# Validation of a Spanish version of the Diagnostic Interview for Bordelines-Revised (DIB-R)

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***Validación de la versión española de la* Diagnostic Interview for Bordelines-Revised *(DIB-R)***

**Summary**

Introduction. *Borderline Personality Disorder (BPD) is the most studied Axis II disorders. However, there are no Spanish versions of specific interviews. The Diagnostic Interview for Borderlines-Revised (DIB-R) is a semi-structured interview used to determine the diagnosis and severity of BPD patients. The aim of this study was to validate the DIB-R for use in a Spanish-speaking sample.*

Method. *The psychometric characteristics of the DIB-R Spanish version were assessed in a sample of 156 patients with the possible diagnosis of borderline personality disorder. There were 29 men and 127 women with a mean age of 27.6 years (SD: 6.5; range: 18-45). The Spanish adaptation of the Structured Clinical Interview for DSM-III-R Personality Disorders (SCID-II) was used as gold standard.*

Results. *The DIB-R showed good total internal consistency (Cronbach's alpha: 0.89) and high inter-rater reliability (within-class correlation: 0.94). Using logistic regression analyses the best cut-off was judged to be 6 or more, obtaining high sensitivity (0.81), specificity (0.94) and moderate convergent validity of the diagnosis with the SCID-II (kappa: 0.59).*

Conclusions. *The Spanish version of the DIB-R showed psychometric characteristics similar to those in the original interview and may be useful to determine BPD presence and severity.*

***Key words:*** *Borderline personality disorder. Diagnostic Interview for Borderlines-Revised. Semistructured interview. Validation.*

**Resumen**

Introducción. *El trastorno límite de la personalidad (TLP) es el trastorno del Eje II más estudiado en la actualidad; sin embargo, no existen versiones españolas de entrevistas específicas. La* Diagnostic Interview for Borderlines-Revised *(DIB-R) es una entrevista semiestructurada que permite determinar tanto el diagnóstico como la severidad clínica de pacientes con TLP. El objetivo del presente estudio es la validación de la DIB-R para su uso en población de habla española.*

Método. *Las características psicométricas de la versión española de la DIB-R fueron evaluadas en una muestra de 156 sujetos con orientación diagnóstica de TLP; 29 hombres y 127 mujeres con una edad media de 27,6 años (desviación estándar: 6,5; rango: 18-45). La adaptación española de la* Structured Clinical Interview for DSM-III-R Personality Disorders *(SCID-II) se utilizó como «patrón oro».*

Resultados. *La DIB-R mostró una buena consistencia interna global (alfa de Cronbach de 0,89) y una alta fiabilidad entre evaluadores (coeficiente de correlación intraclase de 0,94). Utilizando un análisis de regresión logística se estableció como punto de corte diagnóstico los valores iguales o superiores a 6, con una elevada sensibilidad (0,81), especificidad (0,94) y con una moderada convergencia diagnóstica con la SCID-II (kappa de 0,59).*

Conclusiones. *La versión española de la DIB-R mostró unas propiedades psicométricas comparables a las del instrumento original y puede resultar útil para determinar tanto la presencia como la gravedad del TLP.*

***Palabras clave:*** *Trastorno límite de la personalidad. Diagnostic Interview for Borderlines-Revised. Entrevista semiestructurada. Validación.*

## INTRODUCTION

Borderline Personality Disorder (BPD) presently generates great interest in clinical research due to, among other reasons, its prevalence, high comorbidity and new available therapeutic options[1]. The increase of studies focused on personality disorders (PD), and especially on BDP, has taken place parallelly to the development of different semistructured interviews for its evaluation[2].

In Axis I disorders, there is wide consensus on the clinical characteristics and evaluation forms. On the other hand, the Axis II diagnoses lead to discussion and skepticism, and their existence even comes into doubt[3]. Specifically, the concept «borderline» has led to confusion and the appearance of different visions of the same disorder. Consequently, there are different forms of evaluating it, it being possible to obtain different diagnoses based on the instrument used[4,5].

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The clinical heterogeneity of BPD, frequent comorbidity with other personality disorders and periodic appearance of Axis I disease contribute to the difficulty to establish a reliable diagnosis. Use of specific semistructured interviews makes it possible to increase the diagnostic reliability as they only concentrate on one disorder, thus achieving a more detailed and exact examination[6].

