

**Do shame and perfectionistic self-presentation explain the link between  
early affiliative memories and eating psychopathology?**

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## **Abstract**

This study explored a model examining the impact that early affiliative memories (with family and peers) presents on eating psychopathology, and whether this link is carried by the mechanisms of external shame and body image-related perfectionistic self-presentation.

This study's sample comprised 480 female college students, who completed the self-report measures of interest.

Path analyses' results revealed that this model accounted for 48% of disordered eating's variance. Furthermore, results showed that 26% of external shame was explained by early memories of warmth and safeness, and that 19% of body image-related perfectionistic self-presentation was explained by the lack of recall of these affiliative memories, through increased levels of external shame.

These findings seem to suggest that the lack of these positive memories is associated with higher levels of shame (feelings of inferiority and unattractiveness), and with higher tendencies to adopt body image-related perfectionistic strategies, that seem to explain excessive eating concern and rigid control of one's eating behaviours.

This study offers important insights for future research and for the development of intervention programs, by revealing the importance of assessing and targeting shame and perfectionistic strategies and suggesting the importance of promoting adaptive emotion regulation strategies to deal with adverse memories.

**Keywords:** Early affiliative memories; external shame; perfectionistic self-presentation; eating psychopathology

## 1. Introduction

Consistent evidences have documented the key role of early emotional experiences on later quality of life and health-related indicators (e.g., Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006; Panksepp, 2010). In fact, rearing experiences, both positive (e.g., of warmth, protection, and care) and negative (e.g., of threat, neglect, and rejection) seem to have an important impact on physiological, psychological and social development and functioning (Gerhardt, 2004). Positive early emotional experiences can stimulate the attachment system and shut down the threat emotional regulation system (Cacciopo, Berston, Sheridan & McClintock, 2000), promoting the development of adaptive emotion regulation strategies (DeHart, Peham, & Tennen, 2006; Mikulincer & Shaver, 2004).

Further, research has documented that early affiliative experiences can operate as conditioned emotional memories (Gilbert & Irons, 2009), which play a significant influence on the development of relational schemas of the self and others and on emotional regulation processes (Baldwin & Dandeneau, 2005; Brewin, 2006; Pinto-Gouveia & Matos, 2011). Indeed, empirical accounts showed that the capability of accessing warm and safeness memories is highly associated with the ability to face stressful events and personal setbacks (Gilbert & Irons, 2009; Richter, Gilbert, & McEwan, 2009). In turn, the recall of negative early experiences can activate negative emotional states (e.g., shame) and the subsequent engagement on defensive behaviours (Cunha, Matos, Faria, & Zagalo, 2012; Murray, Waller, & Legg, 2000).

Shame is a self-conscious emotion characterized by the perception that others see the self negatively, i.e., as inferior, inadequate, undesirable or unattractive (e.g., Gilbert, 2002, Lewis, 1992). Intense feelings of this painful emotion have been strongly associated to several social difficulties (e.g., isolation or alienation) and with mental health problems (e.g., Kim, Thibodeau, & Jorgensen, 2011). Specifically, shame has been highlighted as a key factor in the

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development and maintenance of psychopathology (Gilbert, 1998; Tangney & Dearing, 2002), namely with body-image difficulties and higher proneness to eating psychopathology (Ferreira, Matos, Duarte, & Pinto-Gouveia, 2014; Gee & Troop, 2003).

According to Gilbert (2002), shame has a defensive function that acts as the warning sign that one may be negatively evaluated by others and therefore criticized, ostracized, or rejected. Therefore, shame may activate a series of maladaptive defensive behaviours (e.g., of correction, concealment, avoidance, or excessive self-monitoring) in order to attenuate perceived negative consequences and protect the self.

Perfectionistic self-presentation is one of these maladaptive interpersonal strategies, which reflects the belief that looking perfect in the eyes of others assures acceptance and belonging within the group (Hewitt et al., 2003). In fact, research has suggested that some individuals, when dealing with shame experiences, may endorse maladaptive compensatory strategies with the purpose of concealing one's negatively perceived characteristics or attributes (Ferreira, Trindade & Ornelas, 2015; Hewitt et al., 2003). However perfectionistic self-presentation seems to have a paradoxical effect. The need to present a perfect public image is associated with different clinical conditions, namely eating disorders (e.g., Ferreira et al., 2015). Particularly, research has demonstrated the link between perfectionistic self-presentation strategies and higher levels of body dissatisfaction and eating psychopathology, especially in women (e.g., Cockell et al., 2002; McGee, Hewitt, Sherry, Parkin, & Flett, 2005). Women's engagement in these perfectionistic maladaptive attitudes and behaviours, with the purpose of weight and body control, can be understood by the emphasis on the link between thinness and positive qualities (such as success, status, and happiness), specifically in modern Western societies (Ferreira et al., 2015; McGee et al., 2005; Pinto-Gouveia, Ferreira, & Duarte, 2014).

