DISCRIMINANT VALIDITY OF THE ZKPQ IN A SAMPLE MEETING BPD DIAGNOSIS VS. NORMAL-RANGE CONTROLS

Montserrat Gomà-i-Freixanet, PhD, Joaquim Soler, PsyD, Sergi Valero, PsyD, Juan Carlos Pascual, MD, and Victor Pérez Sola, MD, PhD

Widiger and Simonsen (2005) state that given the limitations of the categorical model of Personality Disorders classification proposals are to be expected for dimensional classifications. The purpose of this paper is to test the alternative five factorial model (AFFM) of personality in a sample with PDs. Subjects were administered the ZKPQ to test the discriminant capacity of the AFFM in classifying subjects diagnosed with BPD (n = 74) vs normal-range controls (n = 148) paired by age and sex, and identifying sensitive and/or specific dimensions that can be of help in diagnosing BPD. The results showed that high scores on N-Anx and Imp-SS, and low scores on Act are prognostic factors for being diagnosed with BPD. Likewise, this model correctly classified 88% of subjects with a kappa index of 0.73. The AFFM of personality appears to have a substantial power for predicting SCID-II interview-based BPD diagnosis.

The classification of personality disorders proposed in the different versions of the Diagnostic and Statistical Manual of Mental Disorders (4th ed., rev. ed.; DSM-IV; American Psychiatric Association, 2000) continues to be the subject of discussion and debate. Two of the cardinal points of debate are the categorical nature of the DSM system and the contents of its classification. Although some improvements have been introduced in the different versions of the DSM, descriptions of personality disorders are still largely the result of committee deliberations with limited empirical support (Livesley, 1987; Widiger & Frances, 1987) and little attention to conceptions derived from the study of normal personality structure. Since the early claims (Eysenck, 1987; Frances, 1980) that personality disorders...
(PDs) could be more appropriately represented by a dimensional model than by a categorical one, there is growing unequivocal evidence giving empirical support to alternative dimensional models (e.g., Clark, 1993; Dyce & O'Connor, 1998; Livesley, 1998; Widiger & Costa, 1994; Wiggins & Pincus, 1989). Although the diagnostic approach of the present version of the DSM is categorical in nature, it simultaneously stresses that enduring and maladaptive personality characteristics only constitute a PD when they cause significant functional impairment or subjective distress: a view consistent with dimensional approaches that conceptualize PDs as extreme variants of normal personality traits (e.g., Livesley, Schroeder, Jackson, & Jang, 1994; Widiger, 1992, 1993).

In a recent seminal paper, Widiger and Simonsen (2005) state that given the recognition of the many limitations of the categorical model of PDs classification, “one expected response is proposals for dimensional classifications” (p. 110). It seems that for a future DSM edition the best bet for PDs diagnosis could be an integration of the different dimensional models into a hierarchical structure where the contributions and potential advantages of each one of the models could be taken into account. Therefore, they expect that a common structure is likely to be found among these models as they come from the study of the normal personality structure and have the common aim of identifying the fundamental dimensions that underlie normal and maladaptive personality. Among these dimensional models, Widiger and Simonsen (2005) cite the model of Zuckerman, Kuhlman, Joireman, Teta, and Kraft (1993). This model, described as the alternative five factorial model (AFFM), emerged from a series of factor analyses of scales believed to measure basic dimensions of personality or temperament, particularly those used in psychobiological research (Zuckerman, Kuhlman, & Camac, 1988; Zuckerman, Kuhlman, Thornquist, & Kiers, 1991). The basic traits of the AFFM are Neuroticism-Anxiety (N-Anx), Activity (Act), Sociability (Sy), Impulsive Sensation Seeking (ImpSS), and Aggression-Hostility (Agg-Host) and are measured by the Zuckerman-Kuhlman Personality Questionnaire (ZKPQ; Zuckerman & Kuhlman, 1993). In this model, no measures of cultural interests or intellectual styles were included because of Zuckerman’s (1984) conception that basic traits should be easily comparable to traits in other species and found throughout the human lifespan. In the same line of thinking, Aggression rather than Agreeableness, and Impulsive Sensation Seeking rather than Conscientiousness were included. Furthermore, the broad dimension of Extraversion was divided into the separate factors of Activity and Sociability (Zuckerman, 2002) because in earlier studies Act emerged as a distinct factor at the five-factor analyses of scales (Zuckerman et al., 1988; Zuckerman et al., 1991). Due to its identification as a basic developmental trait (see, for example, Buss & Plomin, 1984; Thomas & Chess, 1977) activity level merits a distinctive assessment as a major trait of temperament in the child as well as of personality in the adult human. Moreover, the distinction between Hostility and Anxiety is also important because both
traits have different psychobiological bases (Gray, 1982), and should not be confounded within a single factor. On the other hand, Imp and SS are conceptually closely related and have many important psychobiological correlates (Zuckerman, 1983, 1984, 1991, 1994). Together with Socialization they form a distinctive factor in five-factor analyses of scales (Zuckerman et al., 1991) and of items. Finally, a measure of social desirability was also included in the questionnaire (Infrequency scale) to ensure none of the basic traits were affected by this response set bias. The ZKPQ questionnaire developed to assess this alternative model has demonstrated good internal reliability, temporal stability, validity and cross-cultural replicability (Goma`-i-Freixanet, Valero, Puntı`, & Zuckerman, 2004; Goma`-i-Freixanet, Wismeijer, & Valero, 2005; Zuckerman, 2002).

