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Early Emotional Memories and Borderline Symptoms: The Mediating Role of Decentering

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Abstract

Several studies suggested that Borderline Personality Disorder is related to early invalidating and harsh environments, characterized by scarce experiences of warmth and safeness, and possibly traumatic shameful memories. On the other hand, the ability to take a stance and not get fused with one's internal experiences seems to be linked to diminished psychopathology. This study aims to understand the relationship between early emotional memories (of warmth and safeness experiences and shameful traumatic events) and borderline symptoms. Moreover, intends to explore the mediator role of decentering on the relationship between early emotional memories and borderline symptoms in a sample of 304 subjects from general community. Results showed significant correlations between early emotional memories, decentering and borderline symptoms. Additionally, our findings suggest that decentering mediate, at least partially, the effect of early emotional memories on borderline symptoms. Taken together, these findings point out for the importance of promoting decentering abilities with patients presenting borderline features.

Key words: Shame traumatic Memories, Internal Shame, Warmth and Safeness memories; decentering; borderline personality.

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Novelty and Significance

What is already known about the topic?

- Borderline Personality Disorder is known to be related to invalidating family environments and traumatic shameful events in early childhood, which frequently lack experiences of warmth and safeness.
- The ability to decenter and take a stance of internal experiences seems to be linked to diminished psychopathology, however, no connection with this construct, emotional memories and borderline features was made, as far as we know.

What this paper adds?

- The results suggest that early warmth-safeness memories and decentering are protective of borderline symptoms.
- Decentering mediates positive and negative early experiences and borderline symptoms, suggesting that it might be an important tool in borderline symptomatology intervention.

Borderline Personality Disorder (BPD) is characterized by a pattern of emotional instability, unstable relationships, impulsive behaviors, distorted and unstable sense of self and frequently intentional self-injury (American Psychiatric Association, 2006). Although the prevalence of BPD is not very expressive, the existence of several BPD features in non-clinical young adults' samples is frequent (Trull, 1995). Furthermore, some studies suggest the existence of a continuum from normality to BPD (Chabrol, Chouicha, Montovany, & Callahan, 2001), which corroborates the importance of studying borderline symptoms in general population samples.

Researchers have been trying to understand the epistemology of borderline symptoms for a long time (Lyoo, Han, & Choo, 1998; Paris, 2008; Skodol, Gunderson,

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Pfohl, Widiger, Livesley, & Siever, 2002). The most widely accepted theoretical models include: genetic and biological vulnerabilities related to "complicated" temperaments, characterized by emotional regulation difficulties and lower emotional threshold (Belsky *et alii*, 2012; Crowell, Beauchaine, & Linehan, 2009; Taylor, Karlamangla, Friedman, & Seeman, 2011) as well as psychosocial risk factor such as presence of abusive (physical, psychological and/or sexual) and negligent caregivers and disruptive attachment styles (Baer, Peters, Eisenlohr-Moul, Geiger, & Sauer, 2012; Baird, 2008; Matos, Pinto Gouveia, & Costa, 2013; Freitas, 2011). Specifically, BPD symptoms have been consistently related to early traumatic shameful events, abusive, harsh and negligent early environments (Andrews, 2002; Baird, 2008; Belsky *et alii*. 2012; Brown, Linehan, Comtois, Murray, & Chapman, 2009; Zeigler-Hill & Abraham, 2006). Moreover, research advocates a close link between the severity of borderline symptomatology and trauma (Baird, 2008; Lieb, Zanarini, Schmahl, Linehan, & Bohus, 2004).

In fact, shame experiences can occur early in life and may become encoded as conditioned emotional memories which function as traumatic ones, characterized by intrusion, hyperarousal and avoidance symptoms (Matos & Pinto Gouveia, 2010). Additionally, these threat activating memories can forge the whole sense of self and become central to one's personal identity (Pinto Gouveia & Matos, 2011). Shame traumatic central memories have been associated with both internal and external shame in adulthood. Furthermore, as these shame memories become central to one's self-identity, they might influence the quality of the attachment relationships in adulthood (Matos & Pinto Gouveia, 2010; Matos, Pinto Gouveia, & Costa, 2013; Rüsch *et alii*, 2007).

