Psychiatria Danubina, 2015; Vol. 27, Suppl. 1, pp 170–176 *Conference paper*

BIPOLAR AND BORDERLINE PERSONALITY DISORDERS: A DESCRIPTIVE COMPARISON OF PSYCHOPATHOLOGICAL ASPECTS IN PATIENTS DISCHARGED FROM AN ITALIAN INPATIENT UNIT USING PANSS AND BPRS

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SUMMARY

Background: *There is current scientific debate in consideration of the possibility to consider the Borderline Personality Disorder (BPD) as a mood disorder within the bipolar spectrum furthermore, authors reported about the challenging differential diagnosis of BPD and Bipolar Disorder (BD).*

Subjects and methods: *32 patients hospitalized in the Inpatient Psychiatric Unit in Perugia, discharged with a diagnosis of BD or BPD, were included. Factor analyses of BPRS and PANSS items were performed. Association between socio-demographic, clinical and psychopathological variables was tested using bivariate analyses.*

Results: *Factor analysis identified 6 Factors, explaining 67.6% of the variance, interpreted as follow: 1) Euphoric Mania, 2) Psychosis, 3) Inhibited Depression, 4) Disorganization, 5) Psychosomatic features, and 6) Mixed features. Bivariate analyses identified statistically significant differences between BPD and BD according to: PANSS positive symptoms domain, BPRS total score, Euphoric Mania and Disorganization. No statistically significant differences came up on socio-demographic and clinical aspects.*

Conclusion: *Even though the sample is small, interesting findings came out from our investigation. Our findings are in line with the current literature. Euphoric mood, is one of the aspects which best differentiated BD from BPD. Higher scores in Disorganization, BPRS and PANSS positive symptoms in BD may be related to the fact that our sample is a group of patients from an acute inpatient unit, so the impact of the symptoms severity for BD may be remarkable.*

Key words: *Bipolar Disorder - Borderline Personalitry Disorder - psychopathology*

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INTRODUCTION

There is considerable debate in literature about the correlation between Borderline Personality Disorder (BPD) and Bipolar Disorder (BD). Similarities and differences have been analyzed in order to understand if the two conditions need to be defined as separate entities or whether BPD can be considered as a mood disorder to be included in a bipolar spectrum (Akiskal 2004).Contact points and differences can be assessed through the analysis of the characteristics regarding symptoms, co-occurrence, etiology, neurobiology and treatment response.

In both BD and BPD, symptoms are characterized by affective instability and impulsivity. Several authors, however, have suggested that they have different characteristics. In BPD affective instability is triggered by environmental stressors, while in BD mood changes seem to be more spontaneous and less influenced by environmental events.(Paris 2007; Renaud 2012; Paris 2015). In addition, several authors believe that the mood changes in BD shift between depression and euphoria, while in BPD changes range from euthymic to anger and irritability (Paris 2007; Renaud 2012; Paris 2015). The speed of affect shifting is also different. The period of time within which the oscillations occur in the BD is bigger (more gradual in the transition from mania to depression, faster in the opposite direction) than in BPD, where the mood changes alternate within minutes or hours (Renaud 2007). Regarding impulsivity it has been observed that it is pervasive in BPD and more episodic in BD. Impulsivity in BPD configures a pattern in which there are significant recurrent parasuicidal gestures and self- injury, which are less frequent in BD (Paris 2007, Ghaemi 2014, Paris 2015). Studies comparing patients with BPD and BPII have found differences in the profiles of impulsivity between the two groups of patients (Bøen 2014).

Both conditions are characterized by important psychosocial morbidity (Zimmermann 2015), although recent studies suggest that this is more marked in patients with BPD (Paris 2015). In fact, although both have difficulties in interpersonal relationships, the characteristics of the relational deficits are different. The patients with BPD have ambivalent relationships characterized by dependence and fear of abandonment (Paris 2007, Renaud 2012, Parker 2014, Paris 2015). BPD patients have a disrupted and poor self-image, and they experience chronic emptiness (Parker 2014), whereas patients with BD can have, especially during manic or hypomanic episodes, a grandiose self-image (Renaud 2007).

