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The Relationship Between Borderline Personality Disorder and Major Depression in Later Life: Acute Versus Temperamental Symptoms

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Abstract

Objective—A recent issue in the personality disorder field is the prevalence and course of Axis II symptoms in later life. Focusing on the presentation of personality disorder criteria over time may have some utility in exploring the relationship between borderline personality disorder (BPD) and major depression in older adults. Temperamental personality symptoms are relatively resistant to change but tend to be nonspecific to disorders, while acute symptoms remit relatively quickly. We predicted that temperamental BPD symptoms would be positively correlated with a history of depression and did not expect to find a relationship between major depression and acute BPD symptoms.

Method—One thousand six hundred and thirty participants between the ages of 55 and 64 were recruited to participate in a community-based longitudinal study representative of the St. Louis area. Participants completed a battery of assessments at baseline, including diagnostic interviews for all ten personality disorders and major depressive disorder.

Results—Temperamental and acute BPD symptoms were significantly correlated with a history of major depression. After adjustments were made for the effects of temperamental symptoms on depression, acute symptoms were no longer correlated with a history of depression. As predicted, temperamental symptoms remained significantly related to depression, even after controlling for the effects of acute symptoms. BPD acute symptoms showed a unique negative correlation with the amount of time following remission from a depressive episode.

Conclusions—Overall, this study supports associations between major depression and borderline personality in older adults. The findings indicate that a history of major depression is primarily related to stable BPD symptoms related to emotional distress, which are more prevalent in older adults compared to acute features.

Keywords

Borderline Personality Disorder; Temperament; Depression; Older Adults

Relatively few investigations have examined the relationship between personality disorders and major depression in later life.[1] Research on the interplay between borderline personality disorder (BPD) and major depressive disorder (MDD) is needed to improve our understanding of the maintenance of these disorders beyond middle age. High rates of co-occurrence between borderline personality disorder and major depression have been

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reported, and some findings indicate that rates of co-occurrence are just as high in older adults as in younger adults.[2] Unfortunately, a satisfying empirical explanation for the link between these two disorders has not been established.

The presentation of BPD and MDD is one of the most common examples of co-occurrence between Axis I and Axis II.[3–5] Theoretical models suggest that a common factor implements affective instability in both BPD and MDD.[6] Both disorders are characterized by shifts in affective states, but MDD tends to be more episodic and fixed while BPD is typically enduring and reactive.[7] Several studies have shown that BPD probands have a higher prevalence of affective disorders in their relatives compared to other personality disorders.[8–10] In addition, a multivariate twin study and significant longitudinal associations between BPD and depressive symptoms suggest that the relationship is due to a common latent factor.[11–13] Due to these shared characteristics, some researchers have proposed that chronic depression might be better conceptualized as a personality disorder and others believe that borderline personality is a variant of a mood disorder.[14,15] The idea of chronic depression being conceptualized as a personality disorder is especially important to address in older adults because research has shown that dysthymic disorder presents itself differently in older adults compared to younger adults.[16]

While personality disorders are defined as enduring and inflexible patterns of behavior according to DSM-IV criteria, personality disorder criteria differ in prevalence and stability across the lifespan.[17–19] It is commonly assumed that certain forms of personality pathology diminish or “burn out” by middle age. Some cross-sectional studies indicate that personality disorders are less prevalent among older adults,[20] but subthreshold pathology persists. For example, Stepp and Pilkonis[21] grouped patients with borderline personality disorder by age and demonstrated that older patients had significantly less suicidal behavior and impulsivity compared to younger patients. However, levels of emotional distress were consistent across all age groups. Likewise, Zanarini and colleagues[18,22] followed patients with borderline personality disorder over ten years and reported marked improvement in some symptoms while others remained stable. Stable symptoms included inappropriate and chronic anger, feelings of emptiness, fears of abandonment, and dysphoric affect while identity disturbance, suicidal gestures, unstable relationships, and stress related paranoid ideation were more likely to remit. BPD symptoms that are relatively resistant to change, but tend to be nonspecific are labeled as temperamental symptoms while BPD symptoms that remit relatively quickly, are less pervasive over time, and include the “best markers” for diagnosis (i.e., high positive predictive value) are referred to as acute symptoms. Acute symptoms (e.g., suicidal gestures) typically lead to hospitalization, treatment and the awareness of a BPD diagnosis.[23]

Hopwood *et al.*[24] provided further support for the distinction between BPD temperamental and acute symptoms using the Five Factor Model (FFM) of personality traits. They found a positive correlation between neuroticism and temperamental symptoms as well as a negative correlation between agreeableness and acute symptoms. These data indicate that, in addition to remission rates, personality traits could distinguish between the temperamental and acute symptoms of BPD. Previous reports have shown a strong relationship between neuroticism and major depression and a negligible relationship between agreeableness and major depression.[25,26] The authors concluded that the relationship between BPD temperamental symptoms and neuroticism might represent a risk factor for developing major mood disorders.

