

# Childhood Maltreatment, Attachment, and Borderline Personality–Related Symptoms: Gender-Specific Structural Equation Models

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**Objectives:** Survivors of early interpersonal trauma may experience relational problems, anger, impulsive and self-destructive behaviors, identity disturbance, and other difficulties that are associated with borderline personality disorder. Insecure attachment also has been documented in survivors and may be related to borderline personality–related symptoms (BPRS). The goal of the current study was to examine an integrative model of maternal and paternal childhood maltreatment and insecure attachment as they predict BPRS. **Method:** The sample was composed of 954 participants who completed self-report measures of parental maltreatment during childhood, attachment security, and trauma-related symptoms. **Results:** Structural equation modeling suggested differential impacts of maternal and paternal maltreatment on male and female participants. Both maternal and paternal maltreatment were directly associated with BPRS in women, whereas in men, only paternal maltreatment was directly related to BPRS. In women, paternal maltreatment was indirectly associated with BPRS through attachment anxiety but not through attachment avoidance. In men, maternal maltreatment was indirectly associated with BPRS through attachment anxiety but not through attachment avoidance. **Conclusion:** These findings have implications for the understanding of gender-specific etiologies of borderline personality symptoms and underscore attachment security as an important intervention target.

### Clinical Impact Statement

The present study suggests that father–daughter and mother–son maltreatment are predictors of symptoms related to borderline personality, through the development of insecure attachment. These results highlight the importance of providing therapeutic interventions that are trauma- and attachment-focused, as well as gender-sensitive, for patients suffering from borderline symptomatology.

**Keywords:** childhood maltreatment, adult attachment theory, borderline personality, structural equation modeling

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Borderline personality disorder (BPD), considered one of the more challenging conditions to treat in therapy, is characterized by a pervasive pattern of instability in interpersonal relationships, abandonment fears, identity disturbance, chronic feelings of emptiness, affect instability, impulsivity, self-injurious behavior, suicidality, difficulty controlling anger, and dissociation (American Psychiatric Association, 2013). A number of studies have indicated that exposure to childhood abuse or neglect is related to various borderline personality–related symptoms (BPRS; e.g., Bierer et al., 2003; Briere, Hodges, & Godbout, 2010; MacIntosh, Godbout, & Dubash, 2015). As well, a large body of empirical research, both cross-sectional and longitudinal, has indicated that between 30% and 90% of patients diagnosed with BPD report a history of child maltreatment (Bouchard, Godbout, & Sabourin, 2009). This association has been noted in a variety of samples, including psychiatric inpatients (Bradley, Jenei, & Westen, 2005) and outpatients (Golier et al., 2003), urban drug users (Bornovalova, Gratz, Delany-Brumsey, Paulson, & Lejuez, 2006), and community adolescents (Rogosch & Cicchetti, 2005). At the same time, however, other authors (e.g., Berenz et al., 2013; Lewis & Grenyer, 2009) have reported that a history of trauma is neither

necessary nor sufficient for the development of BPD, and research has failed to empirically demonstrate strong direct causal links between these variables (Berenz et al., 2013; Bornovalova et al., 2013), yielding the importance of integrative mediation models.

Research has also suggested that trauma survivors diagnosed with BPD tend to report chaotic early environments that may also involve sexual, physical, emotional, or verbal abuse and chronic neglect (Cohen et al., 2014) and that more severe and extensive child maltreatment tends to be associated with higher levels of BPRS (Bierer et al., 2003). However, more research is needed to specifically identify the distinct and cumulative impacts of different types of child maltreatment and their characteristics, including the relative contributions of maternal versus paternal maltreatment, on BPRS.

### Complex Posttraumatic Stress and BPRS

Beyond borderline personality disorder, some researchers (e.g., Rosenkranz, Muller, & Henderson, 2014) have suggested that survivors of chronic and severe child maltreatment may present with a more complicated form of posttraumatic stress disorder (PTSD; American Psychiatric Association, 2013), often referred to as complex PTSD (CPTSD; Herman, 1992; World Health Organization, 2017). CPTSD includes classic PTSD symptoms as well as dysfunctional self-organization symptoms, characterized by difficulties with emotion regulation, relationships, and identity. A degree of overlap can be identified between CPTSD-related self-disorganization and BPD symptoms, notably in terms of identity impairment, excessive anger, distress reduction behaviors, and suicidality. Some of these symptoms can be theoretically viewed as resulting from triggered implicit memories, negative relational schema, and trauma-activated emotions associated with severe childhood interpersonal trauma (Herman, 1992; MacIntosh et al., 2015), which then motivate risk-taking or potentially self-damaging “borderline” activities as a way to avoid triggered emotional distress (Briere, in press; Briere et al., 2010).