Moreover, many studies have analyzed the rates of comorbidity between BD and BPD.In most cases the disorders are isolated, and the percentages of comorbidity detected were not specific for BPD compared to other Personality Disorders (Paris 2007). Epidemiological studies claim that BPD is not the most frequently PD diagnosed in patients with BD and, likewise, BD is not the axis I disorder most frequently found in BPD (Zimmerman 2013).

Regarding the etiology, several studies have confirmed the importance of psychosocial risk factors (like trauma and child abuse) for the development of BPD, while these are less frequent in BD,in which genetic component has a predominant role (Paris 2007, Parker 2014, Paris 2015). In this regard, Ghaemi has suggested that the most important characteristics to distinguish the two conditions are a history of sexual abuse and parasuicidal behaviour and self-harm for BPD, and the family history of BD.

The neurobiological substrate underlying the two conditions appear to be different (Renaud 2012, Parker 2014, Ghaemi 2014, Paris 2015). Although there are some areas of overlap, the neurological abnormalities are more extensive in BD (affecting both cortical and subcortical structures), while abnormalities in BPD involve mainly fronto-limbic system, according to the phenomenology of BPD (Rossi 2012).

Treatment response is another characteristic that differs in BD and BPD. Patients with BD need appropriate pharmacotherapy, based primarily on mood stabilizers, which proved not to be effective in inducing remission of symptoms in BPD. Mood stabilizers in BPD are effective in reducing impulsivity and anger, but do not work on mood symptoms (Renaud 2012). While the gold standard for treatment of BD is pharmacotherapy with mood stabilizers, patients with BPD need specifically structured psychotherapy (Paris 2007, Ghaemi 2014, Parker 2014, Paris 2015).

AIMS

The authors analyzed the contact points and differences between BD and BPD in order to understand if the two conditions could be considered as separate entities, according to the current categorical nosologies (DSM-5, ICD-10) or whether BPD can be included within the bipolar spectrum, according to a dimensional point of view.

METHODS

The authors performed MEDLINE searches to assess similarities and differences between Bipolar Disorder and Borderline Personality Disorder. They were included in the review studies that met the inclusion criteria Bipolar Disorder, borderline personality disorder and psychopathology.

Starting from the results obtained by analysis of the literature, the authors then conducted a clinical trial on 20 inpatients.

Participants

The present study considered 32 patients hospitalized in the Inpatient Psychiatric Unit of the General Teaching Hospital Santa Maria della Misericordia in Perugia, discharged with a dignosis of BD or BPD. The unit provides 17 beds for a catchment area corresponding to an entire Local Health District (ASL 1 dell'Umbria). The unit is a locked ward providing crisis stabilization, intensive evaluation, and care for psychiatrically, medically, and psychosocially complex cases.

16 patients met the inclusion criteria for BPD as defined in DSM-5, and 16 patients met the inclusion criteria for BD as defined in DSM-5.

Procedures

The study design was a medical record review of patients' charts during their hospitalization. Patients were not assessed directly. Basic demographic, socioeconomic, psychosocial, clinical data (gender, marital status, age, nationality, previous hospitalizations, voluntary or compulsory admission, reasons for admission, discharge diagnosis, length of stay, and therapy at discharge) and PANSS, and BPRS scores were extracted from the medical charts. Variables were collected systematically using a structured data collection instrument. All patients gave informed consent for the use of personal and clinical data for research purposes during the hospitalization.

SCID-II

Diagnosis for BPD was made through SCID-II (Structured Clinical Interview for DSM IV axis II disorders). For the psychopathological assessment BPRS (Brief Psychiatric Rating Scale), and PANSS (Positive and Negative Syndrome Scale) were used.

Structured Clinical Interview for DSM IV axis II disorders (SCID-II) is a self-administered test used to evaluate axis II personality disorders. The SCID-II is composed of 120 items rated on a scale of 4 levels and divided into twelve sections, one for each personality disorder. Each PD is evaluated separately from the others.

