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Original article

Differences and overlap in self-reported symptoms of bipolar disorder and borderline personality disorder

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ABSTRACT

Background: Differential diagnosis between bipolar disorder (BD) and borderline personality disorder (BPD) is often challenging due to some overlap in symptoms and comorbidity of disorders. We investigated correlations in self-reported symptoms of BD and BPD in screening questionnaires at the levels of both total scores and individual items and explored overlapping dimensions.
Methods: The McLean Screening Instrument (MSI) for BPD and the Mood Disorder Questionnaire (MDQ) for BD were filled in by patients with unipolar and bipolar mood disorders ($n = 313$) from specialized psychiatric care within a pilot study of the Helsinki University Psychiatric Consortium. Pearson's correlation coefficients between total scores and individual items of the MSI and the MDQ were estimated. Relationships between MDQ and MSI were evaluated by exploratory factor analysis (EFA).
Results: The correlation between total scores of the MDQ and MSI was moderate ($r = 0.431$, $P < 0.001$). Significant correlations were found between the MSI items of "impulsivity" and "mood instability" and all MDQ items ($P < 0.01$). In the EFA, the MSI "impulsivity" and "mood instability" items had significant cross-loadings (0.348 and 0.298, respectively) with the MDQ factor. The MDQ items of "irritability", "flight of thoughts" and "distractibility" (0.280, 0.210 and 0.386, respectively) cross-loaded on the MSI factor.
Conclusions: The MDQ and MSI items of "affective instability", "impulsivity", "irritability", "flight of thoughts" and "distractibility" appear to overlap in content. The other scale items are more disorder-specific, and thus, may help to distinguish BD and BPD.

1. Introduction

Borderline personality disorder (BPD) is often comorbid with mood disorders and shares some phenomenological features with them, particularly with bipolar disorder (BD) [3]. This has resulted in numerous discussions about relationship of the BPD with BD, some authors even suggesting than BPD should be considered as a part of the bipolar spectrum disorders [1], others emphasizing differences between them [24]. Some recent studies have indicated partial overlap in pathogenetic mechanisms and genetics of the disorders, although clear distinctions have also been found [6,31,32,34]. Phenomenological and neurobiological overlap may underlie common difficulties in differential diagnosis between BPD and BD. However, because of notable differences in their treatment [24], it is important to distinguish the two disorders in psychiatric and other clinical settings.

Numerous previous studies have found BD to be widely under-recognized [11,17,25], or recognized only after a long delay [17]. The same may be also true for BPD [19]. However, as BD has received increasing clinical recognition and attention in recent years, some reports have implied that BD also may also become overdiagnosed at times and, moreover, patients misdiagnosed with BD may be significantly more likely to be later diagnosed with BPD [38–40]. There is a possibility of overdiagnosis of BPD, too.

In the absence of widely approved biomarkers specific for each disorder, the diagnoses of BD and BPD remain clinical [18]. The systematic use of screening tests and structured clinical interviews may considerably improve detection of disorders in clinical psychiatry [29]. The McLean Screening Instrument (MSI) for BPDs

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and the Mood Disorder Questionnaire (MDQ) for BD are useful and valid screening instruments used in psychiatric settings to improve recognition of these disorders. Both are based on self-reported symptoms [11,12,36].

In this study, we aimed to investigate the correlation between the MSI and the MDQ at the levels of both total scores and individual items, and explore overlapping and non-overlapping self-reported items of BD and BPD.

2. Methods

2.1. The Helsinki University Psychiatric Consortium (HUPC)

This investigation is a part of the Helsinki University Psychiatric Consortium (HUPC) pilot study, a collaborative research project between the faculty of medicine of the university of Helsinki; the department of mental health and substance abuse services of the National institute for health and welfare; the Department of social services and health care, city of Helsinki; and the department of psychiatry, university of Helsinki and Helsinki university hospital. The study protocol was approved by the Ethics committee of Helsinki university central hospital.

2.2. Setting

The study was conducted in 10 community mental health centres, three psychiatric inpatient units and one day-hospital offering specialized secondary public mental health services in the metropolitan area of Helsinki between 12.1.2011 and 20.12.2012.

