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Childhood trauma and body dissatisfaction among young adult women: the mediating role of self-criticism

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Abstract
The present study examined the relationship between childhood trauma and body dissatisfaction among young women. The mechanisms through which childhood trauma are related to body dissatisfaction have not been sufficiently examined previously. The aims of the present study were to analyze the (i) relationships between childhood trauma, self-criticism, and body dissatisfaction and (ii) mediating role of self-criticism in the relationship between childhood trauma and body dissatisfaction. A total of 754 young adult women aged 18 to 30 years participated ($M = 20.49$ years; $SD = 2.28$). The findings showed positive correlations between childhood trauma, self-criticism, and body dissatisfaction. The mediation model indicated that (i) greater childhood trauma was associated with greater self-criticism, and (ii) greater self-criticism was significantly associated with greater body dissatisfaction. Therefore, childhood trauma was indirectly associated with increased body dissatisfaction and explained by the positive relationship with increased self-criticism. These results highlight the importance of childhood trauma in body dissatisfaction among young adult women and demonstrates self-criticism coping style as a key factor in this relationship. Early detection of self-criticism-based coping styles and childhood trauma could improve (i) quality of life and prevent the onset of body dissatisfaction, and (ii) treatment planning and prevent body dissatisfaction from escalating into major problems (e.g., eating disorders, body dysmorphic disorder, morbid exercise and/or depressive symptomatology).

Keywords Childhood trauma · Self-criticism · Body image · Body dissatisfaction · Mediation analysis

Introduction

Body image refers to the subjective image that individuals have of their own body irrespective of its actual appearance. It is a complex and multidimensional construct that comprises an individual's personal identity and encompasses thoughts, beliefs, and feelings about their own body, as well as evaluations and behaviors such as reviews and comparisons (Yamamotova et al., 2017).

Negative body image is often referred to as body image distortion or body dissatisfaction. It can be defined as the negative attitude and evaluation by an individual towards their own physical appearance originating from a discrepancy between the individual's perception of their own body image and the idealized body image or desired ideal state of the body (Heider et al., 2018). It is characterized by a great dissatisfaction with the body in general or some part(s) of it. In addition, it is also often related to continuous preoccupation with appearance and engaging in dysfunctional behaviors such as frequently checking body parts in the mirror, frequently weighing themselves, hiding the body or part(s) of the body and/or avoiding social situations. Body dissatisfaction generates intense discomfort and can negatively affect an individual's physical and psychological health by influencing self-esteem, mood, and social and occupational functioning (Lantz et al., 2018). It is a dynamic concept that changes with age, mood, and changing social influences (Hosseini & Padhy, 2022).

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Body dissatisfaction is not only common in the general population but is a central component underlying several serious illnesses, such as body dysmorphic disorder, morbid exercise, eating disorders, depressive symptomatology, ongoing negative affect, and suicidal ideation (Alcaraz-Ibáñez et al., 2021; McLean et al., 2021; Perkins & Brausch, 2019; Soares et al., 2020; Weinberger et al., 2016). Recently, it has been noted that body dissatisfaction is pervasive in society and that it generates much discomfort and suffering among individuals (Sala et al., 2021). Furthermore, it has been highlighted that it is females who suffer more body dissatisfaction compared to males (Karazsia et al., 2017).

Adolescence is a critical period in the development of body image because it is considered a transition period from childhood to adulthood. It is influenced by different factors including gender, fashion, peer group, education, social influences, family influences, and physical changes that occur at this stage of the life cycle (Aparicio-Martinez et al., 2019; Jiotsa et al., 2021; Paterna et al., 2021). All of these factors also comprise established risk and maintenance factors for body dissatisfaction (McLean & Paxton, 2019; Smith et al., 2020). Previous research has shown that positive established relationships with parents, especially mothers, can be a protective factor against body dissatisfaction (de Vries et al., 2019). Moreover, critical messages exerted by mothers concerning body appearance ideals have been found to exert a significant impact on the development of body dissatisfaction for girls. Overall, findings demonstrate that secure relationships established with parents predict greater body satisfaction and less likelihood of establishing beliefs related to the need for adherence to appearance ideals in order to receive approval or acceptance from others (Hosseini & Padhy, 2022).