BPRS

Brief Psychiatric Rating Scale (BPRS) is a heteroassessment scale designed for adult psychiatric patients, hospitalized, especially for patients who have received a diagnosis of schizophrenia. The BPRS is composed of 18 items that explore as many symptoms, characterized, each one, by a description which has a high degree of commonality between psychiatrists experts. Each description is subdivided into a number of other symptoms, related to the symptomatology expressed in the header

of the item. Each item is rated on a 7-point scale ("absent", "very light", "mild", "moderate", "medium severity", "serious" and "very serious") as well as "not rated" (=0). The sum of the scores of each item provides a total score that can be accepted as an expression of the severity of disease.

PANSS

Positive and Negative Syndrome Scale (PANSS) is composed of 30 items divided into three scales, a Positive scale, a Negative scale andone for general psychopathology.Each item is rated on a 7-point scale, from "absent" (1) to "very severe" (7). In addition to the 3 subtotals of the 3 stairs, a score that measures the difference between the positive and negative syndromes can be obtained subtracting the total of the negative scale from that of the positive scale.

Analyses

Descriptive analysis of socio-demographic and clinical variables and BPRS and PANSS scores was carried out.

Factor analysis was performed on BPRS and PANSS. An R matrix (Varimax rotation) was obtained by calculating the correlation coefficients for each pair of variables. The appropriateness of the analyses was evaluated by looking at the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity ($p<0.05$). Once factors were extracted, we assumed >0.46 loading for a given variable to be significant.

To test for normality of distributions of the total sample scores and scores of each factor, authors used Shapiro-Wilk test.

Bivariate analyses were performed using Student's t-test or Mann-Whitney test according to the distribution of data for quantitative variables and Pearson's Chi-square for categorical variables.

IBM SPSS 21.0 software was used for all statistical tests.

RESULTS

Socio-demographic and clinical aspects are shown in Table 1. The study sample included 32 patients, 14 males (43.8%); the mean age is 39.9±13.3 years. 16 were diagnosed with BD and 16 with BPD. Other backward characteristics are shown in Table 1.

Results from bivariate analyses are listed in Table 2. Length of stay, age, gender, marital status, nationality, having previous hospitalization, being admitted in involuntary status, having a prescription at discharge of antipsychotic or mood stabilizer did not differ among the two groups. Positive symptoms domain resulted in a higher mean score in BD (21.1±5.3) than in BPD (13.6±4.8) ($p=0.003$); we also found that median BPRS total score is higher in BD (63.5) than in BPD (48.5) ($p=0.004$).

Table 1. Socio-demographic and Clinical Characteristics of the Study Sample (*n*=32)

Diagnosis	
Bipolar disorder	16 (50%)
Borderline Personality Disorder	16 (50%)
Length of stay	11.7±14.4
Age, years	39.9±13.3
Gender, male	14 (43.8%)
Relationship status	
Not married	25 (78.1%)
Married	7 (21.9%)
Nationality	
Italian	27 (84.4%)
Foreigners	5 (15.6%)
Has the patient had more than one hospitalization?	
Single hospitalization	17 (53.1%)
More than one hospitalization	15 (46.9%)
Involuntary status	4 (12.5%)
Reason for hospitalization	
Suicidal Attempt/Self-Harm	10 (31.3%)
Hypo-/maniac excitement	6 (18.8%)
Behavioral disorders	4 (12.5%)
Psychomotor agitation	3 (9.4%)
Lack of medications adherence	3 (9.4%)
Assessment and medication planning	2 (6.3%)
Depressive symptoms	2 (6.3%)
Thought Disorders/Psychotic Features	1 (3.1%)
Mixed state	1 (3.1%)
Discharge medications plan (n=32)	
Long acting antipsychotic	5 (15.6%)
Oral antipsychotic	24 (75%)
Mood stabilizer	27 (84.4%)
Antidepressant	2 (6.3%)
Benzodiazepine	24 (75%)
PANSS (n=22)	
Positive Scale	16.0±6.0
Negative Scale	17.1±6.6
General Psychopathology Scale	44.20±7.7
Total Score	77.3±14.9
BPRS (n=24)	
Total score	54.8±13.3

