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Borderline Personality Disorder Symptoms and Affective Responding to Perceptions of Rejection and Acceptance from Romantic versus Non-Romantic Partners

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Abstract

We examined event-contingent recording (ECR) of daily interpersonal interactions in a diagnostically diverse sample of 101 psychiatric outpatients who were involved in a romantic relationship. We tested whether the unique effect of borderline personality disorder (BPD) symptoms on affective responses (i.e., hostility, sadness, guilt, fear, positive affect) to perceptions of rejection or acceptance differed with one's romantic partner compared to non-romantic partners. BPD symptoms were associated with more frequent perceptions of rejection and less frequent perceptions of acceptance across the study. For all participants, perceptions of rejecting behavior were associated with higher within-person negative affect and lower within-person positive affect. As predicted, in interactions with romantic partners only, those with high BPD symptoms reported heightened hostility and, to a lesser extent, attenuated sadness in response to perceptions of rejection. BPD symptoms did not moderate associations between perceptions of rejection and guilt, fear, or positive affect across romantic and non-romantic partners. For all participants, perceived acceptance was associated with lower within-person negative affect and higher within-person positive affect. However, BPD symptoms were associated with attenuated positive affect in response to perceptions of accepting behavior in interactions with romantic partners only. BPD symptoms did not moderate associations between perceptions of acceptance and any of the negative affects across romantic and non-romantic partners. This study highlights the specificity of affective responses characteristic of BPD when comparisons are made to patients with other personality and psychiatric disorders. Implications for romantic relationship dysfunction are discussed.

Keywords

Borderline personality disorder; interpersonal functioning; romantic relationships; affective responding; rejection sensitivity

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Borderline Personality Disorder Symptoms and Affective Borderline personality disorder (BPD) is characterized by tumultuous interpersonal relationships, including alternation between idealization and devaluation, frantic efforts to avoid abandonment, and intense arguments (American Psychiatric Association, 2013). These symptoms signal a conflict about closeness to others (Hopwood, Schade, & Pincus, 2014) and reflect both a desire for intimacy and attachment (Gunderson, 2007) along with mistrust and fearfulness in relationships (King-Casas et al., 2008; Zanarini & Frankenburg, 2007). Thus, the disorder is often characterized as one of dysregulation – of emotions, behavior, self, and cognition – in the context of perceived rejection or criticism (Hopwood, Thomas, & Zanarini, 2012; Zanarini & Frankenburg, 2007). Consistent with this characterization, BPD has been discussed by many as a disorder of disturbed attachment, with its symptoms often emerging in relationships with attachment figures such as romantic partners (Gunderson & Lyons-Ruth, 2008).

Although there is a large body of research examining emotion dysregulation in BPD, particularly in response to interpersonal threat, less research has assessed how such responding may be affected by type of interaction partner. Evidence from laboratory research supports heightened emotional reactivity, especially anger and hostility, to perceived rejection (Chapman, Dixon-Gordon, Butler, & Walters, 2015; Renneberg et al., 2012). Additional work has found increased negative affect (Sadikaj, Russell, Moskowitz, & Paris, 2010) and rage (Berenson, Downey, Rafaeli, Coifman, & Paquin, 2011) to perceptions of cold or rejecting behavior in daily life in those with BPD. Anger and hostility may represent the natural consequence of heightened arousal, hypervigilance, and perceptions of threat (Hopwood et al., 2011; Lobbestael & McNally, 2016) that characterizes those with BPD symptoms (Rosenthal et al., 2008). Our empirical knowledge is lacking, however, when it comes to the nuances of these processes in the context of romantic relationships compared to other types of relationships.

For individuals with prominent BPD features, romantic relationships may pose particular difficulty in terms of emotion regulation (Bouchard & Sabourin, 2009). In fact, there is evidence that romantic relationships of those with BPD are characterized by anxiety and distrust (Bouchard & Sabourin, 2009; Miano, Fertuck, Roepke, & Dziobek, 2016), low levels of satisfaction, high levels of distress, and frequent breakups and reunions (Bouchard, Sabourin, Lussier, & Villeneuve, 2009; Lavner, Lamkin, & Miller, 2015). In a community sample, BPD symptoms were related to greater seriousness of daily conflict with romantic partners and greater daily hurt feelings reported by partners (South, 2014). Compared to healthy women, those with BPD tend to respond with greater stress responses and poorer communication in threatening conversations with romantic partners (Miano, Grosselli, Roepke, & Dziobek, 2017). They also fail to show an adaptive reduction in empathic accuracy during these interactions. Reductions in empathic accuracy in the context of relationship conflict may be protective, and a failure to show this response in those with BPD likely contributes to heightened reactivity and relationship dysfunction (Miano, Dziobek, & Roepke, 2017).

Dysfunction in romantic relationships may reflect BPD-related sensitivities and attempts at affective regulation that are potentially damaging to relationships. Thus, examining moment-

to-moment interpersonal perceptions and affective responding may help elucidate processes that are specific to BPD and to romantic relationships. Mikulincer, Shaver, and Pereg (2003) highlight the influence of both hyperactivating and deactivating strategies to deal with the heightened distress experienced by those with insecure attachment in the face of perceived unavailability of attachment figures. Hyperactivating strategies, which are characteristic of those with overt anxious attachment, lead to vigilance for relationship threat, a strong approach orientation toward relationship partners (Hazan & Shaver, 1994), and intense emotional responses to threatening events (Mikulincer et al., 2003). The primary function of deactivating strategies, which are characteristic of those with avoidant attachment, is to suppress the attachment system by using distancing and inattention to threatening events or thoughts that evoke feelings of vulnerability and attachment-related concerns (Mikulincer et al., 2003). BPD is marked by instability, making it likely that there are vacillations between approach and avoidance strategies when perceptions of threat are activated within romantic relationships (Meyer & Pilkonis, 2005).

In some contexts, such strategies may be activated by cues of intimacy or closeness alone, regardless of valence. For example, there is evidence that perceived trustworthiness of romantic partners is more affected by threatening situations for those with BPD compared to control patients (Miano et al., 2016). At the same time, affective regulation strategies associated with the attachment system may also affect perceptions of positive social information. There is some evidence that individuals with BPD demonstrate blunted positive affect in response to cues of relationship safety, such as praise (Reichenberger, Eibl, & Pfaltz, 2017) or warm and accepting behavior from one's interaction partner (Sadikaj et al., 2010). In romantic relationships, BPD symptoms were related to a negative interpretation bias in response to positive events initiated by romantic partners (Bhatia, Davila, Eubanks-Carter, & Burckell, 2013). Importantly, inconsistency in the use of affect-regulation strategies may represent an important distinction between those with features of BPD versus other personality disorders (OPDs), some of which (i.e., avoidant personality disorder) are also characterized by worries about and strong responses to rejection (American Psychiatric Association, 2013; Meyer, Ajchenbrenner, & Bowles, 2005).

