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Borderline personality–bipolar spectrum relationship

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Abstract

Background: The relationship between borderline personality disorder (BPD) and bipolar disorders, especially bipolar-II disorder (BP-II), is unclear. Several reviews on the topic have come to opposite conclusions, i.e., that BPD is a bipolar spectrum disorder or instead that it is unrelated to bipolar disorders. Study aim was to find which items of BPD were related to BP-II, and which instead had no relationship with BP-II.
Methods: Study setting: An outpatient psychiatry private practice, more representative of mood disorders usually seen in clinical practice in Italy. Interviewer: A senior clinical and mood disorder research psychiatrist. Patient population: A consecutive sample of 138 BP-II and 71 major depressive disorder (MDD) remitted outpatients. Assessment instruments: The Structured Clinical Interview for DSM-IV Axis I Disorders-Clinician Version (SCID-CV) was used for diagnosing, the SCID-II Personality Questionnaire was used by patients to self-assess borderline personality traits. Interview methods: Patients were interviewed with the SCID-CV to diagnose BP-II and MDD. The questions of the Personality Questionnaire relative to borderline personality were self-assessed by patients. As clinically significant distress or impairment of functioning was not assessed by the questionnaire, a diagnosis of borderline personality disorder could not be made, but borderline personality traits (BPT) could be assessed (i.e., all DSM-IV BPD items but not the impairment criterion).
Results: BPT items were significantly more common in BP-II versus MDD. The best combination of sensitivity and specificity for predicting BP-II was found by using a cutoff number of BPT items ≥ 5: specificity was 71.4%, sensitivity was 45.9%. BPT (defined by ≥ 5 items) was present in 29.5% of MDD and in 46.3% of BP-II ($p = 0.019$). Logistic regression of BP-II versus BPT items number found a significant association. Principal component factor analysis of BPT items found two orthogonal factors: "affective instability" including unstable mood, unstable interpersonal relationships, unstable self-image, chronic emptiness, and anger, and "impulsivity" including impulsivity, suicidal behavior, avoidance of abandonment, and paranoid ideation. "Affective instability" was associated with BP-II ($p = 0.010$), but "impulsivity" was not associated with BP-II ($p = 0.193$). Interitem correlation was low. There was no significant correlation between the two factors.
Discussion: Study findings suggest that DSM-IV BPD may mix two sets of unrelated items: an affective instability dimension related to BP-II, and an impulsivity dimension not related to BP-II, which may explain the opposite conclusions of several reviews. A subtyping of BPD according to these dimensions is supported by the study findings.

Keywords: Affective instability; Bipolar II disorder; Borderline personality; Factor analysis; Impulsivity

Abbreviations: BP-II, bipolar II disorder; BPD, borderline personality disorder; BPT, borderline personality traits; CI, confidence interval; *df*, degrees of freedom; DSM-III, diagnostic and statistical manual of mental disorders, third edition; DSM-III-R, diagnostic and statistical manual of mental disorders, third edition, revised; DSM-IV, diagnostic and statistical manual of mental disorders, fourth edition; DSM-IV-TR, diagnostic and statistical manual of mental disorders, fourth edition, text revised; GAF, global assessment of functioning scale; ICD-10, classification of mental and behavioural disorders, tenth edition; MDD, major depressive disorder; OR, odds ratio; ROC, receiver operating characteristic curve; SCID-CV, structured clinical interview for DSM-IV axis I disorders, clinician version; SCID-II, structured clinical interview for DSM-IV axis II personality disorders; T, *t*-test statistics; Z, Mann–Whitney *U*-test statistics; χ^2, chi-squared test statistics.

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1. Introduction

The diagnostic status of borderline personality disorder (BPD) is unclear. According to DSM-IV-TR (American Psychiatric Association, 2000), BPD is defined by five or more of the following: (1) frantic efforts to avoid abandonment; (2) unstable interpersonal relationships; (3) unstable self-image; (4) impulsivity; (5) suicidal behaviors; (6) affective instability; (7) chronic feeling of emptiness; (8) anger; (9) paranoid/dissociative ideation, causing significant distress or impairment of functioning.

The Work Group on BPD for DSM-IV (Gunderson et al., 1996) concluded that the overlap between BPD and mood disorders was caused by the item "affective instability", and that "impulsivity" could be its "essential feature".

DSM-III and DSM-III-R (American Psychiatric Association, 1980, 1987) had BPD diagnostic criteria similar to DSM-IV-TR BPD (American Psychiatric Association, 2000). In ICD-10 (World Health Organization, 1992) the "emotionally unstable personality disorder" has two types, the "borderline" and the "impulsive". The "borderline type" includes affective instability, and the "impulsive type" includes affective instability and impulsivity.