Given the overlap between CPTSD and BPD symptoms, there is currently a debate among experts regarding whether to include CPTSD in future diagnostic manuals (e.g., Cloitre, Garvert, Weiss, Carlson, & Bryant, 2014) or to reclassify BPD as a trauma-related disorder (e.g., Lewis & Grenyer, 2009). Cloitre and her team (2014) used latent class analyses to investigate this question and found that trauma survivors could be divided into four groups according to their symptom profiles: low symptoms, high-PTSD symptoms, high-CPTSD symptoms, and high-BPD symptoms. Although the high-BPD-symptom group showed elevated scores on some CPTSD symptoms, the authors suggested a distinction between the two diagnoses.

### Insecure Attachment and BPRS

#### Attachment Theory

Bowlby (1984) proposed the attachment theory to explain the human drive to form relationships with others and to maintain a desired level of proximity to significant attachment figures. He suggested that an attachment behavioral system regulates the child’s responses when experiencing emotional distress and that attachment figures who offer contact, reassurance, and comfort

facilitate the child’s development of emotional regulation and well-being as well as expectations that close relationships will provide a safe haven and a secure base. These conditions, in turn, are thought to stimulate the development of positive models of self and others in relationships (Bowlby, 1984). In an extension of Bowlby’s theory to adults (Hazan & Shaver, 1987), insecure attachment is typically conceptualized as comprising two dimensions: abandonment anxiety and intimacy avoidance. The abandonment anxiety dimension represents the individual’s fear of relational rejection and abandonment, in combination with a lack of self-worth. It is thought to involve a hyperactivation of the attachment system that keeps the focus on signals of relational threats and on the search for love and security. The avoidance of close relationships dimension, on the other hand, reflects an individual’s emotional suppression, self-reliance, and discomfort with closeness and interdependence, based on expectations that others will be unavailable and unsupportive. It involves a deactivation of the attachment system to reduce negative emotional states and vulnerability to rejection (see Mikulincer & Shaver, 2017).

#### Attachment and Child Maltreatment

In the case of abuse or neglect, attachment schemas are typically negative. For example, young children who are being maltreated often infer negative self- and other-characteristics from such acts. They may conclude that they must be intrinsically unacceptable and deserving of such treatment and may come to see themselves as helpless, unlovable, or weak and to view others as inherently dangerous, rejecting, or unavailable (Godbout, Briere, Lussier, & Sabourin, 2014). As a result, survivors of childhood maltreatment may internalize negative schema about themselves, others, and their relationships with other people, leading to insecure attachment. Empirical data have generally supported these propositions, with the link between childhood maltreatment and insecure attachment being widely documented in abused or neglected children (Muller, Thornback, & Bedi, 2012) and in adults with maltreatment histories (Erozkan, 2016; Godbout et al., 2014; Godbout, Sabourin, & Lussier, 2009; MacIntosh et al., 2015).

Notably, however, the gender of the maltreating parent has been underexamined in the attachment literature, despite its seeming relevance. In one of the few studies of parental gender and type of parental maltreatment in the prediction of adult attachment style, Briere, Godbout, and Runtz (2012) found that paternal neglect and maternal psychological abuse predicted participants’ attachment anxiety, whereas lack of paternal and maternal support was associated with attachment avoidance. This suggests that the gender of the abusive or neglecting parent or caretaker may be an important determinant of the effects of maltreatment on attachment across the life span.

#### Attachment as a Mediator of the Link Between Child Maltreatment and BPRS

Empirical data have suggested that insecure attachment, especially anxious-preoccupied attachment, is overrepresented among those with BPD (Scott et al., 2013). Researchers and theorists posit that the fundamental characteristics of this disorder—that is, unstable, intense interpersonal relationships; feelings of emptiness; bursts of rage; chronic fears of abandonment; intolerance of being

alone; and lack of a stable sense of self—may stem from attachment difficulties (Beeney et al., 2017; Fonagy, Target, & Gergely, 2000; Godbout et al., 2009). In support of these conclusions, longitudinal studies have indicated that early attachment experiences can be powerful predictors of later BPRS and likely influence personality development via their influence on the elaboration and consolidation of internalized cognitive schemas over the life span (e.g., Carlson, Yates, & Sroufe, 2009).

### Gender as a Moderator of BPRS

Studies have generally suggested that BPD is more prevalent in women than in men (American Psychiatric Association, 2013; Skodol & Bender, 2003). This often-observed gender difference may be due in part to the higher rates of childhood sexual abuse (CSA) among women (Stoltenborgh, van IJzendoorn, Euser, & Bakermans-Kranenburg, 2011), which in turn are associated with higher rates of BPD (MacIntosh et al., 2015). As well, some BPRS may reflect gender-stereotypic behaviors believed to be more common in women, such as suicidal “gestures,” self-injury, and more demonstrative expression of emotions. However, the findings in a national U.S. representative study yielded similar prevalence rates in men and women (Grant et al., 2008). Given the apparent gender differences in both BPD etiology and outcomes, and findings showing gender similarities, further research is indicated to determine the role of gender in the etiology, mediation, and structure of BPRS.