As Widiger and Simonsen (2005) recognize, there is a need for supportive empirical data on each proposed alternative dimensional model of PD in making decisions regarding which specific component of each model should be included within this proposed integrative hierarchical structure. Therefore, the aim of the present study was (1) to investigate the characteristic ZKPQ profile of Borderline Personality Disorder (BPD) patients when compared with demographically matched normal-range controls (i.e., which is the dimensional profile of BPD patients on dimensions derived from the AFFM) and (2) to test the discriminant capacity of the ZKPQ in classifying subjects diagnosed with BPD vs. normal-range controls paired by age and sex, and identify sensitive and/or specific dimensions that can be of help in diagnosing BPD. Specifically, the ability of the ZKPQ in predicting a categorical PD diagnosis was assessed. The present study provides first time evidence of the specific ZKPQ profile of patients meeting BPD as assessed by the SCID-II.

**METHOD**

**PARTICIPANTS**

For the purpose of this study, we used two samples matched by age and sex. The age range for both samples was from 19 to 43 years, with a proportion of 87.8% being females. The clinical sample consisted of a convenience sample of 74 outpatients from the Department of Psychiatry at the Hospital de la Santa Creu i Sant Pau from the Autonomous University of Barcelona, Spain. This sample, fulfilling BPD diagnosis, consisted of 65 women and 9 men (mean ± SD age 27.32 ± 5.32 years) with 55.6% of them having completed high school studies. The frequencies of DSM-IV co-occurring Axis II diagnoses (including PDs from the DSM-IV appendix) observed were: (a) schizoid, 1.4%; (b) schizotypal, 2.9%; (c) paranoid, 24.6%; (d) antisocial, 10.1%; (e) histrionic, 8.7%; (f) narcissistic, 2.9%; (g) dependent, 13%; (h) avoidant, 13%; (i) obsessive-compulsive, 14.5%; (j) depressive, 44.9%; and (k) negativistic, 26.1%.
To test for the clinical specificity of the dimensional personality profile, the BPD sample was matched by sex and age with a normal-range sample which acted as a control group. A case-control strategy was used, randomly selecting two controls for each case. In total, the control sample comprised of 148 subjects, 130 women and 18 men (mean ± SD age 27.32 ± 5.32 years) with 63.9% of them having completed college studies. This control group was extracted from a comprehensive general population sample pool of 1,169 subjects, which matched the IDESCAT Census Projections for the year 2000 in the distribution of age and sex groups (Goma`-i-Freixanet et al., 2003). In line with other studies (Pukrop, 2002), BPD patients attained significantly lower levels of education (Chi-square = 31.79, \( p = 0.0005 \)) than controls.