Many people with remitted personality disorders continue to experience residual or temperamental symptoms.[17, 27] McGlashan and colleagues[17] demonstrated overall improvement in BPD symptoms but also found that the rank order of symptom prevalence

remains stable over time. In other words, the most prevalent BPD criteria, such as affective instability and anger, were least likely to remit and had trait-like qualities. The least prevalent criteria were more likely to remit and were more reactive and symptomatic in nature. Changes in diagnosis and expression of BPD symptoms are apparently common over time. As a result, subsyndromal personality disorders may affect a higher proportion of older adults than we are currently aware of.[28]

If certain features of personality pathology remain present with advancing age, then it will be important to investigate the impact of subthreshold BPD symptoms in older adults. The most prevalent and least changeable criteria in BPD are affective symptoms (e.g., dysphoria, anxiety, helplessness), features that are also frequently used to characterize Axis I affective disorders. Thus, temperamental symptoms may have important clinical implications regarding the risk of major depression. Unfortunately, little is known about the relationship between depression and borderline personality disorder past middle age.[28, 29]

The purpose of the current paper is to investigate the relationship between Axis II BPD symptoms and Axis I major depression. This study also aims to extend the findings of Zanarini *et al.*,[18,22] in validating the distinction between BPD temperamental and acute symptoms. Another aim of this paper was to replicate the data found by Hopwood *et al.*[24] that linked the FFM "normal" personality traits to subsyndromal symptoms of BPD. Using data from the St. Louis Personality and Aging Network, we will examine baseline data on the association between a history of major depression and current BPD symptoms, with the intention of following the trajectory of this relationship over time. Due to the relationship between neuroticism and temperamental symptoms, we expected BPD temperamental symptoms to be positively correlated with a history of major depressive episodes (MDE) and did not expect a significant correlation between acute BPD symptoms and a history of MDE. Consistent with this, we predicted that the presence of BPD temperamental symptoms would be negatively correlated with the amount of time since the individual's last episode of major depression occurred.

Methods

Participants

A community-based sample of adults between the ages of 55 and 64 were recruited to participate in an on-going longitudinal study: The St. Louis Personality and Aging Network (SPAN).[30] Participants were identified using listed phone numbers from Genesys Sampling Systems. Phone records were crosschecked with census data to ensure at least one member of the household was within the target age range. One thousand six hundred thirty participants completed the baseline portion of the study by the beginning of 2011. The current report focuses on those participants who do not meet criteria for a current episode of major depression (n=1,592). We excluded participants from the analysis who currently met criteria for a MDE at baseline recruitment because combining formerly depressed individuals with participants who are currently symptomatic may weaken our attempt to interpret the relationship between personality and major depression. Although recent findings suggest that personality pathology scores are not state dependent,[31] most of the literature examining the influence of depression on personality assessment questions the validity of personality self report when depressed mood is present.[32–34] In fact, Abrams suggested that research on the relationship between personality disorders and major depression in older adults should occur during periods of remission from depression.[35] We ran the analysis with and without participants who met lifetime criteria for mania or hypomania (n=38) and there was no difference between the results, thus we included bipolar participants in the final sample. No other psychiatric comorbidities were excluded from the analysis. The mean age of participants at baseline was 59.6 (SD=2.74) and 54.3% were

female (n=864). The sample is generally representative of middle-aged individuals living in the St. Louis area (Table 1). All participants provided informed, written consent and were compensated $60 for completing the baseline assessment.

Measures

Baseline assessment for participants in the SPAN study includes a brief life narrative, a semi-structured diagnostic interview for personality disorders, and structured interviews screening for depression and substance use. All interviews were conducted by carefully trained research staff and graduate students who received continued supervision by the principal investigator (T.O.). After the interview portion of the assessment is complete, participants fill out a battery of self-report measures.