Furthermore, there is growing empirical evidence emphasizing that neglectful, rejecting, shaming, critical and abusive experiences damages brain development in a drastic and long-lasting manner. They represent one of the most powerful elicitors of stress responses, triggering the threat system, which is thought to be very sensitive in BPD (Perry, 2002; Taylor *et alii*, 2011; Freitas, 2011). Also, those negative early experiences undermine the development of the affiliative-soothing system (Gilbert, Baldwin, Irons, Baccus, & Clark, 2006), which enhances the vulnerability to several physical and mental health problems (Andrews, 2002; Gilbert, 2009a; Gilbert, Cheung, Grandfield, Campey, & Irons, 2003), namely BPD (Liotti, 2002; Linehan, 1993a; Linehan & Dexter-Mazza, 2008). The underdevelopment of the affiliative-soothing system compromises physiological and emotional regulation abilities, which make individuals less able to view the self as lovable and worthy, and others as soothing and reassuring. As consequence, these individuals tend to present difficulties in self-soothing or seeking help from others when facing distress (Gilbert, 2009b; Gilbert & Procter, 2006). In fact, patients with BPD features report having caregivers that were emotionally cold and ambivalent and showed few signs of affection. They are described as harsh and invalidating caregivers, who are unable to provide a secure attachment to the child (Baird, 2008; Gilbert, 2007; Levy, 2005).

On the other hand, the presence and recall of positive emotional memories during childhood (feeling warmth, safe and cared) has been associated with lower levels of psychopathology (e.g., depressive symptoms) and positively related to experience positive affects (e.g., of safeness, warmth and security) and prosocial behaviors (Matos, Pinto Gouveia, & Duarte, 2015; Richter, Gilbert, & McEwan, 2009). Also it promotes a sense of being loved, accepted, valued and chosen by others (e.g., caregivers, friends, lovers) for important social roles, and thus, leading to feelings of safeness, connectedness and a sense of belonging (Bowlby, 1973 cited in Matos & Pinto Gouveia, 2014; Gilbert, 2010).

Literature has been consistently showing that borderline symptomatology is associated with several maladaptive cognitive processes, including: memory bias, high levels of shame and rumination and scarce decentering abilities (Baer & Sauer, 2011; Baer *et alii*, 2012; Morton, Snowdon, Gopold, & Guymer, 2012; Upton, 2011; Wupperman, Fickling, Klemanski, Berking, & Whitman, 2013).

A lot has been written about mindfulness skills training, namely inside Dialectical Behavior Therapy (DBT) showing it has a positive impact in the borderline experience (in individuals with BPD), in the way that the training of these competences promote the acceptance of the internal experience (the participants are taught how to notice/observe, describe and act with efficacy), getting out of the doing mode (ruminative cycles/automatic pilot), to engage in the being mode (being with the experience as it is) (Bishop *et alii*, 2004). However, little has been written about these capacities before the training takes place and their connection with BPD features, namely, the ability to decenter from ruminative thoughts. Decentering is the capacity to use attentional awareness and perspective shifting skills to observe thoughts, without getting caught by them, understanding that they are only thoughts and not reality. Hence, this skill enables people to adopt an attitude of curiosity, openness, and acceptance allowing to observe all reactions without efforts to change their content (Lebois *et alii*, 2015).

Decentering abilities have been highlighted as an adaptive strategy to deal with unwanted internal experiences as mental impermanent events, without considering them necessarily true or even trying to suppress or avoid them (Wupperman *et alii*, 2013). This metacognitive awareness ability can help manage negative internal experiences and their subsequent emotional dysregulation, leading to a decrease in their duration, frequency and intensity (Morton *et alii*, 2012; Segal, Teasdale, & Williams, 2004; Watkins, Teasdale, & Williams, 2000; Wupperman *et alii*, 2013).