ASSESSMENT INSTRUMENTS

The *Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997)* was used as external diagnostic standard for *DSM-IV PD* assessment. Although there is a lack of an agreed-upon “gold standard” for psychiatric diagnosis, the previous version of this instrument has shown to have adequate interrater reliability and to be useful in providing fine discriminations among the Axis II PDs (e.g., First, Spitzer, Gibbon, & Williams, 1995). The Spanish translation of the *DSM-III-R* version of the SCID-II gave an overall kappa of 0.85 (Gómez Beneyto et al., 1994).

The *Zuckerman-Kuhlman Personality Questionnaire (ZKPQ; Zuckerman & Kuhlman, 1993)* consists of 5 content scales. Additionally, two facet scores can be obtained from the Act scale: Need for General Activity, impatience and restlessness (GenAct); and need for Work Activity (WorkAct), and from the Sy scale: Parties and friends (Parties) and Isolation intolerance (Isol). In total it has 99 dichotomous items, in sentence format and true-false response set. The ZKPQ also includes an Infrequency scale (Infreq, 10 items) detecting inattention to the task. The items are mostly exaggerated, true scored, socially desirable but unlikely to be completely true statements about anyone. This scale is highly skewed, with most scores around 0 or 1. In Spanish samples, scores higher than 4 in this scale are considered to indicate questionable validity for that record (Gomà-i-Freixanet et al., 2004).

Participants from both samples completed the Spanish version of the ZKPQ (Gomà-i-Freixanet et al., 2004). This instrument has shown good psychometric properties in Spanish samples, with test-retest reliability coefficients over a 2-week period ranging from 0.77 to 0.91, internal consistency \( \alpha \) coefficients ranging from 0.67 to 0.84 and convergent, discriminant, and consensual validity. The factorial structure has also been replicated in Spanish samples with congruence coefficients ranging from 0.88 to 0.96, and from 0.84 to 0.92 in a female and male sample respectively (Gomà-i-Freixanet et al., 2004; Gomà-i-Freixanet et al., 2005).
PROCEDURE

Subjects fulfilling *DSM-IV* diagnostic criteria for BPD (American Psychiatric Association, 1994) and the rest of inclusion/exclusion criteria were accepted to participate in a single-centre, randomized, double-blind, and placebo-controlled clinical trial that was including pharmacological therapy. The inclusion criteria to participate in were: (1) meeting *DSM-IV* diagnostic criteria for BPD as assessed by the SCID-II for *DSM-IV* Axis II PDs; (2) having an age range from 18 to 45 years; (3) no current episodes of Axis I disorders or unstable symptomatology of the comorbid Axis I disorders; (4) having a Clinical Global Impression (CGI; Guy, 1976) severity of illness score ≥ 4; (5) not receiving psychotherapy; and (6) for female subjects, using medically accepted contraception. Subjects with organic brain syndrome, schizophrenia, drug-induced psychosis, alcohol, or other substance dependence, bipolar disorder, mental deficiency, or major depressive disorder were not included in the study. Participants also underwent complete physical examination, and laboratory and pregnancy tests before entering to the study. The preceeding clinical history and diagnostic interviews were conducted by two clinical psychologists from the BPD unit with wide experience using diagnostic interviews for Axis II, and were administered and scored blind to the ZKPQ scores. Subjects were administered the ZKPQ before the pharmacological treatment started. The Ethical Committee of the institution approved the protocol and all subjects gave their written informed consent before participating in this study.

As stated above, the control sample was a random subsample of a much larger sample. The questionnaires were answered anonymously and only demographic data such as sex, age, education level, and place of residence were recorded. All respondents participated voluntarily in the study and did not receive any emolument for their participation. As the study was not intrusive in any way, neither informed consent waivers nor participant debriefing following participation were required from the controls.

