Appetite 80 (2014) 137–142

Contents lists available at ScienceDirect

Appetite

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

Research report

Turning eating psychopathology risk factors into action. The pervasive effect of body image-related cognitive fusion

Cláudia Ferreira, Lara Palmeira *, Inês A. Trindade

Cognitive and Behavioral Research Centre (CINEICC), Faculty of Psychology and Educational Sciences, University of Coimbra Rua do Colégio Novo, Apartado 6153, 3001-802 Coimbra, Portugal

ARTICLE INFO

Article history:
Received 29 May 2013
Received in revised form 15 May 2014
Accepted 18 May 2014
Available online 20 May 2014

Keywords:
Body image-related cognitive fusion
Eating psychopathology
Social rank
BMI
Body image dissatisfaction

ABSTRACT

Body image dissatisfaction and unfavourable social comparisons are significant risk factors to eating psychopathology. Nevertheless, the impact of these negative experiences depends on the cognitive and emotional processes involved. Previous research has shown that cognitive fusion is a nuclear process linked to psychological inflexibility, but its role on body image and eating difficulties remains unclear. This study aims to explore a model of the mediational role of body image-related cognitive fusion (CF-BI) on the relationship between body dissatisfaction, unfavourable social comparisons, and eating psychopathology in a sample of 345 female students. Results from path analyses show that the impact of unfavourable social comparisons on eating psychopathology is fully mediated by CF-BI. Moreover, CF-BI also revealed a mediational effect on the relationship between body image dissatisfaction and the severity of eating symptoms, in spite of the fact that a direct effect of body dissatisfaction still exists. The tested model highlights the crucial role that cognitive fusion, in the specific domain of body image, plays in the relationship between risk factors and the severity of disordered eating attitudes and behaviours. Furthermore, these findings present empirical support for the relevance of addressing acceptance and cognitive defusion techniques to prevent and treat eating disorders.

Introduction

Research has been highlighting the existence of multiple risk pathways in the development of eating psychopathology (Stice, 2001). Furthermore, body image dissatisfaction has been considered one of the key components of eating disorders (e.g., Stice, Marti, & Durant, 2011). More specifically, body image dissatisfaction can be due to the perception of a significant discrepancy between one's real body image and one's desired one, which in turn can precede eating disordered attitudes and behaviours, such as dieting (Higgins, 1987; Stice et al., 2011). Moreover, body image dissatisfaction has been associated with unfavourable social comparisons (Myers & Crowther, 2009; Trampe, Stapel, & Siero, 2007). In fact, unfavourable social comparisons (the tendency to perceive the self as inferior, inadequate and undesirable) appear to be associated with nuclear features of eating psychopathology, even when other variables are controlled for (Troop, Allan, Treasure, & Katzman, 2003).

The need to be accepted, valued and chosen by others is a universal and central aspect in humans, as well as other species (Gilbert, Price, & Allan, 1995). Related to this fundamental need is the process of social comparison, which can be conceptualized as an adaptive mechanism that allows the estimation of one's status within the group. When one realizes the main characteristics valued by the group, one can adapt behaviours or attributes and can make efforts to improve those domains in order to raise his/her status and avoid being rejected. In fact, the display of features considered by the group as attractive and valued often defines one secure social rank (Barkow, 1980). Therefore, presenting qualities (e.g., forms of beauty; Gilbert, 2002) valued by the group will offer important social advantages (e.g., positive social attention, approval and favourable appreciation from others). On the other hand, the perception of lower attractiveness or low social rank may turn relationships with the self and with others insecure and threatening, putting one at risk of being criticized or rejected (e.g., Gilbert, 1992). This often leads to negative consequences such as shame and defensive responses like anxiety and anger (Gilbert et al., 1995).

Furthermore, several studies argue that unfavourable social comparisons play a crucial role on the development of different psychopathological conditions, including eating disorders (e.g., Allan & Gilbert, 1995; Troop et al., 2003). Namely, it has been suggested that negative social comparisons based on physical appearance have an impact on body image dissatisfaction, and lead to an increased tendency to diet and seek thinness in both adolescents and adults (Myers & Crowther, 2009; Pinto-Gouveia, Ferreira, & Duarte, 2014).

In Western societies, having a valued physical appearance has become a major domain of one's social rank (Buote, Wilson, Strahan,

* Corresponding author.
E-mail address: larapalmeira@gmail.com (L. Palmeira).

http://dx.doi.org/10.1016/j.appet.2014.05.019
0195-6663/

Gazzola, & Papps, 2011; Ferreira, Pinto-Gouveia, & Duarte, 2013b; Gilbert, 2002) and is used to gather positive social attention (Ferreira, Pinto-Gouveia, & Duarte, 2013a; Gilbert, 2002; Troop et al., 2003). In fact, a thin body image (similar to the ones portrayed by models or celebrities) has been linked not only to feminine attractiveness, but also to positive attributes such as health, success, intelligence and happiness (Kanazawa & Kovar, 2004; Sypeck et al., 2006; Webster & Driskell, 1983).

To sum up, and although literature has been highlighting the role of body image dissatisfaction and unfavourable social comparisons in the development and maintenance of eating psychopathology, the mediational processes involved in this relationship remain less than clear. In fact, even though the majority of women are dissatisfied with their body image and show perceptions of unfavourable ranking, especially when comparing themselves with ideal models of physical attractiveness, only a minority develop an eating disorder. This seems to suggest that emotional regulation processes may play a crucial role in these psychopathological conditions. Growing evidence highlight that psychopathology is due not only to the presence of undesirable internal experiences, but mainly to the cognitive and emotional processes used to respond to them (Segal, Teasdale, & Williams, 2004).

