



In light of the DSM-5 dimensional model of personality: Borderline personality disorder at the crossroads with the bipolar spectrum

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ABSTRACT

Background. State-of-the-art research highlights that borderline personality disorder (PD) and bipolar spectrum disorders have clinical characteristics in common, which imply uncertainty in differential diagnoses. Although there is a growing body of literature on the DSM-5 dimensional model of personality disorder, its discriminative features between these clinical samples are still understudied. In this study, we seek to identify the best set of predictors that differentiate between borderline PD and bipolar spectrum, based on pathological and normative personality traits and symptoms. **Methods.** A cross-sectional study of three clinical samples: 1) Borderline PD group of 63 participants; 2) Major depressive disorder group of 89 participants; 3) Bipolar disorder group of 65 participants. **Self-reported assessment:** Personality Inventory for DSM-5; Brief Symptom Inventory; FFM Inventory. A series of one-way ANOVAs and logistic regression analyses were computed. **Results.** The major set of data emerging as common discriminants of borderline PD across the bipolar spectrum are unusual beliefs & experiences, paranoid ideation, obsession-compulsion and extraversion. **Depressivity (OR: 34.95) and impulsivity (OR: 22.35) pathological traits displayed the greatest predictive values in the differential diagnosis.** **Limitations.** The small size of the samples; a lack of data from participants' previous clinical history. **Conclusions.** Findings support the DSM-5 pathological traits as differentiating borderline PD through bipolar spectrum, and reinforcing the joint use of symptom-related pathological functioning and normal-range personality traits. **Alongside the bipolar spectrum, borderline pathology sheds light upon a hypothetical overlap along the depressive and schizoaffective/schizophrenia spectra, representing a borderland space at a crossroads with the psychopathology of a meta-spectrum.**

1. Introduction

State-of-the-art research highlights that borderline personality disorder (PD) and bipolar spectrum disorders have clinical characteristics in common, which imply uncertainty in differential diagnoses (Bayes and Parker, 2020; Bennazi, 2007; Luty, 2020; Paris, 2017). Although there is a growing body of literature on the DSM-5 dimensional model of personality disorder (American Psychiatric Association [APA], 2013;

Gore and Widiger, 2013; Krueger and Eaton, 2010; Zimmermann et al., 2019), its discriminative features between borderline PD and both major depressive disorder and bipolar disorder, are still understudied.

The relationship between borderline PD and bipolar spectrum is a complex topic of great theoretical, clinical and public health significance (Akiskal, 2004; Zimmerman et al., 2020). If on the one hand, the precise relationship of personality disorders with the disease spectra is uncertain and an unsolved general problem of psychiatric classification

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(Angst, 2007; Sperandio et al., 2020), on the other, a growing body of evidence suggests high comorbidity between personality disorders and bipolar spectrum disorders and draws attention to the important role that personality disorders may play (Ng et al., 2017).

Considerable controversy has arisen around the construct of bipolar spectrum disorders, however the concept may be inferred from numerous classical sources, dating back to the 19th century and even as far back as antiquity (Pies, 2007). Current clinical and epidemiological research provides support for a continuum of bipolar psychopathology, in other words, a bipolar spectrum ranging from subthreshold characteristics to clinical disorders (Walsh et al., 2015). Over the past decades, manifold lines of evidence have raised the controversial question of whether borderline PD is an independent disease entity or if it might be better conceptualized as belonging to the spectrum of mood disorders (Akiskal, 2004; Angst, 2007; Cattaneo et al., 2019; Deltito et al., 2001; Paris, 2009; Perugi et al., 2011).

Differentiating between borderline PD and comorbid major depressive disorder, atypical depression and bipolar disorders is a complex task (Gunderson et al., 2018; MacKinnon and Pies, 2006; Perugi et al., 2011; Ruggero et al., 2010; Zimmerman et al., 2020). Hence, establishing an accurate diagnosis presents a considerable challenge to both research and clinical contexts (Youngstrom et al., 2018). One of the main issues is understanding what comprises borderline PD, since the ambiguity of the term ‘borderline’ acts largely as a fall-back option until the core psychopathology has been successfully identified (Gunderson et al., 2018). A comprehensive quantitative assessment of the overlapping and differential clinical moderators is also warranted in order to better understand the actual boundaries of borderline PD and bipolar disorders (Fornaro et al., 2016). Recent studies have highlighted personality features, relationship style and phenomenological differences in mood states as key differentiating factors, among others (Bayes et al., 2019).

In light of the empirical evidence supporting the DSM-5 dimensional model of personality disorders, which are likewise aligned with the general Five-Factor Model (FFM), the borderline PD traits of emotional lability, anxiousness, separation insecurity, hostility, depressivity, impulsivity, and risk taking have been advanced as core features of the disorder (APA, 2013; Samuel et al., 2012), and as evidence for the domains of negative affectivity (Calvo et al., 2016; Fowler et al., 2021) and disinhibition (Calvo et al., 2016). Research has also pointed to a consideration of cognitive and perceptual dysregulation and suspiciousness for inclusion as a representation of the ninth borderline PD symptom criterion (i.e., stress-induced paranoia or dissociation) (Watters et al., 2019). A newfound and innovative study on the topic of borderline-mood spectrum using the Personality Inventory for DSM-5 (PID-5) has suggested the diagnostic accuracy of a borderline PD algorithm in differentiating bipolar disorder (Fowler et al., 2019).

This paper seeks to identify the best set of predictors that differentiate between borderline PD and bipolar spectrum disorders (major depressive and bipolar disorders), based on pathological and normative personality traits and symptoms, as well as including PID-5 items. To our knowledge, this represents a first analysis of the DSM-5 dimensional model of personality disorder to focus on the discriminative features associated with personality-psychopathology data in a simultaneously differential report of these disorders.

2. Method

2.1. Participants

This cross-sectional study consisted of a total of 217 patients distributed across three clinical samples: 1) Borderline PD sample of 63 participants aged between 18 and 64 years ($M_{age} = 40.32$ years, $SD = 11.18$), predominantly male (55.6%), with an average of 9 years of schooling; 2) Major depressive disorder (recurrent episode) sample of 89

participants aged between 18 and 75 years ($M_{age} = 47.80$ years, $SD = 10.79$), almost equal between sexes (51.6% female), with an average of 12 years of schooling; 3) Bipolar disorder sample of 65 participants aged between 19 and 76 years ($M_{age} = 46.49$ years, $SD = 12.84$), predominantly female (60%), with an average of 12 years of schooling. The bipolar spectrum group ($n = 154$) is a merger of the major depressive disorder and bipolar disorder groups.

Regarding the sociodemographic features, significant differences were observed in age between the borderline PD and major depressive disorder groups ($t(148) = -4.13$, $p = .001$) and between the borderline PD and bipolar disorder groups ($t(126) = -2.90$, $p = .004$). No between-group differences were found in other sociodemographic variables such as sex or schooling.