STATISTICAL ANALYSIS

The *DSM-IV* cut-off points were used for categorical diagnosis of BPD (First et al., 1997). The data analyses followed 3 steps: descriptive analyses, predictive analyses, and model adjustment. In the first step, differences between groups were tested using two-tailed independent Student’s *t*-test, and Pearson’s correlation coefficients among ZKPQ scales for both groups were carried out. Subsequently, we performed logistic regression analyses to study the independent contribution of each ZKPQ dimension and facet to the prediction of the categorical diagnosis of BPD. We opted for logistic regression analysis because, contrary to Pearson’s correlation, logistic regression analysis adjusts associations among variables. Finally, for adjusting the model and checking the overall discriminatory power of the ZKPQ, different cut-off points for ZKPQ dimensions and facets were ob-
tained, and concordance was then studied by kappa indexes. Sensitivity and specificity indexes, hit rates (true positives + true negatives)/n, along with positive and negative predictive values were also obtained. Moreover, the Receiver Operating Characteristic (ROC) curve was produced with the selected cut-off point. The ROC curve summarizes all pairs of sensitivity and specificity values which can be achieved when the threshold is changed from low to high scores. The area under the ROC curve represents the ability of a scale to identify a particular PD; precisely in this case, the ability of the ZKPQ to identify a BPD diagnosis. An area under the ROC curve of 0.5 indicates an inaccurate test, whereas an area of 1.0 indicates perfect diagnostic accuracy.

RESULTS
COMPARISON OF BPD PATIENTS WITH NORMAL-RANGE CONTROLS

Means, standard deviations, t-test differences, Cohen’s $d$ and Cronbach’s alphas of the ZKPQ dimensions in BPD and control groups are shown in Table 1. Both groups differed significantly on all scales but on the Infreq scale: N-Anx ($t_{216} = 15.50$, $p = 0.0005$), Act ($t_{220} = 2.15$, $p = 0.032$), Sy ($t_{220} = 3.49$, $p = 0.001$), ImpSS ($t_{220} = 5.82$, $p = 0.0005$), Agg-Host ($t_{220} = 5.76$, $p = 0.0005$), and Inf ($t_{220} = 1.31$, $p = 0.192$). The BPD group scored significantly higher on N-Anx, ImpSS and Agg-Host, and significantly lower on Act and Sy. The absence of significant differences between both groups on the Infreq scale (measuring inattention to the task) and the low scores (around 0 or 1) gives additional validity to the obtained data in the BPD group. Also worth mentioning is the high homogeneity of the scores on the N-Anx scale in the BPD group ($SD = 2.76$). Internal consistencies ranged from 0.73 to 0.79 in the BPD sample, and from 0.66 to 0.87 in the control group sample. Internal reliabilities of the control sample are similar to those found in other groups with the same cultural background and similar age ranges (Gomà-i-Freixanet et al., 2004; Gomà-i-Freixanet et al., 2005). Reliabilities

<table>
<thead>
<tr>
<th>Scale</th>
<th>BPD (n = 74)</th>
<th>Control (n = 148)</th>
<th>Cohen's $d$</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$\alpha$</td>
</tr>
<tr>
<td>ZKPQ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N-Anx</td>
<td>16.04</td>
<td>2.76</td>
<td>0.73</td>
</tr>
<tr>
<td>Act</td>
<td>7.28</td>
<td>3.56</td>
<td>0.78</td>
</tr>
<tr>
<td>Sy</td>
<td>6.89</td>
<td>3.46</td>
<td>0.75</td>
</tr>
<tr>
<td>ImpSS</td>
<td>12.16</td>
<td>4.08</td>
<td>0.79</td>
</tr>
<tr>
<td>Agg-Host</td>
<td>10.35</td>
<td>3.52</td>
<td>0.79</td>
</tr>
<tr>
<td>Infreq</td>
<td>1.30</td>
<td>1.12</td>
<td>—</td>
</tr>
</tbody>
</table>

Note. ZKPQ = Zuckerman-Kuhlman Personality Questionnaire; N-Anx = Neuroticism-Anxiety; Act = Activity; Sy = Sociability; ImpSS = Impulsive Sensation Seeking; Agg-Host = Aggression-Hostility; Infreq = Infrequency.
of the BPD sample are similar to those found in other clinical samples (Ball, 1995).

CORRELATION ANALYSES

For comparison, Table 2 shows Pearson’s correlation coefficients among ZKPQ scales for both groups. In general, as in a university student sample (Gomà-i-Freixanet et al., 2004) and in a general population sample (Gomà-i-Freixanet et al., 2005) the correlation coefficients for the control group are low in magnitude, although they are statistically significant due to the sample size. In BPD patients, N-Anx was significantly and positive correlated with both ImpSS and Agg-Host dimensions, while there was no such correlation in the general population sample.

