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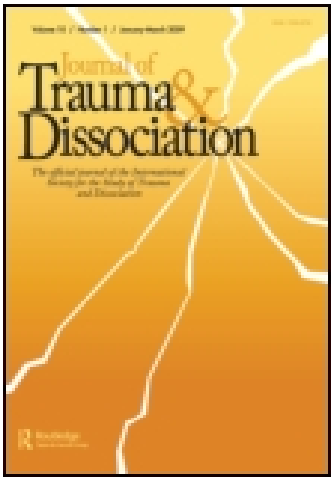

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Co-Occurrence of Dissociative Identity Disorder and Borderline Personality Disorder

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Co-Occurrence of Dissociative Identity Disorder and Borderline Personality Disorder

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The literature indicates that, among individuals with borderline personality disorder, pathological dissociation correlates with a wide range of impairments and difficulties in psychological function. It also predicts a poorer response to dialectical behavior therapy for borderline personality disorder. We hypothesized that (a) dissociative identity disorder commonly co-occurs with borderline personality disorder and vice versa, and (b) individuals who meet criteria for both disorders have more comorbidity and trauma than individuals who meet criteria for only 1 disorder. We interviewed a sample of inpatients in a hospital trauma program using 3 measures of dissociation. The most symptomatic group was those participants who met criteria for both borderline personality disorder and dissociative identity disorder on the Dissociative Disorders Interview Schedule, followed by those who met criteria for dissociative identity disorder only, then those with borderline personality disorder only, and finally those with neither disorder. Greater attention should be paid to the relationship between borderline personality disorder and dissociative identity disorder.

KEYWORDS dissociation, borderline personality disorder, severity of symptoms

Dissociative and paranoid symptoms were added to the diagnostic criteria for borderline personality disorder (BPD) in the *Diagnostic and Statistical*

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Manual of Mental Disorders, Fourth Edition (*DSM–IV;* American Psychiatric Association, 1994), but no guidance was provided in the BPD criteria or text for when such symptoms are severe and pervasive enough to warrant a separate dissociative disorder diagnosis on Axis I, nor is any such guidance provided in *DSM–5* (American Psychiatric Association, 2013). The *DSM–5* states,

> During periods of extreme stress, transient paranoid ideation or dissociative symptoms (e.g., depersonalization) may occur (Criterion 9), but these are generally of insufficient severity or duration to warrant an additional diagnosis. These episodes occur most frequently in response to a real or imagined abandonment. Symptoms tend to be transient, lasting minutes or hours. (American Psychiatric Association, 2013, p. 664)

Dissociative disorders are not mentioned in the differential diagnosis of BPD in *DSM–5* (p. 666), nor are they mentioned in a list of commonly co-occurring disorders (p. 665).

Besides the above quotation, in the *DSM–5* section on BPD, the words *dissociation* or *dissociative* appear only in diagnostic Criterion 9 for BPD and in the sentence "Self-mutilation may occur during dissociative experiences and often brings relief by reaffirming the ability to feel or by expiating the individual's sense of being evil" (American Psychiatric Association, 2013, p. 664). Thus, there is no doubt that the *DSM–5* considers dissociative symptoms in BPD to be minor and transient.

A body of research has indicated that dissociative disorders are in fact common in BPD (Conklin & Westen, 2005; Ross, 2007; Şar, Akyüz, Kugu, Öztürk, & Ertem-Vehid, 2006; Şar et al., 2003), and, vice versa, BPD is common in dissociative identity disorder (DID; Ross, 2007; Ellason, Ross, & Fuchs, 1995). Other studies have found lower but still clinically important rates of dissociation in BPD (Zanarini, Ruser, Frankenburg, & Hennen, 2000). The relationship between BPD and dissociation has been discussed at length by Korzekwa, Dell, and Pain (2009) and by Korzekwa, Dell, Links, Thabane, and Fougere (2009).

Studies of the relationship between BPD and dissociation indicate that pathological dissociation correlates with a wide range of indicators of severity and impairment in BPD and complicates response to psychotherapy (Chlebowski & Gregory, 2012; Kliendienst et al., 2011; Yen, Johnson, Costello, & Simpson, 2009). The clinical literature on DID recognizes the increased difficulty of psychotherapy when there is comorbid BPD (Ross, 1997, 2005).