Overall, the participants in the clinical samples were of Portuguese nationality (93.5%), mostly single (43.1%) or married/cohabiting (30.1%), while most were unemployed (44.9%) or employed (34.6%), and lived predominantly in an urban environment (81%).

2.2. Measures

2.2.1. Socio-demographic questionnaire (e.g., age, sex, schooling)

2.2.2. Personality Inventory for DSM-5 (PID-5). The PID-5 (Krueger et al., 2012; Pires et al., 2019) is a self-report measure, which operationalizes the dimensional personality pathology model proposed in Criterion B of the DSM-5 Section III. It is composed of 220 items, rated on a 4-point Likert scale ranging from 0 (very false or often false) to 3 (very true or often true), which characterize 25 empirically derived lower level traits (facets) grouped into five higher-order trait domains of maladaptive personality variation, namely Negative Affectivity, Detachment, Antagonism, Disinhibition, and Psychoticism. All the facets and domains were calculated by specific algorithms for the calculation scores (Krueger et al., 2012). In our study, Cronbach's alphas (α) for the domains had a value of .84 (Negative Affectivity), .87 (Detachment), .89 (Antagonism), .88 (Disinhibition), and .95 (Psychoticism).

2.2.3. Brief Symptom Inventory (BSI). The BSI (Derogatis, 1993; Canavarro, 1999) identifies self-reported clinically relevant psychological symptoms. The BSI consists of 53 items covering nine symptom dimensions scales: Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic anxiety, Paranoid ideation, and Psychoticism. Participants rank each feeling item on a 5-point Likert scale ranging from 0 (not at all) to 4 (extremely). Rankings characterize the intensity of distress during the past seven days. Dimension scores are calculated by summing the values for the items included in that dimension and dividing this figure by the number of items endorsed in that dimension. In our study, Cronbach's alphas (α) for the domains had a value of .88 (Somatization), .80 (Obsession-Compulsion), .86 (Interpersonal Sensitivity), .91 (Depression), .87 (Anxiety), .86 (Hostility), .86 (Phobic anxiety), .78 (Paranoid ideation), and .77 (Psychoticism).

2.2.4. NEO-Five Factor Inventory (NEO-FFI). The NEO-FFI (Costa and McCrae, 1992; Lima and Simões, 2000) is a short-form of the NEO Personality Inventory (NEO PI-R) which operationalizes the FFM. The NEO-FFI contains 60 items, and participants are asked to respond on a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree). The NEO-FFI scales yield scores for the following personality domains (traits): Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. Each scale consists of 12 items which are scaled so that higher scores reflect the presence of the assessed traits. In our study, Cronbach's alphas (α) for the domains had a value of .75 (Neuroticism), .72 (Extraversion), .60 (Openness to Experience), .60 (Agreeableness), and .79 (Conscientiousness).

2.3. Procedure

The present study received approval and authorization from the Ethics Committee of the researchers' affiliation institution and by the host institutions involved. The study was conducted in accordance with the latest version of the Declaration of Helsinki and in compliance with the European General Data Protection Regulation.

After the aims and procedures had been fully explained to the participants, their informed written consent was obtained containing both their and the researchers' signatures. None of the participants received a reward for their contribution.

At the time of data collection, the patients were having treatment at mental health units. In each affiliated mental health institution, there was a clinician – psychiatrist or psychologist – member of the research team, who coordinated the sampling procedures, who selected the participants with the respective diagnoses contained in our study from the clinical databases of their institution, or from whom they were referred. In general, our collected clinical samples relied on the direct clinical evaluation of several psychiatrists (in a one to one DSM-5 diagnostic assessment), whose diagnosis had been previously discussed and agreed upon by a clinical team. It should be noted that each diagnosis is the result of a medical psychiatric evaluation, archived on the clinical records, conducted by at least three different clinicians: the assistant psychiatrist; the coding doctor, responsible for the respective Diagnosis-Related Groups (DRG) (Fetter et al., 1980); and the collaborating researcher. Patients were selected according to their DSM-5 diagnosis (Section II) and the study's inclusion and exclusion criteria. The study inclusion criteria were aged 18 years or above and the diagnostic criteria for borderline PD, bipolar disorder and major depressive disorder. The exclusion criteria for this study were intellectual disability, schizophrenia, neurocognitive disorders, and prior concurrent fulfillment of the diagnostic criteria for borderline PD, bipolar or major depressive disorders. Some patients answered the research protocol during their brief term hospitalizations, others were outpatients, admitted sequentially in the sample whenever they had a follow up consultation. It is estimated that 25% is related to invalid protocols, dropouts and refusals to participate in the research.

2.4. Data Analysis

The statistical analyses were conducted with the Software PASW Statistics (v. 24, SPSS Inc, Chicago, IL). Effects for p -values $\leq .05$ were considered statistically significant.

The main objective was explored by means of the following:

- 1 In order to evaluate whether there was a significant influence of the groups on the variables under study, a series of one-way Analysis of Variance (ANOVAs) were computed across the diagnostic groups (borderline PD, major depressive disorder, and bipolar disorder) as the independent variable, and scores on the PID-5 domains/facets, the BSI scales and NEO domains as dependent variables. The assumptions of this statistical method were validated by checking the normality and the homogeneity of variances. The adjusted alpha level with the Bonferroni correction procedure were used for adjustment of multiple comparisons. The samples' sociodemographic features, personality and psychopathology parameters were explored with descriptive statistics.
- 2 To determine the discriminating ability of whether DSM-5 personality disorder traits (PID-5), psychopathology symptoms (BSI scales), and FFM personality normative domains (NEO-FFI) were able to classify the diagnostic status of borderline PD (vs. major depressive disorder; vs. bipolar disorder; vs. bipolar spectrum disorders), seven binary logistic regressions were performed using a backward LR method: model 1 - the PID-5 higher-order domains were entered as predictors; model 2 - the PID-5 lower-order traits or facets were entered as predictors; model 3 - the PID-5 lower-order traits or facets,

BSI scales, and the NEO domains were entered as predictors. In all the analyses performed, the sociodemographic variables (sex, age) were controlled. Odds ratios (ORs) were obtained for each parameter, and the Nagelkerke R^2 was used to measure the global predictive capacity of the model. The Hosmer–Lemeshow goodness-of-fit test (χ^2_{HL}) was used to determine the suitability of the fitted logistic regression model.

- 3 To determine whether the PID-5 items were able to classify the diagnostic status of borderline PD (vs. major depressive disorder; vs. bipolar disorder), two binary logistic regressions were performed using a forward LR method: the 220 items of PID-5 were entered as predictors. Odds ratios (ORs) were obtained for each parameter, and the Nagelkerke R^2 was used to measure the global predictive capacity of the model. The Hosmer–Lemeshow goodness-of-fit test (χ^2_{HL}) was used to determine the suitability of the fitted logistic regression model.