PREDICTIVE POWER OF THE ZKPQ AT THE LEVEL OF DIMENSIONS

In order to test the ability of the ZKPQ dimensions to predict a categorical BPD diagnosis, we performed a logistic regression analysis using the stepwise method for entering the variables. Given the small number of predictors, alpha was set at 0.05 for entry into the equation. All five ZKPQ dimensions (Infreq scale is not considered a dimension in the normative sense) were included in the logistic regression model where the group of origin (either BPD or control) was the dependent variable. The groups were coded into the model as 1 per BPD group and 0 per control group, and the resulting final model was statistically significant (Chi-square3 = 149.75, p = 0.0005). Table 3 shows that 3 out of 5 dimensions entered into the model: N-Anx, ImpSS and Act. The Wald statistic informs on the impact of each of the predictive dimensions for the categorical diagnoses of BPD. The obtained model shows that having high scores on N-Anx and ImpSS, and low scores on Act is a prognostic factor with high probability

| TABLE 2. Correlations Between ZKPQ Dimensions in BPD Group (n = 74) and Control Group (n = 148) Separately |
|---|---|---|---|---|---|
| Control | N-Anx | Act | Sy | ImpSS | Agg-Host |
| BPD | N-Anx | .072 | -.167* | -.009 | .095 | -.078 |
| Act | .148 | .170* | .364*** | .260** | .236** |
| Sy | -.111 | .337** | .308*** | .190* | .061 |
| ImpSS | .303** | .317** | .334** | .347*** | .157 |
| Agg-Host | .473*** | .236* | .164 | .477*** | -.055 |
| Infreq | -.088 | -.021 | .030 | .229* | -.204 |

Note. In the upper-right side correlations for the control group are reported; in the lower-left side correlations for the BPD group.
N-Anx = Neuroticism-Anxiety; Act = Activity; Sy = Sociability; ImpSS = Impulsive Sensation Seeking; Agg-Host = Aggression-Hostility; Infreq = Infrequency.
*p < .05, **p < .01, ***p < .001, two-tailed tests.
of being endorsed with a BPD diagnosis. Using the following algorithm,

\[ p = \frac{1}{1 + e^{-6.77 - 0.452 \cdot NAnx - 0.196 \cdot ImpSS + 0.220 \cdot Act}} \]

estimations about the probability of being endorsed with a BPD diagnosis can be made. Using the default probabilistic cut-off point of 0.5, the obtained model had a sensitivity (the probability that a test will be positive given a patient with the condition) of 82.4%; a specificity (the probability that a test will be negative given a patient without a condition) of 89.9%; a positive predictive value (PPV: the probability that a patient will have a condition given a positive test result) of 80.3%; a negative predictive value (NPV: the probability that a patient will not have a condition given a negative test result) of 91.1%; a hit rate of 87.4% and a kappa index of 0.72 (\( p < 0.0005 \)).

**ACCURACY OF THE MODEL AT THE LEVEL OF DIMENSIONS**

Accuracy can be improved if different cut-off points are chosen. The accuracy of the model exemplified by concordance and predictive indexes can be seen in Table 4. Analyses showed that, predictably, sensitivity was increased and specificity decreased or vice versa when lower or higher cut-off points were used. It seemed to us that the optimal adjustment was observed using the probabilistic cut-off point of 0.4 where we found a high and balanced sensitivity (87.8%) and specificity (87.8%), with a high PPV (78.3%) and NPV (93.5%). Likewise, this cut-off point showed the highest hit rate, with 87.8% of the participants correctly classified and the highest

