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Borderline personality disorder diagnosis: concordance between clinical and semistructured interview evaluation

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Background and objective. No study in Spain has analyzed the difference in frequencies of the diagnoses made based on clinical evaluation and semistructured interview in borderline personality disorder diagnosis (BPD). This present study aims to analyze diagnostic concordance in BPD patients previously diagnosed based on clinical evaluations using clinical semistructured interviews for DSM-IV axis II (SCID-II), and to analyze if there are differences in the distribution of frequencies of the psychiatry disorders in the diagnostic concordance group and the non-diagnostic concordance one.

Material and method. The study was carried out with 146 patients referred to the Borderline Personality Disorder Program of the Psychiatric Department at the Hospital Universitari Vall d'Hebron during its first year of service. A descriptive study was designed to analyze diagnostic concordance between previous BPD clinical evaluation and semistructured interview SCID-II administered by clinical experienced interviewers.

Results. Diagnostic concordance was not observed in 30% of the final study patients. The results indicated that all the study patients presented a great number of psychiatry disorders. There were significant differences between the diagnostic concordance group and the non-diagnostic concordance one. A higher number of personality disorder ($Z = 3.36$; $p = 0.01$) and anxiety disorder ($Z = 3.04$; $p = 0.002$) was observed in the diagnostic concordance group.

Conclusions. BPD was diagnosed 30% less when using semistructured interviews than with clinical evaluations.

Key words:
Borderline personality disorder. Diagnosis. Semistructured interview. Clinical evaluations.

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Diagnóstico del trastorno límite de la personalidad: concordancia entre el juicio clínico y la entrevista semiestructurada

Fundamento y objetivo. Ningún estudio en España ha analizado la diferencia en la frecuencia del diagnóstico realizada a partir del juicio clínico y del uso de la entrevista semiestructurada en el diagnóstico del trastorno límite de la personalidad (TLP). Los objetivos del presente trabajo son: estudiar la concordancia diagnóstica del TLP en pacientes previamente diagnosticados a partir del juicio clínico mediante el uso de la entrevista clínica semiestructurada para el eje II del DSM-IV (SCID-II) y analizar si existen diferencias en la distribución de frecuencias de los trastornos psiquiátricos en función de la observación o no de concordancia diagnóstica.

Material y método. En el estudio participaron 146 pacientes derivados al Programa del Trastorno Límite de Personalidad del Servicio de Psiquiatría del Hospital Universitari Vall d'Hebron durante su primer año de funcionamiento. Se realizó un estudio descriptivo de la concordancia diagnóstica del trastorno mediante la utilización de la SCID-II por profesionales con experiencia en su uso en pacientes previamente diagnosticados a partir del juicio clínico.

Resultados. No se observó concordancia diagnóstica en el 30% de los pacientes incluidos en el estudio. Los resultados muestran un elevado número de trastornos en todos los pacientes en el momento del diagnóstico. Se observa un mayor número de diagnósticos de trastornos de personalidad ($Z = 3,36$; $p = 0,01$) y de trastornos de ansiedad ($Z = 3,04$; $p = 0,002$) en el grupo de concordancia diagnóstica que en el grupo de no concordancia diagnóstica.

Conclusiones. Mediante el uso de entrevistas semiestructuradas se observa un 30% menos de diagnósticos de TLP que mediante el juicio clínico.

Palabras clave:
Trastorno límite de la personalidad. Diagnóstico. Entrevista semiestructurada. Juicio clínico.

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INTRODUCTION

Borderline personality disorder (BPD) is a serious disorder characterized by a long-lasting pattern of instability in the regulation of emotions, impulse control, interpersonal relationships and self-image¹. This affects approximately 2% of the general population and is the most common disorder in the clinical settings. It is observed in 10% of out-patients and 20% of in-patients²⁻⁴. BPD is more frequent in women than in men, the epidemiological studies indicating a 7:3 ratio, respectively^{2,4}. This disorder generates a severe psychosocial deficit⁵ as well as high mortality due to suicide. A total of 10% of patients diagnosed of BPD die from suicide, the suicide rate being 50 times greater than that observed in the general population⁶.