3. Results

3.1. DSM-5 dimensional model of personality disorder and personality-psychopathology features: comparisons of borderline PD with bipolar spectrum

Table 1 reports the results of the analysis of variance on the effect of the borderline PD group and the major depressive/bipolar disorder groups on the pathological personality traits, the psychopathological symptoms and the normative personality domains. In general, the variables that simultaneously differentiate the borderline PD group and the other clinical groups are highlighted: high average results in the PID-5 higher-order domain of Disinhibition, and in the PID-5 facets/traits of Attention seeking, Impulsivity, Risk taking, and a low average result in the NEO domain of Agreeableness, were all associated with effect sizes ranging from small to moderate.

3.2. Predictions based on the DSM-5 dimensional model of personality disorder and personality-psychopathology features: differentiating between borderline PD and bipolar spectrum

Prediction of borderline PD vs. major depressive disorder. Table 2 presents the results of the logistic regression analyses and shows the significant coefficients. The regression models were significant: model 1 ($\chi^2 = 26.01$, $df = 3$, $p < .001$, -2 Log likelihood = 181.94), accounting for 21% of the variance (Nagelkerke's $R^2 = .21$; Cox & Snell $R^2 = .16$), the Hosmer–Lemeshow test: $\chi^2_{HL}(8) = 7.53$, $p = .480$, suggests that the model is a good fit; model 2 ($\chi^2 = 33.58$, $df = 6$, $p < .001$, -2 Log likelihood = 174.37), accounting for 27% of the variance (Nagelkerke's $R^2 = .27$; Cox & Snell $R^2 = .20$), the Hosmer–Lemeshow test: $\chi^2_{HL}(8) = 3.92$, $p = .865$, suggests that the model is a good fit; model 3 ($\chi^2 = 82.48$, $df = 21$, $p < .001$, -2 Log likelihood = 84.26), accounting for 65% of the variance (Nagelkerke's $R^2 = .65$; Cox & Snell $R^2 = .49$), the Hosmer–Lemeshow test: $\chi^2_{HL}(8) = 14.75$, $p = .07$, suggests that the model is a good fit. The obtained model 3 included 21 variables, and showed that 10 uniquely and significantly contributed to the model associated with higher odds of outcome ($OR > 1$), thus emerging as differential predictors of the borderline PD diagnosis: PID-5 facets/traits - Separation insecurity, Unusual beliefs & experiences, Intimacy avoidance, Deceitfulness, and Impulsivity; BSI scales - symptoms of Obsession-compulsion, Hostility and Paranoid ideation; NEO domains - Extraversion and Conscientiousness.

Prediction of borderline PD vs. bipolar disorder. Table 3 presents the results of the logistic regression analyses. The regression models were significant: model 1 ($\chi^2 = 8.08$, $df = 2$, $p < .01$, -2 Log likelihood = 169.37), accounting for 8% of the variance (Nagelkerke's $R^2 = .08$; Cox & Snell $R^2 = .06$), the Hosmer–Lemeshow test: $\chi^2_{HL}(8) = 8.33$, $p = .402$, suggests that the model is a good fit; model 2 ($\chi^2 = 31.30$, $df = 7$, $p < .001$, -2 Log likelihood = 146.15), accounting for 29% of the variance

Table 1

Descriptive Statistics and Results of the Analysis of Variance on the Effect of the Clinical Groups on the Variables in Study

	Depression ¹ (n = 89)	Borderline ² (n = 63)	Bipolar ³ (n = 65)		Borderline ² vs. Depression ¹				Borderline ² vs. Bipolar ³		
	M(SD)	M(SD)	M(SD)	F	α_{adj} B	η^2_p	π	F	α_{adj} B	η^2_p	π
PID-5 domains											
Negative affectivity	1.76(.47)	1.75(.54)	1.71(.49)	.04	-	-	-	.14	-	-	-
Detachment	1.26(.58)	1.10(.48)	1.20(.45)	3.99*	.11	.02	.44	1.45	-	-	-
Antagonism	.81(.56)	1.04(.56)	.92(.59)	6.96**	.03	.03	.50	1.35	-	-	-
Disinhibition	1.18(.55)	1.39(.50)	1.18(.55)	5.18**	.08	.03	.48	4.74**	.10	.06	.64
Psychoticism	1.08(.66)	1.20(.65)	1.12(.61)	1.10	-	-	-	.53	-	-	-
PID-5 facets											
Negative affectivity											
Anxiousness	2.03(.58)	1.95(.58)	1.89(.56)	1.10	-	-	-	.35	-	-	-
Emotional lability	1.84(.59)	1.78(.76)	1.76(.68)	.29	-	-	-	.04	-	-	-
Hostility	1.29(.69)	1.41(.61)	1.07(.60)	1.29	-	-	-	9.78***	.01	.07	.72
Perseveration	1.32(.53)	1.46(.58)	1.29(.61)	2.42	-	-	-	2.54	-	-	-
Restricted affectivity	1.15(.58)	1.07(.65)	1.15(.55)	.64	-	-	-	.52	-	-	-
Separation insecurity	1.41(.70)	1.51(.68)	1.50(.64)	.98	-	-	-	.02	-	-	-
Submissiveness	1.16(.72)	1.20(.65)	1.22(.77)	.11	-	-	-	.02	-	-	-
Detachment											
Anhedonia	1.55(.67)	1.36(.62)	1.29(.62)	3.27	-	-	-	.42	-	-	-
Depressivity	1.39(.78)	1.30(.67)	1.11(.66)	.83	-	-	-	2.64	-	-	-
Intimacy avoidance	.98(.73)	.88(.73)	1.20(.72)	1.25	-	-	-	6.25**	.05	.03	.38
Suspiciousness	1.58(.56)	1.59(.52)	1.44(.60)	.005	-	-	-	2.13	-	-	-
Withdrawal	1.26(.69)	1.07(.59)	1.12(.58)	3.54	-	-	-	.23	-	-	-
Antagonism											
Attention seeking	1.00(.71)	1.45(.77)	1.12(.77)	14.92***	.001	.07	.85	6.01**	.04	.03	.38
Callousness	.66(.58)	.69(.47)	.62(.54)	.17	-	-	-	.58	-	-	-
Deceitfulness	.70(.57)	.92(.62)	.75(.57)	6.10**	.04	.05	.68	2.73	-	-	-
Grandiosity	.92(.66)	1.06(.66)	1.07(.76)	2.07	-	-	-	.007	-	-	-
Manipulativeness	.81(.68)	1.13(.69)	.94(.71)	8.63***	.01	.03	.52	2.39	-	-	-
Disinhibition											
Distractibility	1.39(.58)	1.47(.60)	1.43(.61)	.47	-	-	-	.14	-	-	-
Impulsivity	1.38(.71)	1.71(.71)	1.33(.76)	7.69**	.02	.05	.71	8.45***	.01	.11	.91
Irresponsibility	.78(.65)	.98(.57)	.79(.65)	4.08*	.14	.02	.29	3.10	-	-	-
Rigid perfectionism	1.55(.58)	1.44(.62)	1.54(.66)	1.41	-	-	-	.79	-	-	-
Risk taking	1.35(.65)	1.62(.57)	1.32(.65)	7.57**	.02	.06	.78	7.56**	.02	.09	.85
Psychoticism											
Eccentricity	1.19(.78)	1.27(.79)	1.19(.72)	.39	-	-	-	.38	-	-	-
Cognitive & perceptual dysregulation	1.08(.66)	1.16(.65)	1.06(.64)	.37	-	-	-	.71	-	-	-
Unusual beliefs & experiences	.97(.70)	1.16(.70)	1.10(.71)	2.75	-	-	-	.29	-	-	-
BSI scales											
Somatization	1.38(1.03)	.93(.94)	.93(1.05)	4.54*	.11	.04	.64	.03	-	-	-
Obsession-compulsion	1.63(.97)	1.60(.88)	1.54(.86)	.08	-	-	-	.20	-	-	-
Interpersonal sensitivity	1.45(1.17)	1.57(1.10)	1.29(1.09)	.59	-	-	-	2.41	-	-	-
Depression	1.95(1.31)	1.61(1.13)	1.53(1.02)	3.13	-	-	-	.50	-	-	-
Anxiety	1.78(1.10)	1.47(1.04)	1.34(1.06)	2.22	-	-	-	.80	-	-	-
Hostility	1.19(1.03)	1.38(.89)	.96(.93)	3.59	-	-	-	7.61**	.002	.05	.60
Phobic anxiety	1.08(1.21)	.84(.87)	.83(.79)	.79	-	-	-	.001	-	-	-
Paranoid ideation	1.62(.89)	1.64(.98)	1.30(.82)	.17	-	-	-	5.60**	.05	.03	.43
Psychoticism	1.41(1.00)	1.31(.88)	1.17(.91)	.16	-	-	-	.82	-	-	-
NEO domains											
Neuroticism	30.96(8.31)	30.94(7.38)	28.41(7.89)	.22	-	-	-	3.30	-	-	-
Extraversion	24.49(7.85)	27.61(5.99)	25.80(6.69)	9.08***	.007	.05	.72	3.60	-	-	-
Openness	28.17(5.77)	28.00(6.01)	27.97(6.48)	.006	-	-	-	.001	-	-	-
Agreeableness	30.68(5.93)	27.84(5.35)	31.52(6.36)	10.31***	.007	.06	.78	5.82**	.04	.09	.86
Conscientiousness	32.47(7.71)	29.59(6.52)	30.50(7.62)	3.95*	-	.03	.51	.34	-	-	-