<table>
<thead>
<tr>
<th>Cut-off points</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Hit Rate</th>
<th>PPV(^1)</th>
<th>NPV(^2)</th>
<th>Kappa</th>
<th>( p )</th>
</tr>
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<tbody>
<tr>
<td>.3</td>
<td>90.5</td>
<td>84.5</td>
<td>86.5</td>
<td>74.4</td>
<td>94.7</td>
<td>.712</td>
<td>.0005</td>
</tr>
<tr>
<td>.4</td>
<td>87.8</td>
<td>87.8</td>
<td>87.8</td>
<td>78.3</td>
<td>93.5</td>
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<td>82.4</td>
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<td>91.1</td>
<td>.718</td>
<td>.0005</td>
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<tr>
<td>.6</td>
<td>77.0</td>
<td>92.6</td>
<td>87.4</td>
<td>83.8</td>
<td>88.9</td>
<td>.710</td>
<td>.0005</td>
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<td>.7</td>
<td>68.9</td>
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<td>86.9</td>
<td>89.4</td>
<td>86.0</td>
<td>.688</td>
<td>.0005</td>
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</tbody>
</table>

Note. \(^1\)PPV = Positive Predictive Value (probability of true BPD after a positive result in predictor); \(^2\)NPV = Negative Predictive Value (probability of true non-BPD after a negative result in predictor).
kappa index of 0.73 ($p < 0.0005$). This kappa index, the usual metric of categorical agreement, informs of the accuracy of the model, i.e., of the standardized difference between the observed and the expected agreement. In the obtained model, the accuracy of the ZKPQ is not only statistically significant but high in magnitude. The obtained area under the ROC curve with a cut-off point of 0.4 was 0.94 (CI 95% 0.90–0.97), indicating almost perfect diagnostic accuracy.

PREDICTIVE POWER OF THE ZKPQ AND ACCURACY OF THE MODEL AT THE LEVEL OF FACETS

Given that the ZKPQ can offer facet scores in 3 out of the 5 scales, we performed a second logistic regression analysis using the stepwise method for entering the variables. We entered into the equation 2 dimensions (N-Anx and Agg-Host) plus 6 facets (GenAct, WorkAct, Parties, Isol, Imp, and SS). The resulting final model was statistically significant (Chi-square$_3$ = 157.86, $p = 0.0005$). Table 5 shows that 3 out of 8 scales entered into the model: N-Anx, Imp, and GenAct. The obtained model shows that having high scores on N-Anx and Imp, and low scores on GenAct is a prognostic factor with high probability of being endorsed with a BPD diagnosis. The optimal adjustment seemed to be observed using the probabilistic cut-off point of 0.5 where we found a high sensitivity (79.7%) and specificity (93.2%), with a high PPV (85.5%) and NPV (90.1%). Likewise, this cut-off point showed the highest hit rate, with 88.7% of the participants correctly classified and the highest kappa index of 0.74 ($p < 0.0005$).

DISCUSSION

The overall results show that BPD can be accurately described in terms of dimensional trait profiles. Subjects meeting BPD diagnosis scored higher than controls on N-Anx, ImpSS, Agg-Host, and lower on Sy and Act. These results are in line with data obtained with subjects meeting the same diagnosis but assessed with different instruments (e.g., when comparing BPD with controls controlling for age and sex and using the NEO, Pukrop (2002) found that BPD also differed on Neuroticism, Agreeableness, and Extraversion). When we tested for the discriminant capacity of the ZKPQ, the dimensions that best discriminated were N, ImpSS, and Act. Although

<table>
<thead>
<tr>
<th>Scale</th>
<th>B</th>
<th>Wald</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
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<tbody>
<tr>
<td>N-Anx</td>
<td>.428</td>
<td>37.91</td>
<td>&lt;.0005</td>
<td>1.53</td>
</tr>
<tr>
<td>Imp</td>
<td>.485</td>
<td>18.22</td>
<td>&lt;.0005</td>
<td>1.62</td>
</tr>
<tr>
<td>GenAct</td>
<td>-.231</td>
<td>5.33</td>
<td>.021</td>
<td>0.79</td>
</tr>
</tbody>
</table>