In contrast, previous research has shown a strong association between childhood trauma and negative early life experiences and body dissatisfaction. However, the mechanisms through which these associations occur are less clear (Monteleone et al., 2021; Vartanian & Hayward, 2020). To date, studies have focused on addressing trauma and adverse childhood experiences among individuals with eating disorders (Pauls et al., 2022). The presence of childhood traumatic experiences is very high among individuals with an eating disorder, especially emotional abuse (Brustenghi et al., 2019). For this reason, recent studies have attempted to explore the mediating factors between traumatic experiences and the development of eating disorders such as emotional regulation difficulties, body dissatisfaction, and coping styles based on self-criticism, among others (Lev-Ari et al., 2021; Rabito-Alcón et al., 2021). However, the mechanisms through which trauma is related to body dissatisfaction have not been sufficiently examined and body dissatisfaction can result in not only eating disorders but other negative consequences such as mood disorders and morbid exercise (Alcaraz-Ibáñez et al., 2021).

Relatedly, coping styles refer to the responses that individuals use to cope with traumatic or stressful situations or events in order to overcome the emotional damage caused. The coping styles employed can be positive or negative and are relatively stable in each individual over time (Echeburúa & Amor, 2019). No previous research has ever examined coping styles among individuals with body dissatisfaction. However, it has been shown that emotional abuse in childhood predicts the propensity for shame and self-criticism. Self-criticism is defined as a dysfunctional coping strategy that provides security and is used by individuals in order to hide their shortcomings and avoid experiences considered as shameful (Shahar et al., 2015). In addition, it is considered a continuous attack by individuals on themselves and the inability by individuals to be kind to themselves. Because of this, there is great importance in addressing self-criticism and interventions targeting this specific coping style (O'Neill et al., 2021).

Analyzing self-critical coping style is a key area of opportunity to better understand the relationship between childhood trauma and body dissatisfaction among college females because it is common among this population and has been associated with numerous future problems. Previous studies have focused on studying body dissatisfaction among individuals with eating disorders. However, although body dissatisfaction represents a fundamental psychopathological feature of eating disorders, it is also a risk factor for the development of other problems (Weinberger et al., 2016). Moreover, it has been noted that the mechanisms through which childhood trauma is related to body dissatisfaction have not been sufficiently examined, and no previous research has ever examined the coping styles employed among individuals with body dissatisfaction. Therefore, the aims of the present study were to analyze the (a) relationship between childhood trauma, self-criticism, and body dissatisfaction, and (b) mediating role of self-criticism in the relationship between childhood trauma and body dissatisfaction. The hypotheses (H_s) of the study were that (i) as childhood trauma increases, self-criticism and body dissatisfaction also increase (H_1), and (ii) childhood trauma will lead to body dissatisfaction through the use of self-criticism-based coping styles (H_2).

Method

Participants

The participants were 754 young adult women aged between 18 and 30 years. Their average age was 20.49

years (*SD* = 2.28). The majority of women were university students (87%) whereas12.8% were working and the remaining 0.2% were unemployed or in other occupational circumstances.

Measures

Cartes: Modèles Individuels de Relation (*CaMir-R*; Balluerka et al., 2011). The CaMir-R assesses attachment experiences and family dynamics in childhood (retrospectively) and in the present. The scale consists of 32 items comprising seven subscales. The childhood trauma subscale was used in the present study. *Childhood trauma* assesses memories of having had unavailable, violent or neglectful parents during childhood (e.g., *"Threats of separation, moving to another place, or breaking family ties are part of my childhood memories"*). Items are rated using a Likert-type format from 1 (*Strongly disagree*) to 5 (*Strongly agree*) and summed to provide a total score on the childhood trauma subscale. In the present study, Cronbach's alpha coefficient for the childhood trauma subscale was 0.74.

Coping Strategies Inventory (CSI; Tobin et al., 1989; Spanish version: Jáuregui et al., 2016) assesses eight functional and dysfunctional coping strategies used in stressful or negative situations. It consists of 41 items with eight subscales. The self-critical coping style subscale was used in the present study. *Self-criticism*, consisting of self-blame and self-criticism for inadequate handling or occurrence of the stressful situation (e.g., *"I recriminated myself for allowing this to happen"*). Items are rated using a Likert-type format from 0 (*Not at all*) to 4 (*Completely*) and summed to provide a total score on the self-criticism subscale. In the present study the Cronbach's alpha coefficient for the self-criticism subscale was 0.81.