Moreover, preliminary results from recent studies indicated that promoting decentering abilities in borderline individuals was able to decrease emotional dysregulation (Morton *et alii*, 2012; Wupperman *et alii*, 2013). However, studies on the role which decentering plays on the relationship between emotional and shame-based negative traumatic memories and borderline symptomatology are still scant. Thus, the present study aims to explore the relationship between shame traumatic memories (involving external and internal shame feeling) and memories of being cared for, loved and accepted during childhood and current borderline symptomatology. Finally, the main goal of this study is to investigate whether decentering can function as a mediator on the relationship between these previously mentioned emotional memories and current borderline symptoms.

Method

Participants

Participants were 304 Portuguese subjects from the general population (201 women), with ages ranging from 18 to 55 years old (M= 27.03; SD= 6.75). Significant gender differences were found regarding age ($t_{(6.75)}$= 4.532), with male participants (M= 29.41) being significantly older than the female ones (M= 25.82). The majority of the participants (44,4%) had a degree course and 20,1% had completed a master or a PhD. Concerning sample's marital status 79% was single (n= 243), 9,2% were unmarried but living together as a couple, and 7,6% were married. Also, gender differences were found concerning marital status ($X^2(4)$= 18.10; p= .001).

Measures

Early Memories of Warmth and Safeness Scale (EMWSS, Richter *et alii*, 2009; Portuguese version, Matos & Pinto Gouveia, 2010). This scale was designed to measure recall of feeling warmth, safe, accepted and cared for, specifically during childhood. The 21 items included statements such as "I felt appreciated the way I was" or "I felt part of those around me". Responses are given in a 5 points Likert scale with participants rating how frequently each statement applied to them during their childhood (from 0= "No, never" to 4= "Yes, most of the time"). Both the original and the Portuguese version revealed an excellent internal consistency (α= .97; Richter *et alii*, 2009). In the current study the scale presented a similar Cronbach' alpha (α= .98).

Experiences Questionnaire (EQ, Fresco *et alii*, 2007; Portuguese version Pinto Gouveia, Gregório, Duarte, & Simões, 2012). The EQ is a 20-item self-report inventory, with items such as "I can observe unpleasant feelings without being drawn into them" or even", "I can actually see that I am not my thoughts" and was designed to measure decentering. Items are rated on a 5-point Likert scale (1= never, 5= all the time). The EQ revealed a good internal consistency (α= .83) in the original study, as well as in the Portuguese version and (α= .81) (Pinto Gouveia *et alii*, 2012). In the present study the Cronbach' alpha value was α= .86.

Trauma Related Shame Inventory (TRSI, Øktedalen, Hagtvet, Hoffart, Langkaas, & Smucker, 2014; Portuguese version Cid, 2012). The TRSI evaluates traumatic shame-related to a specific event that may have occurred between childhood and adolescence. This scale is divided into two subscales, with 12 items each: one for internal shame ("Because of my traumatic experience, I don't like myself") and other for external shame ("If others knew what happened to me, they would despise me"). The questionnaire uses a four points Likert Scale, that ranges between 0= Not at all correct about me, and 3= Completely correct about me. The original version of the scale presented good internal consistency for both internal shame (α= .80) and external shame (α= .86) subscales. The Portuguese version also presented adequate internal consistency levels. In the present study the TRSI total scale and both subscales revealed very good internal consistencies (α= .95 for total scale, .91 for internal shame subscale, and .90 in external shame subscale).

Borderline Personality Questionnaire (BPQ, Poreh, Rawlings, Claridge, Freeman, Faulkner, & Shelton, 2006; Portuguese version Pinto Gouveia & Duarte, 2007). BPQ is a self-report measure that assesses borderline personality traits, based on DSM-IV criteria (APA, 1994). This instrument encloses 80 dichotomous items (No/Yes), organized in 9 subscales. The original versions' psychometric properties were analyzed on three culturally distinct non-clinical samples (Poreh et alii, 2006), and its total scale revealed good internal consistency and reasonably good for all subscales. In the present study BPQ total score revealed an excellent Cronbach' alpha (α= .93), and subscales varying from acceptable to very good internal consistency: Affective Instability α= .85; Abandonment α= .66; Relationships α= .78; Self-image α= .82; Suicide/Self-mutilation α= .74; Emptiness α= .84; Intense Anger α= .73; and Quasi-psychotic States α= .62; with the exception of the Impulsivity subscale, which showed poor internal consistency with a value of α= .56.