The Diagnostic Interview for Borderlines (DIB) was elaborated in the decade of the 70's to «achieve diagnostic reliability in the specific case of borderline patients»[7]. It evaluates five areas of content characteristic of the BPD according to the author's idea: social adaptation, impulsive action patterns, affects, psychosis and interpersonal relationships. It also makes it possible to determine the seriousness of the disorder on a 0-10 scale.

In spite of its adequate psychometric characteristics[8-12], some authors have pointed out its limited discriminating validity in regards to other Axis II disorders and mild overlapping with diagnoses obtained by DSM criteria based interviews[13,14]. In order to correct these limitations, a revised version of the interview, the Diagnostic Interview for Borderlines–Revised (DIB-R)[15], appeared in 1989.

The number of items in the DIB-R is reduced from 132 to 125 and a content scope, that of social adaptation, is eliminated, as it is not discriminating of other PD. The duration of the interview is comparable to the original instrument (45-60 minutes). The examination is limited to the 2 years prior to the time of the interview and the cut-off is increased for the diagnosis from 7 points to points equal to or greater than 8.

The studies that have evaluated the psychometric properties of the DIB-R obtain an elevated sensitivity and specificity, with an inter-rater reliability of 0.85-0.94 and test-retest reliability of 0.53-0.91. The DIB-R has shown greater diagnostic efficacy and specificity against other Axis II and Axis I disorders than the original DIB[15-18]. Thus, the interview has been progressively implemented as a diagnostic tool of choice in BPD[19-21].

This study aims to validate the DIB-R for its use in investigation and in the clinical scope in the Spanish speaking population.

## METHODOLOGY

### Adaptation methodology

To obtain the Spanish version of the DIB-R, the translation-back translation procedure[22] and the performance of pilot studies with patients[23,24] were performed. The original interview was translated by a bilingual person with clinical experience. The translations were discussed with one of the investigators until reaching a consensus. The first version was re-translated to english by another independent translator (anglo-saxon linguist with experience in biomedical text translation). This version was sent to the DIB-R author who, after several corrections, verified the adaptation to the original text. A description of the areas as well as examples of some items appear in table 1.

### Raters

Three psychologists with experience in the use of interviews in the area of personality evaluation were trained by a psychologist who was an expert in the use of the original instrument. For their training, discussion

**TABLE 1. Examples of items from each area of the DIB-R Spanish version**

| *Areas* | *Items* |
|---|---|
| Affective | During the last two years…<br>1… Have you felt quite sad or depressed much of the time?<br>13… Do you get angry easily (to be touchy, to have outbursts of temper)?<br>15… Have you felt very anxious most of the time?<br>22… Very empty? |
| Cognitive | During the last two years…<br>33… Have you repeatedly felt that you are not a real person? As if your body or a part of it feels strange or as if it changes size or form? As if you were really physically separated from your feelings? As if you were seeing yourself at a distance? (Depersonalization)<br>34… Have you often felt that the things around you were «unreal»? As if they were strange or changing in size or form? As is you were dreaming them? As if a window was there, between you and the world? (Derealization) |
| Impulsive behaviors | During the last two years…<br>65… Have you ever hurt yourself deliberately without intending to commit suicide (for example, cutting your skin, burns, hitting yourself, breaking windows with your fists, hitting walls, hitting your head)? (Self-mutilation)<br>68… Have you made some suicide attempt, however mild it may be (suicidal gestures/attempts)? |
| Interpersonal relationships | During the last two years…<br>83… Have you generally hated being alone?<br>84… Have you often made desperate efforts to avoid feeling alone (i.e., speaking on the telephone for hours at these times, going out to meet someone that you can speak to)? |

meetings on the use of the criteria, its application form, observation of interviews and role-playing practices were carried out.

### Subjects

The sample was made up of 156 out-patients, referred from other clinical services with diagnostic orientation of BPD, for their inclusion in a treatment protocol of the disorder[25]. To be included in the study, the subjects had to be between 18 and 45 years and they could not have a present diagnosis of: organic brain syndrome, schizophrenia, drug induced psychosis, alcohol or other toxic dependency, bipolar disorder, mental retardation, major depression episode. All the subjects signed the informed consent to participate in the study.