In summary, examining affective responding to interpersonal perceptions in the context of both romantic and non-romantic relationships for those with elevated BPD symptoms may provide a more nuanced understanding of how and with whom problematic affective responding is likely to emerge. Given that high-quality romantic relationships may have a positive and stabilizing influence on symptoms of BPD (Kuhlken, Robertson, Benson, & Nelson-Gray, 2014; Links & Heslegrave, 2000), research that enhances our knowledge of the processes that erode such relationships is an important contribution.

Aims and Hypotheses of the Current Study

We seek to address several limitations in the existing literature. First, much of research examining affective responding to interpersonal perceptions has focused on between-person differences in response to rejection stimuli in the laboratory (for review, see Lazarus, Cheavens, Festa, & Rosenthal, 2014). By contrast, reports of momentary affective responses to interpersonal behavior in daily life capture more proximal ratings of emotions in response

to perceptions of partners behaving in a rejecting or accepting manner within specific interactions, allowing researchers to examine within-person processes and to enhance ecological validity (Santangelo & Bohus, 2014). Furthermore, those studies that have examined within-person affective responding to perceptions of rejection in daily life have been limited to studies either using healthy (Berenson et al., 2011) or community control groups (Sadikaj et al., 2010). Because interpersonal dysfunction is considered a core impairment of personality disorders in general (Hopwood, Wright, Ansell, & Pincus, 2013), designs that do not include comparison with a variety of diagnosed personality and psychiatric disorders make it difficult to identify affective responding that is unique to BPD pathology rather than other personality dysfunction. Finally, the most noteworthy gap in the literature is the lack of evidence regarding how interpersonal dynamics may differ in the context of romantic partners compared to non-romantic partners. Although romantic relationship difficulties are emphasized in conceptualizations of BPD (Bouchard & Sabourin, 2009), we know little about the influence of BPD symptoms on romantic relationship functioning, especially in daily life.

Our aim for the current study was to examine affective responding to perceptions of interpersonal behavior in daily interactions with romantic and non-romantic partners using event-contingent recording (ECR). For measurement purposes, we relied on interpersonal theory (Wiggins, 1979) and the interpersonal circumplex, which is defined by the two dimensions of dominance and affiliation. Of particular relevance to attachment concerns are perceptions of behavior on the affiliation dimension, which ranges from displays of solidarity, intimacy, and acceptance on the affiliative pole to separation, hostility, and rejection on the disaffiliative pole (Horowitz, 2004). To increase the specificity of our findings to BPD pathology versus other forms of personality dysfunction, we assessed BPD and OPD symptoms continuously and controlled for the influence of symptoms of OPDs in our models.

Between-Person Hypotheses

At the between-person level of analysis, we examined associations between BPD symptoms and overall person mean levels (i.e., average levels across time, which differ between individuals) of perceived rejection and acceptance, as well as negative and positive affect. Consistent with research demonstrating hypervigilance to threat cues (Bertsch et al., 2013), rejection sensitivity (Chapman, Walters, & Gordon, 2014; Renneberg et al., 2011), and negative emotionality in BPD (Carpenter & Trull, 2013), we hypothesized that BPD symptoms would be associated with: (1) greater overall levels of perceived rejection; (2) decreased levels of perceived acceptance; and (3) greater levels of negative emotions across the protocol. In line with previous research (Sadikaj et al., 2010), we did not predict an association between BPD symptoms and overall between-person mean levels of positive emotion.

Within-Person Hypotheses

Of primary interest were our hypotheses regarding the influence of BPD symptoms on within-person processes, beyond the influence of OPD symptoms. We expected that BPD

symptoms would be associated with several altered patterns of reactivity to perceived interpersonal behavior in the specific context of romantic partners.

Rejection

Based on (a) the prominence of anger and aggressive responding as defining features of BPD (American Psychiatric Association, 2013), (b) the likelihood that hyperactivating strategies would be most pronounced within close relationships (Mikulincer et al., 2003), and (c) the observation that anger has the strongest activating components of the negative affects (Critchfield, Levy, Clarkin, & Kernberg, 2008; Mikulincer et al., 2003), we hypothesized that for those with elevated BPD symptoms, hostility would be amplified s*pecifically in the context of rejection from romantic partners* but not in the context of rejection from non-romantic partners. Thus, we did not predict that sadness, fear, or guilt (more associated with passivity and withdrawal) would be uniquely elevated (beyond amplifications associated with OPDs) in response to perceived rejection from romantic partners for those with elevated BPD symptoms. Although it was expected that BPD features would be associated with higher overall levels of negative emotions, heightened generalized anxiety, and fears of abandonment, we expected that such characteristics would specifically potentiate in-the-moment self-reports of hostility. Finally, because the research examining positive affect in BPD is limited, we had no specific hypotheses about the influence of BPD symptoms and partner type on the association between rejection and positive affect.

Acceptance

For those with elevated BPD symptoms, romantic relationships may especially activate attachment-related schemas (Hazan & Shaver, 1987) and self-protective affect-regulation strategies reflecting preoccupied and fearful attachment styles (Agrawal et al., 2004; Mikulincer et al., 2003). Thus, we hypothesized that the previously reported pattern of weaker positive affect in response to positive social feedback for those with elevated BPD symptoms (Bhatia et al., 2013; Reichenberger et al., 2017; Sadikaj et al., 2010) would occur specifically in the context of acceptance from romantic partners but not in the context of acceptance from non-romantic partners. However, given the limited research on responding to praise in BPD, we had no hypotheses about the influence of BPD symptoms and partner type on the association between acceptance and negative affect (i.e., hostility, fear, sadness, guilt).

Method

Participants

Recruitment—Participants and their romantic partners were recruited via fliers posted in psychiatric treatment clinics. The analyses reported here focus on the target participants (identified patient) and their perceptions of interpersonal behavior within daily interactions. We employed an initial stratification method to recruit an equal proportion of participants who met criteria for BPD, OPDs, and another mental disorder, but not a PD. Potential participants were screened via telephone for the presence of both BPD and general PD using the McLean Screening Instrument for Borderline Personality Disorder (Zanarini, Vujanovic, & Parachini, 2003) and the personality disorder scales from the Inventory of Interpersonal

Problems (Pilkonis, Kim, & Proietti, 1996) respectively (see Supplementary Table S1 for BPD criteria met by the initial stratification groupings).

Inclusion and exclusion criteria—Participants who were included via phone screen were asked to confirm their current romantic relationship status. All participants were required to be in psychiatric treatment. Couples were required to have a relationship length of at least one month, and to be in contact at least four times per week (at least two face-to-face contacts were required). Exclusion criteria included a lifetime diagnosis of bipolar disorder or psychosis, severe developmental disability, or major medical illnesses that influence the central nervous system.

