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The buffer effect of body compassion on the association between shame and body and eating difficulties

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ABSTRACT

Body compassion is a new construct which incorporates two multidimensional concepts: body image and self-compassion. Self-compassion has been revealed as a protective mechanism against body image and eating-related-related disturbances, including eating disorders. However, the study of this compassionate competence specifically focused on the domain of the body is still largely unexplored.

This study aims to test whether body compassion moderate the impact of external shame on body image shame and disordered eating, in a sample of 354 women from the Portuguese general population.

Correlation analyses showed that body compassion was negatively associated with experiences of shame and disordered eating. Path analysis results demonstrated the existence of a moderator effect of body compassion on the relationship between general feelings of shame and both body image shame and related behaviours, and disordered eating symptomatology. In fact, results suggested that body compassion buffered the impact of general feelings of shame on these psychopathological indices, with the tested model accounting for 46% and 39% of the variance of body image shame and disordered eating, respectively.

This study contributes to a better understanding of the role of body compassion in body image and eating difficulties. Body compassion seems to be an important protector of these difficulties in women by buffering the effects of general shame on body image shame and related body concealment behaviours, as well as disordered eating. The findings from this study thus appear to offer important research and clinical implications, supporting the relevance of promoting body compassion in prevention and treatment programs for body image difficulties and disordered eating.

1. Introduction

There is a large body of evidence showing that compassionate skills may protect against a broad range of physical and mental health problems (e.g., Gilbert, 2010; Homan & Sirois, 2017). Particularly, self-compassion is defined as an adaptive emotion regulation strategy that involves the sensitivity to the suffering of the self and the motivation to engage in helpful actions to prevent or alleviate it (e.g., Dalai Lama, 2001; Gilbert, 2005, 2010). According to Neff (2003, 2004), self-compassion entails the ability to understand and accept in a kind and supportive manner one's negative experiences or difficulties (e.g., personal setbacks, inadequacies, imperfections, or failures). These self-compassionate abilities encourage individuals to accept and embrace their perceived inadequacies or negative experiences (such as shame) with a mindful attitude and a sense of connectedness, which promotes the adoption of effective and health behaviours (Neff, 2004).

A growing body of research has shown that self-compassion is positively linked with positive affect, psychological well-being and social connectedness, and can be a powerful antidote to a variety of physical and mental health conditions (e.g., Gilbert, 2005; Hall, Row, Wuensch, & Godley, 2013; Pinto-Gouveia, Duarte, Matos, & Fráguas, 2014). Indeed, there is growing recognition that self-compassion may have a protective effect and promote well-being by buffering the impact of negative, distressing and challenging life experiences (e.g., Neff, 2004; Pinto-Gouveia et al., 2014). Research has consistently demonstrated that self-compassion can have a salient and beneficial impact in weight and body image-related difficulties and disordered eating behaviour, both in clinical and nonclinical samples (Ferreira, Pinto-Gouveia, & Duarte,

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2013; Marta-Simões, Ferreira, & Mendes, 2016; Pinto-Gouveia, Ferreira, & Duarte, 2014; Wasylkiw, MacKinnon, & MacLellan, 2012). In particular, research conducted with women shows that self-compassion is associated with low feelings of shame, unfavourable social comparisons (Ferreira et al., 2013), and body image concerns (Wasylkiw et al., 2012), lower levels of eating psychopathology (Pinto-Gouveia et al., 2014).

Empirical evidences suggest that self-compassionate abilities may have a buffer effect against the impact of body dissatisfaction, body shame and body surveillance on quality of life and the severity of disordered eating (e.g., Daye, Webb, & Jafari, 2014; Duarte, Ferreira, Trindade, & Pinto-Gouveia, 2015; Ferreira, Matos, Duarte, & Pinto-Gouveia, 2014; Kelly, Vimalakanthan, & Miller, 2014). However, the study of these compassionate competences specifically focused on the domain of the body remains largely unexplored in spite of the recent development of a measure of body compassion (Altman, Linfield, Salmon, & Beacham, 2017). This construct was developed from the overlap of two constructs: body image (Cash, 2000) and self-compassion (Neff, 2003). Body compassion is a multidimensional construct that comprises three factors: (1) defusion (i.e., an attitude of decentering or mindfulness, rather than an attitude of over-identification with one's body limitations or inadequacies); (2) common humanity (i.e., the ability to face one's body image negative experiences as part of the human rather than adopting an isolating or shaming perspective; and (3) acceptance (i.e., acceptance in a kind manner of body-related painful thoughts and feelings, rather than being judgmental; Altman et al., 2017). This construct offers a novel conceptualization of body-related difficulties and well-being suitable to mindfulness, compassion, and acceptance-based approaches (Altman et al., 2017). Altman et al. (2017) highlighted that higher levels of body compassion were positively linked with body image flexibility and positive affect, and negatively associated with disordered eating and lower levels of negative affect.