Procedure

Participants completed a battery of self-report questionnaires using *Google Docs Online Platform*. The study's link was advertised through the internet, using the social networks and email lists, describing the study and inviting to participate any individual above 18 years old, who can read and understand Portuguese clearly and who is not currently taking psychopharmacological medication (with examples: antidepressants, anxiolytic, anti-psychotic).

Previously to fulfilling the questionnaires, participants were fully informed about the aims of the research study and the voluntary and confidential nature of it.

Data Analysis

The current study had a cross-sectional design. Independent t tests were conducted to estimate mean differences regarding gender differences. Pearson product-moment correlation analysis were performed to explore the relationships between emotional memories (*trauma related internal and external shame*, and *early memories of warmth and safeness*), *decentering* and *borderline symptomatology* variables. The cut points proposed by Pestana and Gageiro (2003), were followed (i.e., very low *r* from 0 to .19; low between .20 and .39; moderate from .30 to .69; high between .70 and .89 and very high <.90) in order to interpret the correlation magnitudes.

Multivariate outliers were screened using Mahalanobis squared distance (D^2) method and univariate normality was assessed by skewness (*Sk*) and kurtosis (*Ku*) coefficients using IBM AMOS SPSS 22.0 software. There was no severe violation of normal distribution ($|Sk| < 3$ and $|Ku| < 10$; Kline, 2005).

To test the hypothesized theoretical model a *Path analysis* was conducted. Path analysis allows considering simultaneously the influence of all the exogenous and endogenous variables, as well as the estimation total, direct and indirect or mediator effects (Schumacker & Lomax, 2004). Based on all these assumptions a causal model of the impact of emotional memories in childhood (*early memories of warmth and safeness*, and *trauma related internal and external shame*) over the *borderline symptomatology*, mediated by *decentering* was tested. Maximum Likelihood Estimation method was used to evaluate the regression coefficients significance. This procedure estimates the optimal effect of one set of variables on another set of variables in the same equation, controlling for error (Byrne, 2010; Kline, 2005). The significance of direct, indirect and total effects was assessed using χ^2 tests (Kline, 2005).

Bootstrapping resampling method was further used to test the significance of the meditational path, using 2000 bootstrap samples and 95% confidence intervals (*CIs*). Sample size was determined according to the recommendation of five cases/individuals per parameter (Kline, 2005). Effects with $p < .05$ were considered statistically significant. The global model adequacy was assessed through several model fit indexes: χ^2/df, *CFI, TLI* and *RMSEA* ($p \leq .05$) (Kline, 2005). These data analyses were conducted using SPSS and AMOS software (SPSS Inc., Chicago, IL, USA).

Results

Multivariate outliers were screened using Mahalanobis squared distance D^2) allowing us to identify 11 individuals reporting small distances from p_2 to p_1 with both $p < .05$, therefore identifying as multivariate outliers. Even thought, extreme values were not detected and the outliers were maintained. In fact, it has been suggested that data is more likely to be representative of the population when outliers are included (Kline, 2005; Tabachnick & Fidell, 2007).

Table 1 presents means and standard deviations, for each gender and the t-test results to explore gender differences. Table 2 presents results from Pearson correlation analyzes. The *trauma related external and internal shame* (TRSI.ES and TRSI.IS) showed low to moderate negative correlations with *memories of warmth and safeness* (EMWSS) and *decentering*. Also, trauma related external and internal shame revealed moderate

Table 1. Means, Standard Deviations, and *t*-test differences by gender.

	Males (*n*= 103)		Females (*n*= 201)			
	M	*SD*	*M*	*SD*	*t*	*p*
TRSI.IS	16.36	5.82	17.73	6.57	-1.86	.064
TRSI.ES	15.23	4.82	15.95	5.38	-1.18	.239
EMWSS	56.98	19.65	57.73	21.37	-.306	.760
EQ.Dec	25.69	6.18	25.63	6.18	.096	.923
BPQ	19.80	12.73	21.57	13.27	-1.126	.261

Notes: BPQ= Borderline Symptoms; TRSI.ES= Trauma Related Shame Inventory -External Shame; TRSI.IS= Trauma Related Shame Inventory -Internal Shame; EMWSS= Early Memories of Warmth and Safeness Scale; EQ.Dec= Experiences Questionnaire -Decentering.