*Note.* BPD = 1; control group = 0.  
N-Anx = Neuroticism-Anxiety; Imp = Impulsivity; GenAct = General Activity.
AggHost and Sy were significantly different at the level of bivariant analysis, these two dimensions recapitulated at the multivariant analysis due to the statistical significance of those that remained in the model. The kappa of 0.73 obtained with the ZKPQ is higher than those found in the literature with SCID-II BPD diagnosis and other instruments such as the PDQ-4+ (Fossati et al., 1998; $k = 0.19$) and the TCI (Gutiérrez, Sangorrín, Martín-Santos, Torres, & Torrens, 2002; $k = 0.53$). Furthermore, to make a more detailed analysis of the BPD profile, we introduced the facets, whenever possible, and the variables that entered into the model were N-Anx, Imp, and GenAct. Although for diagnosis purposes it is easier for the clinician to work at the level of dimensions, for research purposes it is interesting to know that the component of Imp (and not that of SS) best discriminates among groups. In the same manner, in relation to the E dimension, it is interesting to differentiate among the different components of that dimension. It is the Act dimension rather than that of Sy, that predicts BPD diagnosis, and specifically within the Act dimension itself, it is GenAct rather than WorkAct that best discriminates.

The present study sought to test specifically the AFFM in BPD patients for several reasons. First, according to Livesley (2005), BPD is one of the most valid DSM-IV diagnoses along with the antisocial, schizoid-avoidant, and obsessive compulsive PDs. Thus, data obtained using this diagnosis provide an additional guarantee regarding its validity. Second, BPD symptomatology seems to be well characterized by the AFFM. Although this instrument was not designed specifically to measure personality pathology, the ZKPQ provides data on basic personality traits that may be reflected in a wide range of adaptive and maladaptive behaviors as well as of habits and attitudes (e.g., two of the cardinal symptoms of BPD namely affective dysregulation and behavioral dyscontrol could well be tapped by N-Anx and ImpSS, respectively). Third, there are some controversies about which dimensions best describe BPD. According to Widiger and Trull (1997), subtle distinctions exist in relation to how personality domains are conceptualized, thus provoking a disagreement at lower-order levels about the selection and placement of particular facets into particular scales. Livesley (2005) states that this disagreement stems partly from the lack of clarity about the exact meaning of secondary and primary traits: what is a primary trait to one theorist is a secondary trait to others, e.g., Impulsivity trait placement in the alternative models of Eysenck (1991), Costa and McCrae (1998), and Zuckerman (2002). And fourth, Borderline diagnosis seems to be characterized by a core phenotype consisting of affective dysregulation, behavioral dyscontrol, and disturbed interpersonal relationships. These dimensions have strong genetic influences on traits that underlie them: N-Anx is associated with increased responsivity of cholinergic systems, and Impulsive Aggression with reduced serotonergic activity in the brain (Skodol et al., 2002). Therefore, biologically rooted models such as the AFFM connect temperamental dispositions with biological markers such as neurotransmitters or hormones, that in turn can serve as genetic
criteria to supplement the usual statistical criteria used to determine the number and content of secondary constructs (Livesley, 2005).

CONCLUSIONS

The data obtained from this study is the first attempt to provide validation of the ZKPQ in a clinical sample meeting BPD criteria by examining its psychometric properties and its discriminant and predictive power. Nevertheless, it is important to acknowledge several important issues regarding the interpretation of the present results. First, our results could be different with the use of an alternative model of PD diagnosis. In addition, the probabilistic cut-off points chosen must be considered as preliminary until they have been cross-validated in independent samples. Furthermore, the sole reliance on patient’s reports to assess personality traits could produce an underestimation of traits with low social desirability. However, since we did not find significant differences on the Infreq scale between controls and patients, it seems unlikely that our results lose relevance because of this positive response set bias.

In summary, the AFFM of personality with its instrument of measurement, the ZKPQ, appears to have a substantial power for predicting SCID-II interview-based BPD diagnosis as compared to other trait systems of assessment. Thus, the measures obtained from the ZKPQ could indicate temperamental vulnerability to BPD that can be triggered by developmental events. Researchers and clinicians whose interest includes general personality functioning as well as maladaptive personality traits might be well served by using this instrument as a useful tool for diagnosing, case conceptualization, differential treatment planning, and predict response to treatment (Widiger, 1993). Accordingly, results of the current study could add to the growing base of knowledge on the utility of dimensional models of personality in the advance of PDs conceptualization.

REFERENCES