C-DIS-IV—We used the Computerized Diagnostic Interview Schedule (C-DIS-IV)[36] to identify lifetime and 12-month prevalence rates of major depressive episodes. The fully structured interview was designed to be administered by nonclinician interviewers and to assess for all major DSM-IV psychiatric diagnoses.

SIDP-IV—The Structured Interview for DSM-IV Personality (SIDP-IV)[37] was administered to assess the presence of DSM-IV Axis II disorders. The SIDP-IV is arranged by thematic grouping of symptoms rather than by type of disorder to minimize the focus of pathology, which may reduce interviewer bias. Participant's responses were rated by interviewers on a scale from 0 (not present) to 3 (strongly present) to measure symptom presence over the past five years. To achieve optimal statistical results, we chose to analyze personality scores on a 4-point scale. All interviews were video-recorded, and independent judges rerated 265 randomly chosen interviews. Reliability tests indicate adequate reliability at ICC = 0.67 for the overall scale and ICC= 0.77 for BPD.

MINI—An abbreviated version of the Mini-International Neuropsychiatric Interview (MINI)[38] was used to assess alcohol/substance abuse and dependence. The MINI is a brief, reliable and validated structured interview used to diagnose Axis-I psychopathology. We expanded the criteria to assess both 12-month and lifetime prevalence rates.

NEO-PI-R—The NEO-Personality Inventory-Revised (NEO-PI-R)[39] is a self-report, 240 item instrument used to measure the five factors of personality including neuroticism, extraversion, openness, agreeableness and conscientiousness. Each of the five domains is comprised of six facets, providing a comprehensive and detailed assessment of adult personality. Participants respond to each of the trait statements using a 1 to 5 Likert-type scale. Scores for each facet and domain are calculated by summing the respective trait scores.

BPD Symptoms—Borderline personality disorder symptom classifications were based on previous findings from The McLean Study of Adult Development (MSAD), a prospective study on the course of borderline personality disorder.[18,22] Part of the study procedures includes measuring borderline personality symptomatology every two years using the Revised Diagnostic Interview for Borderlines (DIB-R). Items on the DIB-R measure 15 subsyndromal symptoms and cover a much broader scope of BPD than DSM-IV diagnostic criteria. Follow-up data from MSAD reveals an assortment of remission patterns for BPD symptoms. Results suggest that BPD symptoms can be organized into two categories depending on how quickly the symptom resolves over time. BPD features that tend to resolve slowly were labeled temperamental symptoms and BPD features that resolve relatively quickly were labeled acute symptoms. For this paper, we divided BPD symptoms into temperamental and acute categories based on these results.

There are 24 total items on the DIB-R and each falls into one of four major headings: affect, cognitive, impulsivity, and interpersonal. Although we do not conduct the DIB-R as part of the SPAN study, we were able to compile 21 of the 24 DIB-R items from an assortment of measures. We obtained the nine DSM-IV BPD criteria from the SIDP-IV and extracted the other items from the NEO-PI-R, MINI and SIDP-IV. From the affect domain, we used the NEO-PI-R to assess depression, anxiety and helplessness. In the cognitive domain we used a combination of SIDP items as an index for odd thinking/unusual perceptions and non-delusional paranoia. We used items from the MINI to represent substance abuse symptomatology and one of the NEO-PI-R facets to represent general impulsivity. SIDP-IV items accounted for the remaining interpersonal features including counter-dependency, dependency/masochism, entitlement, and intolerance of aloneness. Counter-dependency and dependency/masochism were combined into one item due to lack of discriminating items on the measures we used. Stormy relationships and devaluation/manipulation were also combined because the SIDP-IV measures both of these features in one item, resulting in a total of 19 BPD symptom items. We did not include the following BPD features from the DIB-R in our analyses: help-seeking suicide efforts, treatment regression and counter-transference problems.

Temperamental symptoms included depressive affect, anger, anxiety, helplessness, loneliness/emptiness, odd thinking/unusual perceptions, non-delusional paranoia, general impulsivity, intolerance of aloneness, abandonment concerns, counter-dependency/ masochism. Acute symptoms included affective instability, quasi-psychotic thought, identity disturbance, substance abuse, promiscuity, self-mutilation, stormy relationships/devaluation/ manipulation, and entitlement. Cronbach's alpha for the 11 temperamental items and 8 acute items were 0.68 and 0.54 respectively. The internal consistency of these scales may have been negatively influenced by the skew of scale items commonly seen in community sample with relatively low levels of pathology and covariance among psychopathology items. The correlation between temperamental and acute symptom sets was moderate (r=0.47, $p<.001$, df=1508).

