of scientific literature inconsistencies regarding the links between drive for thinness and eating disorders. The second aim was to compare levels of body dissatisfaction and drive for thinness in a long-term follow-up study of AN patients after hospitalization, compared with a control population without any eating disorder history. Following the literature on AN outcomes (Pike, 1998), we hypothesized that the patients who were hospitalized for AN at least 5 years before the current study, would have higher levels of eating disorder risk factors compared to controls, independently from their recovery state, in particular concerning body dissatisfaction and drive for thinness.

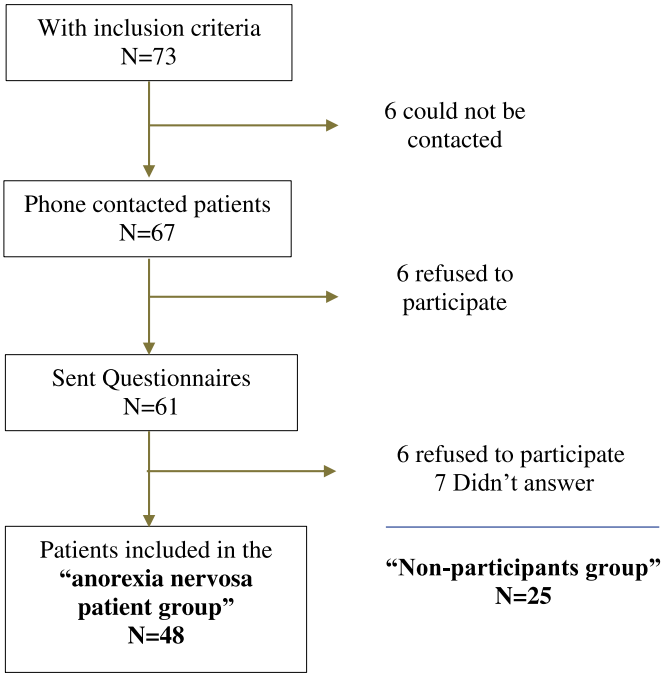

Fig. 1. Study flow chart.

2. Methods

2.1. Participants

Inclusion criteria for patients: female patients aged 18 and above at the time of the study, who had been hospitalized at the Child Psychiatric Unit of University Grenoble Alpes Hospital (France) for a first episode of anorexia nervosa between January the 1st 1986 and December the 31st 2003. AN diagnosis was made according to the DSM criteria (concordant with DSM-III-TR, DSM-IV and DSM-IV-TR) by a psychiatrist working in this psychiatric unit during hospitalization. As this unit takes care of youths under 16, this hospitalization was the first one for 98% of the patients included in the study. When several hospitalizations were required for a patient, data selected were those from the first admission.

Control group: female students and workers consulting for medical or dental purposes at the University Grenoble Alpes health care center, matched with patients by age, gender, and ethnicity. Individuals with a past medical history of eating disorders were not included in the study.

Exclusion criteria in both groups: males, participants under 18, participants with a chronic disease generating weight fluctuations at the time of study (endocrine, digestive, tumor…), or mental health issues (depression, psychosis, bipolar disorder, addiction – except for tobacco dependence).

Participants were asked written informed consent to take part in the study.

2.2. Procedure

Data were collected from medical records. AN patients received, after a phone call agreement, written information about the aim of the study, consent form, self-report questionnaires, and a prepaid return postage envelope. Patients were called back one and two months later, if no response was given. The control group was handed questionnaires at the University Grenoble Alpes health care center, which the participants returned when completed.

Seventy-three patients met inclusion criteria, six could not be located; 67 patients were contacted; 48 patients returned filled out questionnaires (``anorexia nervosa patients group"). Those who could not be located or who did not complete the questionnaires were included into the ``non-participants group" (see flow chart on Fig. 1).

Seventy-three participants were included in the control group (``control group"). Neither patients nor controls were given financial compensation for study participation. The research was reviewed by the local ethics committee center and approved by an institutional review board.

2.3. Measures

A demographic and medical data questionnaire was used including data on present and past medical history and current weight and height which were used to calculate the BMI.

Five other scales or subscales were administered in order to assess body satisfaction outcome, drive for thinness, eating disorders general symptomatology, perfectionism and negative affect. The 26-item Eating Attitude Test (EAT) was used to detect eating disorders symptomatology (French validation; Carrot et al., 1987) in association with BMI (Cronbach α total = 0.86 observed by Gleaves et al., 2014).

Two dimensions of the French translation (Bouvard and Cottraux, 2010) of the Eating Disorder Inventory (EDI) were used: the Drive for Thinness subscale (EDI-DT) in order to test the mediational hypothesis concerning body dissatisfaction and eating disorders outcome (Cronbach α subtests = 0.73–0.89 observed by Gleaves et al., 2014), and the Perfectionism subscale (EDI-P) in order to control for its moderating effect on the relationship between body dissatisfaction and eating disorder. We did not select the other EDI subscales as they were not directly related to our hypotheses.

The 34-item Body Shape Questionnaire (BSQ) was used to assess body dissatisfaction. As this outcome was of primary importance for the current study, we chose the BSQ rather than the EDI body dissatisfaction subscale. Validation studies of the original version (Cronbach α subtests = 0.85–0.97; Probst et al., 2008; Rosen et al., 1996), as well as that of the French version (Rousseau et al., 2005) in a non-clinical sample, showed good reliability and consistency.

To control for eventual mood impact on these dimensions, we also used the 13-item Beck Depression Inventory (BDI; French validation; Cronbach α subtests = 0.73–0.88; Bourque and Beaudette, 1982).