Mood disorders commonly co-occur in BPD, and differential diagnosis may be difficult (American Psychiatric Association, 2000). According to DSM-IV-TR (American Psychiatric Association, 2000), the basic feature distinguishing mood disorders and BPD is course, episodic in mood disorders and relatively stable in BPD. However, BPD may have an oscillating course including remissions, and mood disorders may not fully remit (American Psychiatric Association, 2000; Zanarini et al., 2004; Akiskal, 2004).

Recent reviews on BPD–bipolar disorders relationship (Akiskal, 2004; Magill, 2004; Paris, 2004; Smith et al., 2004; Lieb et al., 2004) reached opposite conclusions, i.e., BPD is a variant of bipolar spectrum disorders, or BPD is unrelated to mood disorders. Some features suggesting a BPD–bipolar spectrum link: diagnostic criteria of BPD mix traits, symptoms and behaviors largely in the domain of affective and impulse control (Akiskal, 2004), affective instability predicted major depressive disorder (MDD) shift to bipolar-II disorder (BP-II) (Akiskal et al., 1995), and BP-II, BPD, cyclothymic temperament, and trait affective instability were closely associated (Perugi et al., 2003). Some features suggesting BPD–bipolar spectrum no link: affective instability was common in BP-II and BPD but only BPD showed high impulsivity levels (Henry et al., 2001), and impulsivity long-term stability was not shared by affective instability (Links et al., 1999), suggesting that impulsivity may be BPD core feature.

There are different definitions of affective instability. In the BPD literature, affective instability includes marked reactivity of mood (e.g., intense episodic dysphoria, irritability, anxiety) but not depression, lasting few hours or few days (Gunderson et al., 1996), as in DSM-IV-TR (American Psychiatric Association, 2000). This definition should distinguish BPD affective instability from cyclothymic disorder affective instability including depressed mood (Gunderson et al., 1996). In the bipolar literature, affective instability includes frequent, rapid mood changes (happiness, sadness, irritability), lasting some days (Akiskal et al., 1995, 2003a; Akiskal, 2004). Differences between affective instability of BPD and BP-II were found (Henry et al., 2001): BP-II had more depression, elation, and shifts between depression and elation, while BPD had more anger, anxiety, mood reactivity, irritability, aggressiveness, and impulsivity.

The symptomatic overlap between BP-II and BPD was related to BPD criteria including mood instability and impulsivity (Black, 2004). The relationship between BPD and BP-II should be better clarified. BP-II was subgrouped into a "sunny" subtype, showing a relatively stable interepisode course and productive hypomanic episodes (Benazzi, 2000, 2004a,b,c; Hecker, 1898 in Koukopoulos, 2003), and into a "dark" subtype, showing a highly unstable course (related to cyclothymic temperament) and non-productive hypomanic episodes (Akiskal et al., 2003a). The "sunny" BP-II subtype was the dominant one in non-tertiary-care settings (Benazzi, 2000; Hecker, 1898 in Koukopoulos, 2003), the "dark" subtype was the dominant one in tertiary-care settings (Akiskal et al., 2003a). It was possible to distinguish clearly the "sunny" BP-II and BPD by the SCID-CV (First et al., 1997a) and the SCID-II (First et al., 1997b) (Benazzi, 2000). The differential diagnosis problems between BP-II and BPD seem related mainly to the "dark" BP-II subtype.

One way to probe the unclear boundaries of diagnostic criteria is to use factor analysis. A Medline search (keywords "borderline personality disorder", "factor analysis", access 26 Dec 2004) found only eight factor analysis studies of BPD (Whewell et al., 2000; Rosenberger and Miller, 1989; Clarkin et al., 1993; Fossati et al., 1999; Sanislow et al., 2000, 2002; Blais et al., 1997; Johansen et al., 2004). Five reports studied DSM-IV BPD (American Psychiatric Association, 1994), finding different factor structures (one to three factors), and suggesting heterogeneity in the population covered by DSM-IV BPD criteria.

BPD criteria should be tested versus BP-II, because it is the bipolar disorder most likely to show features of BPD (Black, 2004; Akiskal, 2004; Perugi et al., 2003). BP-II has several features making BPD-BP-II differential diagnosis difficult: high axis I disorders comorbidity (Perugi et al., 2003), frequent suicide attempts (Rihmer and Pestality, 1999), unstable course (Akiskal et al., 2003a; Benazzi, 2004a), frequent recurrences (Judd et al., 2003), incomplete interepisode recovery (Judd et al., 2003; Benazzi, 2001), episodes mixing depressive and hypomanic symptoms (depressive mixed state) such as irritability, anger, psychomotor agitation, and racing/crowded thoughts (Benazzi, 2002, 2003a,b, 2004d, 2005; Akiskal and