



## Research Paper

## Insight's level in borderline personality disorder, questioning consciousness

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## ABSTRACT

**Objective:** Borderline Personality disorder (BPD) stands as a hard to treat the disorder. We investigate the insight level differences between BPD patient and results from the literature regarding other hard to treat disorders - schizophrenia (SZD) and bipolar disorder (BD). As insight is related to symptomatology, we considered its two aspects: cognitive and clinical.

**Method:** We recruited one hundred and one patients suffering from BPD from DSM 5 Criteria (Mean age = 35.90 years), measured their clinical insight with the Scale to Assess unawareness of Mental disorder and the cognitive insight with the Beck Cognitive insight scale.

**Results:** compared to the literature references BPD patients demonstrated the same BCIS scores as BD and SZD patients but showed better scores than SZD however, equal to BD for SUMD. BCIS score was related to symptomatology level.

**Limitations:** BCIS and SUMD scales were constructed to assess insight in schizophrenia so we need to compare the results with another insight scale.

**Conclusions:** BPD has a good insight level, like BD's. Clinical implications of results and their impact on treatment orientation are discussed.

## 1. Introduction

Insight is a multidimensional concept strongly involved in treatment compliance (Amador et al., 1994; Beck et al., 2011; Sendt et al., 2015). Clinical insight is defined as the capacity to admit one's illness, the importance of treatment adherence and the right symptoms 'attribution (David, 1990; Beck et al., 2004). Cognitive insight is defined as the capacity to criticize erroneous beliefs about yourself (Beck et al., 2004). An important insight's literature exists, mainly in Schizophrenic (SZD) or Bipolar Disorders (BD) (for review see: Tham et al., 2016; García et al., 2016; Belvederi et al., 2015; Leclerc et al., 2013, Velligan et al., 2017). In SZD, there is no consensus concerning their links with symptomatology. Mintz et al. (2003) reported conflictual studies, some showing an association between insight and global, positive, negative symptoms or suicide risk while others do not (for review see: Amador et al., 1996; Crumlish et al., 2005; Schwartz and Smith, 2004; Kao and Liu, 2011; Palmer et al., 2015; Yen et al., 2008; Acosta et al., 2012; De Assis da Silva et al., 2017). Nevertheless, several studies show the importance of the quality of the insight in the adherence to treatment. A meta-analysis by Czobor et al. (2015) on the factors of non-adherence to treatment in schizophrenia demonstrated that the level of insight was an essential predictor of treatment continuity (OR: 1.420, CI95%:

[1.264–1.596];  $p < 0.0001$ ). In bipolar disorders, lack of therapeutic adherence is also shown to be closely related to the quality of insight in patients. (Sajatovic et al., 2009). More precisely, De Assis Da Silva et al. (2015) found that the manic phase was associated with a decrease in the quality of insight in patients and that the lack of insight was linked to the mood changes, speech-thought structure, and agitation in bipolar patients (De Assis Da Silva et al., 2016). García et al. (2016) indicated that insight should be considered as a therapeutic target to promote patient adherence to treatment in these two mental disorders.

Personality disorders are also characterized by poor adherence to treatment and are considered to be significant risk factors with respect to the high number of hospitalizations of patients (Witt et al., 2019). More specially, borderline personality disorder is an important risk of relapse (OR 3.47, 95% CI 1.84–6.53; PAR 42.4%, for review see Witt et al., 2019; Benjamin, 1996; Evans et al., 2017). Yet to our knowledge, no study has evaluated the quality of insight in personality disorders and more specifically in borderline personality disorder. Nevertheless, Martin et al. (2019) showed that the level of insight was closely related to the symptoms of patients. The authors demonstrated that the level of insight varied according to the type of emotion (positive or negative) at the origin of the impulsive behaviors in the patients. More specifically, positive valence impulsive behaviors were statistically negatively correlated with insight level while negative valence impulsive behaviors

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were statistically positively correlated with insight level. According to the authors, the study of the dynamics of insight in borderline patients would allow a better understanding of the disorder but also a more effective management of the symptoms. The aim of the study is (i) to investigate the insight level in BPD and (ii) to assess these links with symptomatology.