### The Current Study

The established relationship between child maltreatment and BPRS suggests several avenues of investigation relevant to the etiology of BPRS. First, it appears that the type of maltreatment and the gender of the maltreating parental figure may have complex effects on subsequent symptomatology, including those associated with BPD. Second, the literature has suggested that attachment insecurity both arises from parental maltreatment and mediates between maltreatment and later symptoms. Given that gender may influence maltreatment type and that maltreatment effects may vary according to gender, it is possible that this variable may also be relevant to the development of BPRS, as suggested by early models of BPD (e.g., Masterson & Rinsley, 1975). In response, the current study examined an integrative model of the role of different forms of maternal and paternal childhood maltreatment in the development of BPRS, as mediated by insecure attachment, in women and men.

### Method

#### Procedure

Participants were recruited online through two psychology websites (i.e., Social Psychology Network, hosted by Wesleyan University, and Psychological Research on the Net, sponsored by the Hanover College Psychology Department) and from a Canadian university. Participants indicated that they learned of the study through their Canadian university (49%), the Social Psychology Network website (26.5%), Psychological Research on the Net (8%), someone (e.g., a friend, a professor) who directed them to

one of these websites (9.5%), or other sources (7%; e.g., “Google search”). All interested participants accessed and completed computerized questionnaires via a link to the study. Participants were offered the opportunity to be entered into a drawing for \$100; university students were offered an entry into the drawing or bonus points toward their course grade. Informed consent was obtained from all participants, and the study was approved by the university’s Human Research Ethics Board.

### Participants

A total of 954 participants (73% women) completed the study. Mean age of participants was 24 years ( $SD = 7.7$ ,  $Mdn = 21$ , range = 18–72), and most identified as Caucasian (78%), with the remainder identifying as Asian (10%); Hispanic (4%); mixed race (4%); Black, African American, or African Canadian (3%); or American or Canadian Indian, Aboriginal, or First Nations (1%). The majority of participants had some college- or university-level education (83%), and 63% had an annual family income of US\$40,000 or more. A comparison of the sociodemographic characteristics of participants recruited online versus from the Canadian university revealed that the majority of online participants (81%) were from the United States (from 40 different states), whereas those in the university sample were mostly Canadians (91%). In addition, the online participants were older ( $M = 28$  years,  $SD = 9.6$ ) than the university participants ( $M = 20.4$  years,  $SD = 2.6$ ). Finally, family of origin annual income of US\$80,000 or more was reported by 45% of the university participants versus 18% of the online participants. In both groups, the majority were female, identified as Caucasian, and had attained some college- or university-level education.

### Measures

**Childhood maltreatment.** Parental childhood maltreatment was evaluated by several items from various measures. The Psychological Maltreatment Review (PMR; Briere et al., 2012) is a 30-item questionnaire composed of three subscale assessing emotional abuse, emotional neglect, and lack of psychological support by maternal and paternal figures within a typical year prior to age 18. The PMR has shown good reliability and validity (Briere et al., 2012), with Cronbach’s alphas ranging from .90 to .94 in the current sample. For each parental figure, a total score representing psychological maltreatment was created by summing scores for emotional abuse, emotional neglect, and lack of support.

Maternal and paternal physical maltreatment were evaluated by two items assessing the frequency of physical violence perpetrated toward the child (i.e., direct violence; Leserman, Drossman, & Li, 1995) and two items that were developed for this study assessing the frequency of physical violence perpetrated toward the other parent (i.e., indirect violence) prior to age 18. The scores were summed to obtain a total physical maltreatment score, as perpetrated by each parent. Alphas were .67 for maternal and .72 for paternal physical maltreatment.

Finally, child sexual abuse was assessed by six dichotomous items (yes–no) asking about nonconsensual sexual experiences prior to age 14 that were modified from scales by Leserman et al. (1995) and Badgley (1984). This scale has shown good sensitivity, specificity, and test–retest reliability (Leserman et al., 1995). As

has been proposed by other researchers and done in other studies (e.g., Vaillancourt-Morel et al., 2015), a continuous severity score was calculated for both maternal and paternal sexual maltreatment based on the most severe or invasive sexually abusive behavior experienced (0 = *no sexual abuse*, 1 = *noncontact*, 2 = *physical contact* [e.g., *genital fondling*], 3 = *oral sex*, 4 = *anal or vaginal penetration*).

Scores for psychological, physical, and sexual maltreatment by one's mother were all treated as indicators of a latent maternal maltreatment variable (although maternal sexual abuse was ultimately removed; see the Results section), whereas scores for psychological, physical, and sexual maltreatment by one's father were used as indicators of a latent paternal maltreatment variable.

