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The moderating role of rejection sensitivity in the relationship between emotional maltreatment and borderline symptoms

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ABSTRACT

Borderline Personality Disorder (BPD) is theorized to develop from a combination of dispositional and environmental risk factors. Among these risk factors, both childhood emotional neglect and abuse (ENA) and rejection sensitivity (RS) have been independently associated with BPD symptomatology. However, to our knowledge, no studies have examined the interaction between these variables as they relate to BPD symptoms. In the current study, greater ENA and RS were independently associated with more BPD symptoms in a sample of undergraduate students (n = 133). In addition, there was an interaction such that RS was more strongly correlated with BPD symptoms at moderate and low levels of ENA. Our findings suggest dispositional and environmental factors combine to instantiate BPD symptoms and thus suggest RS and ENA merit investigation in clinical samples.

1. Introduction

Borderline Personality Disorder (BPD) is a serious mental illness affecting up to 1% of the adult population (Grant et al., 2008; Lenzenweger, Lane, Loranger, et al., 2007). Despite the proliferation of theories (i.e., Bateman & Fonagy, 2004; Clarkin, Yeomans, & Kernberg, 2006; Kernberg, 1975; Linehan, 1993) supporting the interaction of predisposition and environment in the development of BPD, most studies have not examined how disposition and environment interact in BPD (Paris, 2008).

1.1. Rejection sensitivity and BPD

Interpersonal dysfunction is prominent in a broad range of mental health disorders (e.g. Major Depressive Disorder [MDD], BPD, Social Anxiety Disorder [SAD]). Interpersonal stressors are also common precipitants of suicidal behavior (Brodsky, Groves, Oquendo, Mann, & Stanley, 2006). A key risk factor for interpersonal dysfunction is rejection sensitivity (RS), defined as a tendency to defensively expect, readily perceive, and overreact to interpersonal rejection (Downey & Feldman, 1996; Romero-Canyas, Downey, Berenson, Ayduk, & Kang, 2010). RS reduces the stability of interpersonal relationships (Downey & Feldman, 1996; Downey, Freitas, Michaelis, & Khouri, 1998) and is elevated in several prevalent mental health disorders (Gunderson & Lyons-Ruth, 2008; Harb, Heimberg, Fresco, Schneier, & Liebowitz, 2002; Holt-Lunstad, Smith, & Layton, 2010; King-Casas & Chiu, 2012; Miano, Fertuck, Arntz, & Stanley, 2013; Staebler, Helbing, Rosenbach, & Renneberg, 2011). In particular, high RS is strongly associated with BPD (Downey, Khouri, & Feldman, 1997; Selby, Ward, & Joiner, 2010; Staebler et al., 2011), and individuals with BPD have greater RS than healthy volunteers and psychiatric patients without BPD (Selby et al., 2010; Staebler et al., 2011). Furthermore, positive associations between BPD symptoms and RS have also been observed in non-clinical samples (Ayduk et al., 2008; Berenson et al., 2009; Miano et al., 2013). Individuals who have BPD exhibit the interpersonal instability, sensitivity to abandonment, and self-destructive and suicidal behavior associated with extreme levels of RS, so BPD is a disorder in which the impact of high RS can be investigated in a clinical context.

1.2. Emotional neglect and abuse and BPD

Childhood abuse, particularly physical and sexual abuse, is also associated with borderline pathology (Afifi et al., 2011; Battle et al., 2004; Bierer et al., 2003; Gibb, Wheeler, Alloy, & Abramson, 2001; Johnson, Cohen, Chen, Kasen, & Brook, 2006; Tyrka, Wyche, Kelly, Price, & Carpenter, 2009; Widom, Czaja, & Paris, 2009). Recent studies have begun to examine the importance of emotional

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neglect and abuse (ENA), defined as "verbal assaults on a child's sense of worth or well-being or any humiliating or demeaning behavior directed towards a child by an adult or older person" (Bernstein, Ahluvalia, Pogge, & Handelsman, 1997, p. 341) and "the failure of caretakers to meet children's basic emotional and psychological needs, including love, belonging, nurturance and support" (Bernstein et al., 1994), in BPD pathology. Associations between BPD and greater ENA have been reported (Sar, Akyuz, Kugu, Ozturk, & Ertem-Vehid, 2006), with Gratz, Tull, Baruch, Bornovalova, and Lejuez (2008) finding emotional abuse to be a more robust predictor of co-morbid BPD among substance users than any other type of childhood maltreatment.

While childhood trauma appears to be associated with BPD, many people with trauma histories do not manifest maladaptive behavioral and emotional patterns (Dumont, Widom, & Czaja, 2007). Thus, trauma alone is likely not sufficient for the manifestation of BPD. A few recent studies support the perspective that BPD results from the combination of environmental and individual risk factors. Emotional abuse has been found to moderate the effect emotional lability, sensitivity, intensity, and reactivity in BPD (Gratz, Latzman, Tull, Reynolds, & Lejuez, 2011). Further, among those with greater affective dysfunction, emotional abuse is a more potent predictor of BPD features (Gratz et al., 2011). Meanwhile, findings from studies of clinical populations are mixed. Minzenberg, Poole, and Vinogradov (2008) found childhood abuse interacted with memory dysfunction to predict attachment anxiety among BPD patients. Gratz et al. (2008), however, found childhood maltreatment did not moderate the effect of affective dysfunction in the prediction of co-morbid BPD among substance users in treatment.

