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# The impact of early shame memories in Binge Eating Disorder: The mediator effect of current body image shame and cognitive fusion

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ABSTRACT

This study examined the phenomenology of shame experiences from childhood and adolescence in a sample of women with Binge Eating Disorder. Moreover, a path analysis was investigated testing whether the association between shame-related memories which are traumatic and central to identity, and binge eating symptoms' severity, is mediated by current external shame, body image shame and body image cognitive fusion. Participants in this study were 114 patients, who were assessed through the Eating Disorder Examination and the Shame Experiences Interview, and through self-report measures of external shame, body image shame, body image cognitive fusion and binge eating symptoms. Shame experiences where physical appearance was negatively commented or criticized by others were the most frequently recalled. A path analysis showed a good fit between the hypothesised mediational model and the data. The traumatic and centrality qualities of shame-related memories predicted current external shame, especially body image shame. Current shame feelings were associated with body image cognitive fusion, which, in turn, predicted levels of binge eating symptomatology. Findings support the relevance of addressing early shame-related memories and negative affective and self-evaluative experiences, namely related to body image, in the understanding and management of binge eating.

## 1. Introduction

Binge eating has long been considered as a clinically significant problem (Stunkard, 1959), with significant negative psychological and physical health implications (Hudson et al., 2007; Kessler et al., 2013). Nonetheless, it was not until recently that Binge Eating Disorder (BED) was recognized as a distinct eating disorder diagnosis (DSM-5; American Psychiatric Association, 2013). The hallmark feature of BED is the occurrence of binge eating episodes, which involve the ingestion of an unusually large amount of food accompanied by a feeling of loss of control. Binge eating is often precipitated by and acts as a means of coping with negative affect (Dakanalis et al., 2014; Heatherton and Baumeister, 1991; Leehr et al., 2015. These episodes involve emotional distress and shame because of the binging behaviour, as well as concerns about the effects of these episodes on body weight, shape, and self-esteem. However, contrary to the currently established diagnoses of Bulimia Nervosa and Anorexia Nervosa, diagnostic criteria for BED does not require body image concerns for diagnosis (Ahrberg et al., 2011; Dakanalis et al., 2015b; Grilo, 2013).

Theoretical suggestions (Gilbert, 2002; Goss and Gilbert, 2002) and recent studies indicate that shame feelings, especially those related to body image (Duarte et al., 2015c), play an important role in the prospective development of binge eating symptoms (Dakanalis et al., 2014, 2015a) and in the persistence of binge eating symptoms in patients with BED (Dakanalis et al., 2015b; Duarte et al., 2015a; Jambekar et al., 2003). According to the biopsychosocial model of shame (Gilbert, 1998, 2002, 2007, 2003), humans are innately motivated to stimulate positive feelings in others and create a positive image of themselves, to fit within the social group. According to this perspective, shame acts as a warning signal that the individual is negatively evaluated by others, as unattractive, worthless, inferior or defective, because of his/her personal characteristics, attributes or behaviours (e.g., physical appearance or eating behaviour; Gilbert, 1998; Gilbert, 2003). These negative evaluations may also become the basis for self-evaluation (Gilbert, 1998; Kaufman, 1989). As a consequence, a series of defensive behaviours (e.g., concealment, avoidance) are activated to decrease the probability of such potential social threats (Gilbert, 1998, 2002, 2007, 2003).

Shame is significantly associated with eating psychopathology symptoms in nonclinical (e.g., Gee and Troop, 2003; Murray et al., 2000; Sanftner et al., 1995) and in clinical samples with eating disorders (Duarte et al., 2016; Grabhorn et al., 2006; Swan and Andrews, 2003). More specifically, Duarte et al. (2014), in a study conducted in a nonclinical sample of women from the general population, found that

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body shame had a significant effect on binge eating symptoms, above overall negative affectivity. Moreover, in a recent study conducted in a clinical sample of women with BED (Duarte et al., 2015a), the effect of shame on the severity of binge eating symptoms was found to be influenced by the extent to which these negative evaluations are associated with cognitive fusion with body image cognitions (Ferreira et al., 2015).

Cognitive fusion is theorized by the Acceptance and Commitment Therapy psychopathology model (Hayes et al., 2011) as a process that involves the tendency to relate to internal experiences (e.g., thoughts, memories) as though they were literally true and permanent. When "fused" the individual's behaviours become overly dominated by cognition, rather than by other sources of behavioural regulation and despite of actual negative consequences (Gillanders et al., 2014; Hayes et al., 1999; Luoma and Hayes, 2003). In fact, cognitive fusion triggers experiential avoidance, that is, attempts to avoid, modify, reduce or control such internal experiences. However, these attempts are futile, carrying the unintended consequence of increasing the frequency and intensity of these undesired internal experiences and deteriorating the individual's mental health (Hayes et al., 1999; Luoma and Hayes, 2003). Specifically, body image cognitive fusion involves the tendency to become fused with disturbing cognitions about one's body (Ferreira et al., 2015). Research suggest that it is this entangled relationship with shame-related evaluations and body image-related cognitions that may foster maladaptive attempts to avoid these internal events (e.g., through binge eating; Duarte et al., 2015a; Hayes et al., 1999; Luoma and Hayes, 2003).