Note: * $p < .05$. ** $p < .01$. *** $p < .001$; α_{adj} B = the adjusted alpha level with the Bonferroni procedure; η^2_p (effect size): $\leq .05$ (Small); $.05$; $.25$] (Medium); $.25$; $.50$] (High); $> .50$ (Very high); π (test power): $\geq .80$; 1.00] (Cohen, 1988).

¹ Major depressive disorder group

² Borderline PD group

³ Bipolar disorder group

(Nagelkerke's $R^2 = .29$; Cox & Snell $R^2 = .22$), the Hosmer–Lemeshow test: $X^2_{HL}(8) = 10.05$, $p = .261$, suggests that the model is a good fit; model 3 ($\chi^2 = 52.37$, $df = 15$, $p < .001$, -2 Log likelihood = 79.33), accounting for 57% of the variance (Nagelkerke's $R^2 = .57$; Cox & Snell $R^2 = .42$), the Hosmer–Lemeshow test: $X^2_{HL}(8) = 9.74$, $p = .284$, suggests that the model is a good fit. The obtained model 3 included 15 variables, and showed that 7 uniquely and significantly contributed to the model associated with higher odds of outcome ($OR > 1$), thus emerging as differential predictors of the borderline PD diagnosis: PID-5 facets/traits - Unusual beliefs & experiences, Depressivity and Perseveration; BSI scales - symptoms of Obsession-compulsion and Paranoid

ideation; NEO domains - Neuroticism and Extraversion.

Prediction of borderline PD vs. bipolar spectrum disorders. Table 4 presents the results of the logistic regression analyses and shows the significant coefficients. The regression model is significant ($\chi^2 = 81.62$, $df = 12$, $p < .001$, -2 Log likelihood = 149.91), accounting for 52% of the variance (Nagelkerke's $R^2 = .52$; Cox & Snell $R^2 = .39$), the Hosmer–Lemeshow test: $X^2_{HL}(8) = 8.56$, $p = .381$, suggests that the model is a good fit. The obtained model included 12 variables, and showed that 6 uniquely and significantly contributed to the model associated with higher odds of outcome ($OR > 1$), thus emerging as differential predictors of the borderline PD diagnosis: PID-5 facets/traits - Unusual beliefs &

Table 2
Summary of Logistic Regression Models Predicting Borderline PD vs. Major Depressive Disorder

	B (S.E.)	Wald (χ^2)	p	OR [95% CI]	Nagelkerke R^2
Model 1					.21
PID-5 (D) Detachment	-1.03 (.40)	6.69	<.01*	.37 [.16, .78]	
PID-5 (D) Disinhibition	1.43 (.37)	15.18	<.001*	4.18 [2.04, 8.58]	
Age	-.02 (.01)	6.51	<.01*	.98 [.96, 1.00]	
Model 2					.27
PID-5 (f) Restricted affectivity	-.67 (.34)	3.86	<.05*	.52 [.27, 1.00]	
PID-5 (f) Anxiousness	-.64 (.33)	3.74	<.05*	.53 [.28, 1.01]	
PID-5 (f) Attention seeking	1.10 (.29)	14.16	<.001*	2.99 [1.69, 5.29]	
PID-5 (f) Rigid perfectionism	-.94 (.36)	6.90	<.01*	.39 [.19, .79]	
PID-5 (f) Perseveration	1.22 (.52)	5.61	<.01*	3.40 [1.24, 9.36]	
Model 3					.65
PID-5 (f) Anxiousness	-2.38 (.91)	6.81	<.01*	.09 [.02, .55]	
PID-5 (f) Separation insecurity	1.31 (.59)	4.91	<.01*	3.70 [1.16, 11.80]	
PID-5 (f) Unusual beliefs & experiences	2.12 (.59)	9.48	<.001*	8.34 [2.16, 32.28]	
PID-5 (f) Distractibility	-1.98 (.98)	4.12	<.05*	.14 [.02, .93]	
PID-5 (f) Intimacy avoidance	1.03 (.53)	3.80	<.05*	2.80 [.99, 7.90]	
PID-5 (f) Deceitfulness	2.31 (.94)	6.02	<.01*	10.12 [1.59, 64.3]	
PID-5 (f) Impulsivity	3.11 (.91)	11.65	<.001*	22.35 [3.75, 133]	
PID-5 (f) Callousness	-5.03 (1.43)	12.36	<.001*	.007 [.001, .11]	
PID-5 (f) Rigid perfectionism	-3.24 (.95)	11.60	<.001*	.04 [.007, .11]	
BSI Somatization	-3.15 (.84)	14.04	<.001*	.04 [.008, .22]	
BSI Obsession-compulsion	2.81 (.90)	9.77	<.001*	16.67 [2.86, 92.3]	
BSI Hostility	1.99 (.68)	8.49	<.001*	7.32 [1.92, 27.94]	
BSI Paranoid ideation	1.28 (.64)	4.03	<.05*	3.61 [1.03, 12.64]	
NEO Extraversion	.12 (.06)	3.63	<.05*	1.12 [1.00, 1.27]	
NEO Conscientiousness	.16 (.08)	4.38	<.05*	1.20 [1.01, 1.40]	

Note: * Two-tailed; B=logistic regression coefficient. S.E.=standard error of the logistic regression coefficient. OR=odds ratio. PID-5 (D)=PID-5 Domain; PID-5 (f)=PID-5 facet.