## 2. Materials and methods

### 2.1. Participants

One hundred and one BPD patients (Mean age = 35.90 years, 11 male and 90 female) diagnosed with DSM 5 criteria (American Psychiatric Association, 2013), by both psychiatrist and clinical psychologist, participated. Patients were stable according to their psychiatrist and had no hospitalizations or changes in housing the last month. Participants were recruited from a Psychiatric Hospital and a daycare center in a Psychiatric Clinic in France. Exclusion criteria were: (a) known neurological disease, (b) developmental disability. Participants were proficient in the French language, had a normal or corrected-to-normal vision and were naïve as to the purpose of the study. The present protocol was accepted by the Committee of Ethics referring to Helsinki's Ethics protocols. Participants gave written consent. We applied a pencil-paper protocol for 35 min to 45 min.

### 2.2. Borderline personality questionnaire (BPQ) (Poreh et al., 2006)

We assessed BPD traits using the Borderline Personality Questionnaire (BPQ) French Version (Cronbach's  $\alpha = 0.93$ ; Bianchi et al., 2018). This is an 80-items true/false self-report measure for borderline personality traits. Subscales score impulsivity, affective instability, abandonment, relationships, self-image, suicide/self-mutilation, emptiness, intense anger, and quasi-psychotic states. Chanen et al. (2008) then state that the best cut point was around 56 points. In this study we will consider a cut point at 52 points, to discriminate the patient's superior to our sample mean of BPQ score as disordered traits.

Scale to assess Unawareness of Mental Disorder (SUMD) (Amador et al., 1994). We used the French version (Raffard et al., 2010) (Cronbach's  $\alpha = 0.75$ ). The SUMD assesses 'lack of insight, i.e. the higher the score (ranging from 1="conscious" to 5="non-conscious", 0="non-adequate"), the poorer the insight. It provides scores on three insight dimensions: mental illness (S1), needs for treatment (S2) and social consequences (S3). The SUMD assesses clinical insight. We extracted a global score (SUMD), adding S1 S2 and S3 scores.

Beck Cognitive Insight Scale (BCIS) (Beck et al., 2004). Favrod et al. (2008) provided the French translation (Cronbach's  $\alpha = 0.7$ ). BCIS has two subscales: Self-reflectiveness (SR; 9 items) and Self-Certainty (SC; 6 items). They respectively assess self-consciousness (SR) and certainty about patient's own judgments and beliefs (SC). These 15 items are rated on a 4-point Likert scale (0 = do not agree at all to 3 = agree completely). BCIS score is calculated from SR score minus SC score (BCIS). Good insight levels corresponding to 8 and up 'scores.

### 2.3. Statistical analysis

As the variables were not normally distributed, Spearman nonparametric correlations were used. We applied multiple linear regression to estimate the shared covariance between BCIS, SUMD and BPQ. The significance level was  $p < .05$ .

## 3. Results

All means and SD for BPQ, SUMD and BCIS scores are presented in Table 1.

**Table 1**  
Descriptive analysis.

	Mean	SD
Age	35.90	12.71
Time since first Diagnostic (in months)	29.33	56.83
SR	15.56	4.458
SC	7.69	3.767
BCIS total	7.87	5598
BPQ total	52,01	11.470
SUMD total	5.424	2.405
S1	1.706	1095
S2	2.109	1.313
S3	1.607	1.099

Note: SR: Self-reflectiveness score from BCIS; SC: Self-certainty score from BCIS; BCIS: Cognitive Insight global score; BPQ: Borderline Personality Disorder questionnaire score; SUMD: Scale to Assess Unawareness of mental disorder summed score S1+S2+S3; SUMD S1: Mental illness; S2: Needs for treatment; S3: Social consequences.