Shame-related feelings and cognitions may have its roots in early negative shame experiences, such as being criticized by parents, bullied by peers, sexually or physically abused, or displaying negative characteristics of the self to others (Gilbert, 2007; Gilbert et al., 1996; Matos et al., 2013; Tangney and Dearing, 2002). Research shows that these experiences can be recorded in autobiographical memory as central to identity and life story (Pinto-Gouveia and Matos, 2011), influencing subsequent cognitive, emotional and attentional processing (Baumeister et al., 2001; Berntsen and Rubin, 2006, 2007; Gilbert et al., 2003; Schore, 1994). Moreover, there is evidence that these early shame experiences can be encoded as traumatic memories (Matos and Pinto-Gouveia, 2010). These shame traumatic and central memories have been associated with current shame feelings and evaluations (Matos et al., 2013), difficulties in emotion regulation (Pinto-Gouveia et al., 2013), experiential avoidance (Dinis et al., 2015), and with a range of psychopathological indicators (Matos and Pinto-Gouveia, 2010; Pinto-Gouveia and Matos, 2011). Moreover, recent studies conducted in a mixed sample of patients with eating disorders showed that shame-related memories have a significant effect on the severity of eating disorder symptoms (Ferreira et al., 2014a) and that this effect is mediated by the extent to which these memories influence current self-evaluations (Matos et al., 2014).

There is evidence that early negative experiences are a risk factor for BED (Caslini et al., 2016; Jackson et al., 2000; Pike et al., 2006;). Fairburn et al. (1998) found that women with BED revealed greater exposure to adverse childhood experiences (e.g., parental criticism, peer bullying, sexual or physical abuse, critical comments about weight, shape or eating) than women without eating disorders or with other psychiatric disorders. Another study identified sexual abuse as a risk factor for BED (Striegel-Moore et al., 2002). However, the specific impact of shame experiences and their phenomenology in patients with BED and the pathways through which they may operate on the severity of the disorder, were never investigated.

The current study explores early shame experiences in a sample of women diagnosed with BED. Moreover, we sought to test the hypothesis that the extent to which these experiences are recalled as traumatic and central to identity is indirectly associated with the severity of binge eating symptoms, via the effect on current external shame, namely external body shame. External body shame, in turn, is hypothesised to potentially impact binge eating symptoms via the process of body image cognitive fusion.

## 2. Methods

### 2.1. Subjects

The sample of this study consisted of 114 women with the diagnosis of BED. Participants were 20–63 years of age, with a mean of 36.62 years ($SD$ = 37.62). Their years of education mean was 14.57 ($SD$ = 5.93). All participants were Portuguese and Caucasian. The majority were married or cohabiting with a partner (52.6%). Forty patients (35.15%) worked in middle class professions and 25 (21.9%) were students. Participants body mass index (BMI) ranged from 16.59 to 53.07, with a mean of 33.79 ($SD$ = 7.75). One (0.88%) participant was low weight (18.5 < BMI); 19 (16.66%) had normal weight (18.5 < BMI < 24.99), 15 (13.16%) were overweight (25 < BMI < 29.99), 28 (24.56%) presented Class I Obesity (30 < BMI < 34.99), 22 (19.30%) presented Class II Obesity (BMI > 35 < 39.99), and 26 (22.81%) presented class III Obesity (BMI ≥ 40); BMI was not calculated for three participants due to instruments unavailability during the respective assessment sessions (World Health Organization, 2011).

### 2.2. Measures

#### 2.2.1. Body mass index (BMI)

The participants' BMI was calculated by dividing the weight (in kg) by height squared (in m), which were collected with standard calibrated instruments.

#### 2.2.2. Eating disorder examination 17.0D (EDE 17.0D; Fairburn et al., 2008)

The EDE is a standardized clinical interview that allows a comprehensive assessment of the frequency and severity of the key behavioural and psychological features of eating disorders. This interview was administered in the current study to examine whether the patients met the diagnostic criteria for BED, according to the DSM-5 criteria. Research consistently supports that EDE has high internal consistency, discriminant and concurrent validity and good test-retest reliability (for a review see Fairburn et al., 2008). In the current study, a Cronbach's alpha estimate of 0.83 was obtained for the total score.

#### 2.2.3. Shame experiences interview (SEI; Matos and Pinto-Gouveia, 2014)

The SEI is a semi-structured interview that comprehensively assesses the occurrence and characteristics of a shame experience in childhood or adolescence, including its emotional, cognitive, behavioural and contextual aspects. The SEI was developed and examined in nonclinical samples (aged 18–62) and in a mixed clinical sample (aged 17–55; Matos and Pinto-Gouveia, 2014) and was previously applied to patients with eating disorders (aged 14–49; Ferreira et al., 2014a; Matos et al., 2014). To promote a de-shaming and supportive context, the SEI starts by explaining to the participants the concept of shame, by normalizing experiences of shame as common occurrences in all individuals throughout life, and by providing some examples of shame experiences from childhood and adolescence. The participant is then asked to recall and describe a personal significant shame experience from childhood or adolescence. The characteristics of the recalled shame experience are then assessed throughout the interview.

After recalling and describing the shame experience, participants were asked to fill the self-report measures Centrality of Event Scale (Berntsen and Rubin, 2006) and Impact of Event Scale – Revised (Weiss and Marmar, 1997) in relation to the recalled shame experience.

#### 2.2.4. Centrality of event scale (CES; Berntsen and Rubin, 2006)

The CES assesses the extent to which a memory for a distressing life