We transformed all 19 items into a common measurement scale so that mean scores could be compared. To convert the items into a common measurement scale we first calculated the original score for each item (e.g., added all of the anxiety facet items from the NEO-PI-R to calculate the anxiety temperamental symptom). We then computed the descriptive statistics for each temperamental and acute symptom, including the minimum value and range. For each item we subtracted the respective minimum value from the participants score, divided by the respective range and multiplied this number by 10. This effectively converted the observed scores on each item to have 0 as the lower limit and 10 as the upper limit (i.e., the range is 10 for each item). The means for temperamental and acute items were M=1.56 (SD=0.69) and M=0.38 (SD=0.61), respectively. The item with the highest mean was general impulsivity (M=4.45, SD= 1.55) and the item with the lowest mean was identity disturbance (M=0.09, SD= 0.64) (Table 2).

Data Analysis

First, we converted all item scores into z-scores so that each item had equal weight when computing temperamental and acute symptom set totals. Point biserial and partial correlations were then performed between BPD temperamental and acute symptoms and a history of major depression. Since many of the variables were skewed, we performed parallel analyses for all of the results using Spearman rather than Pearson correlations. Both sets of analyses generated virtually the same results, thus we present the more recognized Pearson correlations. In the subset of participants who reported experiencing a lifetime history of major depression, we performed partial correlations between BPD temperamental and acute symptoms and the amount of time since their last episode occurred. Partial

correlations are especially important to consider because we are able to find the correlation between one symptom set and a history of major depression while controlling for the variance of the other symptom set. In other words, we remove the effect of the second symptom set from both of the other variables.

Results

According to the C-DIS, 17.4% (n=277) of the participants who were not symptomatic reported a history of major depression. For those participants with a history of major depression, the average age at first episode was 34.3 (SD=14.2), the average age at their most recent episode was 43.6 (SD=11.4) and the mean number of total episodes was 3.9 (SD=7.03). Two hundred and twenty three (80.5%) of participants with a history of major depression reported receiving professional treatment for mental health at some point in their life. A point biserial correlation showed that total BPD symptomatology was positively correlated with a lifetime diagnosis of major depression (r=.18, $p<.001$, df=1588). Table 3 shows the point biserial and partial correlations between a history of major depression and BPD temperamental/acute symptoms. Using point biserial correlations, BPD temperamental and acute symptoms were significantly correlated with a history of major depression. This pattern held for both men and women.

Due to the overlap between BPD symptoms, partial correlations were used to remove the influence of BPD acute symptoms on the correlation between BPD temperamental symptoms and a history of MDE and vice versa. Consistent with our hypothesis, the acute symptoms were no longer correlated with a history of depression when we adjusted for temperamental symptoms in this model (pr=.04, $p=.10$). This did not hold true for males (r=.09, $p=.02$). As predicted, temperamental symptoms remained significantly related to depression, even when controlling for the effect of acute symptoms (pr=.20, $p<.001$).

Among the patients who had experienced a previous episode of major depression, we analyzed the relationship between the amount of time since their last episode occurred and the presence of BPD temperamental/acute symptoms. BPD acute symptoms were negatively correlated with the amount of time passed since the subject's last episode of major depression (pr= −.13, $p=.05$, df=223), while controlling for temperamental symptoms. The partial correlation between BPD temperamental symptoms and time since MDE remitted was not significant (pr= −.01, $p=.86$, df=223).

We examined the associations between BPD temperamental and acute symptoms and the FFM personality domains. We accounted for redundancy by eliminating the appropriate items from the NEO-PI-R while analyzing correlations with temperamental symptoms. Temperamental symptoms were significantly correlated with all five domains including neuroticism (r=.65, $p<.001$, df=1472), extraversion (r= −.26, $p<.001$, df=1441), openness (r= −.06, $p<.05$, df=1440), agreeableness (r= −.27, $p<.001$, df=1438) and conscientiousness (r= −.46, $p<.001$, df=1445). All correlations remained significant while controlling for acute symptoms, by far the strongest correlation was with neuroticism (pr=.63, $p<.001$, df=1309). Acute symptoms were significantly correlated with three of the five domains including neuroticism (r=.28, $p<.001$, df=1472), agreeableness (r= −.23, $p<.001$, df=1466) and conscientiousness (r= −.17, $p<.001$, df=1471). As before, all three correlations remained significant while controlling for temperamental symptoms, and the strongest correlation was with agreeableness (pr=−.12, $p<.001$, df=1309). However the signs switched for neuroticism (pr= −.11, $p<.001$, df=1309) and conscientiousness (pr=.07, $p<.05$, df=1309). In this case, temperamental symptoms may be acting as a suppressor of variance in acute symptoms. In other words, it may be best to conceptualize temperamental symptoms as being jointly related to acute symptoms and neuroticism.