These patients have one or more comorbid disorders on diagnosis on both axes I and II⁷. Epidemiological studies have demonstrated comorbidities on axis I of between 41%-83% with the major depressive disorder (MDD), 12%-39% with dysthymia, 10%-20% with bipolar disorder, 65%-66% with substance related ones (SRD), 46%-56% with post-traumatic stress disorder (PTSD), 23%-47% with social phobia, 16%-25% with obsessive-compulsive disorder, 31%-48% with anxiety attack, 29%-53% with some eating disorder and 25%-44% with attention deficit and hyperactivity disorder⁷⁻¹⁴. The most frequent comorbid diagnoses on axis I are personality avoidance disorder (PAD), personality dependent disorder (PDD) and personality paranoid disorder (PPD) with a prevalence between 43%-47%, 16%-51% and 14%-30%, respectively¹²⁻¹⁴.

Given the therapeutic complexity of BPD, the diagnosis of the disorder and its possible comorbidities should be done in depth and as soon as possible in the course of the disease, since the variables such as early age of diagnosis, absence of cluster C comorbidity have been shown to be good predictors of the disorder remission¹⁵.

At present in the research field, questionnaires or semi-structured interviews designed to measure all of the DSM-IV personality disorders are used. Inter-rater and test-retest reliability of BPD, observed with the use of these instruments, is normally better than that obtained by clinical judgment alone. However, it is also true that the reliability of a good diagnosis based more on training and experience of the evaluator in the use of the interview than in the interview itself¹⁶.

Because of the health care burden and limited time for each visit available in the Spanish healthcare system, the use of semi-structured interviews in the psychiatric setting and in primary care is limited, since these require much time to apply. This situation makes it necessary for the professionals to base their diagnosis on their clinical judgment, with the possibility that the high presence of comorbid disease of some patients will confuse the

BPD diagnosis and generate an elevated number of false positives.

Several epidemiological studies have analyzed the prevalence of personality disorders in different samples^{12,17,27}. The primary difficulties found are the characteristics of the samples of each study evaluation procedure used in each one of them. However, few studies have focused on analyzing the diagnostic differences based on the method used^{24,25}. They have only focused on the study of the differences in BPD diagnosis when meaningful judgment and semi structured interviews are used²⁵.

The Zimmerman and Mattia study (1999) indicates that the percentage of BPD diagnoses conducted using a clinical evaluation and those conducted using semistructured interviews differs. The authors observed that the use of semi-structured interviews generates a greater number of diagnoses. However, when the clinicians were informed about the diagnoses obtained with semistructured interviews, they diagnosed it more often²⁵.

Up to now in Spain, no studies have analyzed concordance between BPD diagnosis made using clinical judgment and that of the semistructured interviews.

Two goals have been established in this work. The first one is to analyze diagnostic concordance of BPD, comparing previous clinical evaluation of BPD or probably BPD with the evaluation made using the semistructured clinical interview for DSM-IV axis II disorders (SCID-II) in patients referred to the BPD program of the Psychiatry Department of the University Hospital of Vall d'Hebron during its first year open. The second purpose aims to study if there are differences in the distribution of the frequencies of psychiatric disorders based on the observation or not of diagnostic concordance of BPD.

MATERIAL AND METHODS

Patients

A total of 146 patients referred to the BPD program of the Psychiatry Department of the University Hospital of d'Hebron during the first year that it was functioning participated for evaluation, differential diagnosis and, when there was diagnostic confirmation, therapeutic approach. Inclusion criteria used were: being between 18 and 50 years of age, having no mental disorder or other organic disorders that could give a better explanation to the psychiatric symptom, not be diagnosed of schizophrenia, bipolar disorder or substance dependence disorder at present and have a previous diagnosis of B or probable B, justified in a referral clinical report in which no semistructured interview was used as an evaluation method.

All the patients included in the study were duly informed and gave their written consent to participate in the study.