Table 3
Summary of Logistic Regression Models Predicting Borderline PD vs. Bipolar Disorder

	B (S.E.)	Wald (χ^2)	p	OR [95% CI]	Nagelkerke R^2
Model 1					.08
PID-5 (D) Detachment	-.92 (.35)	7.00	<.01*	.40 [.20, .79]	
PID-5 (D) Disinhibition	.83 (.31)	7.01	<.01*	2.29 [1.25, 4.22]	
Model 2					.29
PID-5 (f) Restricted affectivity	-.87 (.38)	5.71	<.01*	.42 [.20, .89]	
PID-5 (f) Depressivity	.70 (.38)	3.99	<.05*	2.01 [1.01, 4.02]	
PID-5 (f) Intimacy avoidance	-.64 (.35)	4.83	<.01*	.53 [.30, .93]	
PID-5 (f) Hostility	.96 (.29)	4.85	<.05*	2.60 [1.11, 6.01]	
PID-5 (f) Attention seeking	.73 (.55)	4.37	<.05*	2.07 [1.05, 4.12]	
PID-5 (f) Rigid perfectionism	-.91 (.39)	7.34	<.01*	.40 [.21, .78]	
Model 3					.57
PID-5 (f) Restricted affectivity	-1.10 (.57)	3.66	<.05*	.33 [.11, 1.03]	
PID-5 (f) Unusual beliefs & experiences	1.56 (.70)	5.00	<.05*	4.75 [.21, 18.61]	
PID-5 (f) Depressivity	3.56 (1.29)	7.54	<.05*	34.95 [2.77, 440]	
PID-5 (f) Intimacy avoidance	-1.41 (.53)	7.02	<.01*	.24 [.09, .69]	
PID-5 (f) Eccentricity	-2.81 (.94)	8.95	<.01*	.06 [.01, .38]	
PID-5 (f) Rigid perfectionism	-1.44 (.58)	6.31	<.01*	.24 [.08, .73]	
PID-5 (f) Perseveration	2.26 (.91)	6.15	<.01*	9.63 [1.61, 57.59]	
PID-5 (f) Submissiveness	-1.70 (.71)	5.67	<.01*	.18 [.05, .74]	
BSI Obsession-compulsion	1.47 (.73)	4.05	<.05*	4.24 [1.04, 18.03]	
BSI Depression	-2.85 (1.05)	7.45	<.01*	.06 [.007, .45]	
BSI Phobic anxiety	-1.57 (.65)	5.88	<.01*	.21 [.06, .74]	
BSI Paranoid ideation	2.05 (.66)	9.64	<.001*	7.76 [2.13, 28.29]	
NEO Neuroticism	.11 (.05)	5.13	<.01*	1.12 [1.02, 1.24]	
NEO Extraversion	.11 (.05)	5.23	<.01*	1.12 [1.02, 1.24]	
NEO Agreeableness	-.15 (.05)	10.11	<.001*	.87 [.79, .95]	

Note: * Two-tailed; B=logistic regression coefficient. S.E.=standard error of the logistic regression coefficient. OR=odds ratio. PID-5 (D)=PID-5 Domain; PID-5 (f)=PID-5 facet.

experiences, Impulsivity and Perseveration; BSI scales - symptoms of Obsession-compulsion and Paranoid ideation; NEO domain - Extraversion.

Overall, the differential predictors (higher odds of outcome, $OR > 1$) of the borderline PD diagnosis in relation to the other clinical groups are illustrated and summarized in Fig. 1.

3.3. Logistic regression models for predicting PID-5 items ($OR > 1$) that differentiate borderline PD and bipolar spectrum

Table 5 provides a summary of the results of the logistic regression analyses. The model for borderline PD vs. major depressive disorder is significant ($\chi^2 = 177.64$, $df = 23$, $p < .01$, -2 Log likelihood = 33.08), accounting for 92% of the variance (Nagelkerke's $R^2 = .92$; Cox & Snell

Table 4
Summary of Logistic Regression Model Predicting Borderline PD vs. Bipolar Spectrum

Model	B (S.E.)	Wald (χ^2)	p	OR [95% CI]	Nagelkerke R^2
PID-5 (f) Restricted affectivity	-1.05 (.42)	6.36	<.01*	.35 [.16, .79]	.52
PID-5 (f) Unusual beliefs & experiences	1.10 (.43)	6.40	<.01*	3.00 [1.28, 7.03]	
PID-5 (f) Eccentricity	-1.07 (.45)	5.56	<.01*	.34 [.14, .83]	
PID-5 (f) Impulsivity	.72 (.34)	4.41	<.05*	2.05 [1.05, 4.02]	
PID-5 (f) Rigid perfectionism	-1.41 (.42)	11.04	<.001*	.25 [.11, .56]	
PID-5 (f) Perseveration	1.09 (.54)	4.05	<.05*	2.98 [1.03, 8.60]	
BSI Somatization	-.92 (.39)	5.71	<.01*	.40 [.19, .85]	
BSI Obsession-compulsion	.83 (.40)	4.29	<.05*	2.29 [1.05, 5.03]	
BSI Paranoid ideation	.89 (.38)	5.66	<.01*	2.44 [1.17, 5.09]	
NEO Extraversion	.08 (.03)	6.30	<.01*	1.08 [1.02, 1.15]	
NEO Agreeableness	-.10 (.03)	13.45	<.001*	.91 [.86, .97]	

Note: * Two-tailed; B=logistic regression coefficient. S.E.=standard error of the logistic regression coefficient. OR=odds ratio. PID-5 (D)=PID-5 Domain; PID-5 (f)=PID-5 facet.

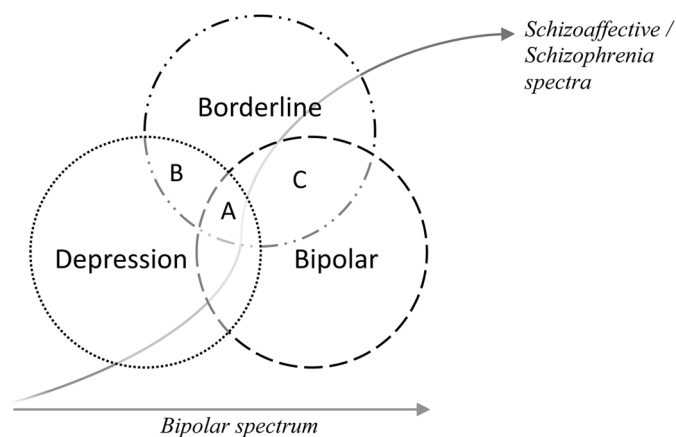


Fig. 1. Illustration and summary of the best differential predictors of borderline PD diagnosis, related to greater chances of results ($OR > 1$) and in decreasing order of odds ratio, in relation to bipolar spectrum (A), major depressive disorder (B), and bipolar disorder (C).