Sample characteristics—Based on the phone screen, 134 potential "identified patient" participants attended an initial in-person assessment. Twenty-three participants were excluded at this stage because of a bipolar diagnosis ($n = 11$), failure of the patient or partner to complete the diagnostic assessments ($n = 10$), or other administrative reasons ($n = 2$). Of the remaining 111 participants, 102 completed and provided usable data for the ECR protocol. We excluded one participant who completed very few entries ($n = 4$; more than 1.5 standard deviations below the mean number completed by the sample). The final sample consisted of 101 participants, the majority of whom were in cohabitating (75%) and opposite-sex relationships (85%). The average romantic relationship length was over four years (53 months; $SD = 51.24$). The sample was mostly female (76%) and on average 30 years old ($SD = 5.87$). Romantic partners were predominantly male (66%) and had an average age of 31 ($SD = 7.78$). Patients were mostly White (71%) or Black (17%) and the remainder were Asian (3%), or more than one race (9%). There was a high level of occupational impairment among participants, with approximately 37% of the sample unemployed, 15% working or attending school part-time, and the remaining 48% working or attending school full-time. Roughly half of the sample was college educated (46%) and reported an estimated annual income of less than $30,000 (51%).

The sample was also diverse diagnostically. Nearly one-third ($n = 33$) of participants met *DSM-IV* criteria for BPD. Of the remaining participants, 26 reported subclinical BPD (endorsing 3–4 symptoms), and 42 endorsed few or no BPD symptoms (endorsing 0–2 symptoms). Other than BPD, the most prevalent PDs were obsessive-compulsive PD (27%), antisocial PD (22%), and avoidant PD (9%). The most frequently diagnosed current Axis I disorders (*DSM-IV)* were major depression (47%), anxiety disorder not otherwise specified (15%), post-traumatic stress disorder (12%), and alcohol use disorder (12%).

Procedures

Following the initial laboratory procedures, participants received a Samsung Galaxy S3 cell phone pre-loaded with custom software. Participants were trained to use the web app to report on their mood, behavior, and interpersonal interactions for the next 21 days. The current analyses used records reporting only on interpersonal interactions (i.e., they did not include records from assessments upon awakening or random daily assessments where no interpersonal interaction was reported). Participants were instructed to complete the specified record immediately following each interpersonal interaction lasting at least 10

minutes. Data were immediately transferred to a secure database that could be accessed only by study staff via a virtual web server to monitor compliance.

Measures

Psychiatric diagnoses—Psychiatric diagnoses and PD symptom severity were established by independent evaluators using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID; First, Spitzer, Gibbon, & Williams, 1995) and the Structured Interview for DSM-IV Personality (SIDP-IV; Pfohl, Blum, & Zimmerman, 1995). Severity scores for BPD and OPD symptoms were calculated by taking the sum of continuous ratings (0 = *not present,* 1 = *present,* 2 = *strongly present*) of the 9 items assessing BPD criteria and of the 71 items assessing each of the other DSM (American Psychiatric Association, 2013) PD criteria. Level of agreement among raters was high for the severity (sum) of BPD (ICC = .98) and OPD (ICC = .89) symptoms. BPD and OPD symptoms were significantly correlated ($r = .68$; $p < .001$).

ECR of interpersonal interactions—Following interpersonal interactions, participants recorded contextual information, including (1) whether the interaction was with their romantic partner, and if not, (2) the relationship of the interaction partner to the participant, (3) if anyone else was present during the interaction (4) where the interaction took place, (5) the length of the interaction, and (6) the topic discussed.

Perceived rejection and acceptance—Participants reported their perception of their interaction partner's behavior using items from the Social Behavior Inventory (Moskowitz, 1994). The SBI is a checklist (i.e., rated yes or no) of 46 behavioral items assessing the two dimensions of the interpersonal circumplex, dominance (dominance versus submissiveness) and affiliation (agreeableness versus quarrelsomeness). Previous ECR studies have supported the reliability and validity of the SBI (Moskowitz & Sadikaj, 2012). The behaviors we targeted fall on the poles of the affiliative dimension. These are the locations of acceptance (affiliative/agreeable) and rejection (disaffiliative/quarrelsome), and in prior work using the SBI, they have been interpreted as such (Sadikaj et al., 2010; Sadikaj, Moskowitz, Russell, Zuroff, & Paris, 2013). Two rejection items assessed perceptions of dissafiliative behavior (i.e., *s/he criticized me* and *s/he ignored me*) and two acceptance items assessed perceptions of affiliative behavior (i.e., *s/he listened attentively to me* and *s/he complimented me*). The two items for rejection and the two items for acceptance were summed and dichotomized to create a variable representing the perception of any rejection or acceptance in each interaction (greater than or equal to 1 = *yes*, 0 = *no*). The perception of acceptance (73.70% of interactions) was far more common than the perception of rejection (12.50% of interactions). Most interactions were marked by either rejection or acceptance; only 5.10% of interactions were characterized by both.

Affect assessment—Following interpersonal interactions, participants reported the extent to which they felt 19 negative affects and 10 positive affects from the Positive and Negative Affect Schedule-Extended version (PANAS-X; Watson & Clark, 1999) using a 5-point scale (1 = *very slightly or not at all,* 5 = *extremely*). We constructed a single event-level score for positive affect and negative affect subscales by computing the mean of the relevant item

ratings for each of the scales described below. For each mood scale, between- and within-person reliabilities were calculated separately using procedures outlined by Cranford et al. (2006).

The scales computed, including the items used and the between- and within-person reliabilities for the scale, were Hostility (hostile, irritable, angry, scornful, disgusted, and loathing; between: .95; within: .83), Guilt (guilty, ashamed; between: .96; within: .69), Sadness (sad, blue, downhearted, alone, lonely; between: .97; within: .83), Fear (afraid, jittery, nervous, scared, frightened, shaky; between: .98; within: .77), and Positive Affect (active, alert, attentive, determined, enthusiastic, excited, inspired, interested, proud, strong; between: .98; within: .86).

Analytic Strategy—Because the data had a 3-level structure with observations nested within days nested within persons, we conducted multilevel linear mixed modeling in SPSS Version 24 using the MIXED procedure with maximum likelihood estimation. We used an autoregressive error structure to account for dependencies due to repeated measurements. To separate the between-subjects effect of participant's propensity to perceive rejecting or accepting behavior from their momentary experiences of such behavior on time-linked affective experiences, the rejection and acceptance predictors were parsed into within- and between-person components. We controlled for the grand-mean-centered person means of perceived rejection or acceptance across the study protocol. BPD and OPD symptoms were grand-mean centered.