Dissociation in BPD correlates with difficulties in a wide range of psychological functions and with a wide range of psychological impairments: affect regulation (Barnow et al., 2012; Loffer-Stastka, Szerencsics, & Blums, 2009; Van Dijke et al., 2010), emotional learning (Ebner-Priemer

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et al., 2009), alexithymia (Evren, Cinar, & Evren, 2012), neuropsychological functioning (Haaland & Landro, 2009), oligodypsia (Hoeschel et al., 2008), cognitive schemas (Johnston, Dorahy, Courtney, Bayles, & O'Kane, 2009), pain sensitivity and perception (Ludascher et al., 2007, 2010), cortisol and norepinephrine regulation (Simeon, Knutelska, Smith, Baker, & Hollander, 2007), sensitivity to stress (Stigmayer et al., 2008); self-mutilation (Brodsky, Cloitre, & Dulit, 1995; Shearer, 1994), and suicide attempts (Wedig et al., 2012). This body of literature is inconsistent with the *DSM–5* claim that dissociative symptoms are usually mild and transient in BPD. The severity of dissociation in BPD was also related to the severity of childhood trauma in one study (Watson, Chilton, Fairchild, & Whewell, 2006), but this is not a consistent finding in the literature (Laporte, Joel, Herta, & Russell, 2011). The significance of this inconsistent relationship is uncertain, but it may indicate that measures of trauma used in prior research did not capture the full range of psychosocial etiological factors in BPD.

Based on this literature and our clinical experience with comorbid DID and BPD, we hypothesized that DID in particular, and severe, chronic, complex dissociation in general, can be regarded as markers of severity in BPD. Inversely, we hypothesized that individuals meeting criteria for both DID and BPD would be more symptomatic than those with DID alone: in other words, BPD functions as a marker of severity in DID. To investigate these hypotheses, we interviewed a sample of inpatients in a hospital trauma program using three measures of dissociation: the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986), the Dissociative Disorders Interview Schedule (DDIS; Ross, 1997), and the Dissociative Trance Disorder Interview Schedule (DTDIS; Ross, Schroeder, & Ness, 2013). We predicted that the most symptomatic and comorbid group would be those participants who met criteria for both DID and BPD on the DDIS; those with DID alone would be the next most symptomatic, followed by those with BPD alone; and the least symptomatic group would be those with neither DID nor BPD. We expected our findings to be inconsistent with the *DSM–5* statement that dissociative symptoms in BPD are usually mild and transient.

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METHODS

Participants

Consecutively admitted inpatients on a trauma program were approached and asked to participate. No participants received financial compensation. Of the 100 inpatients who agreed to participate, 79 were female, 25 were married, and the average age was 41.6 years ($SD = 10.9$).

All participants gave written informed consent, and the study was approved by the Medical Staff Committee of the hospital, which acts as the internal review board.

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Measures

The DES is the most widely used self-report measure of dissociation (Bernstein & Putnam, 1986; Carlson et al., 1993; Dell, 2002; van IJzendoorn & Schuengel, 1996). It has 28 items; has good psychometric properties, including split-half reliability and test–retest reliability; and has been analyzed using a variety of advanced statistical techniques (Carlson et al., 1993; Waller, Putnam, & Carlson, 1996; Waller & Ross, 1997).

The DDIS has been used in a series of research projects in North America, Turkey, and China (Pincus, Rush, First, & McQueen, 2000; Ross, Duffy, & Ellason, 2002; Ross & Ness, 2010; Şar, Akyüz, Kundakçi, Kiziltan, & Dogan, 2004; Xiao et al., 2006). It is a 131-item structured interview that inquires about a range of symptoms and *DSM–IV* diagnoses, as well as childhood abuse. It makes *DSM–IV* diagnoses of DID and BPD. The DDIS had good concurrent validity with the DES ($\kappa = 0.81$; Bernstein & Putnam, 1986), the Structured Clinical Interview for *DSM–IV* Dissociative Disorders ($\kappa = 0.74$; Steinberg, 1995), and a clinical interview ($\kappa = 0.71$) in an inpatient psychiatric hospital in the United States (Ross et al., 2002).

The DDIS yields a total trauma score, which is the sum of duration of sexual abuse in years, number of perpetrators of sexual abuse, number of types of sexual abuse perpetrated, age at onset of sexual abuse (age 0–1 = 18, decreasing to age 19 = 0), duration of physical abuse, number of perpetrators of physical abuse, and age at onset of physical abuse (age 0–1 = 18, decreasing to age 19 = 0).

The DTDIS (Ross et al., 2013) was developed in order to gather standardized data on possession states and related experiences, including classic culture-bound syndromes such as *amok, latah, bebainan, pibloktoq,* and *ataque de nervios*. These syndromes overlap with one another and involve discrete episodes of behavioral dyscontrol; shouting; echolalia; confusion; crying; exaggerated startle; and, in the case of *amok,* attempts to kill others, which may be successful.