Eating Disorders Inventory-2 (EDI-2; Garner, 1998). It evaluates symptoms that accompany anorexia nervosa and bulimia nervosa. It consists of 91 items comprising 11 scales, three assess attitudes and behaviors related to food and weight and the remaining eight scales assess clinically relevant psychological traits in this type of disorders. The body dissatisfaction subscale was used in the present study. *Body dissatisfaction*, assesses dissatisfaction with overall body shape (e.g., *"I think my thighs are too thick"*); Items are rated using Likert-type format from 0 (*Never*) to 5 (*Always*) and summed to provide a total score on the body dissatisfaction subscale. In the present study, the Cronbach's alpha coefficient for the body satisfaction subscale was 0.86.

Procedure

The study design was a cross-sectional retrospective survey study. Participants were recruited through two channels (online and face-to-face). Regarding the online route, the surveys were made available to individuals who wanted to participate through an online platform (*surveymonkey.com*). Participation was promoted through different social networking sites (e.g., *LinkedIn, Twitter, Instagram, Facebook*) and advertisements on research websites. Regarding the face-to-face route, participants were recruited on the Complutense University of Madrid and in gyms in the locality of Madrid who responded to the survey in paper-and-pencil format. The only criterion for exclusion was being aged under 18 years. All participants gave informed consent to participate in the study. In the case of the online version, they clicked a button indicating that they had read the study information and agreed to participate voluntarily. In the face-to-face version, they checked the corresponding box on the paper. They could leave the study at any time. The study followed the ethical principles of the Declaration of Helsinki (2013) and ethical approval for the study was provided by the Deontological Commission of the Faculty of Psychology of the Complutense University of Madrid (with reference Ref. 2020/21–035).

Analytical procedure

First, descriptive statistics and correlations of study variables were computed. The normality assumption was then explored by examining asymmetry and kurtosis levels. Normality was assumed when the asymmetry and kurtosis values were in between −2 and +2 (Cain et al., 2017). Second, the hypotheses of the study were tested. To do so, a linear regression model was tested with the macro PROCESS v4.0 (Hayes, 2017). More specifically, Model 4 was applied to test the proposed mediation. Childhood trauma was modelled as the independent variable, self-criticism was the mediator, and body dissatisfaction was the dependent variable. Age was entered as covariate to control for its confounding effects. The indirect effect of childhood trauma on body dissatisfaction through self-criticism was tested with 10,000 bootstrap samples to correct for estimation bias following Hayes's (2017) suggestions. The effect size of the model was explored attending to r^2. The r^2 values over 0.01 were considered small effects, over 0.09 medium effects and over 0.25 large effect sizes (Cohen, 1988).

Results

The descriptive statistics and correlations of the study variables are shown in Table 1. As shown, the asymmetry and kurtosis values were in between −2 and +2 in all cases so normality was assumed for all the study variables. In relation to the correlations, childhood trauma and self-criticism

Table 1 Descriptive statistics and bivariate correlations of the study variables

	Descriptive statistics						Correlations		
Variable	M	SD	Min	Max	As	Kr	1	2	3
1. Age	20.50	2.28	18	30	1.16	1.37			
2. Childhood trauma	14.71	3.43	5	25	-0.10	-0.45	-0.02		
3. Self-criticism	7.05	5.03	0	25	0.67	-0.14	-0.07*	0.09**	
4. Body dissatisfaction	18.95	9.69	0	40	0.26	-0.22	-0.13*	0.09*	0.25***

Note. *$p < .05$; **$p < .01$; ***$p < .001$.

were both positively correlated with body dissatisfaction, with the correlation between self-criticism and body dissatisfaction being greater. These results support H_1 of the study.

The mediation model analysis was carried out (see Figs. 1 and 2). The results of the analysis indicated that higher childhood trauma was related to higher self-criticism (β = 0.13, SE = 0.05, 95% CI [0.03, 0.23]) and higher self-criticism was significantly related to higher body dissatisfaction (β = 0.46, SE = 0.06, 95% CI [0.32, 0.59]). Although childhood trauma had a no significant direct effect on body dissatisfaction (β = 0.18, SE = 0.09, 95% CI [-0.01, 0.37]), the indirect effect of childhood trauma on body dissatisfaction was significant (indirect effect = 0.06, bootstrap SE = 0.02, bootstrap 95% CI [0.01, 0.11]). Therefore, childhood trauma was indirectly related to higher body dissatisfaction and was explained by the positive relationship with increased self-criticism. These results support H_2 of the study. This model explained 8% of the variance of body dissatisfaction indicating a small to medium effect size.