Procedure

Each patient was interviewed during three 60 minute long sessions. The time between each interview was 1 week.

During the first session, MFV made a psychiatric interview in order to determine if the patients fulfilled the enrolment criteria. Screening based on the evaluation of the BPD criteria according to the SDM-IV was performed.

After, all the patients were evaluated by clinicians with experience in the use of semistructured interviews (JL MC, LAC and OAP) in two different sessions. In the first one, the Semistructured Clinical Interview for DSM-IV Axis II disorders²⁸ (SCID-II) was administered. In the second one, the structured Clinical Interview for DSM-IV Axis I Disorders²⁹ (SCID-I) was performed. Twenty interviews out of all the evaluations were recorded to analyze inter-rater reliability. Reliability between good and excellent for the axis II disorders ($\kappa=0.71-0.91$), excellent for antisocial personality disorder ($\kappa=1.00$) and good for axis I disorders ($\kappa>0.73$) was observed. Presence of BPD was confirmed when there was agreement between the evaluation made by the clinician in the first interview and the diagnosis obtained by the SCID-II.

A total of 35.6% (53) of the sample of patients were excluded because they did not fulfill the enrolment criteria or had not signed the informed consent. Of these 53 patients, 66.04% (35) of the subjects were excluded because they did not have a previous clinical report with the diagnosis or suspicion of BPD, 9.43% (5) because there was no diagnostic agreement between the first and second interview and the remaining 24.53% (13) because they did not fulfill other enrolment criteria.

Finally, the study sample was made up of 93 patients. No significant differences were observed in the sociodemographic variables of the patients excluded and those who participated in the study, except for the gender variable ($\chi^2=11.12$; $gl=1$; $p=0.001$), observing a greater frequency of women among the study participants.

Statistical analysis

The differences in the sociodemographic variables between both groups, those where diagnostic congruence was observed and those where it was not (diagnostic incongruence group) were analyzed using non-parametric tests, the Mann Whitney U test for ordinal variables and the chi square test for nominal variables. The age variable, as it had a normal distribution in both the diagnostic incongruence group ($n=28$) and in the diagnostic congruence group ($n=65$) according to the Kolmogorov-Smirnov test ($Z=1.28$; $p=0.17$ and $Z=1.03$; $p=0.24$ respectively) was analyzed with the Student's t test. Since the total number of disorders diagnosed in each group did not have a normal distribution, the Mann Whit-

y's U non-parametric test was used. The percentage of each one of the specific disorders fulfilled by the patients of each group was studied using the chi square test.

RESULTS

The sociodemographic characteristics of the 93 patients who participated in the study can be observed in table 1. The sample was mainly formed by women (71%), with a mean age of 24.88 years ($SD=6.20$), single (81.7%) at the time of the evaluation and basic educational level of 51.6% (primary school graduate) (table 1). The most frequent axis II disorders were paranoid personality disorder (PPD), paranoid schizoid disorder (PSD) and depressive personality disorder (DPD), these being observed in 32.3%, 26.9% and 24.7% of the cases, respectively (table 2). In regards to axis I disorders, the most frequent were major depressive disorder (MDD) (48.4%), cannabis use disorder (46.2%), panic disorder without agoraphobia (41.9%) and cocaine use disorder (29.0%) (table 2). Furthermore, it was observed that 72.8% of the patients had one or more personality disorders at the time of the evaluation and 94.6% had one or more axis 1 disorders (table 2).