In fact, Acceptance and Commitment Therapy (ACT) conceptualizes psychopathology as a condition of psychological inflexibility intrinsically linked to cognitive fusion, which arises when individuals become entangled with their private events (e.g., thoughts, emotions; Hayes & Gifford, 1997). In this line, cognitive fusion is defined as one's tendency to become caught up with the content of internal experiences (Luoma & Hayes, 2003). Thus, when fused with their thoughts, individuals tend to respond to them as if they were facts or they represent the truth, triggering experiential avoidance strategies (attempts to avoid, escape, modify or control the experience) and turning these internal experiences more painful. For example, someone entangled with his/her body dissatisfaction experiences (e.g., "I'm too fat") may refuse social events like meeting with friends or going to the beach, even if these are pleasurable and valued activities. Thereafter, one's life choices may become focused on controlling these unwanted internal experiences, which may compromise other personal or social goals (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

In conclusion, as it substantially increases one's experiential avoidance, cognitive fusion has been portrayed as a key component of psychological inflexibility and as a source and maintenance factor of harmful behaviours and emotional distress (Hayes, 2004; Hayes, Strosahl, Bunting, Twohig, & Wilson, 2004).

Recent theoretical and research findings consider that eating disorders can be viewed as an illness of psychological inflexibility or failed attempts to regulate negative sensations, thoughts and feelings (Baer, Fischer, & Huss, 2006; Merwin et al., 2011). However, regarding body image and eating psychopathology issues, cognitive fusion is a subject that is little explored. Even so, only a few studies have emphasized its relation to such conditions (e.g. Ferreira, Trindade, Duarte, & Pinto-Gouveia, 2013; Merwin & Wilson, 2009). Additionally, Hayes and Pankey (2002) found that patients with anorexia nervosa entangle themselves frequently with thoughts about their body image. Moreover, a recent study suggests that body image-related cognitive fusion plays an important role on eating psychopathology (Trindade & Ferreira, 2014).

The current study aims to complement these recent findings through the examination of a novel and integrative model for eating psychopathology. This model intends to explore the impact of risk factors for eating disorders (e.g. body mass index (BMI), body dissatisfaction and social rank) through body image-related cognitive fusion. It is hypothesized that body image-related cognitive fusion plays a mediation role on the relationship between nuclear risk factors and the severity of eating psychopathology.

Methods

Participants

The research was conducted in a sample that aimed to represent the risk population for eating psychopathology in relation to age and sex characteristics. The study included 345 female students aged between 13 and 36 ($M = 17.87$; $SD = 2.89$) years old, and with a mean of 11.43 ($SD = 2.47$) years of education. On average, participants had a BMI of 21.15 ($SD = 2.79$).

Measures

Demographic data

In the research protocol participants were asked about their age, completed educational level, current height and weight (and with such information, BMI (Wt/Ht^2) was calculated).

Figure Rating Scale (FRS; Ferreira, 2003; Thompson & Altabe, 1991)

The FRS was developed to assess body image dissatisfaction, and is comprised of a series of nine schematic figures of different sizes arranged in an increasing manner, according to its number (1–9). Participants are requested to select the silhouettes that best represent their present and ideal body images; the divergence between the two silhouettes offers a measure of body dissatisfaction (BD). The scale has shown good temporal, convergent and divergent validities (Thompson & Altabe, 1991).

Social Comparison Rating Scale (SCRS; Allan & Gilbert, 1995; Gato, 2003)

The SCRS is a 11-item scale that measures the relative perception of one's social standing. Items regard rank and attractiveness characteristics and are followed by a 10-point Likert scale with bipolar constructs (e.g. Inferior/Superior). For each item, the participants are asked to select a number which best portrays their social position in relation to others. Lower scores indicate higher levels of unfavourable social comparisons. The Cronbach's alphas of the scale were shown to range from .88 to .96 in clinical populations, and between .90 and .91 in student populations (Allan & Gilbert, 1995). The Portuguese version presented similar reliability values.

Social Comparison through Physical Appearance Scale (SCPAS; Ferreira et al., 2013b)

The SCPAS is a self-report measure of one's subjective perception of social position and group fit, based on physical appearance. Similarly to the SCRS, participants are asked to assess their perceived rank on a Likert scale ranging from 1 to 10 with bipolar constructs (e.g. Inferior/Superior). The scale is comprised of two parts, in which participants are asked to compare themselves physically with peers (part A) and models (part B). In this study only part B was used since we intended to assess participants' physical comparisons related to distal targets, namely models, actresses and celebrities. Lower scores characterize gradually higher levels of unfavourable social comparisons based on physical appearance. The SCPAS' part B presented good internal reliability in the original study (.96).

Cognitive Fusion Questionnaire: Body Image (CFQ-BI; Ferreira et al., 2013)

The CFQ-BI is a 15-item self-report scale that measures body image-related cognitive fusion. It was created by adapting CFQ-28's items (Gillanders et al., 2010) into statements concerning only body image issues (e.g., the item "My thoughts cause me distress or emotional pain" on CFQ-28 was adapted as "My thoughts relating to my body image cause me distress or emotional pain" in CFQ-BI). CFQ-BI presents a unidimensional factor structure as the CFQ