The DTDIS is divided into eight sections with a score that varies from zero to a maximum possible in each section. The number of items in each section is as follows: Traditional Treatment, 25; Identity Changes, 15; Environmental Precipitants, 16; Memory, 7; Dissociative Trance, 10; Cognition, 5; Physical and Somatic Symptoms, 16; and *DSM–IV* Dissociative Trance Disorder, 6. The eight section scores are added together to yield a DTDIS overall score that ranges from 0 to 100. The DTDIS symptom score is calculated as total score – (Traditional Treatment + Environmental Precipitants) and ranges from 0 to 59. No data on the psychometric properties of the DTDIS are available.

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Statistical Analyses

The participants were divided into four groups based on the findings on the DDIS: DID+BPD, DID only, BPD only, and neither DID nor BPD. The four groups were compared using analysis of variance for continuous variables and chi-square tests for dichotomous variables. In addition, each group was compared to the others using two-tailed t tests. Significance was set at $p = .05$. There were no differences between the four groups on age, gender, or percent married. Cronbach's alpha was calculated for the DTDIS total score.

RESULTS

The results of the study are shown in Tables 1, 2, 3 and 4. Statistical information for the significant differences between the different combinations of groups in Tables 1 to 4 is available from the corresponding author: Groups that differ from each other at $p < .05$ are indicated by shared superscripts in the tables.

All three measures confirmed the study hypothesis: The DID+BPD group was the most symptomatic, followed by DID only, then BPD only, then neither DID nor BPD. Cronbach's alpha for the DTDIS total score was .966.

TABLE 1 Trauma Histories Among Inpatients With DID, BPD, Both, or Neither on the DDIS

DDIS section	DID+BPD ($n = 37$)	DID ($n = 9$)	BPD ($n = 35$)	Neither ($n = 19$)	χ^2	p
%						
Physical abuse	86.5[a]	77.8	68.6	52.6[a]	7.87	.05
Sexual abuse	91.9	66.7	74.3	68.4	6.28	*ns*
Physical and/or sexual abuse	100.0[a,b]	77.8	82.9[a]	73.7[b]	9.72	.02
Average						
					F	p
Total trauma score	72.0[a,b]	58.0	38.7[a]	31.9[b]	4.917	.003
Duration of sexual abuse (years)	13.4[a,b]	10.7	6.1[a]	4.3[b]	4.767	.004
Number of sexual abusers	2.4[a,b]	1.7	1.3[a]	0.9[b]	6.023	.001
Number of types of sexual abuse	5.7[a,b,c]	3.3[a]	3.2[b]	1.8[c]	7.690	.0001
Duration of physical abuse (years)	14.7	19.5	9.4	13.6	1.858	*ns*
Number of physical abusers	2.6[a,b]	1.7[b]	1.6	1.1[b]	3.977	.01

Notes: Groups that differ from each other at $p < .05$ are indicated by shared superscripts. DID = dissociative identity disorder; BPD = borderline personality disorder; DDIS = Dissociative Disorders Interview Schedule.

TABLE 2 Diagnoses Among Inpatients With DID, BPD, Both, or Neither on the DDIS

DDIS section	DID+BPD ($n = 37$)	DID ($n = 9$)	BPD ($n = 35$)	Neither ($n = 19$)	χ^2	p
%						
Major depressive episode	100.0[a]	100.0[b]	88.9	84.2[a,b]	11.06	.02
Substance abuse	54.1	33.3	77.1	57.9	7.56	*ns*
Somatization disorder	37.8	11.1	20.0	10.5	6.90	*ns*
Dissociative amnesia	86.5[a,b]	77.8[a,c]	48.6	26.3[b,c]	23.05	.0001
Dissociative fugue	35.1[a]	22.2	0.0[a]	0.0	21.66	.0001
Depersonalization disorder	78.4[a,b]	66.7*c*	20.0[a]	15.8[b,c]	33.75	.0001
Dissociative disorder not otherwise specified	21.6	22.2	0.0	5.3	10.39	.01
Average						
					F	p
Number of dissociative disorders	3.2[a,b]	2.9[c]	0.7[a]	0.5[b,c]	63.546	.0001

Notes: Groups that differ from each other at $p < .05$ are indicated by shared superscripts. DID = dissociative identity disorder; BPD = borderline personality disorder; DDIS = Dissociative Disorders Interview Schedule.