Factor analyses (Table 3) of BPRS and PANSS items clustered in 6 factors explaining a variance of 67.6%. The contribution of each factor to explained variance was 18.3% (factor 1), 14.7% (factor 2), 14.5% (factor 3), 7.6% (factor 4), 6.4% (factor 5), 6.1% (factor 6). The study of correlations between items showed a strong correlation for factor 1, interpreted as 'euphoric mania', with the BPRS items Motor hyperactivity, Mannerisms and posturing, Elevated mood, Grandiosity, Excitement, Distractibility, Tension, and Conceptual disorganization; and PANSS items Excitement, Grandiosity, Mannerisms & posturing, Depression, Disturbance of volition, Lack of judgment and insight. Factor 2, interpreted as 'Psychosis', showed strong correlation with PANSS items Suspiciousness/persecution, Hostility, Guilt

Table 2. Bivariate Associations between Socio-demographic, Clinical, PANNS and BPRS Variables and Bipolar Disorder (BD) *vs* Borderline Personality Disorder (BPD) (n=32)

	BD	BPD	TESTS
Length of Stay*	11.1±19.8 *7.5*	12.3±6.1 *10.5*	U=173.0 , p=0.094
Age*	42.7±15.4 *39*	37.1±10.5 *34*	U=102,0 , p=0.327
Male (14, 43.8%)	9 (64.3%)	5 (35.7%)	χ^2=2.03, *df*=1, *p*=0.154
Not married (25, 78.1%)	12 (48.0%)	13 (52.0%)	χ^2=0.18, *df*=1, *p*=0.669
Italian (27, 84.4%)	14 (51.9%)	13 (48.1%)	χ^2=0.24, *df*=1, *p*=0.626
More than one hospital (15, 46.9%)	6 (40%)	9 (50%)	χ^2=1.13, *df*=1, *p*=0.288
Involuntary status (4, 12.5%)	3 (75%)	1 (25%)	χ^2=1.14, *df*=1, *p*=0.285
Antipsychotic prescription (24, 75.0%)	12 (50%)	12 (50%)	χ^2=0.00, *df*=1, *p*=1.000
Mood stabilizer prescription (27, 84.4%)	15 (55.6%)	12 (44.4%)	χ^2=2.13, *df*=1, *p*=0.144
PANSS total (n=22)	83.9±10.1	74.3±16.1	t=1.44, df=20, p=0.165
Positive symptoms	21.1±5.3	13.6±4.8	t=3.33, df=20, p=0.003
Negative symptoms	15.1±5.2	18.0±7.2	t=-0.94, df=20, p=0.359
General Psychopathology	47.6±4.9	42.7±8.3	t=1.44, df=20, p=0.165
BPRS total (n=24)*	66.1±14.8 *63.5*	49.2±8.2 *48.5*	U=17.5, p=0.004

**In Italics the median value*

feelings, Stereotyped thinking, Lack of spontaneity & flow of conversation, and difficult in abstract thinking; and BPRS items Suspiciousness, Uncooperativeness, Hostility, and Guilt. Factor 3, interpreted as 'Inhibited depression' correlated strongly with BPRS item Blunted affect and PANSS items Blunted affect, Emotional withdrawal, and motor retardation. Factor 4, interpreted as 'Disorganization' showed significant correlation with PANSS items Conceptual disorganization, Poor attention, and Unusual thought content; and BPRS item Unusual thought content. Factor 5, interpreted as 'Psychosomatic feature' correlated with BPRS item Somatic concern and PANSS items Somatic concern, and Hallucinatory behaviour. Factor 6, interpreted as 'Mixed features', correlated with BPRS item Anxiety, Depression, and suicideality; and PANSS items Anxiety and Poor impulse control.