**Attachment.** Attachment was assessed using the Experiences in Close Relationships—Revised (ECR-R) measure (Fraley, Waller, & Brennan, 2000). This 36-item self-report questionnaire evaluates the anxiety and avoidance dimensions of adult romantic attachment. Each dimension is assessed by 18 items, with higher scores indicating greater attachment anxiety or avoidance. The ECR-R is a widely used instrument that has demonstrated good psychometric properties (Fraley et al., 2000; Sibley, Fischer, & Liu, 2005). In the present study, Cronbach's alphas were .94 for both dimensions.

**Borderline personality-related symptoms.** Several relevant scales from the Trauma Symptom Inventory (2nd ed.; TSI-2; Briere, 2011) were used as indicators of a latent variable representing BPRS: Anger (angry thoughts, feelings, and behaviors), Suicidality (suicidal thoughts and behaviors), Tension Reduction Behaviors (use of external activities such as self-injury or binge eating to distract from feelings of distress), Impaired Self-Reference (identity confusion and lack of self-determination), and Dysfunctional Sexual Behavior (problematic sexual behaviors). These TSI-2 scales were used as proxies for BPD-related symptoms based on their theoretical relevance as well as their significant correlations with the Borderline scale of the Personality Assessment Inventory (Morey, 1991) in the TSI-2 validity study (Briere, 2011). The validity and reliability of the TSI-2 scales have been demonstrated using various samples (see Briere, 2011). In the present sample, Cronbach's alphas ranged from .81 to .91.

## Data Analysis

Descriptive analyses were performed to examine the prevalence of exposure to various types of child maltreatment in the current sample. To examine our general hypothesis, we performed structural equation modeling (SEM) using Mplus, Version 7 (Muthén & Muthén, 2015). First, measurement models were estimated to verify whether the latent variables (i.e., BPRS, maternal child maltreatment, and paternal child maltreatment) were well represented by their indicators. Next, the structural model examined the mediational role of attachment anxiety and avoidance in the relation between child maltreatment and BPRS.

Models were computed using the maximum likelihood robust estimator, correcting for the nonnormal distribution of some variables (e.g., childhood maltreatment). As recommended by McDonald and Ho (2002), overall model fit was tested by considering together the comparative fit index (CFI), the root-mean-square error of approximation (RMSEA), the chi-square statistic, and the ratio of chi-square to degrees of freedom ( $\chi^2/df$ ). A combination of

a nonstatistically significant chi-square value, a CFI value of .90 or higher, an RMSEA value below .08, and a ratio of chi-square to degrees of freedom less than 3 are thought to represent a good fit (Kline, 2010; Ullman, 2001).

To examine the mediational role of attachment anxiety and avoidance, we computed direct effects (path coefficient from child maltreatment to BPRS), indirect effects (path coefficient from child maltreatment to attachment dimension  $\times$  path coefficient from attachment dimension to BPRS), and total effects (direct effect + indirect effect). Because indirect effects can exist even in the absence of a significant direct association between an independent and a dependent variable (MacKinnon & Fairchild, 2009), all possible indirect effects were tested. To examine the significance of the indirect effects, we used 95% bootstrap confidence intervals (CIs; MacKinnon & Fairchild, 2009). This bias-corrected method is based on a distribution of the product of coefficients and generated confidence limits for the true value of the coefficient for the indirect effect. When 0 is not in the confidence interval, the indirect effect is considered significant. We then reported the proportion of the total effect that is mediated through attachment (indirect effect/total effect). Finally, given that some sociodemographic differences were identified between the online and university participants, the subsample (online vs. university) was included as a covariate in the model.

## Results

Table 1 shows prevalence rates for at least one occasion of physical and sexual maltreatment, as well as means and standard deviations for psychological maltreatment, attachment scales, and trauma-related symptoms. The small number of participants reporting sexual abuse perpetrated by their mothers ( $n = 3$  men and 7 women) precluded its inclusion as an indicator of maternal child maltreatment. Similarly, the number of men reporting sexual abuse by their fathers ( $n = 3$ ) precluded its use as indicator of paternal child maltreatment in men. As a result, sexual abuse was included as an indicator of paternal child maltreatment in only women, meaning that different models were estimated in men and women.