(A) Unusual beliefs & experiences; Perseveration; Paranoid ideation; Obsession-compulsion; Impulsivity; Extraversion.

(B) Impulsivity; Obsession-compulsion; Deceitfulness; Unusual beliefs & experiences; Hostility; Separation insecurity; Paranoid ideation; Intimacy avoidance; Conscientiousness; Extraversion.

(C) Depressivity; Perseveration; Paranoid ideation; Unusual beliefs & experiences; Obsession-compulsion; Neuroticism; Extraversion.

$R^2 = .69$), the Hosmer–Lemeshow test: $\chi^2_{HL}(8) = 6.67$, $p = .572$, suggests that the model is a good fit. The obtained model included 23 items, and showed that 12 items uniquely and significantly contributed to the model associated with higher odds of outcome ($OR > 1$), thus emerging as differential items predictors of the borderline PD diagnosis. The model for borderline PD vs. bipolar disorder is significant ($\chi^2 = 142.78$, $df = 17$, $p < .001$, $-2 \text{ Log likelihood} = 34.67$), accounting for 90% of the variance (Nagelkerke's $R^2 = .90$; Cox & Snell $R^2 = .67$), the Hosmer–Lemeshow test: $\chi^2_{HL}(8) = 2.09$, $p = .978$, suggests that the model is a good fit. The obtained model included 17 items, and showed that 9 items uniquely and significantly contributed to the model associated with higher odds of outcome ($OR > 1$), thus emerging as differential items predictors of the borderline PD diagnosis.

4. Discussion

4.1. General main findings

Firstly, and considering the empirical data from a general perspective, this study highlights the most common personality traits and

symptoms that emerge across our research as discriminant and ‘pathognomonic’ or as a core disorder of borderline PD in its comparisons with major depressive disorder, bipolar disorder and bipolar spectrum disorders: Unusual beliefs & experiences (PID-5 facet), Paranoid ideation (BSI scale), Obsession-compulsion (BSI scale), and Extraversion (NEO trait) (Fig. 1).

The first hallmark to emerge from our results is in relation to the personality pathology facet, Unusual beliefs & experiences, as a trait-based psychoticism and the network of Paranoid ideation and Obsession-compulsion symptoms. It could be considered that this constellation of a DSM-5 personality disorder trait and psychotic-like symptomatology may offer an alternative way to characterize the psychotic phenomena in borderline PD. These features may possibly increase the prediction of stress-related paranoia and/or dissociative symptoms as being related to psychotic phenomena in borderline patients (D’Agostino et al., 2019). The manic-hypomanic component of mood spectrum in borderline was related to subdomains of the psychotic spectrum, namely ‘unusual and odd thoughts’, ‘illusions’, ‘delusions’, ‘hallucinations’ (Benvenuti et al., 2005). Even the Obsession-compulsion symptomatology in borderline PD appears to represent a close affinity with schizophrenia and affective disorders (Rasmussen et al., 2019). This paper proposes a schizoaffective/schizophrenia spectra psychopathology in borderline PD with underpinnings that differ from bipolar spectrum, despite the possible continuum. The data emerging from this study intersects with a controversial topic, in a phenomenological and historical sense, namely this possible dimensional spectrum overlap, for which nowadays a refreshing and innovative revivalism in the field has been witnessed (Gama Marques and Ouakinin, 2019; Kelleher and Cannon, 2014; Schroeder et al., 2013; Schultze-Lutter et al., 2019; Zandersen and Parnas, 2019). Other psychoanalytic approaches to a delineation of the borderline syndrome are also noteworthy, such as Kernberg’s structural-dynamic concept (Kernberg and Caligor, 2005), describing its functioning at a ‘stably unstable’ level on a continuum from the classic neuroses to psychoses (Akiskal, 2004; Deltito et al., 2001; Kelleher and Cannon, 2014).

The second background hallmark to emerge from this research is the discriminant role of the normative personality trait, Extraversion. According to the general literature on the subject, this trait presents some degree of ambiguity. This finding may be related to impulsivity, a core feature of borderline pathology, and is likely to express the personality’s predisposition to the nature of the externalizing disorder (Eaton et al., 2011; Hyatt et al., 2019), at least in its specific relationship with bipolar spectrum. Some empirical data on borderline pathology also points in this direction and is associated with higher Extraversion: acute impulsivity and interpersonal problems (Hepp et al., 2016); higher prevalence of diagnostic criteria for impulsivity, avoiding abandonment, and inappropriate anger (Critchfield et al., 2008); antisocial behaviour and

Table 5

Summary of Logistic Regression Models for Predicting PID-5 Items (OR>1) that Differentiate between Borderline PD and the Bipolar Spectrum Disorders

	G1 <i>M</i> (SD)	G2 <i>M</i> (SD)	G3 <i>M</i> (SD)	B	Wald (χ^2)	<i>p</i>
Borderline PD vs. Major depressive disorder						
PID-5 (4) <i>I feel like I act totally on impulse</i>	1.40(1.05)	1.86(.95)	-	2.47	3.60	<.05*
PID-5 (5) <i>I often have ideas that are too unusual to explain to anyone</i>	1.37(1.11)	1.84(1.02)	-	3.10	4.04	<.05*
PID-5 (22) <i>I always do things on the spur of the moment</i>	1.34(1.02)	1.62(.92)	-	8.20	6.64	<.01*
PID-5 (39) <i>I have no limits when it comes to doing dangerous things</i>	.97(1.12)	1.33(1.08)	-	4.54	5.44	<.01*
PID-5 (63) <i>I do what other people tell me to do</i>	.87(.92)	1.08(.90)	-	9.14	6.99	<.01*
PID-5 (77) <i>Sometimes when I look at a familiar object, it's somehow like I'm seeing it for the first time</i>	.76(.93)	1.02(1.06)	-	5.55	6.05	<.01*
PID-5 (111) <i>I like standing out in a crowd</i>	1.08(.98)	1.63(1.05)	-	5.52	6.18	<.01*
PID-5 (114) <i>I'm better than almost everyone else</i>	.26(.59)	.62(.91)	-	9.43	7.95	<.01*
PID-5 (121) <i>I get stuck on things a lot</i>	1.42(.98)	1.73(1.00)	-	6.75	5.35	<.01*
PID-5 (138) <i>I never know where my emotions will go from moment to moment</i>	1.53(1.05)	1.73(.99)	-	4.21	6.23	<.01*
PID-5 (143) <i>I believe that some people can move things with their minds</i>	.63(1.00)	.94(1.03)	-	6.34	6.25	<.01*
PID-5 (213) <i>I often "zone out" and then suddenly come to and realize that a lot of time has passed</i>	1.11(1.10)	1.60(1.09)	-	3.27	4.45	<.05*
Borderline PD vs. Bipolar disorder						
PID-5 (27) <i>I often feel like nothing I do really matters</i>	-	1.60(1.01)	1.25(1.06)	3.76	4.07	<.05*
PID-5 (40) <i>To be honest, I'm just more important than other people</i>	-	1.19(1.09)	.97(1.15)	5.68	5.69	<.01*
PID-5 (50) <i>I worry a lot about being alone</i>	-	2.16(1.05)	1.80(1.05)	3.72	4.51	<.05*
PID-5 (104) <i>I often feel like a failure</i>	-	1.95(.85)	1.43(1.05)	6.52	5.13	<.01*
PID-5 (111) <i>I like standing out in a crowd</i>	-	1.63(1.05)	1.17(1.10)	6.80	6.13	<.01*
PID-5 (160) <i>I often forget to pay my bills</i>	-	.75(.82)	.55(.95)	4.60	4.85	<.01*
PID-5 (162) <i>I'm good at conning people</i>	-	1.00(1.08)	.38(.91)	7.93	5.21	<.01*
PID-5 (172) <i>I've been told more than once that I have a number of odd quirks or habits</i>	-	1.08(1.04)	.75(1.05)	6.40	5.34	<.01*
PID-5 (216) <i>I'm nasty and short to anybody who deserves it</i>	-	1.32(1.13)	.78(1.08)	6.69	4.89	<.01*