Bivariate analysis to check for associations between BD and BPD according to 6 factors was performed (Table 4). The median mean score for factor 1, Euphoric mania, and 4, Disorganization, were significantly different between BD and BPD; specifically median values for Euphoric Mania in BD and BPDwere respectively 2.93 and 1.71 (p=0.004). Median values for Disorganization were 2.75 for BD and 1.75 BPD (p=0.002). The mean values for the other factors were not significantly different.

DISCUSSION

In this study we focused on socio-demographic, clinical and psychopathological differences and similarities between patients suffering from BD and BPD. The sample included 32 patients hospitalized in the first 6 months of 2015. We also performed a factor analysis to check how two important psychopathological scales, BPRS and PNSS, describe the specific sample. 6 Factors were identified covering different aspects of two disorders, specifically: 1) Euphoric Mania, 2) Psychosis, 3) Inhibited Depression, 4) Disorganization, 5) Psychosomatic features, and 6) Mixed features. We found that BD and BPD significantly differ in PANSS positive symptoms subscale, and in BPRS total score; in both cases BD showed an higher mean score than BPD. No statistically significant differences were found according to gender, age, being married, being Italian, being involuntarily hospitalized, antipsychotic and mood stabilizer prescription at discharge, PANSS total score, negative symptoms, and General Psychopathology subscales. Euphoric Mania and Disorganization mean scores resulted higher in BD than BPD, while Psychosis, Inhibited depression Psychosomatic features and mixed features did not differ significantly among the two groups.

In our study, one significant difference was found between the bipolar and borderline patients of our population for the "euphoric maniac" factor resulting from our analysis; it was substantially characterized by manic-psychotic symptoms.

According to this finding, the current scientific view is that manic symptoms distinguish bipolar illness from borderline personality (Ghaemi 2014); in particular, in their review Ghaemi and colleagues underlined that the triad of euphoric mood, mood episodicity, and increased goal-directed activities differentiated bipolar patients from borderline ones.

Regarding our population, it is worth noting that our psychiatric ward is an acute inpatients ward, consequently it is possible that bipolar patients scored higher on the BPRS and PANNS euphoric-maniac items because of the severity of their current condition.

Table 3. Correlation Matrix of the 6 Factors from 30-item PANSS[+] and 24-item BPRS[‡] after Varimax Rotation

PANSS and BPRS item	Factor 1	2	3	4	5	6
Motor hyperactivity[‡]	0.865					
Mannerisms and posturing[‡]	0.865					
Elevated mood[‡]	0.857					
Grandiosity[‡]	0.825					
P4 Excitement[+]	0.801					
P5 Grandiosity[+]	0.796					
Excitement[‡]	0.771					
Distractibility[‡]	0.769					
G5 Mannerisms &posturing[+]	0.756					
Tension[‡]	0.592					
Conceptual disorganization [‡]	0.569					
G 6 Depression[+]	-0.524					
G13 Disturbance of volition[+]	0.493					
G12 Lack of judgment & insight[+]	-0.462					
P6 Suspiciousness/persecution[+]		0.903				
P7 Hostility[+]		0.875				
Suspiciousness[‡]		0.853				
G8 Uncooperativeness[+]		0.735				
Uncooperativeness[‡]		0.734				
G3 Guilt feelings[+]		-0.732				
N7 Stereotyped thinking[+]		0.726				
Hostility[‡]		0.722				
Guilt[‡]		-0.657				
N6 Lack of spontaneity & flow of conversation[+]		0.629				
N5 Difficulty in abstract thinking[+]		0.565				
Blunted affect[‡]			0.931			
N1 Blunted affect[+]			0.882			
N2 Emotional withdrawal[+]			0.868			
Emotional withdrawal[‡]			0.721			
N4 Passive/apathetic social withdrawal[+]			0.704			
N3 Poor rapport[+]			0.670			
G16 Active social avoidance[+]			0.668			
G7 Motor retardation[+]			0.601			
Motor retardation[‡]			0.597			
P2 Conceptual disorganization[+]				0.886		
G11 Poor attention[+]				0.847		
G9 Unusual thought content[+]				0.574		
Unusual thought content [‡]				0.558		
Somatic concern[‡]					0.926	
G1 Somatic concern[+]					0.763	
P3 Hallucinatory behavior[+]					0.578	
G2Anxiety[+]						0.845
Anxiety[‡]						0.746
G14 Poor impulse control[+]						0.628
Depression[‡]						0.533
Suicidality[‡]						0.529
Explained variance (%) total 67.6%	18.3%	14.7%	14.5%	7.6%	6.4%	6.1%
Interpretation	*Euphoric Maniat*	*Psychosis*	*Inhibited depression*	*Disorga-nization*	*Psychosoma-tic features*	*Mixed features*