## Integrative Model of the Links Between Child Maltreatment, Attachment, and BPRS

**Measurement models of parental maltreatment and BPRS.** A measurement model including latent variables for maternal maltreatment, paternal maltreatment, and BPRS was examined. Anger, Suicidality, Tension Reduction Behaviors, Impaired Self-Reference, and Dysfunctional Sexual Behavior scores were indicators of the latent variable representing BPRS. Maternal psychological and physical maltreatment were indicators of the latent variable of maternal maltreatment for both men and women, whereas in women, paternal psychological, physical, and sexual maltreatment were indicators of the latent variable of paternal maltreatment. In men, only paternal psychological and physical maltreatment were indicators of the latent variable of paternal child maltreatment. In the models for both women and men, adding covariances between maternal and paternal psychological maltreatment as well as between maternal and paternal physical maltreatment improved the model's fit. Fit indices were satisfactory for the measurement models for women,  $\chi^2(df = 30, N = 699) = 48.68$ ,  $\chi^2/df = 1.62$ , CFI = .99, RMSEA = .03, 90% CI [.01, .05],

Table 1  
*Percentages, Means, and Standard Deviations for Maltreatment, Attachment, and Symptom Variables*

Variable	Women				Men			
	<i>M</i>	<i>SD</i>	%	<i>n</i>	<i>M</i>	<i>SD</i>	%	<i>n</i>
Maternal maltreatment								
Psychological maltreatment	45.50	38.01			42.24	30.42		
Emotional abuse	17.65	15.30			15.17	13.55		
Emotional neglect	12.94	15.49			9.10	12.26		
Lack of emotional support	14.93	14.41			17.98	13.60		
Physical maltreatment			56.8	310			49.2	122
Direct physical violence			23.7	157			25.4	63
Indirect physical violence			37.9	250			40.3	100
Sexual abuse			1.0	7			1.2	3
Paternal maltreatment								
Psychological maltreatment	52.82	41.11			49.69	33.59		
Emotional abuse	16.10	15.05			14.95	13.84		
Emotional neglect	15.82	17.23			11.58	14.49		
Lack of emotional support	20.95	16.57			23.16	14.65		
Physical maltreatment			49.4	315			53.6	128
Direct physical violence			22.4	143			29.0	69
Indirect physical violence			43.3	276			45.2	108
Sexual abuse			5.3	37			1.2	3
Attachment anxiety	3.40	1.40			3.08	1.24		
Attachment avoidance	3.24	1.32			3.08	1.15		
Anger	9.50	6.71			9.61	6.41		
Suicidality	3.16	5.37			2.73	4.54		
Tension-reduction behaviors	5.92	5.14			5.07	4.90		
Impaired self-reference	10.44	6.24			9.75	5.88		
Dysfunctional sexual behaviors	2.33	3.15			3.08	2.99		

and men,  $\chi^2(df = 22, N = 255) = 35.55$ ,  $\chi^2/df = 1.62$ , CFI = .98, RMSEA = .05, 90% CI [.01, .08].

**Model of the direct association between child maltreatment and BPRS.** Prior to the inclusion of attachment anxiety and avoidance, we tested a model of the direct association between child maltreatment and BPRS. For women, both maternal and paternal child maltreatment ( $\beta = .23$ ,  $p = .008$ , and  $\beta = .31$ ,  $p < .001$ , respectively) were significant predictors of BPRS,  $\chi^2(df = 30, N = 699) = 48.68$ ,  $\chi^2/df = 1.62$ , CFI = .99, RMSEA = .03, 90% CI [.01, .05], explaining 23% of its variance. In men, only paternal child maltreatment ( $\beta = .48$ ,  $p = .001$ ) was a significant predictor of BPRS,  $\chi^2(df = 22, N = 255) = 35.55$ ,  $\chi^2/df = 1.62$ , CFI = .98, RMSEA = .05, 90% CI [.01, .08], explaining 41% of its variance.

**Mediation model.** The final models, examining the mediational role of attachment anxiety and avoidance in the relation between parental maltreatment and BPRS for women and men, are illustrated in Figures 1 and 2, respectively. Nonsignificant paths were dropped following the parsimony principle. In addition, these models initially included the subsample (online vs. university) as a covariate. Controlling for subsample did not affect the results observed, and it was therefore dropped from the final models.

For women, maternal and paternal child maltreatment continued to be significantly associated with BPRS after the inclusion of attachment anxiety and avoidance, although the strength of their associations was reduced. Maternal child maltreatment was unrelated to attachment, whereas paternal child maltreatment was significantly related to both attachment anxiety and avoidance. The indirect effect from paternal maltreatment to BPRS through attach-

ment anxiety was significant ( $\beta = .27$ , 95% bootstrap CI [.019, .036]), but the indirect effect through attachment avoidance was not significant ( $\beta = .003$ , 95% bootstrap CI [.000, .007]). This final mediational model for women demonstrated a good fit to the data,  $\chi^2(df = 46, N = 699) = 96.61$ ,  $\chi^2/df = 2.10$ , CFI = .97, RMSEA = .04, 90% CI [.03, .05], and explained 45% of the variance in BPRS.