Discussion

The present study analyzed the relationship between childhood trauma, self-criticism, and body dissatisfaction, finding a positive and significant association between all variables. Secondly, it was explored if self-criticism had a mediating effect in the relationship between childhood trauma and body dissatisfaction. Results confirmed our second hypothesis because self-criticism mediated the relationship between childhood trauma and body dissatisfaction. Empirical literature has evidenced the importance of childhood trauma in explaining future eating disorders (EDs). When exploring causes and comorbidities that precede EDs, childhood trauma has been identified as a potential risk factor for developing and maintaining EDs (Madowitz et al., 2015). There have been observed two main etiological explanations in the literature in trying to understand this pathway, namely, psychological difficulties and body perceptions (Madowitz et al., 2015). When considering the pathway of psychological distress, some aspects should be considered, such as need for control, emotional regulation, and psychological diagnoses. However, it has also been found that body perception influences EDs through body dissatisfaction, sexual dysfunction, and embarrassment, as

Fig. 1 Hypothesized Model

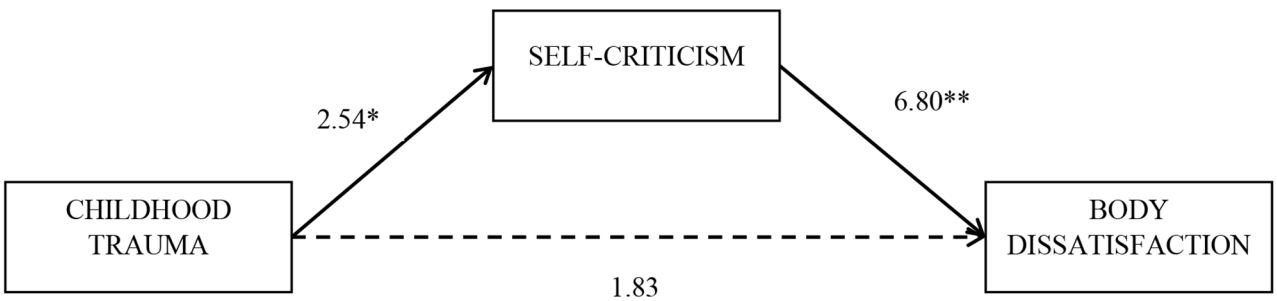

Fig. 2 Regression estimates of the proposed mediation model. *Note.* The dashed line indicates a non-significant effect.

well as a fear of future sexual traumas (Davis et al., 2021; Madowitz et al., 2015).

Nevertheless, previous investigations have not elucidated how childhood trauma influences the onset of EDs. In this respect, the results in the present study evidence the role of self-criticism as a mediating variable between childhood trauma and body dissatisfaction. Other empirical studies have also provided empirical insight concerning the mechanisms underlying the association between childhood trauma and EDs, finding that emotional abuse in childhood is the most prevalent risk factor for developing long-term psychological problems such as eating pathology, more than sexual and/or physical abuse (Trottier & McDonald, 2017). A study conducted by Feinson and Hornik-Lurie (2016a) explored the influence of three psychological mechanisms as possible mediators in the relationship between childhood emotional abuse (CEA) and EDs such as adult binge eating disorder (BED), in which they included self-criticism (in addition to depression and anxiety symptoms). Regression analyses showed that BED was partially explained by CEA together with the three mediators. In fact, results demonstrated the mediating effect of self-criticism and anger in the relationship between CEA and BED. This evidence supports the findings of the present study. In fact, one study reported that self-criticism was the only psychological variable that contributed significantly to explaining the severity of BED (Feinson & Hornik-Lurie, 2016b).

Other studies that have examined the role of self-criticism in eating disorders agree that exposure to trauma and other severe adverse experiences (such as emotional abuse) have an association with EDs in both childhood and adulthood. Trottier and McDonald (2017) found that traumatic experiences and EDs were mediated by emotional dysregulation and self-criticism. On the other hand, Dunkley et al. (2010) reported that different forms of childhood maltreatment (emotional, physical, sexual abuse) were significantly associated with body dissatisfaction. They conducted a path analysis and found that self-criticism was a potential mediator in the relationship between emotional abuse and depressive symptoms and body dissatisfaction among individuals with BED. Indeed, patients with anorexia disorder (AD) and bulimia disorder (BD) have higher scores in self-criticism compared with control groups (Lev-Ari et al., 2021). In particular, patients with BD have shown significantly higher scores in self-criticism than patients with AD, and report suffering more childhood adverse experiences (Speranza et al., 2003).