Note: * Two-tailed; B=logistic regression coefficient. OR=odds ratio. G1=Major depressive disorder group; G2=Borderline PD group; G3=Bipolar disorder group.

externalizing aggression (Lenzenweger et al., 2008); symptoms of exhibitionism, recklessness and mania, and traits related to externalizing psychopathology (Watson et al., 2019). Furthermore, a recent study based on normative and pathological personality traits, integrated in a large-scale structural analysis of psychiatric disorders, suggested the Extraversion trait as a risk factor specific to externalizing disorders (Rosenström et al., 2019).

The third hallmark in our results is the noteworthy differential data presented by Impulsivity and Depressivity DSM-5- related pathological traits in borderline PD through bipolar spectrum disorders, as underlying stable features. The findings report higher scores in the PID-5 Impulsivity trait, in the Disinhibition domain and its Risk taking facet and also in the Antagonism facet of Attention seeking among borderline patients compared to major depressive and bipolar individuals. Moreover, this pathological trait of Impulsivity carries the highest predictive value (OR: 22.35) in the differential diagnosis with major depressive disorder. On the other hand, there are no reported differences in the PID-5 Depressivity facet between the clinical groups, which most likely points to its transdiagnostic nature, although this pathological trait displayed the highest predictive value (OR: 34.95) in the differential diagnosis with bipolar disorder. The higher PID-5 and BSI values related to Hostility and Paranoid Ideation symptoms in borderline PD when compared to bipolar disorder are also interesting, however it should be noted that these values do not differ from those of the major depressive group. Thus, it may be said that a broad depressive endophenotype is present, whereby the depression spectrum is the basic link.

Affective lability and impulsivity appear to be overlapping dimensional features of borderline PD and bipolar disorders (Bayes et al., 2019; Henry et al., 2001; Peluso et al., 2007; Swann et al., 2008). Greater lability in terms of irritability/anger and anxiety and oscillation between depression and anxiety, but not in terms of depression and elation, has been associated with borderline PD (Bayes et al., 2019; Gunderson, 2010; Koenigsberg et al., 2002). There is evidence to support a relationship between impulsivity and depression or depressive episodes, euthymic periods, in addition to mania (Jakubczyk et al., 2012; Peluso et al., 2007; Swann et al., 2008), which is associated with behavioural risk (Swann et al., 2007). This raises the question as to the extent to which impulsivity in depressed individuals is related to the presence of subtle manic symptoms in mixed depressive states (Akiskal et al., 2005; Benazzi, 2006; Perugi et al., 2011), in so far as a component

of impulsivity appears to be intrinsic to the depressive state itself (Swann et al., 2008). Manic/hypomania symptoms appear to be a dimensional component of bipolar depressive episodes, and may reflect a combination of depression with higher trait impulsivity, potentially superimposed on the depressive syndrome (Swann et al., 2007). According to Peluso et al. (2007), most of the dimensions of impulsivity may be linked to a unipolar mood state and are probably a consequence of depressive symptoms. In a recent meta-analysis of genome-wide studies, one of the main results identified by (Coleman et al., 2020) was that depressive symptoms are both the unifying feature of mood disorders and the core of major depression.

The fourth hallmark to emerge from our explorations was, at the initial stage, the identification of the best discriminant models integrating the conjoint analysis of the DSM-5 personality disorder facets, FFM personality normative domains, and symptom-level psychopathology (Tables 2, 3). To classify borderline PD, in comparison with the first model that included only the DSM-5 domains and the aforementioned more complex model, the following was observed: the more complex model yielded a significant increase in R^2 ($p < .001$), accounting respectively for 44% and 49% additional explanation of the outcome variance for major depressive disorder and bipolar disorder. As if applying lenses with shorter focal lengths to widen the field of view, a finer-grained or multidimensional assessment, providing incremental screening and a more specified zoom psychopathology comprehension may be achieved.

Likewise, the exploratory analysis of the PID-5 items pointed to their potential discriminant infra-traits in self-reported assessment, as observed among the clinical groups under study, accounting for approximately 90% of the outcome variance. Moreover, it is interesting to note that all the items differ in the discriminant relationship between borderline PD and the other bipolar spectrum disorders, except the PID-5 111 item (Attention seeking facet) 'I like standing out in a crowd', which is common or core in these analyses.

4.2. Differentiating borderline PD and bipolar spectrum disorders

In addition to the afore-mentioned, regarding the discriminant predictors of borderline PD and major depressive/bipolar disorders, ten and seven respective illness-related traits and symptoms - differentiating variables were observed to arise (Fig. 1). Overall, the pathological traits

of Separation insecurity, Depressivity and Impulsivity are, in line with the literature on the DSM-5 dimensional model of the personality borderline PD algorithm, among the proposed core features of the disorder (Calvo et al., 2016; Fowler et al., 2019; Samuel et al., 2012). However, it should be noted that in this study, the cross-cutting PID-5 facet, namely Unusual beliefs & experiences, emerged as trait indicating schizotypal PD (Watters et al., 2019). Other comprehensive general data to emerge from the study was the evidence of lower Agreeableness through group comparisons, probably exhibiting this normative personality trait, a marker of the Antagonism maladaptive variant, reflecting previous evidence linked to borderline PD (Fowler et al., 2019).