In men, the direct association between paternal maltreatment and BPRS, although slightly smaller in magnitude, remained significant after the inclusion of attachment anxiety and avoidance. Results indicated that maternal maltreatment was associated with attachment anxiety, whereas paternal child maltreatment was linked to attachment avoidance. An indirect effect was observed from maternal maltreatment to BPRS through attachment anxiety ( $\beta = .03$ , 95% bootstrap CI [.016, .045]). Finally, results revealed a direct link between paternal maltreatment and BPRS; attachment avoidance was unrelated to BPRS. This well-fitting mediational model,  $\chi^2(df = 38, N = 255) = 71.92$ ,  $\chi^2/df = 1.89$ , CFI = .96, RMSEA = .06, 90% CI [.04, .08], explained 51% of the variance in BPRS in men.

## Discussion

This study examined the role of maternal and paternal childhood maltreatment in the development of BPRS, as mediated by insecure attachment, in women and men. Results indicated that attachment played a significant mediation role in the link between child maltreatment and BPRS, with different patterns appearing in men and women. In women, a history of child maltreatment from either

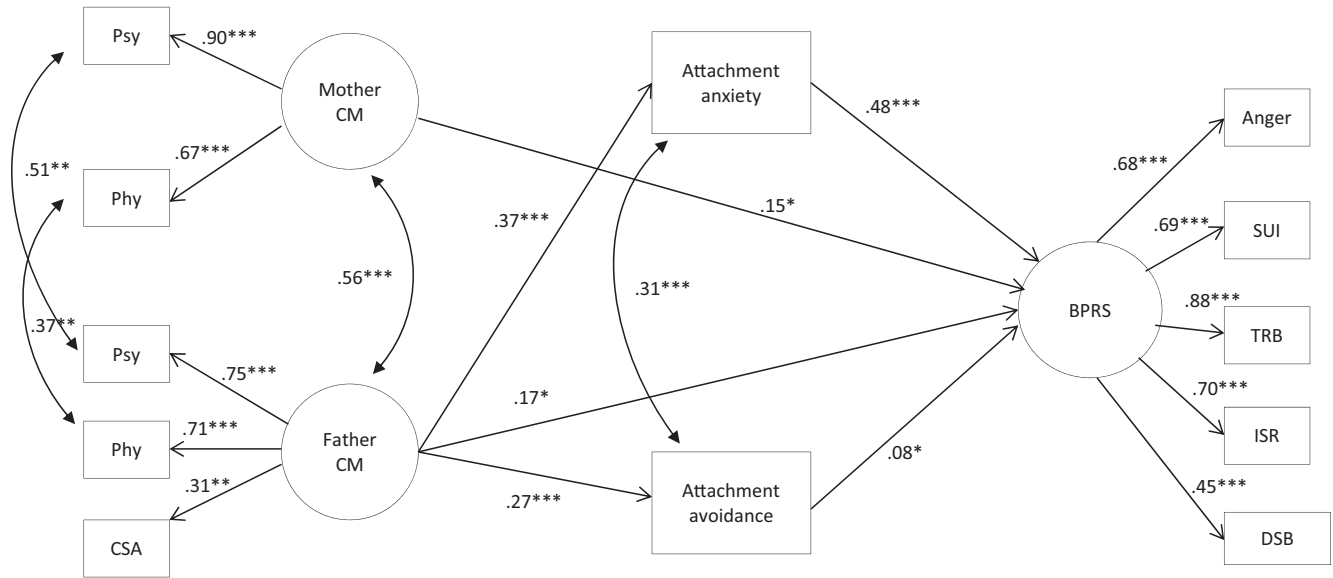


Figure 1. Structural model of the mediating role of attachment anxiety and avoidance in the association between parental childhood maltreatment (CM) and borderline personality-related symptoms (BPRS) trauma-related symptoms in women. Psy = psychological (maltreatment); Phy = physical (maltreatment); CSA = childhood sexual abuse; SUI = Suicidality; TRB = Tension Reduction Behaviors; ISR = Impaired Self-Reference; DSB = Dysfunctional Sexual Behavior. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

the mother or father directly contributed to greater BPRS. However, only maltreatment from the father was related to more insecure attachment in women, which in turn was associated with higher BPRS. In men, maternal maltreatment was related to at-

tachment anxiety, which in turn was linked to higher BPRS, whereas paternal maltreatment was directly related to BPRS. Although paternal maltreatment was associated with attachment avoidance, the latter was unrelated to BPRS. In both men and