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DISCUSSION

Participants in all four groups reported high levels of childhood physical and sexual abuse, with the DID+BPD group having the highest rate (100% childhood physical and/or sexual abuse). The DDIS total trauma score was highest in the DID+BPD group, being almost double that in the BPD-only group. Reported childhood trauma followed the same general pattern in the four groups as did the psychiatric symptoms and was consistent with a trauma–dissociation model of severity in BPD, with the most traumatized and dissociative subgroup of BPD having the most comorbidity. The same is true if we consider the relationship the other way around: People with DID+BPD have more severe trauma and symptoms than people with DID only.

As predicted, the DID-only group reported substantially more dissociation on all three measures than the BPD-only group. The differences between the DID-only group and the DID+BPD group on dissociation were small on the DES and DDIS, indicating that adding BPD to DID does not substantially increase the severity of dissociation. However, the pattern was different on the DTDIS, on which the average total score was 16.3 for the DID-only group and 32.6 for the DID+BPD group. It appears that the

TABLE 3 Symptom Clusters Among Inpatients With DID, BPD, Both, or Neither on the DDIS and DES Scores

	DID+BPD ($n = 37$)	DID ($n = 9$)	BPD ($n = 35$)	Neither ($n = 19$)	F	p
Average DES	51.3[a,b]	44.8[c]	18.7[a,c,d]	13.5[b,d]	36.407	.0001
%					χ^2	p
DES-Taxon membership	100.0[a,b]	100.0[c,d]	56.7[a,c]	50.0[b,d]	26.76	.0001
Average					F	p
DDIS						
Secondary features of DID	10.3[a,b]	9.3[c,d]	3.1[a,c]	2.2[b,d]	44.171	.0001
Amnesia items	3.2[a,b]	3.3[c,d]	1.6[a,c]	1.8[b,d]	19.406	.0001
Borderline criteria	6.9[a,b]	2.9[b,d]	6.1[a,c,d]	2.3[c]	85.650	.0001
Schneiderian symptoms	5.9[a,b]	4.0[c]	2.8[a]	1.7[b,c]	12.835	.0001
Somatic symptoms	13.2[a,b]	7.8	8.0[a]	7.8[b]	3.739	.02
Conversion symptoms	2.2[a,b]	1.4	1.0[a]	1.2[b]	3.445	.02
Extrasensory perception/paranormal experiences	5.4[a,b]	4.2	2.6[a]	2.7[b]	6.299	.001
Suicide attempts	2.4[a,b]	1.0[b]	1.8[c]	0.6[a,c]	6.163	.001

Notes: Groups that differ from each other at $p < .05$ are indicated by shared superscripts. DID = dissociative identity disorder; BPD = borderline personality disorder; DDIS = Dissociative Disorders Interview Schedule; DES = Dissociative Experiences Scale.

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DTDIS may be measuring a different but related set of dissociative symptoms than the DES and DDIS. It is difficult to know how to understand this finding, as the DTDIS has not been widely used in a variety of populations. However, a Cronbach's alpha of .966 indicates that the DTDIS has good internal reliability; studies of the psychometric properties of the DTDIS are under way and will be reported separately. Consistent with prior research (Ross, 2004), Schneiderian first-rank symptoms followed the pattern of the dissociation measures and were likely dissociative in nature in this population. We believe the same thing to be true of extrasensory perception/paranormal experiences.

In terms of nondissociative comorbidity, there were high rates of major depressive episode in all four groups; however, there were statistically significant differences between the neither DID nor BPD group and the BPD-only group ($p = .005$) and the neither DID nor BPD group and the DID+BPD group ($p = .004$) on t tests. This suggests that BPD but not DID increases the risk for depression; however, the small size of the DID-only group

TABLE 4 Symptom Cluster Scores Among Inpatients With DID, BPD, Both, or Neither on the DTDIS

DTDIS section	DID+BPD ($n = 37$)	DID ($n = 9$)	BPD ($n = 35$)	Neither ($n = 19$)	F	p
Traditional treatment	3.1[a,b]	1.6	0.6[a]	0.4[b]	4.444	.006
Identity changes	5.6[a,b]	4.0[c]	2.0[a]	1.2[b,c]	13.435	.0001
Environmental precipitants	4.5[a,b]	2.2	1.7[a]	0.6[b]	6.273	.001
Memory	3.8[a,b]	1.4	1.4[a]	0.4[b]	8.606	.001
Dissociative trance	4.0[a,b]	2.0	1.3[a]	0.2[b]	9.446	.0001
Cognition	2.8[a,b,c]	1.1[c]	1.1[a]	0.1[b]	8.647	.0001
Physical/somatic	6.4[a,b,c]	2.9[c]	2.2[a]	0.6[b]	8.555	.0001
DSM–IV trance possession	2.4[a,b]	1.1	0.5[a]	0.2[b]	9.404	.0001
Symptom score	25.0[a,b,c]	12.6[c]	8.4[a]	2.6[b]	10.659	.0001
Total score	32.6[a,b]	16.3	10.7[a]	3.6[b]	10.642	.0001

Notes: Groups that differ from each other at $p < .05$ are indicated by shared superscripts. DID = dissociative identity disorder; BPD = borderline personality disorder; DTDIS = Dissociative Trance Disorder Interview Schedule; *DSM–IV = Diagnostic and Statistical Manual of Mental Disorders,* Fourth Edition.