Of all the samples, 69.9% (65) of the cases were diagnosed of BPD and thus diagnostic congruence, while the pre-

Table 1		Sociodemographic variables of all the sample
Sociodemographic variables		Frequencies n (%)
Mean age (SD), years		24.88 (6,20)
Gender		
Woman		66 (71.0)
Man		27 (29.0)
Civil status		
Single		76 (81.7)
Married/living with partner		9 (9.7)
Separated/divorced		8 (8.6)
Educational level		
No studies		1 (1.1)
Primary school graduate		48 (51.6)
Occupational training		22 (23.7)
High school		15 (16.1)
University		7 (7.5)
Work situation		
Student		18 (19.4)
Not working		26 (28.0)
Unemployed		13 (14.0)
Sick leave		7 (7.5)
Active		29 (31.2)

Table 2		Frequency of disorders diagnosed in the entire sample
		Frequencies n (%)
Personality disorder		
Avoidant personality disorder	25	(26.9)
Personality dependent disorder	23	(24.7)
Obsessive compulsive personality disorder	8	(8.6)
Paranoid personality disorder	30	(32.3)
Schizotypal personality disorder	11	(11.8)
Histrionic personality disorder	10	(10.8)
Narcissistic personality disorder	7	(7.5)
Antisocial personality disorder	10	(10.8)
Patient with 1 or more personality disorders	68	(72.8)
Axis I disorder I		
Bipolar II disorder	2	(2.2)
Major depressive disorder	45	(48.4)
Dysthymic disorder	7	(7.5)
Alcohol disorder due to alcohol abuse	23	(24.7)
Hallucinogen use disorder	3	(3.2)
Amphetamine use disorder	4	(4.3)
Cannabis use disorder	43	(46.2)
Cocaine use disorder	27	(29.0)
Anxiolytic use disorder	19	(20.4)
Anxiety disorder with agoraphobia	5	(5.4)
Anxiety disorder without agoraphobia	39	(41.9)
Obsessive compulsive disorder	4	(4.3)
Post-traumatic stress disorder	12	(12.9)
Agoraphobia without history of anxiety disorder	2	(2.2)
Social phobia	16	(17.2)
Specific phobia	19	(20.4)
Generalized anxiety disorder	7	(7.5)
Somatization disorder	1	(1.1)
Hypochondria	2	(2.2)
Body dysmorphic disorder	2	(2.2)
Anorexia nervosa	2	(2.2)
Bulimia nervosa	4	(4.3)
Binging disorder	7	(7.5)
Patients with 1 more axis I disorders	88	(94.6)

vious diagnosis was not confirmed in 30.1% (28) of the cases (table 3).

Table 4 shows the comparison of means in the sociodemographic variables between the diagnostic congruence group and the diagnostic incongruence group. Both the gender variable ($\chi^2 = 11.71$; $gl = 1$; $p = 0.001$) and the educational level variables ($Z = 2.04$; $p = 0.04$) had a non-homogeneous distribution in the two groups. A total of 81.5% of the diagnostic congruence group patients were women while men accounted for 46.4% of the cases in the diagnostic incongruence group.

Table 3		Percentage of patients in whom diagnostic congruence was observed and in whom congruence with previous clinical judgment was observed	
		Patients included in the study	
		n	%
Diagnostic congruence	65	69.9	
Diagnostic incongruence	28	30.1	
Total	93	100	

Table 5 shows the most frequent disorders observed in both patient groups at the time of evaluation. The most frequent personality disorders in the diagnostic congruence group were PPD (46.2%), DPD (30.8%) and PSD (25%), while the most frequent ones in the diagnostic incongruence group were PSD (27.7%) and DPD (10.7%). However, statistically significant differences were only observed in DPD ($\chi^2 = 4.23$; $gl = 1$; $p = 0.04$), in PPD ($\chi^2 = 19.08$; $gl = 1$; $p < 0.001$) and in histrionic personality disorder ($\chi^2 = 4.83$; $gl = 1$; $p = 0.03$), these being more frequent in the diagnostic congruence group (table 5).

The most frequent axis I disorders in both groups were those related with substance use (SUD) and MDD (table 5). The groups only showed significant differences in frequency of PTSD ($\chi^2 = 5.94$; $gl = 1$; $p = 0.01$), and in the percentage of specific phobia ($\chi^2 = 7.00$; $gl = 1$; $p = 0.01$), these two disorders being the most frequent in the diagnostic congruence group.