Table 2. Pearson Correlations between all studied variables.

	BPQ	TRSI.ES	TRSI.IS	EMWSS
TRSI.ES	.49**			
TRSI.IS	.53**	.74**		
EMWSS	-.48**	-.31**	-.34**	
EQ.Dec	-.41**	-.33**	-.40**	.43**

Notes: BPQ= Borderline Personality Questionnaire; TRSI.ES= Trauma Related Shame Inventory -External Shame; TRSI.IS= Trauma Related Shame Inventory -Internal Shame; EMWSS= Early Memories of Warmth and Safeness Scale; EQ.Dec= Experiences Questionnaire -Decentering; **= $p \leq .01$; *= $p \leq .05$.

positive associations with *borderline symptomatology*. Nevertheless, this association was stronger for *trauma related internal shame*.

On the other hand, *memories of warmth and safeness* showed a moderate positive correlation with decentering abilities and a negative moderate relationship with borderline symptoms. Finally, *decentering* presented a moderate negative correlation with *borderline symptomatology*.

Taken together these findings and our hypothesis a path model was tested in order to explore the mediational role of *decentering* on the relationship between *emotional memories* (internal and external shame traumatic memories and early memories of warmth and safeness) and *borderline symptoms* (see Figure 1).

Initially, the hypothesized model was tested through a fully saturated model with 22 parameters. Because fully saturated models have a perfect model fit, model fit indices were neither examined nor reported. In this first model all paths were statistically significant, with the exception of the direct effect of *trauma related external shame* on *decentering* ($b_{TRSI.ES.EQ.Desc}$= -.037; p= .677). This non-significant path was then eliminated and a new path analysis was conducted.

The final model showed a very good model fit: (χ^2/df= .174, p= .677; *CFI*= 1.00; *TLI*= 1.015; *RMSEA*= .000 (*CI*= .000, .114; $p \leq .05$).

Results show that *trauma related internal shame* (when controlling for memories of warmth and safeness) had a total effect on over *borderline symptomatology* (β= .283; based on 95% *CI*= .232, .914, p= .001); with a direct effect of β= .244 (based on 95% *CI*= .077, .392; p= .003). Also, the *trauma related internal shame memories* presented an indirect effect on *borderline symptoms*, mediated by *decentering* of .039 (β= -.293 x -.134). This indirect effect corresponds to 13,8% (.039/.283= .138) of the total effect of *trauma related internal shame* on *borderline symptoms* (based on 95% *CI*= .010, .081; p= .010).

Memories of warmth and safeness (when controlling for the effect of trauma related internal shame) presented a total effect of β= -.329 on *borderline symptomatology* (based

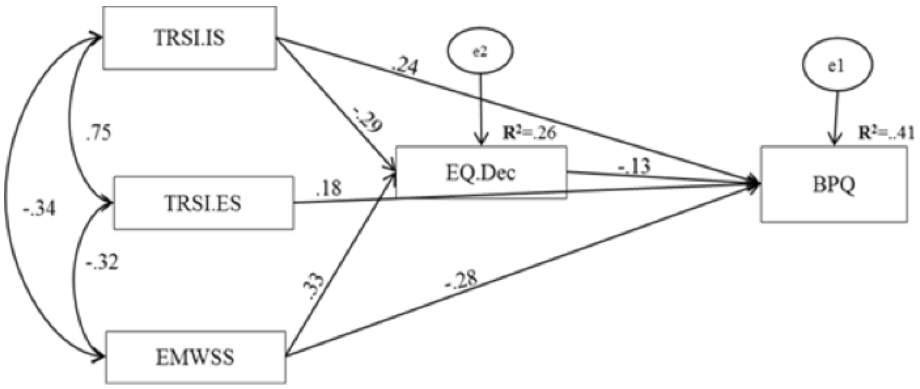

Figure 1. Final model for the mediational role of decentering on the relationship between emotional memories and borderline symptomatology. TRSI.IS= Trauma Related Shame Inventory -Internal Shame; TRSI.ES= Trauma Related Shame Inventory -External Shame; EMWSS= Early Memories of Warmth and Safeness Scale; EQ.Dec= Experiences Questionnaire -Decentering subscale; BPQ= Borderline Personality Questionnaire.