### 3.1. Correlation and regression analysis

We found a significant correlation between insight measures. SR is negatively correlated to S1 ( $r = -0.208$ ;  $p = .049$ ) showing a reverse effect of cognitive insight on clinical insight. SR is correlated positively to BPQ score ( $r = 0.437$ ;  $p = .0001$ ). The correlations between the clinical and cognitive dimensions of insight and the level of symptomatology are presented in Table 2.

To explore the links between insight and symptomatology, we ran a regression analysis to predict the symptomatology level from insight dimensions (see Table 3). Only the BCIS score predicted BPQ total score as we found a significant impact of SR score and then SC score. SR dimensions stood as a predictor -among all insight subdimension- for Impulsivity, Self Image, Suicide, Emptiness, Intense Anger and Quasi psychotic states from BPQ. Self Certainty also affects the prediction of Quasi Psychotic States and S2 dimension was the only relevant SUMD dimension appearing with its predictive effect on Emptiness trait (See Table 4).

We dichotomize two groups regarding their level of symptomatology (HighBPQ:  $n = 52$ ; LowBPQ:  $n = 49$ ) based on our clinical impression that some patients were having access to high insight level. For the HighBPQ group, no significant correlation exists between any insight and symptomatology level. In the LowBPQ group, BPQ score was correlated to SR ( $p = .007$ ;  $r = 0.398$ ), BCIS ( $p = .028$ ;  $r = 0.331$ ) and S1 ( $p = .021$ ;  $r = -0.367$ ).

## 4. Discussion

The main goal of this study was to investigate insight in borderline personality disorder. We used the Scale to assess Unawareness of Mental Disorder to assess clinical insight and the Beck Cognitive Insight Scale to assess cognitive insight. These two questionnaires are conventionally used to assess insight in schizophrenia and in bipolar disorder. Our results make it possible to position the level of insight of borderline patients according to the literature concerning these two clinical entities (see Tables 5 and 6).

The comparison of our results compared to the data in the literature shows that borderline patients have a significantly better score in the self-reflectiveness dimension of BCIS compared to schizophrenic patients and not different with bipolar patients. Self-certainty dimension was no different between borderline, schizophrenic and bipolar patients. Concerning the three dimensions of clinical insight (S1: Mental illness; S2: Needs for treatment; S3: Social consequences), our results show significant differences between borderline patients and schizophrenic patients but also between borderline patients and bipolar patients. More specifically, borderline patients have better clinical insight than schizophrenic patients and bipolar patients have greater clinical insight

**Table 2**  
Correlation between cognitive and clinical insight and clinical variables.

	Impulsivity	Affect Instability	Abandon	Relationship Issues	Self Image	Suicide Self-mutilation	Emptiness	Intense Anger	Quasi Psychotic	BPQ total	Age
SR	<b>.298**</b>	<b>.279**</b>	.173	.140	<b>.318**</b>	<b>.260*</b>	.177	<b>.328**</b>	<b>.263*</b>	<b>.428**</b>	<b>-.250*</b>
SC	-.035	.065	<b>.229*</b>	<b>.267**</b>	-.033	.055	.077	.144	.200	.191	.188
SUMD	-.078	-.122	-.157	-.151	.018	-.008	.085	.070	-.031	-.072	.120
s1	-.117	-.180	-.112	-.123	-.156	.027	-.100	-.008	-.008	-.138	.097
s2	.102	-.143	-.125	-.074	<b>.240*</b>	-.093	.227*	.099	-.111	.026	.090
s3	-.122	-.032	-.057	-.169	-.097	.021	.050	-.020	.031	-.094	.193

Note: \*\*= $p > .005$ .

\*= $p < .05$ ; SR: Self-reflectiveness score from BCIS; SC: Self-certainty score from BCIS; BCIS: Cognitive Insight global score; SUMD: Scale to Assess Unawareness of mental disorder summed score S1+S2+S3; S1: Mental illness; SUMD S2: Needs for treatment; S3: Social consequences, BPQ: Borderline Personality Questionnaire total score.