With specific regard to the relationship with major depressive disorder, the discriminant pathological traits of borderline PD, not foreseen in the dimensional personality disorders literature, are Deceitfulness, associated with antisocial PD (Watters et al., 2019) and Intimacy avoidance expected with schizotypal PD type (Samuel et al., 2012). Furthermore, a possible connection may be established between Obsession-compulsion symptoms and the normative trait of Conscientiousness, as evidence for the obsessive-compulsive type (Samuel and Widiger, 2011). On the other hand, with specific regard to the relationship with bipolar disorder, the discriminant PID-5 trait of borderline PD, not foreseen in the literature, is Perseveration, which is intrinsically related to obsessive-compulsive PD (Samuel et al., 2012; Watters et al., 2019). When there is a combination of this trait with our data on Obsession-compulsion symptoms and evidence of the normative trait Neuroticism, there may be grounds for anakastia to be considered.

This study presents a number of limitations, such as the small size of the samples, a lack of data on the participants' prior clinical history and current treatment, the fact that mood states and related symptoms were not assessed and bipolar disorder was assigned without the specification of subgroups. Use of the full version of the NEO may be promising, for example, in the detection of the Extraversion facet(s) that may more specifically differentiate borderline PD. Future research should focus on the efficacy of the DSM-5 pathological traits and the related PID-5 items as potential personality predictors to differentiate borderline PD from other overlapping disorders. An important question for future studies would be to determine the DSM-5 dimensional personality-based nature of depression and psychotic phenomena in borderline PD, through comparisons with bipolar spectrum subgroups.

Possibly cross-sectional design is a major limitation, while in particular borderline and bipolar spectrum disorders are primarily characterized by a fluctuating long-term course of symptoms during the life-span, thereby possibly resulting in false-positive diagnoses, exemplifying how similarities might result in diagnostic error. However, in this study, the comorbidity of diagnoses was eliminated, which may have facilitated the minimization of errors, recalling also data from the research of Zimmerman and Morgan, (2013), where while there are considerable comorbidity rates between borderline PD and bipolar disorders, each disorder is nonetheless diagnosed in the absence of the other in the vast majority of cases (80% to 90%). Furthermore, our results may also represent an underestimate, as those with the most severe traits or clinical outcomes did not complete the assessment or did not participate voluntarily in the study. On the other hand, this design does not allow for conclusions to be drawn on temporal and causal relationships among the psychiatric diagnoses in terms of symptom outcomes, thus having a potential to confound issues such as state, trait and scar effects, as the mental states of inpatients and outpatients are not directly assessed either at the time of the self-report evaluation.

We also make some considerations about a partial limitation to do with using the self-report with our psychiatric samples. Stanton et al. (2020) recently identified that using measures such as the PID-5 self-report is still often more efficient than following a DSM-based approach, moreover, results suggest that DSM-5 personality pathology domains appear highly stable and consistent over time, in the extent to which individual PID-5 ratings of maladaptive personality were stable across

multiple presentations in a clinically acute setting (Rodríguez-Seijas et al., 2020). Also, the generalizability of the PID-5's psychometric features has been demonstrated for both clinical and nonclinical samples, supporting strong measurement invariance across the groups (Bach et al., 2018). The accuracy of the self-report DSM-5 personality pathology is evidenced in borderline PD (Bach et al., 2016; Calvo et al., 2016; Fowler et al., 2018; Pires et al., 2021; Spring et al., 2021), in bipolar/affective disorders (Fowler et al., 2017; Gutiérrez et al., 2021; Heath et al., 2018; Pires et al., 2021; Watters et al., 2019), and also in self-report clinical utility in differentiating the diagnoses of bipolar disorder and borderline PD (Fowler et al., 2019). Although there is no consensus with regard to the DSM-5 assessment that diagnostic interviews are more valid than self-reports (Hopwood et al., 2008), moreover the combined use of these methods are deemed optimal for assessing functional outcomes or criteria in borderline PD (Hopwood et al., 2008), we also propose the use of interview assessments in future research.

We consider reflecting that our study establishes a close dialogue with the proposed cross-cutting solution emerging in the form of a quantitative nosology, an empirically derived dimensional classification system based on a continuum organization of psychopathology, grounded in maladaptive personality traits and symptoms features (DeYoung et al., 2020; Forbes et al., 2021; Wendt et al., 2019; Widiger et al., 2019) - although in addition or in a complementary manner, also suggesting the importance of hybrid dimensional-categorical approaches to borderline-bipolar-affective clinical dialogues (Fowler et al., 2019; Miller et al., 2018; Saunders et al., 2020).

Since our research addresses a challenging golden-age problem - such as personality disorder and bipolar/affective clinical disorders - the contemporary mainstream that suggests the relationship of personality to personality disorder as largely a spectrum relationship is highlighted, as is the view that although personality has a fundamental role in pre-dating and contributing to the development of different forms of psychopathology (Widiger et al., 2019), personality pathological traits are constituent parts of the spectrum of psychiatric disorders that intervene in the expression of mental health conditions (Tyrer, 2017; Widiger et al., 2019). Thus, and given the phenomenological overlap across borderline and bipolar spectrum psychopathology, and the considerable support suggesting that subthreshold bipolar psychopathology precedes the development of clinical bipolar or affective disorders (Bassett, 2012; Walsh et al., 2015), in the differential analysis carried out in this article the DSM-5 alternative model Criteria B trait constellation was the focus. However, as personality is less prominent in the overall psychopathology of affective disorders (Skodol et al., 2010; Zimmerman and Morgan, 2013), within a different comparative scope future studies may also analyze the presence of personality impairment (Criterion A), namely whether Criterion A distinguishes personality psychopathology from Axis I symptoms (Sleep et al., 2019); improving incremental assessment utility based on the two main components of the DSM-5 AMPD (Sleep et al., 2019), shedding light upon the borderline-bipolar discriminative features, in order to advance.

We believe our results further support the existence of broader underlying personality dimensions of core psychopathological processes, enabling differential heuristics based on the relations of personality, abnormal traits and symptoms, in addition to the cleavage state-trait artifacts. It is our aim to offer a contribution to a differential phenomenological diagnosis between these psychiatric disorders, possibly part of a larger open debate on the model of personality diatheses, as proposed by Tyrer (2007, 2011, 2017).

Findings support the DSM-5 pathological traits as differentiating borderline PD through bipolar spectrum, and reinforcing the joint use of symptom-related pathological functioning and normal-range personality traits. It emerges as a hypothetical and open ended indirect interpretation that, alongside bipolar spectrum, borderline pathology sheds light upon an overlap along the depressive and schizoaffective/schizophrenia spectra, representing a borderland space at a crossroads with

the psychopathology of a meta-spectrum.

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6. Contributors

JHC designed the study, wrote the protocol, managed the literature searches, supervised the collection and evaluation of samples, performed the data analysis and interpretation, wrote the first draft of the manuscript; BG collaborated in the study design, project supervision and provided critical revisions; CM supervised the statistical analysis and data interpretation, provided critical revisions; MP, JGM, and JG conducted and supervised the research process, provision of resources and provided critical revisions; RP collaborated in the study design, project supervision and provided critical revisions. All the authors contributed to and have approved the final manuscript.

Declaration of Conflicting Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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