To simplify models and facilitate interpretation of effects, rejection and acceptance were examined in separate models. The 5.1% of observations that were characterized by both acceptance and rejection were included in both models. However, all analyses were re-run excluding these observations, and there were no changes to the pattern of results. In each model, we included the main and interactive effects of BPD symptoms and partner type on event-level perceptions of rejecting or accepting behavior (i.e., two-way interactions between BPD and partner type, BPD and acceptance or rejection, and partner type and acceptance or rejection, and the three-way interaction between BPD, partner type, and acceptance or rejection). To test the specificity of our findings to BPD relative to general personality pathology, the main and interactive effects of OPD symptoms were also included in each model. The influence of event-level perceptions of interaction partner's behavior on affect (as quantified by the slope) represents affective responses to participants' perceptions of their interaction partner's behavior, across types of partner. Type of interaction partner (0 = *non-romantic partner,* 1 = *romantic partner*) was not centered, as we were interested in whether or not the interaction was with the romantic partner, not separating between and within-subjects effects (see footnote 1). In all models, the intercept of the dependent variable (e.g., hostility, sadness) and the slopes of rejection, acceptance, and partner predictors were estimated as random effects. We also included gender (i.e., 0 = *female*, 1 = *male*) and a time variable (expressed continuously as the cumulative time elapsed since the first entry in the protocol, starting with zero) in each model.

[1]To ensure that this did not affect our findings, all models were re-run with partner separated into within- and between-person components. This did not change the pattern of results in any of the models described below.

When a three-way interaction was present (i.e., BPD symptoms were identified as a significant moderator), interactions were probed by examining the simple main effects of BPD symptoms at both levels of the other moderator (i.e., with non-romantic partner and romantic partner as the reference groups, respectively). We also examined interactions by calculating simple intercepts and slopes at selected values (+/−1 *SD*) of the moderators and examining regions of significance of such effects in accordance with Preacher, Curran, and Bauer (2006). Finally, consistent with Sadikaj et al. (2010), we report effect sizes using the procedure recommended by (Rosenthal & Rosnow, 1984; r = √(F/F+df)).

Results

Preliminary Analyses

We first examined associations between protocol compliance, BPD symptoms, and mean levels of other study variables. Participants completed an average of 58.96 (*SD* = 31.80) entries (range: 9–144). Variability in the number of responses was expected given the event-contingent nature of the protocol. Overall, approximately half (52%) of the interactions reported occurred with romantic partners (range = 11% – 100%). Other interactions occurred most frequently with family members (14%), friends or acquaintances (13%), and those identified as “others” (11%). Fewer interactions occurred with co-workers (7%), bosses or teachers (3%), and roommates (1%). Across the protocol, BPD symptoms were positively associated with the proportion of interactions occurring with romantic partners ($r = .31$, $p < .01$).[1] The number of entries was positively related to BPD symptoms ($r = .26$, $p = .01$) and fear reported across the diary period ($r = .20$, $p < .05$). The number of entries was unrelated to perceptions of rejection ($r = .12$, $p = .25$) or acceptance ($r = .02$, $p = .88$), or to hostility, sadness, guilt, or positive affect reported across the study (r’s = .10, .19, .11, and .02 respectively; all p’s > .05).

Between-Person Analyses

As predicted, BPD symptoms were associated with lower mean levels of perceived acceptance ($r = −.30$, $p < .01$) and greater mean levels of perceived rejection ($r = .30$, $p < .01$) across the protocol. BPD symptoms were also positively associated with fear ($r = .21$, $p < .05$), hostility ($r = .36$, $p < .001$), sadness ($r = .29$, $p < .01$), and guilt ($r = .20$, $p < .05$). BPD symptoms were not related to mean levels of positive affect ($r = −.06$, $p = .53$). The mean numbers of rejection and acceptance interactions were negatively correlated ($r = −.39$, $p < .001$).

Within-Person Analyses

Rejection—As predicted, BPD interacted with partner type to predict the within-person association between perceptions of rejection and hostility, as indicated by a significant three-way interaction ($b = .04$, $SE = .01$, $F = 8.72$, $p < .01$, $r = .05$; see Table 1). All simple slopes were significantly different than zero, indicating that across all conditions rejection was associated with higher within-person hostility (all p’s < .001). BPD symptoms predicted the within-person association between rejection and hostility during interactions with romantic partners ($b = .04$, $SE = .01$, $F = 9.49$, $p < .01$, $r = .10$), and not during interactions with non-romantic partners ($b = −.00$, $SE = .01$, $F = −0.07$, $p = .79$, $r = .01$). Thus, those with high and

low levels of BPD symptoms only differed in response to perceptions of rejection with romantic partners, in which case, high BPD symptoms predicted higher hostility compared to low BPD symptoms.

BPD also interacted with partner type to predict the within-person association between perceptions of rejection and sadness, as indicated by a significant three-way interaction (b = −.03, SE = .01, F = 5.03, p < .05, r = .04; see Table 2)[2]. All simple slopes were significantly different than zero, indicating that across all conditions rejection was associated with higher within-person sadness (all p's < .001). BPD symptoms predicted the within-person association between rejection and sadness during interactions with romantic partners (b = −.03, SE = .01, F = 5.79, p = .02, r = .08), and not during interactions with non-romantic partners (b = .00, SE = .01, F = .04, p = .83, r = .01). In this case, in interactions with romantic partners, BPD symptoms predicted a *weaker* within-person association between rejection and sadness. BPD did not moderate the association between partner type and fear, guilt, or positive affect (p's >.59, r's < .03; See Supplementary Tables S2–S4) in response to perceptions of rejection.

Acceptance—As predicted, BPD interacted with partner type to predict the within-person association between perceptions of acceptance and positive affect, as indicated by a significant three-way interaction (p = .02, r = .05; See Table 3). While all simple slopes were significantly different than zero (i.e., across conditions, acceptance predicted significant within-person increases in positive affect; all p's < .001), BPD symptoms predicted a weaker within-person association between acceptance and positive affect during interactions with romantic partners (b = −.03, SE = .01, F = 11.95, p < .01, r = .10), but not during interactions with non-romantic partners (b = .00, SE = .01, F = 0.01, p = .93, r = .00).

BPD did not interact with partner type to predict the within-person associations between perceived acceptance and any of the negative affects (i.e., fear, sadness, hostility, guilt; all p's > .16, rs < .02; see Supplementary Tables S5–S8).