($n = 9$) makes it difficult to reach any firm conclusions on this point. The only comorbid disorder that followed a distinctly different pattern was substance abuse: The BPD-only group had the highest rate of substance abuse; however, none of the groups differed significantly from one another on rates of substance abuse.

As far as somatization is concerned, the DID+BPD group endorsed nearly double the number of somatic symptoms as the DID-only and BPD-only groups. This was also true when we tabulated the classic conversion symptoms from the *DSM–IV* list of somatization disorder symptoms. The pattern was similar for *DSM–IV* somatization disorder, except that the DID-only group met full criteria less often than the BPD-only group. We suspect that the simple count of number of symptoms may be a more valid measure of the degree of somatoform symptoms in this population.

Suicide attempts were twice as common in the DID+BPD group as in the DID-only group and more common in the BPD-only group than the DID-only group. Our data indicate that adding DID to BPD increases the rate of parasuicidal behavior. This finding is consistent with prior calls for increased attention to dissociation in BPD treatment protocols (Chlebowski & Gregory, 2012; Kliendienst et al., 2011; Yen et al., 2009).

In terms of the number of borderline criteria positive, the groups differed by definition. However, the DID+BPD group was significantly more borderline than the BPD-only group on a t test ($p = .009$). This is consistent with our hypothesis that pathological dissociation is a marker of greater severity of both BPD itself and a range of comorbidities, impairments, and psychological problems. In terms of response to psychotherapy, individuals with both BPD and DID might benefit from the addition of techniques

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described in the DID literature to standard dialectical behavior therapy (Ross, 2005). Then again, they might not; only empirical data from a randomized prospective treatment outcome study can answer this question.

The main strength of our study compared to prior research is the larger sample size and the fact that we could compare four different groups—DID+BPD, DID only, BPD only, and neither DID nor BPD—plus the fact that we used three different measures of dissociation. Our study has a number of limitations. The findings may not generalize to other populations and samples; for instance, less clinically severe outpatients may show different patterns of trauma, dissociation, and comorbidity. The number of participants in the DID-only group was small, which also limits the generalizability of the findings.

In future research, it would be interesting to administer the DES and DDIS to a group of participants with BPD who have never received a DID diagnosis clinically. In such a sample, those positive for DID on the DDIS would not know they have DID, would never have been told they have DID, and would never have received treatment for it. This would allow one to reach conclusions about the relationship between BPD and undiagnosed DID. In the absence of such data, our findings support the conclusion that comorbid DID increases the severity of BPD and vice versa. Adding BPD to DID increases the risk of suicide attempts, whereas adding DID to BPD increases the severity of dissociation, including Schneiderian and extrasensory perception/paranormal experiences. However, somatization follows a different pattern: DID increases the severity of somatization when added to BPD, and BPD does the same when added to DID. Overall, each disorder makes a contribution to the features of the DID+BPD group. Further research is required to understand the role of DTDIS symptoms in BPD and DID, which appear to follow a different pattern from symptoms measured by the DES and DTDIS.

Our data and the literature on BPD and dissociation are inconsistent with the *DSM–5* claim that dissociation in BPD is usually mild and transient. The evidence indicates that dissociation in BPD is commonly severe, complex, and correlated with many dysfunctions. Several models of the relationship between BPD and dissociation are possible, including (a) they are separate but co-occur; (b) dissociation is an element of BPD, not a separate phenomenon (the *DSM–5* view); and (c) BPD is itself a form of dissociative disorder.

DSM–5 states that, in the future, consideration should be given to dimensional models of psychopathology (American Psychiatric Association, 2013, p. 5). We agree with this approach, which was given serious consideration for the *DSM–5* personality disorders. Our data and the existing literature are inconsistent with Model (b) above, which we therefore believe should not be considered for future editions of the *DSM*. Instead a BPD–dissociation dimension should be a focus of future research, in which BPD and severe

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dissociation can exist independently of each other but commonly co-occur, not as separate comorbid disorders, but as elements of a dimension.

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