This study aimed to determine the independent and combined importance of environment by disposition interactions in the manifestation of BPD symptoms by investigating the interaction of RS and ENA in the manifestation of BPD symptomatology. We hypothesized that RS would moderate the relationship between ENA and BPD symptoms such that individuals exposed to minimal ENA might manifest significant BPD symptomatology in the context of high RS. Additionally, we hypothesized both RS and ENA would be independently associated with a greater number of BPD symptoms.

2. Method

2.1. Participants and procedures

Data was collected from 133 undergraduate students enrolled in a racially and ethnically diverse public university in New York City. All participants gave informed consent prior to beginning the study. Students completed a series of self-report questionnaires for course credit and did not receive compensation. Approval for the study was granted by the University's Institutional Review Boards (IRB).

The median age of participants was 19 years. Sixty-seven percent ($n = 84$) of participants were female. Almost 50% of participants who reported their race or ethnicity identified themselves as Hispanic (47.2%, $n = 59$), 21% ($n = 26$) as Black, 17% ($n = 21$) as White, and 10% ($n = 12$) as Asian. The majority of participants (95.2%, $n = 118$) were single at the time of their participation.

2.2. Measures

Adult rejection sensitivity questionnaire (RSQ; Downey & Feldman, 1996). The RSQ is an 18-item, self-report instrument that assesses expectations for and anxiety surrounding interpersonal rejection. Higher scores indicate a tendency towards greater and more generalized rejection concern and expectancy. The RSQ has been found to have high internal consistency, test–retest reliability and criterion-related validity (Downey & Feldman, 1996). The scale had high internal reliability within our sample ($\alpha = .88$).

Structured Clinical Interview for DSM-IV Axis II Personality Disorders-Self Report (SCID-II-Self Report; First, Gibbon, Spitzer, Williams, & Benjamin, 1997). The SCID-II self-report is a screening questionnaire for DSM-IV Axis II personality disorders (Huprich, 2005). We administered the 14-item SCID-II BPD screening questionnaire and collapsed information across items measuring the same symptom so we could understand which of the 9 DSM-IV BPD diagnostic criteria participants endorsed. Information obtained from the screening questionnaire has good concurrent validity with clinician-administered assessments (Jacobsberg, Perry, & Frances, 1995). In this study, the internal consistency for the SCID-II BPD items was acceptable ($\alpha = .77$).

Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998). The CTQ is a 28-item self-report measure of childhood traumatic experience. Six subscales comprise the measure: the emotional abuse, emotional neglect, physical abuse, physical neglect, and sexual abuse subscales and the minimization subscale (a validity index). Higher scores indicate more frequent childhood experience with abuse and/or neglect. The CTQ has been found to have good internal consistency and test–retest reliability as well as good convergent validity (Bernstein et al., 1994). In this study, the internal consistencies across subscales were found to be adequate to high and were as follows: $\alpha = .63$ (for the physical neglect subscale), .78 (for the emotional abuse subscale), .85 (for the emotional neglect subscale), .87 (for the physical abuse subscale), and .90 (for the sexual abuse subscale). Given our particular interest in the effects of emotional maltreatment, we focused on the emotional abuse and emotional neglect subscales. Sample items from these subscales include "people in my family called me things like 'stupid,' 'lazy,' or 'ugly'" and "I felt loved" (reverse coded). We summed scores on these subscales to obtain a measure of emotional maltreatment (ENA). van Harmelen et al. (2010) also used a combination of scores from the emotional abuse and neglect subscales of the CTQ to quantify emotional maltreatment.

Demographic information was also collected via questionnaire.

2.3. Statistical analysis

All analyses were conducted using SAS software, Version 9.2 (SAS Institute Inc., Cary, NC, USA, www.sas.com). Prior to conducting the analyses, we examined the univariate and multivariate normality of the variables of interest. Pearson's product moment and Spearman's Rho correlation coefficients were calculated to determine bivariate relationships between RS, childhood maltreatment types, and borderline symptoms. For the multivariate analysis, the predictor variables were mean-centered, and Poisson regression analysis was performed. To test our hypothesis that ENA would moderate the effect of RS on BPD symptoms, an interaction term (RS*ENA) was also included in the model. To improve the accessibility and interpretability of multivariate findings, data are presented in graphical form. Specifically, observed means for nine groups (e.g., low ENA, low RS; low ENA, medium RS) are presented. In these presentations, low, medium, and high levels of the parent variables represent the bottom, middle, and top third of the distributions, respectively.

3. Results

Descriptive statistics on early childhood maltreatment, RS, and borderline symptoms are presented in Table 1. Participants endorsed similar levels of RS as community-based samples in prior