**Table 3**  
Predicting BPQ total score from insight dimensions.

	Non-Standardized coefficients		Standardized coefficients
	B	SE	Bêta
Model	25.487	6.885	
SR	1.370	0.310	<b>0.459***</b>
SC	0.692	0.325	<b>0.208*</b>
S1	-0.509	1.141	-0.048
S2	0.089	0.925	0.010
S3	0.076	1.104	0.007
R <sup>2</sup>		0.256	
F		4.497	

Note :\*\*\*= $p < .001$ .

\*= $p < .05$ ; SR: Self-reflectiveness score from BCIS; SC: Self-certainty score from BCIS; SUMD S1: Mental illness; S2: Needs for treatment; S3: Social consequences.

**Table 4.**  
Regressions of BPQ dimensions from Age and Insight Dimensions (S1, S2, S3, SR, SC).

	Significative predicting factor	$\beta$	R <sup>2</sup> / F
Impulsivity	SR*	0,271	,085/1,027
Self Image	SR**	0,331	,215/3,010
Suicide	SR*	0,25	,109/1,346
Emptiness	SR**	0,247	,194/2,654
	S2**	0,245	
Intense Anger	SR**	0,341	,166/2,189
Quasi Psychotic	SR*	0,324	,150/1,935
	SC*	0,253	

Note :\*\*\*= $p < .001$  \*\*= $p > .005$ , \*= $p < .05$ ; SR: Self-reflectiveness score from BCIS; SC: Self-certainty score from BCIS; S2: Score to question 2 in SUMD.

than borderline patients. These results show that the level of insight varies according to the clinical disorders and that certain dimensions allow them to be differentiated. The decrease in self-reflectiveness dimension in schizophrenia can be explained by a significant impairment of cognitive functioning in this pathology (Van Camp et al., 2016). For the first time, our results show that borderline patients have an identical

score to schizophrenic patients and bipolar patients regarding the Self-Certainty dimension.

‘Self-Certainty’ which describes the certainty and confidence in one’s own beliefs, is the dimension closely related to non-adherence to treatment in schizophrenia and a specific management of beliefs makes it possible to increase the quality of treatment in patients (Penzenstadler et al., 2019). It therefore seems essential to take into account the self-certainty of borderline patients in order to promote the effect of treatment. Our results also show positive correlations between the self-reflectiveness and self-certainty dimensions of BCIS and borderline symptomatology and linear regression analysis demonstrates the causal role of cognitive insight in the emergence and maintenance of symptomatology. Regarding clinical insight, our results do not show any correlation with borderline symptoms. All of these results highlight that cognitive insight should be considered a therapeutic target in the management of borderline patients. Psychoeducation a treatment intervention and could help to increase insight (Zanarini and Frankenberg, 2008; Zanarini et al., 2018) but this hypothesis must be verified.

The dynamic aspect of insight level should also be discussed: Martin et al. (2019) demonstrated that the emotional valence of impulsive behaviors (positive or negative) can increase or decrease the quality of insight in patients. But these results only concern clinical insight. However, different factors such as emotional variables or socio-demographic variables, such as age, can have an impact on the quality of insight in borderline patients. Several studies already revealed different profiles of BPD questioning the unicity of this disorder by proposing several profiles (Oldham 2002; Rebok et al., 2015). In the ICD-10 (World Health Organization, 1993), borderline-like personality disorder has been split into two categories: the impulsive type and the “borderline” type (F60.3). Whatsoever, therapies need to be careful to assess the insight levels to know how to work with patients without encouraging symptomatology. The present study possesses limitations. We did not evaluate metacognition in our sample, yet metacognition is a predictor of change in BPD (Maillard et al., 2017) which could also play a role in the quality of insight in patients. SUMD and BCIS scales were not specifically designed for BPD but are thoroughly used in awareness research. Third, comparisons of our results with the literature may have been influenced due to possible socio-demographic differences between population samples.

**Table 5**  
Comparison of insight (cognitive and clinical) scores between borderline patients and schizophrenia patients from the literature.