Growing evidence has demonstrated that shame significantly impacts on individuals' sense of self, well-being and vulnerability to psychopathology (e.g., Gilbert, 1998). Shame is a painful self-conscious and universal emotion (e.g., Gilbert, 1998), which arises from the experience of being seen by others as inferior, weak inadequate or unattractive – external shame (Gilbert, 1998; Tangney & Dearing, 2002). Particularly, shame feelings involve the sense that one holds negative qualities or lacks attractive ones and fails to create a positive image and positive feelings on others. Shame can have a detrimental impact on mental health problems, especially in body and eating maladaptive attitudes and behaviours, (Ferreira et al., 2013; Ferreira et al., 2014; Goss & Gilbert, 2002; Skarderud, 2007). Shame has been regarded as a central feature of the development and maintenance of body image and eating-related symptomatology (Goss & Gilbert, 2002; Hayaki, Friedman, & Brownell, 2002; Pinto-Gouveia et al., 2014).

Particularly, in women, physical appearance is a crucial dimension for self-evaluation on whether one is accepted and valued by others (e.g., Gatward, 2007; Gilbert, 2002). Women who perceive that their physical appearance is negatively perceived by others may be more prone to shaming experiences. The perception that body image makes the self-inferior, unattractive, undesirable, and vulnerable to criticism or rejection has been conceptualized as body shame (e.g., Duarte, Pinto-Gouveia, Ferreira, & Batista, 2015; Gilbert & Miles, 2002). This content-specific emotion has been linked to several psychological distress and psychopathological symptoms (such as external shame, anxiety and depressive symptoms; Duarte, Pinto-Gouveia, et al., 2015). Moreover, body image shame is highly associated with weight and shape concerns, body concealment and avoidance behaviours, and eating psychopathology (Castonguay, Brunet, Ferguson, & Sabiston, 2012; Duarte, Pinto-Gouveia, Ferreira, & Batista; Duarte, Pinto-Gouveia, et al., 2015).

Given the pervasive and negative impact of body image shame and disordered eating, it is considered that research should focus on the analysis of potential protective factors of these difficulties so intervention and prevention programmes on these areas can be more comprehensive and helpful. Considering that body compassion is an ability that can be cultivated through mental training, and given the aforementioned association of body compassion with low levels of negative affect and disordered eating, body compassion may be a key variable in this area. The current study therefore aims to explore whether body image and eating difficulties can be attenuated by body compassion. It is expected that body compassion will buffer the relationships of general feelings of shame with body image shame and related concealment behaviours, and with disordered eating.

2. Material and methods

2.1. Participants

The sample of this study comprised 354 women from the Portuguese general population. The mean age was 28.70 ($SD = 10.02$), ranging from 18 to 62. The mean of completed years of education was 14.77 ($SD = 2.85$). Participants' Body Mass Index (BMI) ranged from 15.94 to 44.08, with a mean of 22.97 ($SD = 3.94$) Kg/m^2, which corresponds to normal weight values (WHO, 1995). Moreover, the sample's BMI distribution was revealed to be equivalent to the female Portuguese population (Poínhos et al., 2009).

2.2. Measures

Demographic data: participants reported their age, sex, education level, area of residence, marital status, and current weight and height.

Body Mass Index (BMI): BMI was calculated using the Quetelet Index based on from self-reported participants' height and weight (kg/m^2).

The Other as Shamer Scale – 2 (OAS-2; Matos, Pinto-Gouveia, Gilbert, Duarte, & Figueiredo, 2015). OAS-2 is a shorter version of the OAS (Goss, Gilbert, & Allan, 1994), designed to evaluate levels of external shame (i.e., the perception of being negatively evaluate and judge by others). It comprises 8 items such as "Other people see me as small and insignificant" or "Other people see me as defective as a person" scored on a 5 point scale from 0 ("Never") to 4 ("Almost always"). In the original study, the scale showed high internal consistency (Cronbach's alpha = 0.82).