Table 4. Mean score factors and Bipolar vs Borderline Personality disorder: bivariate analysis

Variable	Bipolar Disorder (n=8)	Borderline Personality Disorder (n=16)	Test
Factor 1: Euphoric Mania	3.34±1.11 (2.93)*	1.87±0.34 (1.77)*	U=17.5, p=0.004
Factor 2: Psychosis	2.82±0.78	2.54±0.73	t=0.89, df=22, p=0.385
Factor 3: Inhibited depression	2.00±1.11 (1.61)*	2.40±1.13 (2.28)*	U=78.0, p=0.390
Factor 4: Disorganization	3.12±1.04 (2.75)*	1.67±0.81 (1.25)*	U=14.0, p=0.002
Factor 5: Psychosomatic features	2.48±0.92	2.13±0.87	t=0.88, df=21, p=0.390
Factor 6: Mixed features	3.33±1.22	3.79±1.27	t=-0.85, df=22, p=0.403

* Median value

On the contrary, in our sample, we obtained a factor that we called "mixed features" that was characterized by the PANNS anxiety and poor impulse control items and by the BPRS depression, anxiety and suicidality items. This factor is quite similar to the "mixicity" factor obtained by Pacchiarotti and colleagues (Pacchiarotti et al. 2013) that included anxiety, tension, suicidality and motor hyperactivity and that resembled agitated depression.

We found no significant difference between borderline and bipolar patients in our population for this factor. This seems to be in line with Perugi and colleagues (Perugi 2011) that analyzed the clinical differences between agitated depression, borderline personality disorder (BPD) and bipolar II disorder (BP-II) and reported that a cyclothymic matrix might represent the mediating core that characterize the mood, the anxiety, and the impulsive disorders of all these diagnoses.

According to this, the same group (Perugi 2015) in a following paper underlined that patients with a Major Depressive Episode (MDE) and comorbid BPD were more likely to have mixed features and BD.

We found no significantly difference for the domain "Inhibited Depression" between Borderline and Bipolar groups. In 1998 Blatt has validated two subtypes of depression, anaclitic and introjective. Anaclitic depression involves feelings of helplessness, loneliness, frailty, chronic fear of abandonment, vulnerability to the disruption of interpersonal relationships: prevailing feelings of loss, abandonment and loneliness. Introjective depression is characterized by feelings of worthlessness, failure, guilt, inferiority, fear of criticism and disapproval, strong push to the competition: prevailing feelings of guilt, worthlessness and failure (Blatt 1998). Starting from this premise, several studies have confirmed the anaclitic phenotype of negative symptoms in patients with BPD. Levy and Edell conducted a study to investigate the quality of depressive events in depressed patients, borderline-depressed patients and borderline- not depress patients: the quality of depressive experiences was different and BPD patients had higher scores on the measure of anaclitic neediness (Levy 2007). According to this conclusion many studies confirm that patients with BPD have a disrupted and poor self image, and they experience chronic emptiness (Renaud 2012, Parker 2014). However, the items of rating scales PBRS and PANSS, used to perform this study, are not able to identify the difference in depressive phenomenology of the two patient groups.