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The current study aimed to explore the impact of the recall of early positive experiences (both in relationships with family and with peers) on eating psychopathology symptomatology, and whether external shame and body image-related perfectionistic self-presentation play a significant role in these associations. It was hypothesized that higher levels of external shame and body image-related perfectionistic self-presentation mediate the relationship between the lack of warmth and safeness memories and the engagement in disordered eating attitudes and behaviours.

## **2. Materials and methods**

### **2.1. Participants**

The sample of this study comprised 361 Portuguese female college students, with ages ranging from 18 to 35 years old ( $M = 22.89$ ;  $SD = 4.27$ ), and a mean of 14.16 ( $SD = 2.17$ ) years of education. Participants' BMI mean was 22.89 ( $SD = 3.28$ )  $\text{kg/m}^2$ , corresponding to normal weight values (WHO, 1995).

### **2.2. Measures**

*Early Memories of Warmth and Safeness Scale* (EMWSS; Richter et al., 2009; Matos, Pinto-Gouveia & Duarte, 2015); The EMWSS is a 21-item measure which measures the recall of feeling warm, safe and cared for in childhood (e.g., "I felt that I was a cherished member of my family"). Each item is rated on a 5-point scale ranging from 0 ("No, Never") to 4 ("Yes, Most of the time"). The measure showed good psychometric properties, with a high level of internal consistency ( $\alpha = .97$ ) both in the original and the Portuguese versions. In the current study, this measure presented a Cronbach's alpha of .98.

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***Early Memories of Warmth and Safeness Scale – Peers*** (EMWSS\_peers; Ferreira, Cunha, Marta-Simões, Duarte, Matos, & Pinto-Gouveia, 2016); The EMWSS-peers is a 12-item derived from the EMWSS (Richter et al., 2009), designed to specifically assess the recall of early experiences of warmth, safeness, and affection within peer relationships (i.e., with friends and colleagues). Participants responded to the items (e.g., “I felt safe and secure with my peers/friends”) on a 5-point scale (0 = “No, Never” to 4 = “Yes, Most of the time”). The EMWSS\_peers revealed good psychometric properties, presenting a Cronbach’s alpha of .97, both in the original and current studies.

***Other as Shamer Scale*** (OAS; Goss, Gilbert, & Allan, 1994; Matos, Pinto-Gouveia, & Duarte, 2011); OAS is a self-report measure composed of 18 items, that assesses external shame (i.e., the perception that others look down on, and negatively evaluate the self). Participants answered the items on a 5-point scale (0 = “Never” to 4 = “Almost always”), with higher scores indicating higher levels of external shame. The reliability of this scale was high both in the original version and Portuguese validation ( $\alpha = .92$  and  $.91$ , respectively), and also in the present study ( $\alpha = .93$ ).

***Perfectionistic Self Presentation Scale – Body Image*** (PSPS-BI; Ferreira, Duarte, Pinto-Gouveia, & Lopes, 2016); The PSPS-BI is a 19-item measure which evaluates the need to present a perfect physical appearance to others (e.g., “It is important to have an attractive physical appearance”). For each item, participants respond using a 7-point scale ranging from 1 (“Totally disagree”) to 7 (“Totally agree”). Analyses of the PSPS-BI showed a high internal consistency ( $\alpha = .93$ ) and good temporal stability. In current study, Cronbach’s alpha was  $.95$ .

***Eating Disorder Examination Questionnaire*** (EDE-Q; Fairburn & Beglin, 1994; Machado et al., 2014); The EDE-Q is a 36 item self-report measure adapted from the Eating

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Disorder Examination Interview. It consists of four subscales (restraint, eating concern, weight concern, and shape concern) which evaluate the frequency and intensity of disordered eating attitudes and behaviours. The items are rated for the frequency of occurrence (from 0 = “None” to 6 = “Every day”) or for the severity (from 0 = “None” to 6 = “Extremely”). The measure presented good psychometric qualities in both the original and the Portuguese versions ( $\alpha = .94$ ). The present study only used the global EDE-Q score, computed through the mean of the four subscales, which presented a Cronbach’s alpha of .93.