Body Compassion Scale (BCS; Altman et al., 2017; Ferreira, Marta-Simões, & Oliveira, 2017). BCS is a self-report questionnaire with 23 items which evaluates an attitude of compassion specifically towards one's body. It comprises three subscales: Defusion (e.g., "When I notice aspects of my body that I do not like, I get down on myself"- reverse item); Common humanity (e.g., "When I feel out of shape, I try to remind myself that most people feel this way at some point"); and Acceptance (e.g., "I am accepting of my looks just the way they are"). Participants are invited to rate each item using a 5-point scale, ranging from 1 ("Almost never") to 5 ("Almost always"). The original BCS and its Portuguese version demonstrated good internal consistency, presenting Cronbach's alphas of 0.92 and 0.91, respectively.

Body Image Shame Scale (BISS; Duarte, Pinto-Gouveia, et al., 2015). BISS comprises 14 items and assesses the experience of body image shame (perceptions that one is negatively evaluated or judged by others due to their physical appearance; external dimension), negative self-evaluations due to one's physical appearance (internal dimension), and consequent avoidance and

Table 1
Means (M), Standard Deviations (SD), Cronbach's alpha (α), and intercorrelation scores on self-report measures (N = 354).

	M	*SD*	α	1.	2.	3.
1.External Shame	8.64	5.45	0.91	–	–	–
2.Body Compassion	76.82	15.54	0.91	−0.47***		
3.Body Image Shame	15.19	12.47	0.95	0.55***	−0.59***	
4.Disordered Eating	1.19	1.18	0.95	0.43***	−0.59***	0.70***

Note: ***$p < .001$. External shame (assessed by The Other as Shamer Scale – 2 - OAS-2); Body Compassion (assessed by Body Compassion Scale - BCS); Body Image Shame (assessed by Body Image Shame Scale - BISS); Disordered Eating (as measured by Eating Disorder Examination Questionnaire - EDE-Q).

body image concealment behaviours. Participants are asked to rate the items using a 5-point scale from 0 ("Never") to 4 ("Almost always"). In the original study, BISS revealed high internal consistency (α = 0.92).

Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994; Machado et al., 2014). EDE-Q is a 36-item self-report version of EDE, composed of which assesses the frequency and intensity of disordered eating attitudes and behaviours. It comprises four subscales: restraint, weight concern, shape concern and eating concern, which together compose a disordered eating severity score. A global score may be obtained by calculating the mean of the subscales' scores. The items are rated for the frequency of occurrence (items 1–15, on a scale ranging from 0 = "None" to 6 = "Every day") or symptom severity (items 29–36, on a scale ranging from 0 = "None" to 6 = "Extremely"). The global score of the questionnaire was used in the current study. The original and Portuguese versions of EDE-Q showed good psychometric properties with Cronbach's alpha estimates of 0.94.

Internal consistency of these measures in the current study are reported in Table 1.

2.3. Procedures

The current study was part of a wider research about the role of different emotion regulation processes on women's mental health. Data collection and other study procedures respected all ethical and deontological requirements inherent to scientific research. Participants were obtained through online advertisements on social networks (Facebook) and by e-mail invitations, in which was included a text that clarified the procedure, aims of this study, and participants' selection criteria. All individuals who accepted to take part in this study provided their written inform consent previously to answering an online version of self-report measures.

2.4. Data analyses

Descriptive and correlational analyses were performed using the software IBM SPSS (v.22; SPSS Inc., Chicago, IL), in order to examine the characteristics and the associations between external shame, body compassion, body image shame, and the severity of disordered eating.

In order to test the moderator effect of body compassion (BCS) in the relationship between external shame (OAS-2) and body image shame and related attitudes and behaviours (BISS), and disordered eating severity (EDE-Q) a path analysis was performed (Fig. 1), using the software the AMOS (version 21, SPSS; Armonk, NY: IBM Corp.) The model examined three causal paths to BISS and EDE-Q (endogenous, dependent variable): (a) the impact of external shame; b) the impact of body compassion; c) the impact of the interaction term of external shame and body compassion (obtained through the product of these variables). The moderation effect is corroborated if the interaction path is significant. The Maximum Likelihood method was used to estimate all model path coefficients, and effects with $p < .050$ were considered statistically significant. Finally, two graphs were plotted to better understand the relationships between the predictor (OAS-2) and outcome variables (BISS and EDE-Q), at different levels – low, medium, and high - of the moderator (BCS). In these graphical representations, and since there were no theoretical cut points for BCS, the three curves were plotted taking into account the following cut-point values of the moderator variable on the x axis: one standard deviation below the mean, the mean, and one standard deviation above the mean, as recommended by Cohen and colleagues (Cohen, Cohen, West, & Aiken, 2003).