CONCLUSIONS

There is current scientific debate in consideration of the possibility to consider the BPD as a mood disorder within the bipolar spectrum (Parker 2014, Hakiskal 2004) furthermore, authors reported about the challenging differential diagnosis of BPD and BD (Ghaemi 2015). Even though our sample is small, findings in this study seem to support the theoretical hypothesis of an overlapping in manifestations between the two nosological entities, highlighting the main difference in euphoric symptoms, which can easily identify the maniac phase of BD. Further studies would be of great interest, trying to investigate if any stronger findings can be obtained looking specifically into mixed state features both in BD and BPD.

Acknowledgements:

Authors would like to express their appreciation for the precious work of Dr. Giulia Menculini, Dr. Francesca Mezzetti, Dr. Chiara Tinarelli who took care of the administration of BPRS and PNSS as part of their clinical rotation.

Conflict of interest: None to declare.

References

1. *Akiskal HS: Demystifying borderline personality: critique of the concept and unorthodox reflections on its natural kinship with the bipolar spectrum. Acta Psychiatrica Scandinavica 2004; 110:401-407.*
2. *Blatt SJ: Contributions of psychoanalysis to the understanding and treatment of depression. Journal of the American Psychoanalytic Association 1998; 46:723-752.*
3. *Bøen E, Hummelen B, Elvsåshagen T, Boye B, Andersson S, Karterud S & Malt UF: Different impulsivity profiles in borderline personality disorder and bipolar II disorder. Journal of affective disorders 2015; 170:104-111.*

4. *Ghaemi SN, Dalley S, Catania C, Barroilhet S: Bipolar or borderline: a clinical overview. Acta Psychiatrica Scandinavica 2014; 130:99-108.*
5. *Ghaemi SN, Barroilhet S: Confusing borderline personality with severe bipolar illness. Acta Psychiatr Scand 2015.*
6. *Levy KN, Edell WS, McGlashan TH: Depressive experiences in inpatients with borderline personality disorder. Psychiatric Quarterly 2007; 78:129-143.*
7. *Pacchiarotti I, Nivoli AM, Mazzarini L, Kotzalidis GD, Sani G, Koukopoulos A, Scott J, Strejilevich S, Sánchez-Moreno J, Murru A, Valentí M, Girardi P, Vieta E, Colom F: The symptom structure of bipolar acute episodes: in search for the mixing link. J Affect Disord 2013; 149:56-66.*
8. *Paris, J, Gunderson, J, Weinberg I: The interface between borderline personality disorder and bipolar spectrum disorders. Comprehensive psychiatry 2007; 48:145-154.*
9. *Parker G: Is borderline personality disorder a mood disorder? The British Journal of Psychiatry 2014; 204:252-253.*
10. *Perugi G, Fornaro M, Akiskal HS: Are atypical depression, borderline personality disorder and bipolar II disorder overlapping manifestations of a common cyclothymic diathesis? World Psychiatry 2011; 10:45-51.*
11. *Perugi G, Angst J, Azorin JM, Bowden CL, Caciagli A, Mosolov S, Young AH: Relationships between mixed features and borderline personality disorder in 2811 patients with major depressive episode. Acta Psychiatrica Scandinavica 2015.*
12. *Renaud S, Corbalan F, Beaulieu S: Differential diagnosis of bipolar affective disorder type II and borderline personality disorder: analysis of the affective dimension. Comprehensive psychiatry 2012; 53:952-961.*
13. *Rossi R, Pievani M, Lorenzi M, Boccardi M, Beneduce R, Bignotti, S, Frisoni GB: Structural brain features of borderline personality and bipolar disorders. Psychiatry Research: Neuroimaging 2013; 213:83-91.*
14. *Zimmerman M & Morgan TA: Problematic boundaries in the diagnosis of bipolar disorder: the interface with borderline personality disorder. Current psychiatry reports 2013; 15:1-10.*
15. *Zimmerman M, Ellison W, Morgan TA, Young D, Chelminski, I, Dalrymple, K: Psychosocial morbidity associated with bipolar disorder and borderline personality disorder in psychiatric out-patients: comparative study. The British Journal of Psychiatry 2015; 206:1-5.*

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