### **2.3.Procedures**

The current study was part of a wider research about the impact of different factors and emotion regulation processes on women’ psychological functioning and mental health.

All procedures of the current study respected the ethical and deontological requirements inherent to scientific research with human beings. The institutions involved approved the administration of the research protocol; all potential participants were fully informed about the aims and procedure of the study, and also about the confidentiality and voluntary character of their participation; and, all participants gave their written informed consent.

Participants were recruited from several high education institutions, private companies and retail services, and the measures were completed, during a break authorized by their institutions’ boards, in the presence of one of the researchers.

### **2.4. Data analyses**

In this cross-sectional design study data analyses were performed using the software IBM SPSS Statistics 22.0 and path analyses were executed using the software AMOS.

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Firstly, descriptive statistics were explored. Then, product-moment Pearson correlation analyses were performed in order to observe the relationships established between the different study's variables.

Path analysis (MacKinnon, 2008), a structural equation modeling (SEM), was performed in order to estimate the presumed relations among the variables of the fully saturated model. This procedure was chosen given that it enables the simultaneous examination of structural relationships as well as direct and indirect effects among multiple variables (endogenous and exogenous), while controlling for errors (Kline, 2005). The path analysis model proposed examined whether early memories of warmth and safeness within family figures and peers explained disordered eating, and also whether these relationships were mediated by external shame and body image-related perfectionistic self-presentation. The Maximum Likelihood estimation method was used to test the regression coefficients and fit statistics. Additionally, a set of goodness-of-fit indices were used to examine the adequacy of the model to the empirical data. Resorting to the Bootstrap resampling procedure the significance of the paths was also examined, with 5000 samples, and 95% bias-corrected confidence intervals (CI) around the standardized estimates of total, direct and indirect effects (Kline, 2005).

### **3. Results**

#### **Descriptive and correlation analyses**

Table 1 presents the descriptive data and correlations among the variables.

Results demonstrated that both early memories of warmth and safeness with family figures (EMWSS) and peers (EMWSS\_peers) presented negative associations with external shame (OAS), body image-related perfectionistic self-presentation (PSPS-BI), and global scores of eating psychopathology (EDE-Q). Moreover, results showed that the OAS and PSPS-



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BI revealed positive correlations with EDE-Q, with moderate and high magnitudes respectively.

A partial correlation analysis controlling for age and BMI was conducted. Results showed that both the direction and magnitude of the correlations of the variables in study remained similar. Therefore, age and BMI were not included in later analyses.

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### 3.1.Path Analysis

The theoretical model was firstly tested through a fully saturated model consisting of 30 parameters. This model explained 49% of eating psychopathology's variance. Due to the non-significant of the following paths: the direct effect of early memories of warmth and safeness with peers on eating psychopathology ( $b_{EMWSS\_peers} = -.002$ ;  $SE_b = .004$ ;  $Z = -.430$ ;  $p = .667$ ) and the direct effect of early memories of warmth and safeness with figures of attachment on eating psychopathology ( $b_{EMWSS\_total} = -.001$ ;  $SE_b = .003$ ;  $Z = .210$ ;  $p = .834$ ) and on body image-related perfectionist self-presentation ( $b_{EMWSS\_total} = -.085$ ;  $SE_b = .071$ ;  $Z = -1.21$ ;  $p = .226$ ), these paths were eliminated and the model was readjusted.

In this readjusted model all path coefficients showed to be statistically significant ( $p < .05$ ), and model fit indices revealed an excellent fit to the empirical data [ $\chi^2_{(4)} = 1.69$ ;  $p = .638$ ;  $CMIN/df = .565$ ;  $CFI = 1.00$ ;  $TLI = 1.00$ ;  $RMSEA = .00$ ,  $p = .900$ ,  $CI = .000 - .062$ ].