Conclusions

Overall, these results suggest that major depression and borderline pathology are significantly related to each other in older adults. A history of major depression is primarily related to the core, temperamental traits of BPD, as opposed to the more transient acute symptoms. This is consistent with the idea that BPD temperamental symptoms are nonspecific to BPD, and acute symptoms have a higher positive predictive value.[40] BPD acute symptoms showed a unique negative correlation with the amount of time following remission from a depressive episode. In other words, higher levels of BPD acute symptoms are related to former episodes of depression having occurred more recently. This finding is inconsistent with our hypothesis that temperamental symptoms would be correlated with a shorter remission period. One interpretation for this finding is that both BPD acute symptoms and depressive episodes emerge at the same time, typically during periods of extreme stress, but BPD symptoms persist after depressive symptoms have resolved. Even though BPD acute symptoms are defined by their instability and short remission rates, personality disorder symptoms are still found to be more stable than mood disorders.[41] Follow-up data demonstrate this possibility since 2.7–12.9% of BPD acute symptoms remain present ten years after baseline,[18] similar to the average amount of time since our participants experienced their last episode of depression. It would seem likely that temperamental symptoms would show the same relationship considering their higher prevalence rates at follow up. A possible reason for this inconsistency is that temperamental symptoms are correlated with all episodes of depression, regardless of whether the episode occurred recently or not.

Follow-up data will allow us to test adequately whether the presence of temperamental symptoms at baseline predicts future episodes of major depression and the manifestation of acute symptomatology. Existing data already indicate that older adults experience problems in interpersonal functioning when subthreshold personality pathology persists after remission from a depressive episode.[42,43] In addition, older adults manifest maladaptive behaviors and Axis I disorders under acute stress.[35] BPD increases the risk of MDE recurrence,[44] and aging alone does not seem to affect the strength of the relationship between personality disorders and depression.[45] Under stressful situations, temperamental traits might be considered a risk factor for developing episodes of major depression in this age group.

No gender differences were found while analyzing the relationship between depression and BPD temperamental symptoms. Males did show a significant relationship between BPD acute symptoms and a history of major depression. This is not surprising considering the externalizing nature of BPD acute symptoms (e.g., substance abuse, suicidal gestures). One explanation for this finding could be that males are more likely to manifest depressive symptoms in the form of aggression and other externalizing behaviors.[46] Another possibility could be the elevated rates of an externalizing latent factor in males compared to females, with males exhibiting a higher number of externalizing behaviors in general.[47,48] It should also be noted that the majority of patients in the McLean Study of Adult Development were female, and we based our symptom classifications on these remission rates.[22]

Our results partially support findings previously reported by Hopwood *et al.*[24] After accounting for acute symptoms, the strongest relationship between BPD temperamental symptoms and the FFM traits was with neuroticism. This would indicate that participants who report BPD temperamental symptoms are particularly sensitive to negative stimuli, cognitions and moods. Low agreeableness appears to share a strong relationship with BPD acute symptoms. This may be explained by the interpersonal, impulsive and self-damaging behaviors included in the acute symptomatology. In other words, participants who tend to

lack trust, empathy and cooperation are also likely to engage in poor coping mechanisms such as interpersonal struggles, substance abuse, and overspending. For neuroticism and conscientiousness, the direction of the relationship between acute symptoms and the traits was reversed after accounting for temperamental symptoms. In this case, temperamental symptoms act as suppressors. In other words, temperamental and acute symptoms are moderately correlated, sharing a certain amount of variance. Once we consider acute symptoms' unique variance with neuroticism, we find a negative relationship. This suggests that the impression of a positive relationship between acute symptoms and neuroticism is accounted for by whatever characteristics acute symptoms share with temperamental symptoms.