Regarding body dissatisfaction, previous research has shown that adolescents with better parent-child relationships are less susceptible to experience body dissatisfaction. When getting older, and especially, in adolescence, children are exposed to critical situations such as teasing, contempt, and rejection by their peers that can lead to a misperception of their body image (Hosseini & Padhy, 2022). It seems that the more frequently they are teased about body size and weight while growing, the more likely body image distortion and body dissatisfaction will be experienced, including when they enter adulthood (Harrington & Overall, 2021; Hosseini & Padhy, 2022). In this respect, quality parent-child relationships could be protective factors for buffering or reducing the impact of social rejection regarding body image. One recent study also found that body dissatisfaction mediated the association between identity formation and ED symptomatology during adolescence and emerging adulthood (Palmeroni et al., 2020), so problems related to body dissatisfaction may lead to long-term consequences.

Limitations

The present study has some limitations. For example, the results highlighted self-criticism as a potential mechanism through which specific forms of childhood maltreatment are associated to body dissatisfaction; however, the present study only evaluated theses variables in the general population, and more specifically, in females. It would be advisable to try to extend this research to clinical population in the future, both in females and males. Moreover, the present study utilized a cross-sectional design, so the variables should be studied utilizing longitudinal designs, with the aim of providing more robust insight concerning the causal relationships among variables.

Moreover, there were other limitations such as the use of self-report data and the use of subscales of psychometric instruments rather than the whole scales. Future studies could expand this research to the exploration of other variables involved in the relationship between childhood trauma, self-criticism and body dissatisfaction. For instance, it would be interesting to explore if mental health disorders (such as depression) have a mediating effect between childhood trauma and body dissatisfaction. Such studies would be able to evaluate the differential impact between mental health disorders and self-criticism. Furthermore, it is important to note that socio-demographic variables such as race/ethnicity were not included in the main analyses. Future research should investigate the role of specific socio-demographic variables such as race/ethnicity. Finally, future studies should incorporate the consideration of the role of social media use in relation to the variables analyzed in the present study. Previous research has emphasized social comparison theory as a basis for understanding the association between social media use and body dissatisfaction.

Conclusions

EDs are increasing public health problems worldwide. Therefore, there is a lot of interest in research identifying the mechanisms that could help in the prevention of these conditions (Tang et al., 2021). On the other hand, childhood experience of traumatic situations has been evidenced as a potential risk factor for developing and maintaining EDs. It appears that psychological difficulties and body perceptions are two main etiological factors that contribute to understanding this pathway. In addition to assessing the influence of childhood trauma in body dissatisfaction, results obtained in the present study highlight the importance of self-criticism as a mediating factor in the relationship. Working on decreasing the negative aspects of self-criticism among individuals who have suffered from childhood trauma may be important in improving body dissatisfaction and preventing it from escalating into major problems. Acknowledging that the present findings should be replicated in a future longitudinal study, results evidence that both childhood trauma and self-criticism should both be considered in prevention and intervention therapeutic programs targeting body dissatisfaction. Furthermore, treatment interventions should be expanded to include assessments of self-criticism among young women with body dissatisfaction, especially those with previous experiences of childhood trauma.

In addition, prevention strategies that incorporate learning how to deal with self-criticism in a direct and positive way may be particularly effective in reducing body dissatisfaction among women, which could lead to the prevention of EDs emerging in the first place. In short, addressing particularly negative and hostile forms of self-criticism may be a promising area in terms of future research and clinical practice (O'Neill et al., 2021).

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Data Availability All data generated or analysed during this study are included in this published article. Reviewers can access the database on request [doi: https://doi.org/10.6084/m9.figshare.19947782].

Declarations

Conflict of interest All study authors declare that they have no conflicts of interest.

Ethical Statement The study followed the ethical principles of the Declaration of Helsinki (2013) and ethical approval for the study was provided by the Deontological Commission of the Faculty of Psychology of the Complutense University of Madrid (with reference Ref. 2020/21–035).

Informed consent and consent to publish Informed consent was obtained from all individual participants included in the study.

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