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The interface between borderline personality disorder and bipolar spectrum disorders

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Abstract

Objective: This review examines whether borderline personality disorder (BPD) should be considered part of the bipolar spectrum.
Methods: A literature review examined studies of co-occurrence, phenomenology, family prevalence, medication response, longitudinal course, and etiology.
Results: Borderline personality disorder and bipolar disorder co-occur, but their relationship is not consistent or specific. There are overlaps but important differences in phenomenology and in medication response. Family studies suggest clear distinctions, and it is unusual for BPD to evolve into bipolar disorder. Research is insufficient to establish whether these disorders have a common etiology.
Conclusions: Existing data fail to support the conclusion that BPD and bipolar disorders exist on a spectrum but allows for the possibility of partially overlapping etiologies.

1. Introduction

It has been persistently suggested that borderline personality disorder (BPD) could be an atypical form of mood disorder [1-3]. Originally, because of frequent comorbidity [4,5], the focus was on whether BPD is a variant of major depression (MDD) [6,7]. However, a significant body of research has established important differences between BPD and MDD: in phenomenology, family prevalence, medication response, pathogenesis [8-11], and, most recently, in their influence on each other's course [12]. The suggestion that BPD might be an atypical form of mood disorder has now shifted from MDD to bipolar disorder [13,14].

The concept of a bipolar spectrum expands the diagnostic construct to include a wider range of syndromes [13-19]. In addition to bipolar I and bipolar II, spectrum disorders would include bipolar III (antidepressant-induced hypomania), and bipolar IV (ultra–rapid-cycling bipolar disorder) [19]. These subtypes might also supercede cyclothymic disorder, which is heterogeneous in phenomenology, family history, biologic correlates, and treatment [20]. It is now being suggested that a bipolar spectrum exists, including many cases of unipolar depression, anxiety disorders, substance abuse, eating disorders, as well as many personality disorders, most notably BPD [14,18,21,22].

The purpose of the present article is to critically evaluate the relationship between BPD and bipolar I disorder, as well as the proposed bipolar spectrum, notably bipolar II. We will examine 4 hypotheses regarding this relationship: (1) BPD is an atypical form (ie, phenotypic variant) of bipolar disorder; (2) bipolar disorder is a phenotypic variant of BPD; (3) BPD and bipolar disorder are independent disorders; and (4) BPD and bipolar disorder have overlapping etiologies. To examine these hypotheses, we review findings concerning co-occurrence, phenomenology, family prevalence, medication response, longitudinal course, and etiology. Medline and PsycInfo searches using the combined search terms *borderline personality disorder* and *bipolar disorder* elicited 147 published articles since 1966; this review focuses on empirical studies and theoretical articles shedding light on the relationship between these disorders.

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2. Co-occurrence

High levels of bipolar disorders in BPD patients would support hypothesis 1, whereas high levels of BPD in bipolar patients would support hypothesis 2, and either could support hypothesis 4. If most cases remain distinct, hypothesis 3 would be supported.

Table 1 shows that in 8 studies of 1006 BPD patients where rates of bipolar I were measured, the range was from 5.6% to 16.1% (median, 9.2%) [23-30]. In 6 studies of 436 BPD patients in which rates of bipolar II were reported, the range was 8% to 19% (median, 10.7%) [5,25,28-31], whereas 1 study found 22% with cyclothymia [32]. In the most methodologically rigorous study, 12% of patients with BPD met criteria for bipolar I, and another 8% met criteria for bipolar II [30]. Still, illustrating how (applying the concept of a broad spectrum and using untested measures) much higher levels of co-occurrence can be found, a study of 16 BPD inpatients reported that 2 had bipolar I; 3 had bipolar II; and another 8 could be rediagnosed with bipolar III, bipolar IV, or cyclothymia [29].