3. Results

3.1. Preliminary analysis

Univariate and multivariate normality was examined by the values of Skewness and Kurtosis, which indicated that there was no severe violation of the normal distribution (Kline, 2005).

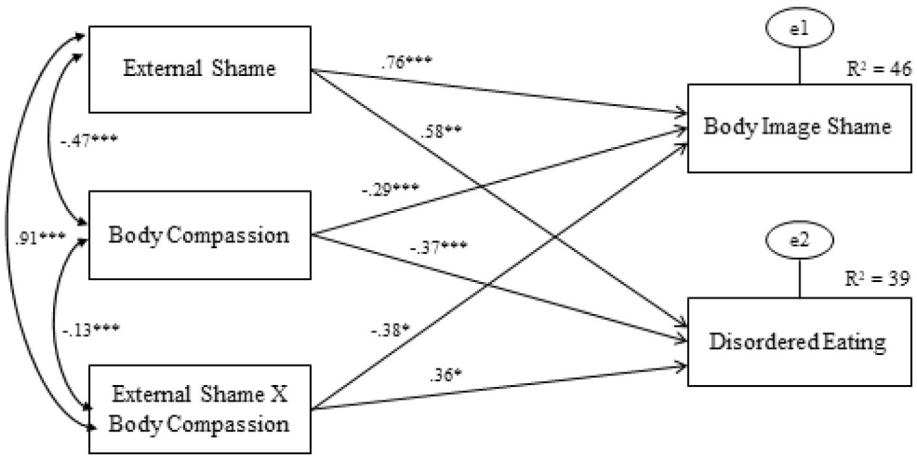

Fig. 1. Path model. *Note*: ***$p < .001$,**$p < .01$; *$p < .05$; The moderator role of body compassion on the association between external shame (OAS-2) and body image shame (BISS), and between external shame (OAS-2) and disordered eating (EDE-Q).

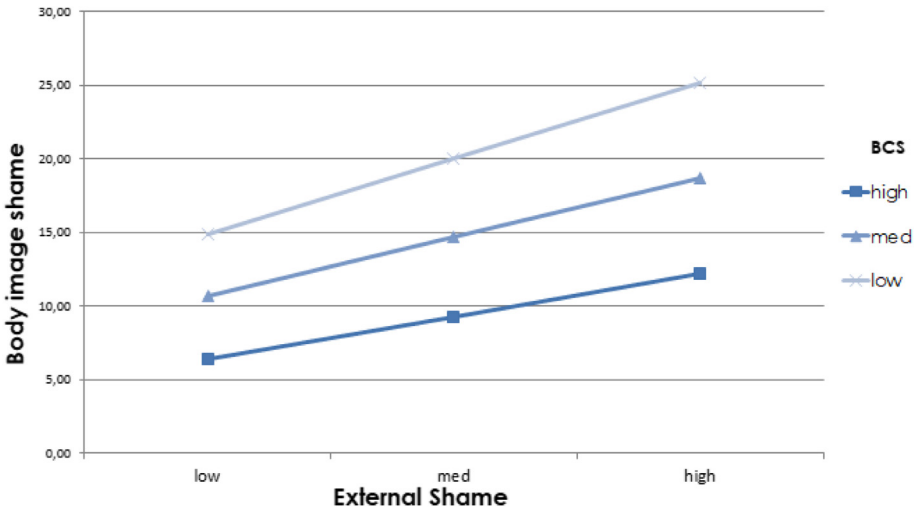

Fig. 2. Graphic for the relation between external shame and body image-focused shame and related attitudes and behaviours with different levels of body compassion (BCS).

3.2. Descriptive and correlations analyses

Descriptive statistics referring to the study's variables are presented, for the total sample ($N = 354$), in Table 1.

Correlation results demonstrated that external shame revealed a negative moderate association with body compassion, and positive associations with body image shame and disordered eating (as measured by EDE-Q), with strong and moderate magnitudes, respectively. Moreover, body compassion were negatively and highly associated with BISS and EDE-Q, which, in turn, were positively and strongly associated with each other.

3.3. Path analysis

The purpose of the path analysis was to examine whether body compassion moderated the impact of general feelings of shame on body shame and related behaviours and on disordered eating severity. This model was tested through a fully saturated model (i.e., with zero degrees of freedom) and comprised 14 parameters. Results indicated that all paths coefficients in the model were statistically significant ($p < 0.050$) and explained 46% of the variance of body image shame 39% of the variance of disordered eating (Fig. 1).