Discussion

The present study yielded several findings that contribute to our understanding of interpersonal sensitivity and romantic dysfunction in those with elevated BPD symptoms. The inclusion of OPD symptoms in our models helps disentangle affective responding that is common to PDs in general (Hopwood et al., 2013) from that specific to BPD psychopathology. First, the results of our between-person analyses were consistent with our hypotheses and with previous research that supports an association between BPD and an increased likelihood of perceiving rejection (Renneberg et al., 2012; Staebler, Helbing, Rosenbach, & Renneberg, 2010). As hypothesized, BPD symptoms were associated with more frequent perceptions of rejection, less frequent perceptions of acceptance, and higher levels of negative affect (i.e., hostility, fear, guilt, and sadness). Our findings are also consistent with evidence from laboratory-based studies simulating rejection, which

[2]OPD symptoms also interacted with partner type to predict the within-person association between rejection and sadness (b = .02, SE = .01, F = 10.30, p = .001, r = .06) such that there was greater sadness in response to rejection from romantic partners compared to non-romantic partners, but only at high levels of OPD symptom severity.

demonstrate that those with BPD report greater feelings of exclusion, regardless of whether they are included or excluded (Renneberg et al., 2011). However, it is unclear whether our between-person findings can be attributed solely to perceptual biases and hypervigilance or must be considered in the context of greater objective adversity in relationships (Zanarini, Frankenburg, Reich, & Fitzmaurice, 2010).

BPD symptoms predicted differential affective responding in the context of romantic versus non-romantic partners in several instances, but not for all affective outcomes. Examination of responses to perceptions of interpersonal behavior at the within-person level yielded several significant results that were consistent with our hypotheses about the impact of relationship context for understanding affective responses in those with BPD symptoms. When associations between BPD symptoms and affective responding to rejection emerged, they were in the context of romantic partners only. This stands in contrast to studies showing that BPD predicted stronger increases in negative affect (Sadikaj et al., 2010) and rage (Berenson et al., 2011) in response to perceptions of cold or rejecting behavior. This divergence may be related to differences in study design. Sadikaj and colleagues (2010) used a community control group and Berenson and colleagues (2011) used a healthy control group (i.e., no Axis I disorder and few BPD symptoms), which may have increased their ability to detect a group effect across interaction partners. Participants in the present study were in psychiatric treatment, indicating that even those without elevated symptoms of BPD still had significant psychopathology and, potentially, interpersonal sensitivity. Finally, we controlled for OPD symptoms in our analyses. All these factors help explain why BPD symptoms were related to differences in affective responding only in specific contexts.

The amplification of hostile responses to rejection from one’s romantic partner among those with high BPD symptoms is consistent with the use of hyperactivating affect-regulation strategies and the BPD criterion of intense anger (American Psychiatric Association, 2013), which describes that “anger is often elicited when a caregiver or lover is seen as neglectful, withholding, uncaring, or abandoning” (American Psychiatric Association, 2013, pp. 664). This study extends research that finds increased negative affect (Sadikaj et al., 2010) and rage (Berenson et al., 2011) in response to cold or rejecting behavior in BPD and highlights that the amplification of such affective responses in interactions with romantic partners may be uniquely associated with BPD symptoms. While this finding should be interpreted with caution given that it required the presence of a significant three-way interaction in the relevant model, the effect size in our study for BPD symptoms predicting the within-person association between rejection and hostility for all partner types was equivalent to that of Sadikaj and colleagues (2010; $r = .01$) and smaller than the effect size in the context of romantic partners only ($r = .04$). In understanding differences between the present study and previous research, it should be noted that our measure of hostility differed from negative emotion in general (as measured in Sadikaj et al., 2010; 2013), and rage in particular (Berenson et al., 2011), to capture not only anger and irritability but also feelings of scorn, disgust, and loathing. This specific type of hostility may be especially relevant in romantic relationships for those with elevated symptoms of BPD and have serious consequences for the quality of romantic relationships (Downey, Freitas, Michaelis, & Khouri, 1998; Romero-Canyas et al., 2010).

BPD symptoms were associated with attenuated positive emotion in response to acceptance from romantic partners, but not non-romantic partners. Although it is plausible to assume that individuals who react in a highly negative manner to rejection would alternatively respond to praise with strong positive affect, the results from this study are consistent with evidence that this may not be the case for those with elevated BPD symptoms, and in fact, that the opposite may be true (Bhatia et al., 2013; Reichenberger et al., 2017; Sadikaj et al., 2010). As a result, individuals with elevated BPD features may not experience the same benefits from positive social feedback and do not reinforce their partners for their "good" behavior, which may decrease the likelihood of such behavior in the future. These findings support the conclusion that those with elevated BPD symptoms are less responsive to positive social feedback and further suggest that when examining the influence of BPD psychopathology, independent of other PD pathology, this attenuation may be more pronounced in romantic relationships.

One possible explanation for this effect is that individuals with high BPD symptoms may experience particularly heightened arousal and use distancing behaviors, at times, during interactions with romantic partners, resulting in a confused and confusing mix of approach and avoidance strategies. For example, Reichenberger and colleagues (2017) provided evidence of increased anxiety and embarrassment in response to praise in those with BPD. Related evidence of the unique vulnerabilities present in romantic relationships for those with elevated BPD feature comes from Beeney and colleagues (2016), who showed that the romantic partners of those with elevated BPD features are kept at the periphery of social networks, which may reflect heightened ambivalence about preserving and protecting such relationships. Finally, accurate perceptions of and responsiveness to cues of relationship safety may be disrupted by hypervigilance for relationship threat (Bertsch et al., 2013). This may be exacerbated by underlying deficits in perceiving social cues (Lazarus et al., 2014; Thome, Liebke, Bungert, Schmahl, & Domes, 2016). Researchers should continue to clarify these and other potential mechanisms underlying altered reactivity to acceptance and praise in BPD.

In interactions with romantic partners, BPD symptoms predicted an attenuation of the within-person association between rejection and sadness, although this unpredicted effect was somewhat smaller ($r = .04$) than that for the other predicted three-way interactions ($r's \geq .05$). Although this effect was not predicted, it is consistent with the use of distancing or deactivating strategies in the context of relationship threat. It is possible that individuals with elevated BPD symptoms do not have ready access to the emotion of sadness, especially when reporting on momentary experiences. As our findings and others indicate (Berenson et al., 2011; Chapman et al., 2015), hostility in response to rejection appears to predominate the emotional experience of those with prominent BPD symptoms. We found that those with high and low BPD symptom severity did not differ on sadness in response to rejection from non-romantic partners, highlighting that this responding appears to be context dependent. A stronger effect in this model was that OPD symptoms predicted the opposite pattern, increased sadness in response to rejection from romantic partners compared to non-romantic partners. This contrast is important to consider when understanding interpersonal difficulties that are unique to BPD and which may damage relationships. Limitations in the ability to experience sadness, combined with heightened hostility in response to perceptions of

rejection, may be especially damaging to relationships by interfering with awareness of the salience of the relationship and adaptive interpersonal behavior, such as repair following perceived rejection (King-Casas et al., 2008).