Figure 1 represents the final model, which explained 48% of eating psychopathology, and also 26% and 19% of external shame and body image-related perfectionist self-presentation, respectively

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Insert Figure 1 around here

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Early memories of warmth and safeness with the family figures had a direct effect on external shame of  $-.24$  ( $b_{EMWSS\_total} = -.163$ ;  $SE_b = .031$ ;  $Z = -5.303$ ;  $p < .001$ ). Early memories of warmth and safeness with peers also had a direct effect of  $-.36$  on external shame ( $b_{EMWSS\_peers} = -.378$ ;  $SE_b = .051$ ;  $Z = -7.437$ ;  $p < .001$ ) and of  $-.11$  ( $b_{EMWSS\_peers} = -.250$ ;  $SE_b = .110$ ;  $Z = -2.279$ ;  $p < .050$ ) on body image-related perfectionistic self-presentation. In turn, external shame had a direct effect of  $.38$  on the body image-related perfectionist self-presentation ( $b_{OAS} = .808$ ;  $SE_b = .099$ ;  $Z = 8.158$ ;  $p < .001$ ) and of  $.17$  on the severity disordered eating ( $b_{OAS} = .018$ ;  $SE_b = .004$ ;  $Z = 4.729$ ;  $p < .001$ ). It was also verified that body image-related perfectionist self-presentation had a direct effect of  $.60$  on eating psychopathology ( $b_{PSPS-BI} = .029$ ;  $SE_b = .002$ ;  $Z = 16.567$ ;  $p < .001$ ).

The analysis of the indirect effects revealed that early memories of warmth and safeness with family figures as well as with peers presented indirect effects through external shame on perfectionist self-presentation of body image, of  $-.15$  (95% CI =  $-.21 - -.07$ ;  $p < .001$ ) and  $-.18$  (95% CI =  $-.42 - -.21$ ;  $p < .001$ ), respectively. The EMWSS and EMWSS\_peers also presented indirect effects on eating psychopathology, of  $-.15$  (95% CI =  $-.01 - .00$ ;  $p < .001$ ) and  $-.28$  (95% CI =  $-.03 - -.02$ ;  $p < .001$ ), respectively, which were totally carried by external shame and by the perfectionist self-presentation of body image. Results also demonstrated that external shame presented an indirect effect of  $-.17$  (95% CI =  $.02 - .03$ ;  $p < .001$ ) on eating psychopathology, which was partially carried through the mechanism of body image-related perfectionist self-presentation.

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Overall, the model revealed that the impact of early memories of warmth and safeness with family and peers on eating psychopathology were significantly mediated by external shame and body image-related perfectionistic self-presentation.

#### **4. Discussion**

This study presents an integrative model to explain the link between the scarcity of early memories of warmth and safeness and higher levels of disordered eating attitudes and behaviours, in a sample of 361 female college students. Taking into account previous studies (e.g., Cunha et al., 2012; Gee et al., 2003; Pinto-Gouveia et al., 2014), it was hypothesized that the impact of the lack of early memories of warmth and safeness, both with family and peers, on the engagement on disordered eating were carried by feelings of inferiority and inadequacy and the need to present a perfect body look to others.

The tested model showed an excellent fit to the empirical data, accounting for 48% of eating psychopathology's variance. Furthermore, results revealed that 26% of external shame was explained by early memories of warmth and safeness with family figures and with peers, and that 19% of body image-related perfectionistic self-presentation was explained by the lack of these affiliative memories, through increased levels of external shame.

Results suggested that the lack of positive early memories is linked to disordered eating, which goes in line with literature regarding the impact of affiliative memories on psychopathology (Richter et al., 2009) and extend previous research by exploring the impact of these memories specifically on eating psychopathology. Also, the present study suggested the significant link between the lack of the recall of early positive experiences (both with family figures and peers) and higher levels of shame and perfectionistic self-presentation focused on body image. In fact, this is the first study that explores the role of early memories, with family figures and peers, in these outcomes.

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Additionally, another important contribution of the present study seems to be the suggestion that the relationship between early affiliative memories and eating psychopathology is carried by the negative effect of external shame and the endorsement on compensatory perfectionistic strategies. In fact, our findings seem to indicate that women who present less positive memories (both with family or peers) tend to believe that others see them negatively (as unattractive or inferior). At the same time, it seems that this painful experience of shame may prompt the adoption of defensive strategies (such as perfectionistic self-presentation strategies). Specifically, the current data suggests that the perception that others see the self negatively may trigger striving to present a perfect body image, which in turn seems to promote disordered eating attitudes and behaviours. Indeed, our results seem to support that these painful feelings and maladaptive strategies can have paradoxical effects, fueling concern about body shape and weight and, consequently, the adoption of maladaptive strategies to control body image.

Nonetheless, it is important to acknowledge that the current study had several limitations. Firstly, the data is cross-sectional, which limits the inference of causal relationships between the variables. Thus, future research should focus on the development of longitudinal designs studies. In addition, the use of a sample exclusively composed of college female students does not allow the generalization of the results. Future work should test our hypotheses in different samples. Also, this model can be considered limited as other factors and emotion regulation processes may be involved in the association between early affiliative memories and eating psychopathology.