First, the relationships between external shame (OAS-2), body compassion (BCS), and body image-focused shame (as measured by BISS) was analysed. OAS-2 had a positive direct effect of 0.76 on body image shame ($b_{OAS\text{-}2} = 1.74$; $SE_b = 0.40$; $Z = 4.40$; $p < 0.001$). In turn, BCS presented a direct effect of −0.29 ($b_{BCS} = -0.23$; $SE_b = 0.06$; $Z = -4.03$; $p < 0.001$) towards BISS. Furthermore, the interaction effect between external shame and body compassion presented significant direct effects on body image shame ($b_{OAS\text{-}2XBCS} = -0.01$; $SE_b = 0.01$; $Z = -2.46$; $p = 0.01$; $\beta = -0.38$). All of the analysed effects were significant and results seem to indicate the presence of a moderator effect of body compassion on the association between external shame and body image shame.

Concerning the association between external shame (OAS-2), body compassion (BCS) and disordered eating (as measured by EDE-Q), OAS-2 presented a direct effect of .58 ($b_{OAS\text{-}2} = 0.13$; $SE_b = 0.04$; $Z = 3.20$; $p = 0.001$) on EDE-Q. BCS had a direct effect of −.37 ($b_{BCS} = -0.03$; $SE_b = 0.01$; $Z = -4.85$; $p < 0.001$) on EDE-Q. Also, results showed that the interaction effect between the two variables was significant ($b_{OAS\text{-}2XBCS} = -0.001$; $SE_b = 0.001$; $Z = -2.20$; $p = 0.028$; $\beta = 0.36$). All of the analysed effects were significant and suggested for the existence of a moderator effect of body compassion on the relationship between general feelings of shame and disordered eating symptomatology.

To better understand the relationship between general feelings of shame with body image shame and eating psychopathology severity in the presence of different levels of body compassion, two graphs were plotted (Fig. 2 for body shame and related attitudes and behaviours; Fig. 3 for disordered eating), considering three body compassion levels (low, medium and high), as assessed by Body Compassion Scale (BCS).

The graphic representation of the moderation analyses results revealed that, for the same levels of external shame, women who present low levels of body compassion tend to show more severity of body image-focused shame (Fig. 2) and disordered eating (Fig. 3), in comparison to those who present medium and high levels of body compassion (BCS).

4. Discussion

The present study underlines the moderator effect of body compassion in the known relationship between experiences of shame and body difficulties and disordered eating.

Results were consistent with previous research, suggesting that external shame is linked to body image shame (e.g., Duarte, Pinto-Gouveia, et al., 2015) and also to disordered eating (Skarderud, 2007; Troop, Allan, Serpell, & Treasure, 2008). Moreover, our study corroborated a positive and strong association between body image shame (and associated attitudes and behaviours) and eating psychopathology severity (e.g., Duarte, Pinto-Gouveia, et al., 2015), and extended literature by revealing a negative correlation between body compassion and indicators of psychopathology (namely, body image shame and eating psychopathology). This finding is in line with previous studies on the negative effects of body compassion on negative affect (Altman et al., 2017) but also provides further information on the association between body compassion and lower levels of body image shame and disordered eating.

To further examine the potential protective role of body compassion in regard to body image and eating difficulties, the moderator effect of body compassion on the relationships of external shame with body image shame and eating psychopathology severity, was tested through a path analysis. The model accounted for 46% of the variance of body image shame and 39% of