It is important to consider these findings in the context of the study's limitations. We were unable to examine moderation by relationship types other than romantic partners due to lower base rates of interactions with other relationship partners. Future research should clarify whether the findings from this study are specific to romantic relationships, or may be characteristic of other close relationships among those with elevated BPD symptoms. In addition, we did not directly assess the participants' *feelings* of rejection or acceptance, but rather we measured their perceptions of others' behavior. While this characterization is consistent with previous research (Sadikaj et al., 2010; 2013), it is possible that different questions regarding moment-to-moment experience (Berenson et al., 2011) would yield a different pattern of results. Also, although data from our previous protocols have revealed no appreciable differences on depression, global functioning, or PD severity based on relationship status for patients with BPD, there may be other ways in which individuals with high BPD symptoms who are in romantic relationships differ from those who are not. Finally, the findings from this study should be considered in light of the number of models tested and the size of effects.

Together, our results shed light on several processes, particularly the use of attachment-related affect-regulation strategies, which may contribute to romantic relationship dysfunction in those with prominent BPD symptomatology. Clinically, special attention to these processes, which are likely to damage romantic relationships, may be important. For example, our findings, in convergence with others (e.g., Sadikaj et al., 2010), suggest that those with prominent BPD features may benefit from attention to interpreting accurately and responding appropriately to positive feedback, especially from romantic partners. Thus, continued insight into dynamics that may interfere with healthy romantic relationship functioning in those with prominent BPD features is needed.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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References

Agrawal HR, Gunderson JG, Holmes BM, Lyons-Ruth K. Attachment studies with borderline patients: A review. Harvard Review of Psychiatry. 2004; 12:94–104. http://doi.org/10.1080/10673220490447218. [PubMed: 15204804]

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5. Washington, DC: Author; 2013.

Beeney, JE., Hallquist, MN., Clifton, AD., Lazarus, SA., Pilkonis, PA. Social disadvantage and borderline personality disorder: A study of social networks; Personality Disorders: Theory, Research, and Treatment. 2016. p. 1-12.http://doi.org/10.1037/per0000234

Berenson KR, Downey G, Rafaeli E, Coifman KG, Paquin NL. The rejection–rage contingency in borderline personality disorder. Journal of Abnormal Psychology. 2011; 120:681–690. http://doi.org/10.1037/a0023335. [PubMed: 21500875]

Bertsch K, Gamer M, Schmidt B, Schmidinger I, Walther S, Kästel T, et al. Oxytocin and reduction of social threat hypersensitivity in women with borderline personality disorder. American Journal of Psychiatry. 2013; 170:1169–1177. http://doi.org/10.1176/appi.ajp.2013.13020263. [PubMed: 23982273]

Bhatia V, Davila J, Eubanks-Carter C, Burckell LA. Appraisals of daily romantic relationship experiences in individuals with borderline personality disorder features. Journal of Family Psychology. 2013; 27:518–524. http://doi.org/10.1037/a0032870. [PubMed: 23750533]

Bouchard S, Sabourin S. Borderline personality disorder and couple dysfunctions. Current Psychiatry Reports. 2009; 11:55–62. http://doi.org/10.1007/s11920-009-0009-x. [PubMed: 19187710]

Bouchard S, Sabourin S, Lussier Y, Villeneuve E. Relationship quality and stability in couples when one partner suffers from borderline personality disorder. Journal of Marital and Family Therapy. 2009; 35:446–455. http://doi.org/10.1111/j.1752-0606.2009.00151.x. [PubMed: 19785701]

Carpenter RW, Trull TJ. Components of emotion dysregulation in borderline personality disorder: A review. Current Psychiatry Reports. 2013; 15:335. http://doi.org/10.1007/s11920-012-0335-2. [PubMed: 23250816]

Chapman AL, Dixon-Gordon KL, Butler SM, Walters KN. Emotional reactivity to social rejection versus a frustration induction among persons with borderline personality features. Personality Disorders: Theory, Research, and Treatment. 2015; 6:88–96. http://doi.org/10.1037/per0000101.

Chapman AL, Walters KN, Gordon KLD. Emotional reactivity to social rejection and negative evaluation among persons with borderline personality features. Journal of Personality Disorders. 2014; 28:720–733. http://doi.org/10.1521/pedi_2012_26_068. [PubMed: 23130813]

Cranford JA. A procedure for evaluating sensitivity to within-person change: Can mood measures in diary studies detect change reliably? Personality and Social Psychology Bulletin. 2006; 32:917–929. http://doi.org/10.1177/0146167206287721. [PubMed: 16738025]

Critchfield KL, Levy KN, Clarkin JF, Kernberg OF. The relational context of aggression in borderline personality disorder: using adult attachment style to predict forms of hostility. Journal of Clinical Psychology. 2008; 64:67–82. http://doi.org/10.1002/jclp.20434. [PubMed: 18161033]

Downey G, Freitas AL, Michaelis B, Khouri H. The self-fulfilling prophecy in close relationships: Rejection sensitivity and rejection by romantic partners. Journal of Personality and Social Psychology. 1998; 75:545–560. [PubMed: 9731324]

First, MB., Spitzer, RL., Gibbon, M., Williams, J. Structured Clinical Interview for DSM-IV Axis I Disorders. New York: Biometrics Research, New York State Psychiatric Institute; 1995.

Gunderson JG, Lyons-Ruth K. BPD's interpersonal hypersensitivity phenotype: A gene-environment-developmental model. Journal of Personality Disorders. 2008; 22:22–41. http://doi.org/10.1521/pedi.2008.22.1.22. [PubMed: 18312121]

Gunderson JG. Disturbed relationships as a phenotype for borderline personality disorder. The American Journal of Psychiatry. 2007; 164:1637–1640. http://doi.org/10.1176/appi.ajp.2007.07071125. [PubMed: 17974925]

Hazan C, Shaver P. Romantic love conceptualized as an attachment process. Journal of Personality and Social Psychology. 1987; 52:511–524. [PubMed: 3572722]

Hazan, C., Shaver, PR. Attachment as an organizational framework for research on close relationships; Psychological Inquiry. 1994. p. 1-22.http://doi.org/10.1207/s15327965pli0501_1

Hopwood, CJ., Schade, N., Pincus, AL. Handbook of Borderline Personality Disorder in Children and Adolescents. New York, NY: Springer; 2014. A Contemporary Interpersonal Model of Borderline Personality Development; p. 293-310.http://doi.org/10.1007/978-1-4939-0591-1_20

Hopwood CJ, Thomas KM, Zanarini MC. Hyperbolic temperament and borderline personality disorder. Personality and Mental Health. 2011; 6:22–32. http://doi.org/10.1002/pmh.158. [PubMed: 22518203]

Hopwood CJ, Wright AGC, Ansell EB, Pincus AL. The interpersonal core of personality pathology. Journal of Personality Disorders. 2013; 27:270–295. http://doi.org/10.1521/pedi.2013.27.3.270. [PubMed: 23735037]

Horowitz LM. Interpersonal Foundations of Psychopathology. American Psychological Association. 2004

King-Casas B, Sharp C, Lomax-Bream L, Lohrenz T, Fonagy P, Montague PR. The rupture and repair of cooperation in borderline personality disorder. Science. 2008; 321:806–810. http://doi.org/10.1126/science.1156902. [PubMed: 18687957]

Kuhlken K, Robertson C, Benson J, Nelson-Gray R. The interaction of borderline personality disorder symptoms and relationship satisfaction in predicting affect. Personality Disorders: Theory, Research, and Treatment. 2014; 5:20–25. http://doi.org/10.1037/per0000013.