### Material

*Diagnostic Interview for Borderlines-Revised (DIB-R)*[15]: it is a semistructured interview made up of 125 items, from which 22 summary sentences (SS) which can have 3 values (0: no; 1: probable; 2: yes) are derived. The SS, in turn, give rise to the 4 area scores (AS): cognitive, affects, impulsive action patterns and interpersonal relationships. The AS determine the overall score on a scale ranging from 0 to 10, the scores equal to or greater than 8 being consistent with the diagnosis of BPD.

*Structured Clinical Interview for DSM-III-R Personality Disorders (SCID-II)*: it is a semistructured interview diagnostic of axis II disorders. This is made up of a series of questions related with the 11 possible personality disorders described by the DSM-III-R. The scores are: 1: absent criteria, 2: presence of doubtful criteria, 3: present criteria, and ?: inadequate information. The SCID-II has been used as «gold standard» due to its wide acceptation in the study of personality and as it has been previous validated in the Spanish population[26].

### Procedure

During the interview, the clinical history was performed and sociodemographic variables (age, gender, educational level, civil status and work situation) were collected. After, the SCID-II and DIB-R interviews were administered. The approximate duration of the complete evaluation ranged from 2 to 3 hours.

To establish the inter-rater reliability of the instrument, two psychologists jointly assessed 25 patients. While one performed the interview, the second independently evaluated it, without directly participating. The remaining subjects were interviewed by a single rater.

### Statistical analysis

The data obtained were analyzed with the SPSS version 11.0 statistical program. Estimation of homogeneity or internal consistency of the interview was evaluated with Cronbach's alpha coefficient.

Criterion validity (kappa index), sensitivity and specificity were established, comparing the DIB-R and SCID-II interview. The cut-off selection was determined by the receiver operating characteristic curves (ROC curves). Finally, the inter-rater reliability was analyzed using the intraclass correlation coefficient (ICC).

## RESULTS

A total of 156 subjects with diagnostic orientation of BPD were evaluated between January 2000 and January 2004. This is a sample made up by 29 men and 127 women with a mean age of 28.1 years (SD 6.33, range 19-40) and 27.5 years (SD 6.56, range 18-45), respectively. Table 2 shows the remaining sociodemographic variables.

Figure 1 shows the comorbidity in axis II of the patients with BPD diagnosis. According to the SCID-II, the most frequent personality disorders in the patients diagnosed of BPD are depressive personality disorder, paranoid personality disorder, passive-aggressive personality disorder and obsessive-compulsive personality disorder. The number of comorbid diagnoses in the subject sample diagnosed of BPD according to the SCID-II appears in figure 2. One third of the sample only has the diagnosis of BPD, approximately one third more, an additional diagnosis of BPD and the other third, 2 or more added diagnoses.

### Validity

The DIB-R showed good internal global consistency, with Cronbach's alpha of 0.89. Table 3 shows the Cronbach's alphas obtained in each one of the 4 interview

**TABLE 2. Sociodemographic variables**

| | *Percentage (%)* |
|---|---|
| **Gender** | |
| Men | 18.6 |
| Women | 81.4 |
| **Civil status** | |
| Stable partner | 25.3 |
| Single | 56 |
| Separated-divorced | 18.7 |
| **Studies** | |
| Primary | 25 |
| Secondary | 45.2 |
| University | 29.9 |
| **Occupational** | |
| Working | 62.8 |
| Not working | 37.2 |

Sociodemographic characteristics of the patient sample (n = 156).