Nevertheless, the present study offers new empirical data that may be relevant for research and for the development of community intervention programs. In accordance with our findings, body image and eating difficulties-related intervention programs should target shame and perfectionistic strategies, by promoting adaptive emotion regulation strategies.

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### **Disclosure statement**

No potential conflict of interest was reported by the authors.

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Table 1

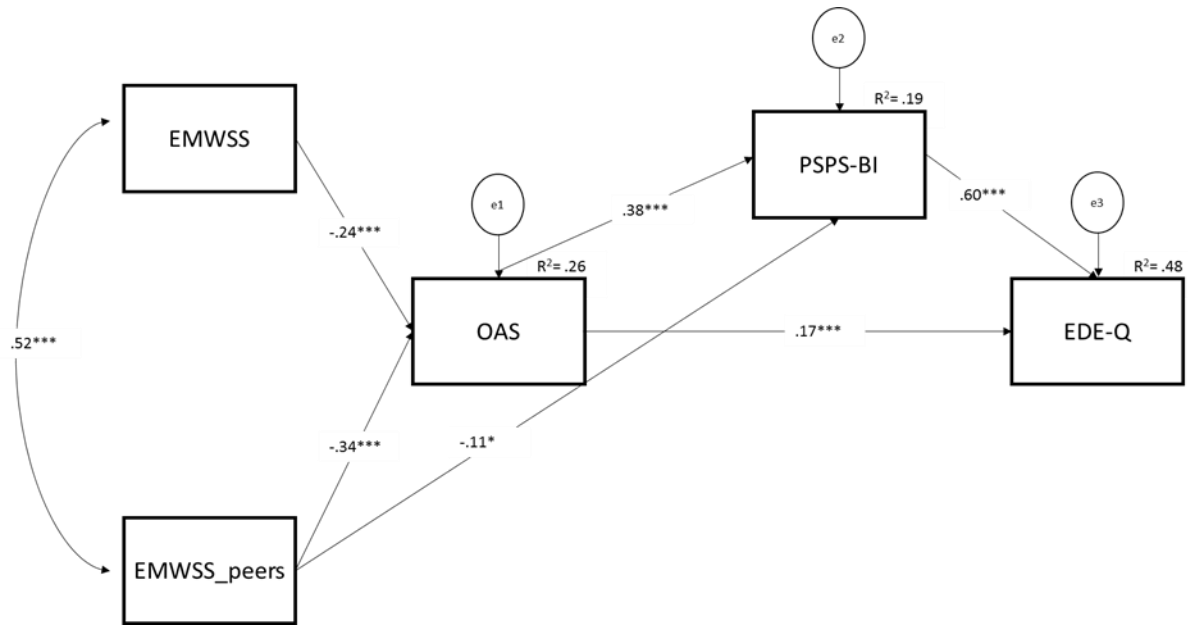
Means (*M*), Standard Deviations (*SD*), and Intercorrelation scores on self-report measures (*N* = 480)

Measures	<i>M</i>	<i>SD</i>	1	2	3	4
1. EMWSS	65.28	16.34	1	-	-	-
2. EMWSS_peers	35.81	9.89	.52***	1	-	-
3. OAS	21.15	10.95	-.42***	-.47***	1	-
4. PSPS_BI	76.03	23.36	-.26***	-.28***	.43***	1
5. EDE_Q	1.27	1.13	-.26***	-.26***	.43***	.68***

*Note:* EMWSS = Early Memories of Warmth and Safeness Scale; EMWSS\_peers = Early Memories of Warmth and Safeness Scale - Peer version; OAS = Other As Shamer; PSPS\_BI = Perfectionistic Self-Presentation Scale – Body Image; EDE\_Q = Eating Disorder Examination Questionnaire

\*\*\*  $p < .001$

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**Figure 1.** Final path model. *Note:* Standardized path coefficients among variables are presented. All path coefficients are significant at the 0.5 level; \*\*\* $p < .001$

*Exogenous variables:* EMWSS = Early Memories of Warmth and Safeness Scale; EMWSS\_peers = Early Memories of Warmth and Safeness Scale - Peer version; *Endogenous mediator variables:* OAS = Other As Shamer; PPS\_BI = Perfectionistic Self-Presentation Scale – Body Image; *Endogenous variable:* EDE\_Q = Eating Disorder Examination Questionnaire.