on 95% *CI*= -.430, -.223; *p*= .001); with a direct effect of *β*= -.284, based on 95% *CI*= -.395, -.17; *p*= .003. The *warmth and safeness memories* also showed a significant indirect effect on *borderline symptomatology*, mediated by *decentering* of .019 (*β*= .331 x -.134) representing 58% (.019/-.329= .577) of the total effect of *warmth and safeness memories* on *borderline symptoms* (based on 95% *CI*= -.279, -.143; *p*= .010).

Finally, there was a direct effect between *external shame* (TRSI.ES) and *borderline symptomatology* of .453 (based on 95% *CI*= .037, .33; *p*= .001; with a direct effect of *β*= .180 (based on 95% *CI*= .094; .853; *p*= .003). The final model explained 26% of *decentering* and 41% of *borderline symptomatology* variance.

DISCUSSION

The development of BPD has been consistently associated with complex and multivariate factors comprising: genetic vulnerabilities, adverse childhood experiences and harsh and invalidating environments (Levy, 2005; Linehan, 1993a; Lieb *et alii*, 2004; Crowell, Beauchaine, & Linehan, 2009). Literature has been highlighting that individuals with early negative experiences (e.g., harsh, negligent intrusive and even abusive caregivers) and who experienced traumatic shameful events are prone to develop borderline symptomatology (Baird, 2008; Freitas, 2011; Johnston, Dorahy, Courtney, Bayles, & O'Kane, 2009). Moreover, individuals with BPD are considered to have difficulties in emotion regulation, heightened emotional sensitivity and a slow return to emotional baseline (e.g., Crowell *et alii*, 2009). The current study explored the relationship between emotional memories, including shame-related traumatic events, memories of warmth and safeness, decentering and borderline symptoms.

As expected, traumatic shameful memories revealed moderate and positive correlations with borderline symptoms. This result is consistent with several previous studies that stated the importance of shame in the development of borderline features (Brown *et alii*, 2009; Rizvi & Linehan, 2005; Rüsh *et alii*, 2007; Freitas, 2011).

In addition, our results suggest that individuals who recall fewer memories of warmth and safeness during childhood present higher levels of borderline symptoms in adulthood. This finding seem to support that the development of borderline symptomatology

relays not only in the presence of early negative experiences but also in the lack of memories of being supported and cared for (Baird, 2008; Linehan, 1993a; Linehan, & Dexter-Mazza, 2008). In fact, recent evidence point out the importance of felling warmth and safe, being loved and chosen by others (e.g., caregivers, friends, lovers) in order to develop secure relationships with others and the self (Gilbert, 2010; Gilbert *et alii*, 2006; Richter, Gilbert, & McEwan, 2009). It seems that when individuals do not have these memories of warmth and safeness with their caregivers, they tend to see others and the environment as unsafe and critical and the self as inferior, unlovable and worthless (Gilbert & Irons, 2005; Matos, Pinto Gouveia, & Duarte, 2015), which is common in individuals with borderline personality disorder (e.g., Linehan, 1993a; Freitas, 2011). Previous studies have already suggested that positive early experiences of warmth and safeness and the absence of traumatic shame events, were negatively related to psychopathological symptoms both in adults and adolescent samples (Cunha, Martinho, Xavier, & Espírito Santo, 2014; Matos *et alii*, 2015; Richter *et alii*, 2009). Moreover, our results suggest that memories of warmth and safeness and shame-based traumatic memories reflect distinct constructs and may be considered distinct risk factors to borderline symptomatology.