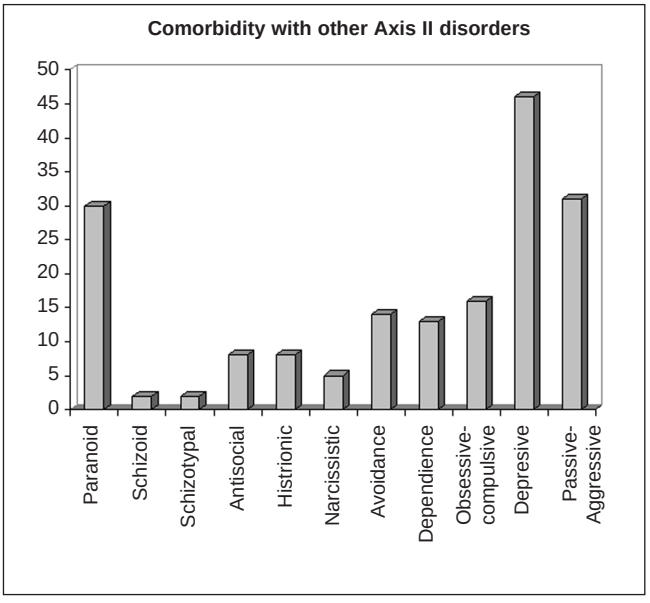


**Figure 1.** Number of BPD patients according to SCID-II interview with comorbidity with other Axis II disorders.

areas. The values obtained indicate adequate homogeneity between the interview items for each area.

Using a logistic regression analysis, we evaluated the diagnostic concordance between the SCID-II and DIB-R, as well as the cut-offs to establish an optimum discrimination between BPD subjects and those who do not have this disorder. Figure 3 shows the ROC curve, the DIB-R showed good global functioning with an area under the curve of 0.91 ($p < 0.000$). According to our results, the optimum cut-off would be close to 6, since it shows elevated sensitivity (0.81) and greater specificity (0.94) with an accuracy of 0.82. With this cut-off as diagnostic criteria, the DIB-R obtains a moderate diagnostic convergence with the SCID-II (kappa of 0.59).

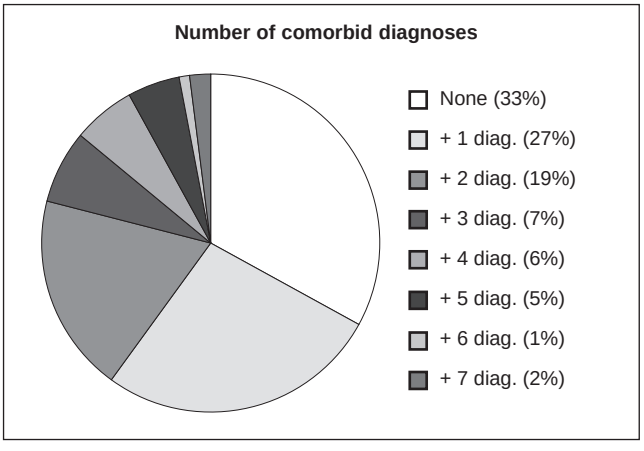


**Figure 2.** Number of comorbid diagnoses of Axis II in BPD diagnosed patients according to the SCID-II

**TABLE 3. Internal consistence of the DIB-R**

| *Areas* | *Cronbach's alpha* |
|---|---|
| Affective | 0.74 |
| Cognitive | 0.77 |
| Impulsive behaviors | 0.73 |
| Interpersonal relationships | 0.74 |
| Global | 0.89 |

## Reliability

The ICC obtained in the global score of the DIB-R interview was 0.94, indicating high inter-rater reliability.

## CONCLUSIONS

BPD is the personality disorder studied most at present, however, there are no Spanish versions of specific semistructured interviews. The absence of adequate psychometric tools in the clinical research and practice in Spanish speaking countries lead to the fact that general semistructured interviews continue to be used for the PD, such as the SCID-II.

The present study has made it possible to obtain the Spanish version of the DIB-R. The results obtained show high equivalence with the values of the original instrument. The validity indexes (of criterion, internal consistency, sensitivity and specificity) and of reliability (ICC) are comparable with those obtained in other validation studies of the original instrument[15-18].