Table 2 shows that in 12 studies with 830 bipolar I patients, between 0.5 and 30% (median, 10.7%) were found to meet criteria for BPD [26,33-38,40,43-46]. In 3 studies with 137 bipolar II patients, between 12% and 23% (median, 16%) had BPD [39,41,42], and 1 study of cyclothymia found 62% [14]. When the rate of BPD in bipolar II was compared to other categories of personality disorder, 2 found the rate of co-occurrence highest for BPD [39,41]; 1 found almost equal rates for BPD and histrionic personality disorder [26]; 4 found histrionic most common [36,40,43,46]; and 2 found obsessive-compulsive most frequent [44,45].

We next combined the results of all studies of bipolar I and bipolar II samples that compared the co-occurrence rates of BPD to that associated with other personality disorders. This involved a total of 11 samples with 683 bipolar I patients [10,26,35-38,40,41,44-46] and 3 samples with a total of 91 bipolar II patients [10,39,41]. A random effects regression analysis with rates of disorders as an outcome measure, adjusted for clustering within the studies, showed that the rate of comorbidity for BPD was not significantly higher in bipolar I ($\chi^2 = 2.5$, $P > .1$) or bipolar II ($\chi^2 = 2.3$, $P > .1$) than for any other personality disorder.

Most of the reports listed in Tables 1 and 2 suffered from significant methodological problems. Assessments of

Table 1
Bipolar co-occurrence in BPD patients

Study	n	BD type	Diagnostic measures	Sample	Number (%) of BPD patients having BD
Pope et al [23]	33	BD-I	*DSM-III*, DIB	Inpatients	3 (9.1%)
McGlashan [24]	169	BD-I	*DSM-III*, DIB	Inpatients	7 (4.1%)
Links et al [25]	88	BD-I, BD-II CD	SADS DIB	Consecutive inpatients	Current: BD-I: 1 (1.1%) BD-II: 3 (3.4%) Lifetime: BD-I: 5 (5.9%) BD-II: 8 (9.6%) CD: 15 (17.9%)
Alnaes and Torgersen [26]	44	BD-I, CD	SCID SIDP	Outpatients	BD-I: 0 (0%) CD: 7 (15.9%)
Zanarini et al [4]	50	BD-I, BD-II, CD	SCID DIB DIPD	Outpatients	BD-I: 0 (0%) BD-II: 0 (0%) CD: 0 (0%)
Akiskal [31]	100	CD, BD-II	*DSM-III* Gunderson criteria for BPD	Consecutive outpatients	BD-II: 17 (17%) CD: 7 (7%)
Levitt et al [32]	46	CD	*DSM-III-R* DIB	Consecutive (inpatient + outpatient)	BD-I: 0 (0%) CD: 10 (22%)
Hudziak et al [27]	87	BD-I	*DSM-III-R* DIB-R	Outpatients + inpatients	14 (16.1%)
Zanarini et al [5]	379	BD-II DIB-R DIPD	SCID	Inpatients	36 (9.5%)
Zimmerman and Mattia [28]	59	BD-I, BD-II SIDP-IV	SCID	Outpatients BD-II: 5 (8.5%)	BD-I: 5 (8.5%)
Deltito et al [29]	16	BD-I, II	SCID SCID-II	Consecutive inpatients	BD-I: 2 (12.5%) BD-II: 3 (19.0%)
McGlashan et al [30]	BD-I, II	175	SCID DIPD-IV	Inpatients, outpatients	BD-I: 21 (12%) BD-II: 14 (8%)

BD-I, bipolar I disorder; BD-II, bipolar II disorder; BD, any bipolar disorder; CD, *DSM-III*, *DSM, Third Edition*; *DSM-III-R*, *DSM, Revised Third Edition*; Cyclothymic disorder; SCID, Structured Clinical Interview for *DSM-III/IV*; DIB, Diagnostic Interview for Borderlines; DIPD, Diagnostic Interview for Personality Disorders; DIPD-IV, Diagnostic Interview for Personality Disorders for *DSM-IV*; SADS, Schedule for Affective Disorders and Schizophrenia.