Although previous studies have revealed a decrease in personality disorder prevalence with advancing age, our study shows that older adults continue to report personality pathology, typically in the form of temperamental traits, and these traits may have prognostic implications for major depression. Besides the possibility of increased risk for major depression, research indicates that dimensional measurements of personality pathology, including subthreshold cases, have a positive correlation with general psychosocial functioning.[49] The present study supports the idea that diagnostic thresholds may interfere with our ability to detect signs of pathology, especially in older adults. If older adults are more likely to present with undetected subthreshold pathology, they may be more likely to receive insufficient care and could suffer as a result. Thus, it appears that current diagnostic standards are unsuitable for this age group.[50] Further research on the impact of subthreshold pathology in older adults will be needed to examine this possibility.

Some limitations in our paper should be noted. Our sample focuses on an older age group representative of the community. As expected, our sample did not present with elevated levels of psychopathology that would be characteristic of a clinical sample. However, our prevalence rates of depression and personality pathology are comparable to other community samples.[5,51] Future studies with a younger sample and clinical populations are warranted. Although our measures of psychopathology are widely accepted scales, we relied on self-report instruments, which may be subject to reporter bias. The participants included in the present analyses were not currently diagnosed with a depressive episode so there is less of a concern about whether participant's negative affect influenced personality descriptions and false positive ratings. When considering the temperamental symptoms, some of the items reflect affective features that integrate symptoms of MDD. Even though the temperamental items differ from symptoms of MDD because participants are instructed to describe their "usual self," it is possible for participants to misinterpret these instructions. To address the issue of tautology, we removed the affective domain from the temperamental symptoms (depression, anxiety and helplessness) and maintained a significant partial correlation with a history of MDD (pr =.18, p<.001).

Another issue we confronted is our restricted ability to determine the onset and duration of BPD symptoms from our baseline sample. We have no way of knowing whether remission rates differ between temperamental and acute symptoms in our current sample until follow-up analyses have been conducted. However, both symptom sets show moderate internal consistency within our sample, and multiple studies have reported distinctions in remission rates between symptom sets that would likely make our analyses justifiable.

In conclusion, these results suggest that BPD temperamental symptoms are linked to the occurrence of previous episodes of major depression, while BPD acute symptoms are not related. This relationship highlights the importance of assessing depression in older adults, even if the full criteria for BPD are not met.

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TABLE 1

Baseline demographic characteristics of 1592 non-depressed participants in the SPAN study

Demographic Characteristics	%	No.
Sex		
Female	54.3	864
Male	45.7	728
Race		
White	65.0	1035
Black	32.4	515
Other	2.6	42
Education		
Less than High School	2.6	42
High School Graduate	43.8	696
College Graduate or Higher	53.6	851
Marital Status		
Married	48.1	766
Widowed	6.8	109
Separated	1.7	27
Divorced	29.3	466
Never Married	14.1	224

TABLE 2

Transformed mean level differences between temperamental and acute borderline personality disorder symptom sets

BPD Symptoms	Mean	Standard Deviation
Temperamental Symptoms		
Anger	0.79	1.73
Depression	3.67	1.71
Anxiety	3.98	1.48
Helplessness	2.01	1.94
Loneliness/Emptiness	0.41	1.43
Odd thinking/Unusual perceptions	0.26	0.76
Non-delusional paranoia	0.90	1.41
General impulsivity	4.45	1.55
Intolerance of aloneness	0.18	0.90
Abandonment concerns	0.09	0.75
Counter-dependency/Masochism	0.52	1.06
Acute Symptoms		
Affective Instability	0.51	1.46
Quasi-psychotic thought	0.24	0.97
Identity disturbance	0.09	0.64
Substance Abuse	0.33	1.36
Promiscuity/Self-damaging behavior	1.00	1.95
Self-mutilation	0.12	0.73
Stormy relationships/Devaluation/Manipulation	0.34	1.25
Entitlement	0.40	1.36

TABLE 3

Point biserial correlations between borderline personality disorder temperamental/acute symptoms and a history of major depression

		History of MDE					
		Whole Sample (n=1592)	**df**	**Females Only (n=864)**	**df**	**Males Only (n=728)**	**df**
Temperamental Symptoms	Pearson *r*	.25**	1508	.28**	815	.21**	691
	Partial Correlation	.20**	1507	.24**	814	.14**	690
Acute Symptoms	Pearson *r*	.16**	1588	.17**	860	.16**	726
	Partial Correlation	.04	1507	.03	814	.09*	690

** Correlation is significant at the .01 level

* Correlation is significant at the .05 level

Note: df=degrees of freedom

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