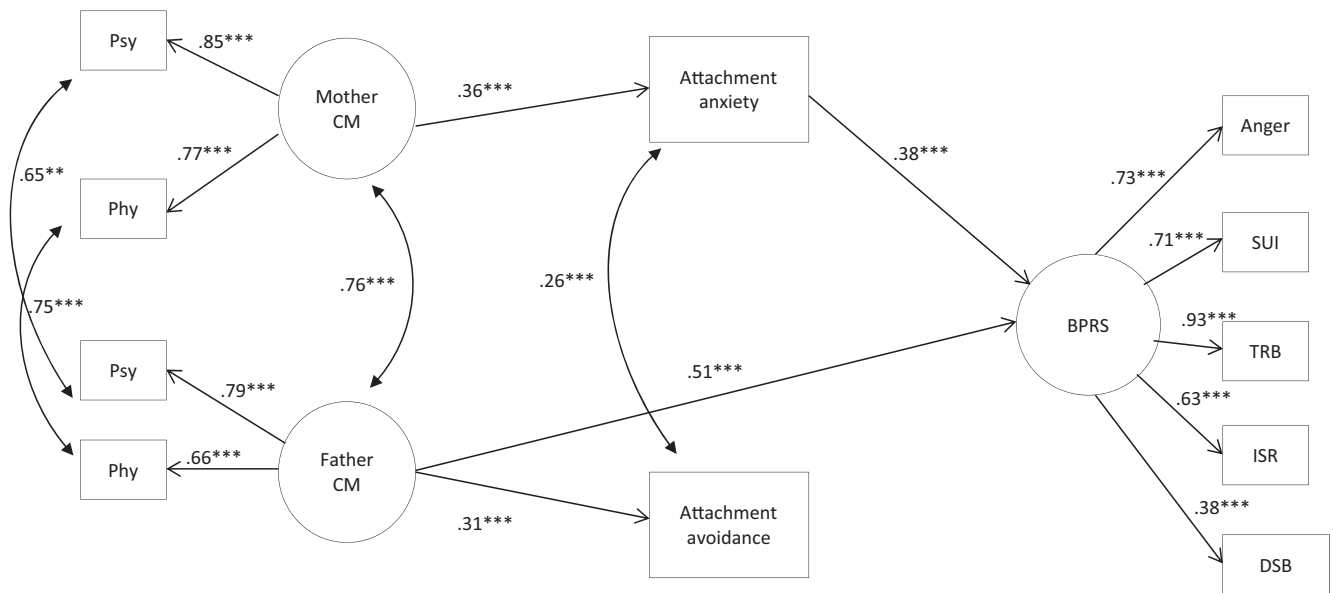


Figure 2. Structural model of the mediating role of attachment anxiety and avoidance in the association between parental childhood maltreatment (CM) and borderline personality-related symptoms (BPRS) trauma-related symptoms in men. Psy = psychological (maltreatment); Phy = physical (maltreatment); CSA = childhood sexual abuse; SUI = Suicidality; TRB = Tension Reduction Behaviors; ISR = Impaired Self-Reference; DSB = Dysfunctional Sexual Behavior. \*\*  $p < .01$ . \*\*\*  $p < .001$ .

women, a significant covariance was observed between fathers' and mothers' maltreatment behavior, likely reflecting the fact that maternal and paternal maltreatment tends to co-occur within families (Godbout et al., 2009). These findings not only highlight the potential role of attachment insecurity in the development of BPRS following childhood maltreatment but also reveal how the gender of the abusive parent and of the victim may influence these associations.

### Childhood Trauma and Attachment Anxiety

Our results support past empirical (e.g., MacIntosh et al., 2015; Scott et al., 2013) and theoretical (e.g., Herman, 1992) work suggesting that childhood trauma may foster BPRS through insecure attachment. It is interesting that although fathers' maltreatment was related to greater attachment avoidance in their children, it was primarily attachment anxiety, rather than avoidance, that played a role in the relation between child maltreatment and BPRS. These findings suggest that more severe and chronic maltreatment experiences may promote negative perceptions of oneself as undeserving of love and likely to be abandoned (i.e., attachment anxiety), rather than leading to negative perceptions of others as unavailable or unworthy of being trusted (i.e., attachment avoidance). This accords with research indicating that child maltreatment survivors tend to blame themselves for their maltreatment, at least when the perpetrator is their parent–attachment figure (Barker-Collo, 2001). As Freyd (1996) noted, such “betrayal trauma” by an attachment figure is particularly threatening, considering the central role of parents in the child’s survival. In this context, to maintain a positive image of the much-needed parents, as well as self-perception of control (e.g., “it’s my fault, so if I become a better child the abuse may stop”), maltreatment perpetrated by an attachment figure may lead to negative evaluations of oneself.