The diagnostic disorder number in each one of the groups was similar. It was only significantly greater in the diagnostic congruence group, the number of axis I disorders ($Z = 3.36$; $p = 0.01$) and the number of anxiety disorders ($Z = 3.04$; $p = 0.002$) (table 6). The frequencies of mood state disorders, somatomorph disorders, eating behavior disorders or adaptive disorders had not significant differences in the groups and no significant differences were observed in the total number of disorders variable (table 6).

CONCLUSIONS

On the contrary to the results obtained in previous studies^{19,22,25} the results indicate the number of diagnoses made without using a semistructured interview is greater than the number of diagnoses obtained with its use. This divergence in the results may be due to the methodological differences between the studies and/or bias of the sample of this work. The sample that participated in the study was formed by patients referred to a specific program in the diagnosis and treatment of BPD with a previous or suspec-

Table 4		Comparison of means of sociodemographic variables between diagnostic congruence group and diagnostic incongruence group					
Sociodemographic variables	Diagnostic congruence group		Diagnostic incongruence group		Statistics		
	Mean	SD	Mean	SD	T (gl)	p	
Age	25.19	6.17	24.18	6.20	0.76 (91)	0.52	
	n	%	n	%	χ^2 (gl)	p	
Gender					11.71 (1)	0.001	
Woman	53	81.5	13	46.4			
Man	12	18.5	15	53.6			
					Z	p	
Civil status					0.11	0.92	
Single	53	81.5	23	82.1			
Married/partner	6	9.2	3	10.7			
Separated/divorced	6	9.2	2	7.1			
School level					2.04	0.04	
No studies	1	1.5	0	0.0			
Primary school graduate	36	55.4	12	42.9			
Occupational training	18	27.7	4	14.3			
High school	7	10.8	8	28.6			
University	3	4.6	4	14.3			
Work situation					0.70	0.48	
Student	11	16.9	7	25.0			
Not working	19	29.2	7	25.0			
Unemployed	8	2.3	5	17.9			
Sick leave	6	9.2	1	3.6			
Active	21	32.3	8	8.6			

ted diagnosis of it while in the previously mentioned studies, mainly psychiatric out-patients in whom there was no suspicion of BPD were included^{19,22,25}.

The primary limitation of the study is the use of a descriptive design. Not using an experimental design prevented us from attributing the diagnostic difference with greater accuracy to the type of method used when evaluating the patients. Furthermore, although all those patients who did not have a previous or suspected diagnosis of BBD were eliminated from the study, and only those who had no report that included the use of semistructured interviews in the diagnosis were included, we could not assure the procedure

Table 5		Disorders diagnosed most frequently in the diagnostic congruence patient group and diagnostic incongruence patient group	
Disorders	Diagnostic congruence group	Diagnostic incongruence group	
	n (%)	n (%)	
Avoidant personality disorder	12 (27.7)	7 (25.0)	
Avoidant personality disorder	20 (30.8)*	3 (10.7)	
Personality dependent disorder	30 (46.2)**	0 (0.0)	
Histrionic personality disorder	10 (15.4)*	0 (0.0)	
Antisocial personality disorder	6 (9.2)	4 (14.3)	
Major depressive disorder	31 (47.7)	14 (50.0)	
Alcohol use disorder	15 (23.1)	8 (28.6)	
Cannabis use disorder	30 (36.1)	12 (42.9)	
Cocaine use disorder	19 (29.2)	8 (28.6)	
Post-traumatic stress disorder	12 (18.5)*	0 (0.0)	
Anxiety disorder without agoraphobia	29 (44.6)	10 (35.7)	
Social phobia	11 (16.9)	5 (17.5)	
Specific phobia	18 (27.7)*	1 (3.6)	

* Significant differences $p < 0.05$. ** Significant differences $p < 0.001$.

used to make the diagnosis with total accuracy. However, knowledge of the Spanish public mental health network, the significant care pressure they are subjected to, the limited time available for the visit by the professionals, the time needed to perform the semistructured interviews and the patients' clinical referral reports made it possible for us to consider the use of semistructured interviews in the previous diagnosis unlikely.