	Borderline patients (n = 101) Mean SD	Buchy’s study (SZD) Mean SD	Statistics r <sub>yt</sub>	Martin’s study (SZD) Mean SD	Statistics r <sub>yt</sub>	Raffard’s study (SZD) Mean SD	Statistics r <sub>yt</sub>	Amador’s study (SZD) Mean SD	Statistics r <sub>yt</sub>
BCIS SR	15.56 4.45	11.60 4.60	<b>0.40</b>	13.22 4.75	<b>0.246</b>	-	-	-	-
BCIS SC	7.69 3.76	8 2.70	0.047	8.31 3.48	0.085	-	-	-	-
SUMD S1	1.70 1.09	-	-	-	-	3.34 1.52	<b>0.579</b>	3.14 1.60	<b>0.463</b>
SUMD S2	2.11 1.31	-	-	-	-	3.06 1.54	<b>0.315</b>	2.48 1.40	<b>0.135</b>
SUMD S3	1.61 1.10	-	-	-	-	3.44 1.57	<b>0.559</b>	3.08 1.80	<b>0.442</b>

BCIS: Beck Cognitive Insight Scale; SR: Self-reflectiveness; SC: Self-Certainty; SUMD: Scale to assess Unawareness of Mental Disorder, SUMD S1: Mental illness; SUMD S2: Needs for treatment; S3: Social consequences; Buchy et al. (2015), Martin et al. (2010), Raffard et al. (2010), Amador et al. (1996).

**Table 6**

Comparison of insight (cognitive and clinical) scores between borderline patients and bipolar patients from the literature.

	Borderline patients (n = 101)Mean SD	Van Camp study (BD)Mean SD	Statistics $r_{jt}$	Bressy's study (BD)Mean SD	Statistics $r_{jt}$
BCIS SR	15.56 4.45	16.32 4.44	0.085	–	–
BCIS SC	7.69 3.76	7.88 3.45	0.026	–	–
SUMD S1	1.70 1.09	–	–	1.30 0.40	<b>0.239</b>
SUMD S2	2.11 1.31	–	–	1.70 1.60	<b>0.138</b>
SUMD S3	1.61 1.10	–	–	1.40 0.50	<b>0.121</b>

BCIS: Beck Cognitive Insight Scale; SR: Self-reflectiveness; SC: Self-Certainty; SUMD: Scale to assess Unawareness of Mental Disorder, SUMD S1: Mental illness; SUMD S2: Needs for treatment; S3: Social consequences; Van Camp et al. (2016); Bressi et al. (2012).

In conclusion, our results revealed that insight level (clinical and cognitive) is a complex phenomenon in patients with BPD. These results have several implications, such as the need to systematize insight's assessment in personality disorders, to provide more effective cares and target the right therapeutic approach.

### Declaration of Competing Interest

The authors declare having no conflict of interest.

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### Author Contribution Statement

SM, made substantial contributions to the conception and design of the work; the acquisition, analysis, interpretation of data; drafted the work, revised it critically for important intellectual content; approved the version to be published; and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

JDM made substantial contributions to the conception of the work revised it critically for important intellectual content; approved the version to be published; and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

PG made substantial contributions to the conception, revised it critically for important intellectual content; approved the version to be published; and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

### Contribution to the field statement

Insight level is heavily related to clinical outcomes in a wide range of disorder and among them, in BD and SZ disorder, two hard to treat disorders. Nowadays, in psychology and psychiatry, increased interest has been put on BPD issues as this is one of the hard to treat personality disorders we face in our clinical practices. This research contributes to open a way to new research considering insight capabilities in BPD. Most of the research regarding personality disorder is focusing on treatment and protocols but tend to elucidate the basic component of treatment adherence, insight level. This comparison to the literature also makes possible a turn on classical view (and stigma) of BPD. Moreover, this research opens a way to new therapy fields based on insight and self-reflectiveness as it's starting to be the case since 2016 with the flourishing of Insight and metacognitive therapies for BPD.

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None.

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