Lavner JA, Lamkin J, Miller JD. Borderline personality disorder symptoms and newlyweds' observed communication, partner characteristics, and longitudinal marital outcomes. Journal of Abnormal Psychology. 2015; 124:975–981. http://doi.org/10.1037/abn0000095. [PubMed: 26348097]

Lazarus SA, Cheavens JS, Festa F, Rosenthal MZ. Interpersonal functioning in borderline personality disorder: a systematic review of behavioral and laboratory-based assessments. Clinical Psychology Review. 2014; 34:193–205. http://doi.org/10.1016/j.cpr.2014.01.007. [PubMed: 24534643]

Links PS, Heslegrave RJ. Prospective studies of outcome: Understanding mechanisms of change in patients with borderline personality disorder. Psychiatric Clinics of North America. 2000; 23:137–150. http://doi.org/10.1016/S0193-953X(05)70148-9. [PubMed: 10729936]

Lobbestael J, McNally RJ. An empirical test of rejection- and anger-related interpretation bias in borderline personality disorder. Journal of Personality Disorders. 2016; 30:307–319. http://doi.org/10.1521/pedi_2015_29_194. [PubMed: 25893553]

Meyer, B., Pilkonis, PA. An Attachment Model of Personality Disorders. In: Lenzenweger, MF., Clarkin, JF., editors. Major Theories of Personality Disorder. 2. New York: Guilford Press; 2005. p. 231-251.

Meyer B, Ajchenbrenner M, Bowles DP. Sensory sensitivity, attachment experiences, and rejection responses among adults with borderline and avoidant features. Journal of Personality Disorders. 2005; 19:641–658. http://doi.org/10.1521/pedi.2005.19.6.641. [PubMed: 16553560]

Miano A, Dziobek I, Roepke. Understanding interpersonal dysfunction in borderline personality disorder: A naturalistic dyadic study reveals absence of relationship-protective empathic inaccuracy. Clinical Psychological Science. 2017; 5:355–366. http://doi.org/1o0i.1or1g7/170/.211767/721062767106261863658035.

Miano, A., Fertuck, EA., Roepke, S., Dziobek, I. Romantic relationship dysfunction in borderline personality disorder—A naturalistic approach to trustworthiness perception; Personality Disorders: Theory, Research and Treatment. 2016. p. 1-8.http://doi.org/10.1037/per0000196

Miano A, Grosselli L, Roepke S, Dziobek I. Emotional dysregulation in borderline personality disorder and its influence on communication behavior and feelings in romantic relationships. Behavior Research and Therapy. 2017; 95:148–157. http://dx.doi.org/10.1016/j.brat.2017.06.002.

Mikulincer M, Shaver PR, Pereg D. Attachment theory and affect regulation: The dynamics, development, and cognitive consequences of attachment-related strategies. Motivation and Emotion. 2003; 27:77–102. http://doi.org/10.1023/A:1024515519160.

Moskowitz DS. Cross-situational generality and the interpersonal circumplex. Journal of Personality and Social Psychology. 1994; 66:921–933. http://dx.doi.org/10.1037/0022-3514.66.5.921.

Moskowitz, DS., Sadikaj, G. Event-congingent recording. In: Mehl, MR., Conner, TS., editors. Handbook of Research Methods for Studying Daily Life. New York: Guilford Press; 2012. p. 160-175.

Pfohl, B., Blum, N., Zimmerman, M. The Structured Interview for DSM-IV Personality Disorders: SIDP-IV. Iowa City: University of Iowa; 1995.

Pilkonis PA, Kim Y, Proietti JM. Scales for personality disorders developed from the Inventory of Interpersonal Problems. Journal of Personality Disorders. 1996; 10:355–369. http://doi.org/10.1521/pedi.1996.10.4.355.

Preacher KJ, Curran PJ, Bauer DJ. Computational tools for probing interactions in multiple linear regression, multilevel modeling, and latent curve analysis. Journal of Educational and Behavioral Statistics. 2006; 31:437–448. http://doi.org/10.3102/10769986031004437.

Reichenberger J, Eibl JJ, Pfaltz M. Don't praise me, don't chase me: Emotional reactivity to positive and negative social-evaluative videos in patients with borderline personality disorder. Journal of Personality Disorders. 2017; 31:75–89. http://doi.org/10.1521/pedi_2016_30_238. [PubMed: 26845528]

Renneberg B, Herm K, Hahn A, Staebler K, Lammers C-H, Roepke S. Perception of social participation in borderline personality disorder. Clinical Psychology & Psychotherapy. 2011; 19:473–480. http://doi.org/10.1002/cpp.772. [PubMed: 22076727]

Romero-Canyas R, Downey G, Berenson KR, Ayduk O, Kang NJ. Rejection sensitivity and the rejection-hostility link in romantic relationships. Journal of Personality. 2010; 78:119–148. http://doi.org/10.1111/j.1467-6494.2009.00611.x. [PubMed: 20433615]

Rosenthal MZ, Gratz KL, Kosson DS, Cheavens JS, Lejuez CW, Lynch TR. Borderline personality disorder and emotional responding: A review of the research literature. Clinical Psychology Review. 2008; 28:75–91. http://doi.org/10.1016/j.cpr.2007.04.001. [PubMed: 17544188]

Rosenthal, R., Rosnow, RL. Essentials of Behavioral Research. New York: McGraw-Hill; 1984.

Sadikaj G, Moskowitz DS, Russell JJ, Zuroff DC, Paris J. Quarrelsome behavior in borderline personality disorder: Influence of behavioral and affective reactivity to perceptions of others. Journal of Abnormal Psychology. 2013; 122:195–207. http://doi.org/10.1037/a0030871. [PubMed: 23231460]

Sadikaj G, Russell JJ, Moskowitz DS, Paris J. Affect dysregulation in individuals with borderline personality disorder: persistence and interpersonal triggers. Journal of Personality Assessment. 2010; 92:490–500. http://doi.org/10.1080/00223891.2010.513287. [PubMed: 20954051]

Santangelo P, Bohus M. Ecological momentary assessment in borderline personality disorder: A review of recent findings and methodological challenges. Journal of Personality. 2014; 28:555–576. http://doi.org/10.1521/pedi_2012_26_067.

South S. Personality pathology and daily aspects of marital functioning. Personality Disorders: Theory, Research, and Treatment. 2014; 5:195–203. http://doi.org/10.1037/per0000039.