### Attachment Anxiety and BPRS

Apart from its relation with childhood trauma, attachment anxiety also appears to be significantly linked to BPRS. Given the role of attachment security in the development of emotion regulation (Mikulincer & Shaver, 2017), it follows that attachment anxiety would be associated with emotional instability, marked by inappropriate anger and impulsive behaviors such as suicidal and self-harming acts. Likewise, a lack of belief in one’s own value may trigger the use of sexuality to obtain love and intimacy, manifesting as dysfunctional sexual behaviors. Previous studies have suggested that anxiously attached individuals tend to use sexuality to gain reassurance in their relationships (e.g., Davis, Shaver, & Vernon, 2004). Moreover, because attachment anxiety implies negative perceptions about oneself (Hazan & Shaver, 1987), it is not surprising that it was associated with identity difficulties. Ultimately, our results indicate that the severity of child maltreatment by an attachment figure is likely to trigger negative beliefs about oneself in adult relationships, which in turn increases the risk of experiencing BPRS.

### Attachment Avoidance and BPRS

Compared to the more extensive links between child maltreatment and attachment anxiety, only paternal maltreatment predicted

attachment avoidance in men and women. Further, although attachment avoidance was related to BPRS in women, it did not explain the association between maltreatment and BPRS. This suggests that although attachment avoidance is relevant in understanding child maltreatment and BPRS, its role in the relation between these two concepts seems less straightforward.

### Gender of Participants and Their Parental Figures

An important aspect of our study was the focus on the participants' and abusive parents' gender. Attachment anxiety played an important role in the relationship between maltreatment and BPRS, yet this varied according to whether the participant and parental figure were of the same or a different gender. Opposite-gender parental abuse (i.e., father–daughter, mother–son) was predictive of BPRS through attachment anxiety, whereas same-gender parental abuse (i.e., mother–daughter, father–son) was directly related to BPRS. Maltreatment by the father was also directly associated with the daughter’s BPRS. It should be noted, however, that sexual abuse of daughters was included for only paternal maltreatment, which may have increased the strength of this direct association. In this regard, clinicians and researchers (e.g., MacIntosh et al., 2015) have suggested that the highly invalidating nature of sexual abuse may increase its association with BPD. Moreover, the relationship between children and their opposite-gender parent may be more likely to shape their perceptions, expectations, and behaviors toward future romantic partners in heterosexual adults (which were in the majority in this study). Although other studies are needed to confirm this hypothesis and the current results, the opposite-gender parent may play a particularly important role in the development of internalized negative perceptions of oneself in romantic relationships, at least among those with heterosexual orientations, which in turn may foster BPRS. In contrast, maltreatment by a parent of the same gender may lead to BPRS, at least among heterosexuals, through other mechanisms, which have yet to be uncovered. For example, future studies might explore the perceptions of oneself and others outside of romantic relationships as possible mechanisms explaining this association, as well as replicating the current model in couples from sexual minorities.

### Limitations and Future Studies

Interpretation of the present findings should be tempered by consideration of its potential limitations. Our SEM results are cross-sectional and therefore cannot be considered proof of causality. Moreover, the representativeness of our sample is limited by a number of factors, including the use of a convenience sample recruited through an online survey and a university sample, resulting in an overrepresentation of White, heterosexual, well-educated women, and thereby possibly reducing the generalizability of the results. Thus, these models should be replicated in other, more diverse, large-scale samples. Self-report bias might also have been a factor, because we used a self-report measure of symptomatology (i.e., TSI-2) as a proxy for BPRS. Similarly, although we chose specific TSI-2 scales based on theoretical and empirical considerations, it cannot be assumed that our BPRS variable accurately measures clinical BPD.

Another limitation is that the assessment of trauma in this study included experiences of only parental maltreatment, as opposed to

nonparental maltreatment and other forms of trauma, which also undoubtedly affect symptomatic outcomes. In addition, to maintain consistency among the child maltreatment variables, we only investigated childhood sexual abuse (CSA) committed by a parent in this article, and mother-perpetrated CSA was too rare to be included in the models. Because parental CSA represents a minority of all CSA cases (Sedlak et al., 2010), this study might not be representative of victims of nonparental CSA. Finally, potentially important variables that we did not assess (e.g., support from one's social network) could be included in future models to more broadly evaluate mediation effects.

## Practical Implications

These findings provide additional evidence that a history of childhood maltreatment may be directly related to symptoms typically associated with BPD, such as anger, tension reduction behaviors, suicidality, dysfunctional sexual behaviors, and impaired self-reference, as well as indirectly related through its impacts on insecure attachment. There are significant implications of these findings for psychological treatment, including the possibility that trauma- and attachment-focused interventions—for example, phase-based cognitive-behavioral therapy for complex trauma (Courtois & Ford, 2015), skills training in affective and interpersonal regulation (Cloitre & Schmidt, 2015), and emotion-focused therapy for complex trauma (Paivio & Pascual-Leone, 2010)—along with the known effectiveness of dialectical behavior therapy (Linehan, 1993), might be helpful in resolving BPRS. Our results also suggest that men and women may experience parental maltreatment differently, with resulting attachment patterns and psychosocial symptoms that vary according to gender. Such findings highlight the possible importance of developing and offering gender-specific interventions for men and women presenting with BPRS.

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