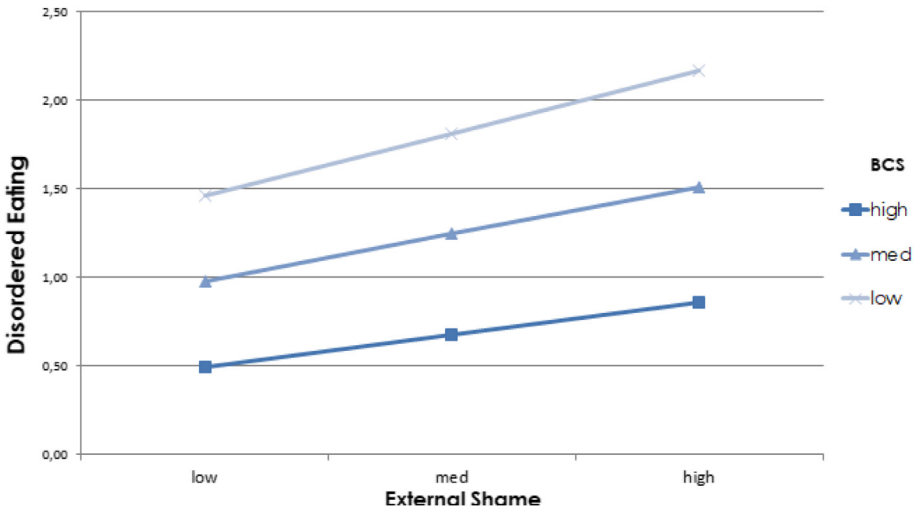

Fig. 3. Graphic for the relation between external shame and disordered eating with different levels of body compassion (BCS).

the variance of disordered eating and confirmed our hypothesis.

Results seem to show that both general feeling of shame and body compassion explain the perception that body image makes the self-inferior, unattractive, undesirable, and vulnerable to criticism or rejection (body image-focused shame) and the engagement in disordered eating attitudes and behaviours (eating psychopathology). Data also suggested a significant moderator effect of body compassion on shame's negative association with body image shame and with eating psychopathology. These results seem to suggest that in females who present higher levels of body compassion, the impact of external shame on both body image shame and eating psychopathology is attenuated. Taken together, results of the two moderator analyses showed that the interaction between general feelings of shame and body compassion revealed an expressive and significant effect upon overall levels of body image-focused shame and disordered eating severity. The same is to say that, for the same level of external shame, those women who present higher levels of body compassion tend to present lower severity of body shame and eating psychopathology, comparatively to those who reveal lower levels of body compassion. These findings seem to suggest that body compassion can buffer the pervasive effect of general feelings of shame and a sense of inferiority on body and eating difficulties. This effect is more intense when general feelings of shame are higher. This finding goes in line with literature that has shown that it is when shame levels are high that this emotion presents a more significant and pernicious effect on mental health (Gilbert, 1998, 2002). Moreover, the way one deals with such levels of shame also seems to determine its impact, as has been previously demonstrated (Oliveira, Ferreira, Mendes, & Marta-Simões, 2017). The present study goes beyond this literature by demonstrating for the first time that body compassion may influence shame's impact on important health outcomes, namely body image and eating-related outcomes.

The moderator effect of body compassion seems to be a key finding that extends previous research (Altman et al., 2017) by suggesting that body-related defusion, common humanity and acceptance abilities may have a beneficial effect on body and eating difficulties and may have relevant clinical implications in prevention and intervention programmes aiming to improve body image and eating difficulties in women. Indeed, it seems that body compassion may be an important mechanism to be developed and promoted in such programmes and may increase their efficacy in reducing shame and maladaptive behaviours such as body concealment, avoidance of activities where one's body may be exposed, unhealthy body image concerns, and disordered eating behaviours.

The current study has some important limitations that should be noted. The cross-sectional design does not allow for causal interpretations of the findings. Future studies should have longitudinal designs in order to determine the directionality of the relationships and to corroborate the effects of body compassion on body image and eating difficulties. In particular, it seems of especial relevance to conduct studies with latent growth models as follow-up studies of the current study. These models would allow the analysis of the effect of body compassion on interpersonal differences and intrapersonal changes in body image and eating variables. Secondly, the use of self-reported measures may compromise the validity of the data. Also, the use of a sample exclusively composed of female participants represents an important limitation. Even though body image shame and eating psychopathology are more prevalent in women, men also experience body image-related difficulties and this study sample does not allow the generalization of the obtained results. Future studies should thus be conducted using different samples (e.g., male and clinical samples). Finally, since body image shame and eating psychopathology have multi-determined and complex natures, other variables (e.g., humiliation experiences, dieting) and emotional regulation processes (e.g., self-criticism, self-compassion, body image flexibility) may be involved. However, the model's design was purposely limited in order to explore the specific role of body compassion.

This is the first study examining the moderator effect of body compassion in the association between experiences of shame and disordered eating. In fact, our findings provide an empirical support of the beneficial role of body compassion by revealing the buffer effect of body compassion on the association between shame and body and eating difficulties in women. These findings appear to offer important research and clinical implications, encouraging the development of body compassion-based intervention programs to address body image and eating-related difficulties. In accordance, future interventions should promote abilities of decentering, the recognition that body negative experiences are shared human experiences, and develop an attitude of acceptance of body-related unwanted or negative body perceptions, thoughts and/or feelings in order to enhance body and eating healthy attitudes and behaviours.

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