Staebler K, Helbing E, Rosenbach C, Renneberg B. Rejection sensitivity and borderline personality disorder. Clinical Psychology and Psychotherapy. 2010; 18:275–283. http://doi.org/10.1002/cpp.705. [PubMed: 21110407]

Thome J, Liebke L, Bungert M, Schmahl C, Domes G. Confidence in facial emotion recognition in borderline personality disorder. Personality Disorders: Theory, Research, and Treatment. 2016; 7:159–168. http://doi.org/10.1037/per0000142.supp.

Watson, D., Clark, LA. The PANAS-X: Manual for the positive and negative affect schedule-expanded form. The University of Iowa; 1999.

Wiggins JS. A psychological taxonomy of trait-descriptive terms: The interpersonal domain. Journal of Personality and Social Psychology. 1979; 37:395–412. http://doi.org/10.1037/0022-3514.37.3.395.

Zanarini MC, Frankenburg FR. The essential nature of borderline psychopathology. Journal of Personality Disorders. 2012; 21:518–535. http://doi.org/10.1521/pedi.2007.21.5.518.

Zanarini MC, Frankenburg FR, Reich DB, Fitzmaurice GM. The 10-year course of psychosocial functioning among patients with borderline personality disorder and axis II comparison subjects. Acta Psychiatrica Scandinavica. 2010; 122:103–109. http://doi.org/10.1111/j.1600-0447.2010.01543.x. [PubMed: 20199493]

Zanarini MC, Vujanovic AA, Parachini EA. A screening measure for BPD: The McLean screening instrument for borderline personality disorder (MSI-BPD). Journal of Personality Disorders. 2003; 17:568–573. http://doi.org/10.1521/pedi.17.6.568.25355. [PubMed: 14744082]

Table 1

The Influence of BPD Symptoms on Hostility in Response to Perceptions of Rejection From Romantic Versus Nonromantic Partners

Variable	*b*	*SE*	*df*	*F*	r^a
Intercept	1.329	0.024	2164.279	2952.179***	0.760
Days passed	−0.004	0.001	2081.194	13.270***	0.080
BPD	−0.000	0.004	2970.826	0.004	0.001
OPD	0.008	0.001	3284.313	28.826***	0.093
Gender	0.050	0.024	1916.716	4.367*	0.048
Rejection_b	1.185	0.097	1881.793	148.755***	0.271
Rejection_w	0.590	0.050	974.069	137.528***	0.352
Partner	−0.007	0.013	2395.773	0.258	0.010
OPD*rejection_w	0.001	0.005	1062.528	0.038	0.006
BPD*rejection_w	−0.004	0.013	991.160	0.073	0.009
Partner*rejection_w	0.035	0.058	2497.654	0.382	0.012
OPD*partner	−0.001	0.002	1996.124	0.169	0.009
BPD*partner	−0.001	0.004	2478.897	0.114	0.007
OPD*partner*rejection_w	−0.009	0.006	3141.969	2.432	0.028
BPD*partner*rejection_w	0.043	0.014	3128.832	8.717**	0.053

Note. Analyses were based on 5833 observations for 101 participants (122 observations were not used due to missing values). BPD = borderline personality disorder symptoms; OPD = other personality disorder symptoms; rejection_b = between-person rejection; rejection_w = within-person rejection.

*$p < .05$.

**$p < .01$.

***$p < .001$.

[a]Effect sizes were computed using the procedure recommended by Rosenthal and Rosnow (1984), $r = \sqrt{(F/F+df)}$

Table 2

The Influence of BPD Symptoms on Sadness in Response to Perceptions of Rejection From Romantic Versus Nonromantic Partners

Variable	*b*	*SE*	*df*	*F*	r^a
Intercept	1.27	0.029	2100.415	1922.003***	0.691
Days passed	−0.001	0.001	1999.486	0.692	0.019
BPD	−0.005	0.004	2919.702	1.515	0.023
OPD	0.011	0.002	3079.281	49.841***	0.126
Gender	0.060	0.029	1936.603	4.396*	0.048
Rejection_b	1.15	0.117	1931.704	95.391***	0.217
Rejection_w	0.256	0.045	818.982	32.901***	0.197
Partner	0.018	0.012	1922.542	2.101	0.033
OPD*rejection_w	−0.007	0.005	928.865	2.172	0.048
BPD*rejection_w	0.002	0.012	835.079	0.044	0.007
Partner*rejection_w	0.234	0.052	1994.958	19.920***	0.099
OPD*partner	0.002	0.001	1632.684	1.984	0.035
BPD*partner	−0.007	0.004	1996.859	3.503	0.042
OPD*partner*rejection_w	0.017	0.005	2594.321	10.299**	0.063
BPD*partner*rejection_w	−0.030	0.013	2568.224	5.033*	0.044

Note. Analyses were based on 5833 observations for 101 participants (122 observations were not used due to missing values). BPD = borderline personality disorder symptoms; OPD = other personality disorder symptoms; rejection_b = between-person rejection; rejection_w = within-person rejection.

*$p < .05$.

**$p < .01$.

***$p < .001$.

[a]Effect sizes were computed using the procedure recommended by Rosenthal and Rosnow (1984), $r = \sqrt{(F/F+df)}$

Table 3

The Influence of BPD Symptoms on Positive Affect in Response to Perceptions of Acceptance From Romantic Versus Nonromantic Partners

Variable	*b*	*SE*	*df*	*F*	r^a
Intercept	2.29	0.044	1984.242	2665.032***	0.757
Days passed	−0.004	0.002	1950.722	3.173	0.040
BPD	−0.002	0.006	2601.236	0.158	0.008
OPD	0.004	0.002	2666.635	2.567	0.031
Gender	−0.069	0.043	1862.021	2.548	0.037
Accept_b	0.760	0.112	1848.822	45.660***	0.155
Accept_w	0.261	0.030	1064.791	77.628***	0.261
Partner	−0.074	0.017	1505.736	18.716***	0.111
OPD*accept_w	−0.002	0.003	1652.170	0.297	0.013
BPD* accept _w	0.001	0.009	1473.690	0.008	0.002
Partner*accept_w	0.048	0.042	2480.875	1.327	0.023
OPD*partner	−0.001	0.002	1355.442	0.554	0.020
BPD*partner	0.004	0.005	1544.488	0.571	0.019
OPD*partner*accept_w	0.007	0.004	3447.126	2.592	0.027
BPD*partner*accept_w	−0.028	0.011	2849.061	5.847*	0.045

Note. Analyses were based on 5833 observations for 101 participants (122 observations were not used due to missing values). BPD = borderline personality disorder symptoms; OPD = other personality disorder symptoms; accept_b = between-person acceptance; accept_w = within-person acceptance.

*$p < .05$.

**$p < .01$.

***$p < .001$.

[a]Effect sizes were computed using the procedure recommended by Rosenthal and Rosnow (1984), $r = \sqrt{(F/F+df)}$.