On the other hand, decentering presented a positive association with memories of warmth and safeness and negative associations with internal and external shame traumatic events and current borderline symptomatology. This suggests that individuals who are able to take a stance from their negative internal experiences recall more positive early experiences and fewer traumatic shame events during childhood. Additionally, and as expected, decentering abilities were negatively related to borderline symptoms. Furthermore, recently, some studies found evidence for the importance of integrating mindfulness skills in the treatment of borderline patients (e.g. Elices *et alii,* 2016; Morton, Snowdon, Gopold & Guymer, 2012). In fact, these mindfulness competences which increase the awareness of the experience as it occurs, seem to be useful in regulating negative emotions and impulsive behaviors (Linehan, 1993a; 1993b). Likewise, recent studies found evidence of the importance of promoting decentering abilities in borderline patients in order to decrease emotional dysregulation (Elices *et alii*, 2016; Morton *et alii*, 2012; Wupperman *et alii,* 2013).

Interestingly, our findings found support for the mediational role of decentering on the relationship between the recall of positive (early memories of warmth and safeness) and negative early emotional experiences (internal and external shame traumatic memories) and current borderline symptoms. Overall, the model tested explained 26% of decentering and 41% of borderline symptomatology variances. It seems that the impact of these early experiences on the development of borderline symptoms in adulthood occurs (at least partially) through the difficulty in taking a stance towards one's negative internal experiences. In addition, as far as we know this is the first study that highlights the crucial direct and indirect effects (through decentering) of early memories of warmth and safeness on borderline symptomatology, as it accounted for 58% of its total effect. This is a very interesting result as it suggests that the absence of feeling loved and secured by caregivers plays a crucial role on the endorsement of borderline features through its effect on the difficulty in taking a stance from one's internal experiences. Previously, Richter *et alii* (2009), demonstrated that recalling positive emotional memories, (feeling warmth, safe, and cared for as a child) was significantly and negatively associated with psychopathology (e.g., depressive symptoms) and positively related to a disposition to experience positive affects (e.g., of safeness, warmth and security). Our study adds further

evidence by showing the mediator role of decentering on the relationship between low warmth and safeness memories and borderline symptomatology.

Additionally, in our model external shame-based traumatic experiences only revealed a direct effect on borderline symptoms. So, it is possible that individuals who had early shame traumatic memories and believe that because of that others may look down on them, may be at greater risk of developing borderline symptoms in adulthood.

Our results are in line with several studies that have already shown that decentering plays a protective role on rumination, which is a process that has been intrinsically associated with psychopathology and BPD (Baer & Sauer, 2011; Freitas, 2011; Fresco *et alii,* 2007; Linehan & Dexter-Mazza, 2008). Furthermore, the crucial role of neglectful, rejecting, shaming, critical and abusive experiences on the vulnerability to several mental health problems, including BPD has already been explored (Baird, 2008; Liotti, 2002; Linehan, 1993a). Nevertheless, our study highlights the importance of early memories of warmth and safeness and decentering as protective factors for borderline personality disorder, suggesting that they can be important tools in the therapeutic process with BPD patients.

There are a number of limitations in this study. Firstly, this is a cross-sectional study which precludes causal conclusions among study's variables. Future prospective studies should further clarify the causality and direction of the relationships found and explore the role of these variables in different groups (e.g., adolescents, clinical samples). Secondly, the early memories of warmth and safeness, as well as, shame-based traumatic experiences were assessed through retrospective reports, which can be less accurate. Still, research attests the validity and accuracy of recalls of early adverse experiences (e.g., Richter & Eisemann, 2000) and sustained the importance of the subjective perception of respondents (e.g., Perris *et alii*, 1986). Future research might benefit from the use of other non-self-report instruments (such as, structured interviews). Finally, it is possible that other processes might mediate the relations found (e.g., self-compassion and acceptance skills). However, we intentionally restrained the model in order to explore the role of decentering abilities.

Nevertheless, our findings have some important clinical implications. Namely it highlights the importance of training decentering abilities when dealing with people more vulnerable and prone to borderline symptoms. Moreover, it emphasizes the importance of assessing early emotional memories in these individuals. Although, more studies regarding the role of decentering are needed, both in normal and clinical populations, our results point out for the importance of developing the ability to detach oneself from our own internal experiences and observe them as merely transitory mental events.

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