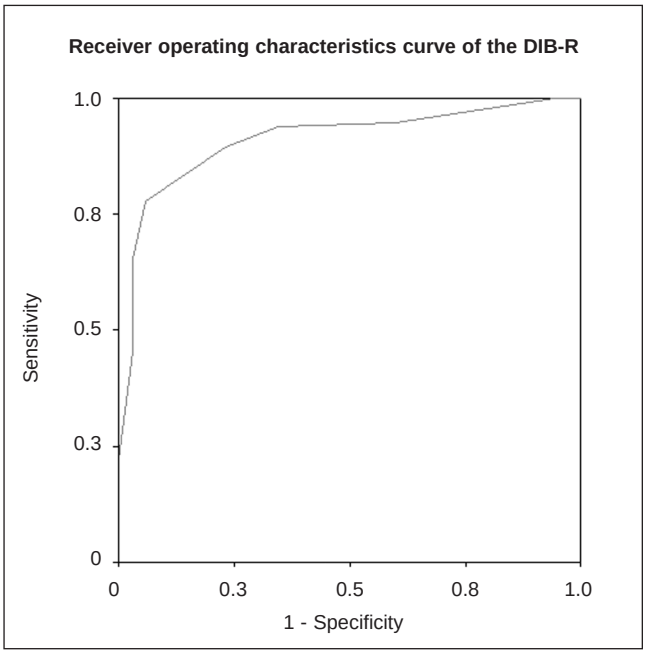


**Figure 3.** Logistic regression analysis. Area under the curve 0.91 ($p < 0.000$).

Validation to Spanish of the DIB-R has an elevated global internal consistency ($\alpha = 0.89$) and of each one of the content areas: affect ($\alpha = 0.74$), cognition ($\alpha = 0.77$), impulsive behavior patterns ($\alpha = 0.73$) and interpersonal relationships ($\alpha = 0.74$). This indicates a noticeable homogeneity and interdependence between the items of each subscale as well as the interview globally.

When the diagnoses obtained with the DIB-R and SCID-II are compared, we observed that there is only moderate diagnostic overlapping. A possible explanation would be that both interviews begin with different ideas of the disorder. On the one hand, the DIB was created from the viewpoint of Gunderson at the end of the 1970's. Even though Gunderson also influenced the DSM classification, on which the SCID-II is based, there are differences between both models. A second explanation, which we believe to be more likely, would be in relationship with the differences of sensitivity and specificity found between both interviews. Our data indicate that obtaining a diagnosis of BPD with the DIB-R is more «demanding» and requires greater severity of the symptoms than in the case of the SCID-II[18]. This is congruent with the reduced number of false positives and the important number of false negatives that exist between both. The original DIB already showed greater specificity (0.90) than sensitivity (0.70) in regards to the DSM-III criteria[12]. In this same sense, general personality interviews such as SCID-II, based on the DSM criteria, in spite of being widely used, show signs of little validity when compared with more rigorous clinical criteria and tend to be more sensitive than specific in the case of BPD[27]. It is necessary to maintain elevated specificity in such a heterogeneous disorder as BPD in clinical research.

The original diagnostic cut-off of 8 is shown to be very specific but not very sensitive. With lower cut-offs, sensitivity of DIB-R (from 0.46 with 8 to 0.81 with 6) increases progressively without hardly losing specificity (from 0.96 with 8 to 0.94 with 6). After lower cut-offs, the specificity decreases more significantly. Cut-offs lower than 8 have already been used in other studies in which the diagnosis of BPD was established with the DIB-R[28]. According to our results, the optimum cut-off for the use of this validation of the DIB-R is 6.

In regards to the inter-rater instrument reliability, an ICC of 0.94 was obtained, a value that indicates an elevated concordance between the scores of both interviewers. It may be stated that the method used in this study, combined interviews, tends to increase inter-rater agreement. When the interviews are performed separately or by independent investigators, a lower concordance is generally obtained[6,29].

All this suggests that the version of the DIB-R adapted to our setting is equivalent to the original and may be valid for its use in clinical research and epidemiology.

### Limitations

To be able to establish a complete equivalence between our validation and the original DIB-R, other psychometric parameters that have not been contemplated in this study must be analyzed. The discriminating validity has not been established by comparing it with samples of patients with other PD and with control subjects. Capacity to discriminate with other disorders was one of the fundamental reasons for the revision of the original DIB interview, so that this parameter should be established in a future time. Results of the reliability of the diagnosis in time have also not been presented and the test-retest reliability should be determined in the future. As this is a personality interview that examines the last 2 years of the patient's life, a sufficient time period should be established for the second evaluation.

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