In agreement with previous epidemiological studies⁷⁻¹⁴, the most frequent axis II disorders observed at the time of evaluation in the diagnostic congruence group were PPD, DPD and PSD and on axis I, MDD, SUD and anxiety disorder without agoraphobia. However, only the differences between the groups DPD, PPD, HPD, PTSD and specific phobias were significant.

Both groups have an elevated number of comorbid disorders at the time of evaluation, but only have significant differences in the number of comorbid personality disorders and number of comorbid anxiety disorders. This result is consistent with previous studies that indicate that BBD patients on diagnosis normally have more than one disorder, both of axis I as well as axis II⁷. The non-existence of differences between both groups in the total number of disorders could be indicating that the psychopathological complexity presented by some patients at the time of the evaluation may hinder their correct diagnosis. Furthermore,

Table 6
Comparison of the number of diagnostic disorders in the diagnostic congruence group and diagnostic incongruence group

Disorders	Diagnostic congruence group		Diagnostic incongruence group		Statistics	
	Mean	SD	Mean	SD	Z	p
Total no. of disorders	5.49	3.31	4.14	1.86	1.62	0.10
No. of axis II disorders	1.65	1.42	0.63	0.63	3.36	0.01
No. of axis I disorders	3.58	2.47	2.52	1.45	1.69	0.09
No. of substance related disorders	1.38	1.62	1.07	1.08	0.28	0.77
No. of anxiety disorders	1.32	1.02	0.68	0.77	3.04	0.002
	n	%	n	%	χ^2	p
Mood state disorders*	39	60.0	16	55.17	0.06	0.82
Somatomorph disorders*	5	7.69	0	0.0	2.28	0.13
Eating behavior disorders*	11	16.92	2	6.89	1.56	0.21
Adaptive disorders*	1	1.54	0	0.0	0.44	0.51

Mood state disorders: sum of the disorders of the mood state group that each patient fulfills at the time of the evolution. Somatomorph disorders: sum of the disorders of the somatomorph group disorders that each patient fulfills at the time of the evaluation. Eating behavior disorders: sum of the disorders of the eating behavior group disorders that each patient fulfills at the time of the evaluation. Adaptive disorders: sum of the disorders of the adaptive disorders that each patient fulfills at the time of the evaluation. *A chi square contrast is done because no patient fulfilled more than one disorder of each category at the time of evaluation.

the different distribution of the psychiatric disorders in each group shows a frequency in the diagnostic concordance group of comorbid disorders similar to those observed in previous epidemiological studies in patients diagnosed of BPD⁷⁻¹⁴. This results allow us to infer that clinical judgment may be generating a greater number of false positives.

It is interesting to point out that the elevated percentage of diagnostic congruence observed (70%) indicates that mental health care professionals correctly recognize and diagnose the disorder in a large number of cases.

The BPD diagnosis is very important, since the next intervention will be planned based on this diagnosis, above all in such a complex disease in which only modest therapeutic results have been scientifically demonstrated^{30,31}. The possibility that 30% of the patients initially diagnosed of BPD have another disorder implies that a different therapeutic approach to that of BPD is needed. The specific diagnoses make it possible to improve and adapt the treatment to the needs of each patient. This fact is very important, especially for the prognosis of the patients and for the public health care

system. A correct diagnosis may decrease the financial output of the public mental health care network since the treatment of BPD patients entails an elevated cost due to the complexity of the specific therapeutic, psychopharmacological and psychotherapeutic approach needed by these patients¹, on the contrary to other psychopathological pictures.

In conclusion, the results of this study indicate that a specific evaluation protocol that includes the administration of a semistructured interview by skilled professionals with experience in its use is more valid than clinical judgment in the diagnosis of BPD, especially in those patients having great psychopathological comorbidity. Thus, this procedure may minimize the possibility of false positives.

The relevance of BPD and its impact in the mental health care network makes it essential to continue studies aimed at analyzing the validity of the diagnostic tools and the search for procedures that increase diagnostic validity when already existing interviews are used.

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