2.3. Sampling

Inclusion criteria for participation in the pilot study were patients' age of over 18 years and provision of informed consent. Patients with mental retardation, neurodegenerative disorders and insufficient Finnish language skills were excluded. Stratified patient sampling selection was performed by identifying all patients within a certain day or week in a unit or by randomly drawing eligible patients from patient lists. Patients treated for psychotic disorders, neuropsychiatric disorders and substance use disorders were excluded from our study. Of the 902 eligible patients with mood, neurotic or personality disorders, 372 declined to participate and 216 were lost for other reasons.

2.4. Clinical diagnoses

The validity of the clinical diagnoses assigned by the attending physicians was critically evaluated by the authors (I.B., K.A., M.K., B.K.) by re-examining all available information from the patient records. Authors K.A., I.B. and B.K. were residents of psychiatry trained in diagnostic evaluations; in any unclear cases, the senior psychiatrists (M.K., E.I., G.J., M.H.) were consulted. The validated clinical diagnoses were based on the ICD-10-DCR [35]. Lifetime principal diagnosis was assigned. Although there is no division of BD into types I (BD-I) and II (BD-II) in the ICD-10, we subtyped patients into these categories according to the DSM-IV [2]. This distinction is established clinical practice in Finland and included in the national BD treatment guidelines.

2.5. Description of patients

Altogether 313 patients participated in the study. Their mean age was 41.7 ± 13.1 years, and 229 (73.1%) were female. All patients were allocated into groups according to the lifetime principal diagnosis; (see Table 1). Patients comprised those with depressive episode (F32-F33; future unipolar depression [UD] [n = 183; mean age 41.4 ± 13.3 years]), bipolar affective disorder (F31; [n = 99, mean age 43.7 ± 12.7 years]) and others (n = 31, mean age 36.2 ± 13 years). Among patients with BD, 36 (36.3%) had type I, 55 (55.5%) type II and 8 (8%) unspecified type. Fifteen patients with neurotic and somatoform disorders, four patients with eating disorders, five patients with dysthymia and seven patients with BPD as lifetime principal diagnosis formed the group "others". There were 65 patients with BPD among all patients, including patients with BPD as lifetime principal diagnosis and as comorbid. Their mean age was 37.5 ± 13 years.

The analysis of representativeness was undertaken by comparing patients suffering from UD or BD in the HUPC with patients with the same diagnoses treated in 2011 and 2012 in psychiatric care organizations. No significant differences emerged in sex and age between these two groups (data not shown).

2.6. Mood Disorder Questionnaire (MDQ)

The MDQ is a brief self-report instrument for screening symptoms or behaviours related to a manic or hypomanic syndrome [12], and it has been translated into Finnish [13]. The first part of the MDQ includes 13 items requiring a "yes/no"

Table 1
Characteristics of MDQ and MSI responders (n = 313).

	BD		UD		Others	
	n	%	n	%	n	%
Number	99	32	183	58	31	10
Age (mean)	43.7 ± 12.7		41.4 ± 13.3		36.2 ± 13	
BPD	17	17.2	39	21.3	9	29
Sex (male)	36	36.3	42	22.9	6	19.4
Marital state						
Married	20	20.2	39	21.3	4	12.9
Cohabitation	17	17.2	29	15.8	3	9.7
Unmarried	32	32.2	75	41	17	55
Divorced	29	29.3	35	19.1	6	19.4
Widowed	1	1	3	1.7	0	0
Job						
Retired due to mental disorder	37	37.4	23	12.5	6	19.4
Unemployed	10	10	18	9.8	8	26
Sick leave	22	22.2	64	35	5	16.1
Retired due to another reason	1	1	8	4.4	0	0
Student	7	7.1	24	13.1	6	19.4
Employed	20	20.2	30	16.4	5	16.1
Unemployed due to another reason	2	2.2	14	7.7	1	3.2

BD: bipolar disorder; UD: unipolar depression; BPD: borderline personality; MDQ: Mood Disorder Questionnaire; MSI: McLean Screening Instrument.