The main purpose of this study was to explore the dimensionality of the borderline personality disorder in nonclinical young adults by means of the Borderline Personality Questionnaire (BPQ; Poreh et al., 2006). We also studied the phenotypic expression of the borderline personality traits as a function of participants' gender and age, and the relationship between BPQ subscales and measures of depressive symptoms, anxiety, stress, hallucinatory predisposition, and paranoid ideation. The sample comprised 809 young adults, 562 (69.5%) were women, with a mean age of 20.2 years (SD = 2.9). The results indicate that the BPQ self-report has adequate psychometric properties. The levels of internal consistency for the BPQ subscales ranged between .78 and .93. Analysis of the internal structure of the BPQ subscales yielded a one-dimensional solution. In contrast, second-order principal components analysis at the item level yielded a five-dimensional solution. Likewise, statistically significant differences in the mean scores of the borderline personality traits as a function of participants' gender and age were found. The BPQ subscales correlated significantly with measures of depression, anxiety, stress, paranoid ideation, and hallucinatory predisposition. These results help to improve our understanding of the dimensional structure of the borderline personality in the general population. Future research should continue to identify participants who are at risk for the development of borderline personality disorder and facilitating the development of early detection and prevention programs.
Table impulsiveness associated with clinically significant distress and high comorbidity [American Psychiatric Association (APA), 2000]. BPD is one of the most common personality disorders (Widiger & Trull, 1993), which usually becomes recognizable during adolescence or young adulthood. The prevalence of BPD in general population is between .7 and 2% (Lenzenweger, Lane, Loranger, & Kessler, 2007; Torgersen, Kringle, & Cramer, 2001), around 10% in psychiatric outpatients, and represents 30–60% of the entire clinical population with personality disorders (APA, 2000).

From a dimensional model of personality disorder (Widiger & Trull, 2007), maladaptive personality traits of BPD are not considered to be associated exclusively with a psychopathological alteration; rather, they can be found distributed continuously within the population along a psychopathological severity continuum, with the clinical entity at the most extreme pole. BPD traits found in the general population would be qualitatively similar, though quantitatively less severe, than those found in clinical samples. Along this continuum we might encounter intermediate phenotypic expressions, which, though not reaching clinical level, would be associated with greater current psychopathological intensity, severity and impairment, and possibly with higher risk of future development of psychopathological disorders. In this regard, participants with high scores on self-reports assessing BPD traits or with subclinical levels have been linked with more depressive symptomatology, negative affect, distress, emotional dysregulation, psychopathological symptoms, and BPD diagnosis (Gardner & Qualter, 2009a; Korfine & Hooley, 2009; Leung & Leung, 2009; Trull, 1995).

The assessment of borderline personality traits has advanced considerably in the last two decades (Poreh et al., 2006; Zanarini et al., 2003). In the current literature, there is a substantial number of measurement instruments with adequate psychometric guarantees (Gardner & Qualter, 2009b; Morey, 1991; Rawlings, Claridge, & Freeman, 2001; Trull, 1995; Zanarini et al., 2003). Undoubtedly, the availability of screening and assessment instruments for BPD traits is relevant for understanding this disorder, for the in-depth study of the possible etiological mechanisms, and for the identification of participants who present such traits at a subclinical or risk level, with a view to improving prevention programs, early detection, and the implementation of prophylactic treatments. Among the most frequently used self-reports, to mention just a few, are the Borderline Scale of the Personality Assessment Inventory (PAI-BOR; Morey, 1991), the Borderline Personality Scale (STB; Claridge & Broks, 1984), and the McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD; Zanarini et al., 2003). Recently, Poreh et al. (2006) have developed a self-report for assessing BPD traits according to DSM-IV criteria (APA, 1994), called the Borderline Personality Questionnaire (BPQ). The BPQ includes a total of 80 statements with dichotomous response format (True/False). Although BPQ has not yet been extensively researched, it has shown adequate psychometric properties, including sensitivity, speci-
ficity, predictive value, diagnostic precision, test-retest reliability, and internal consistency, as well as showing its utility for the detection of BPD in young population (Chanen et al., 2008; Poreh et al., 2006).

With the aim of determining and understanding the number and content of the underlying dimensions of BPD, several studies have examined its construct validity by means of exploratory and confirmatory factor analyses, in both clinical samples (Becker, McGlashan, & Grilo, 2006; Fossati et al., 1999; Sanislow et al., 2002) and the general population (Aggen, Neale, Røysamb, Reichborn-Kjennerud, & Kendler, 2009; Gardner & Qualter, 2009b; Taylor & Reeves, 2007). Nevertheless, it should be pointed out that strict comparison between studies is precluded by the heterogeneity of measurement instruments (e.g., interviews and self-reports), and the samples (e.g., clinical and nonclinical) and statistical analyses employed (e.g., exploratory and confirmatory factor analysis). In clinical samples, BPD can be considered a one-dimensional construct (Fossati et al., 1999; Sanislow et al., 2002), or a multifactor solution, made up of two factors (Benazzi, 2006; Whewell, Ryman, Donanno, & Heather, 2000), three factors (Sanislow et al., 2002), or even four factors (Becker et al., 2006; Lieb, Zanarini, Schmahl, Linehan, & Bohus, 2004). Similar results are found on analyzing the underlying structure of BPD in nonclinical samples. Thus, research has also found one-dimensional (Aggen et al., 2009; Gardner & Qualter, 2009b; Nestadt et al., 2006), two-dimensional (Poreh et al., 2006; Rawlings et al., 2001), three-dimensional (Leung & Leung, 2009; Taylor & Reeves, 2007) or four-dimensional solutions (De Moor, Distel, Trull, & Boomsma, 2009; Gardner & Qualter, 2009b), or even indeed as many as 6 factors (Jackson & Trull, 2001). In particular, analyzing the dimensional structure of the BPQ subscales, Poreh et al. (2006) suggest both a single borderline factor and a two correlated factors called Identity/Interpersonal—or perhaps Negative Affectivity/Interpersonal difficulty—and Impulsiveness.

Upon examining the phenotypic expression of the BPD traits as a function of gender and age in nonclinical samples, statistically significant differences are found, though the results are not yet conclusive (Gardner & Qualter, 2009b; Rawlings et al., 2001; Trull, 1995). As a function of gender, some studies find that men score higher than women in BPD traits (Aggen et al., 2009; Trull, 1995), others find that women score higher than men (De Moor et al., 2009; Ekselius, Bodlund, von Knorring, Lindström, & Kullgren, 1996; Lipp, Arnold, & Siddle, 1994; Trull, 1995), while a third group of studies finds no differences (Gardner & Qualter, 2009b; Rawlings et al., 2001). In any case, although some men may score higher in several BPD traits, this does not mean that the prevalence of BPD is higher in men; on the contrary, the rates in clinical samples are two to three times higher in women (Widiger & Trull, 1993). With regard to age, mean levels of BPD traits are more higher in adolescence, and decline with age (Cohen, Crawford, Johnson, & Kasen, 2005; De Moor et al., 2009; Rawlings et al., 2001). Nevertheless, the phenotypic expression of the BPQ traits in non-
clinical population and their relationship with gender and age require further research. Also, there is a need to carry out studies based on new self-reports in nonclinical samples that can clarify the inconsistent and contradictory results found, permitting greater and more in-depth understanding of this construct, without the confounding effects commonly associated with BPD patients, such as medication or stigmatization.

Within this research context, the purpose of the present study was to explore the underlying dimensional structure of BPD in nonclinical young adults on the basis of the BPQ (Poreh et al., 2006). The study of the internal structure of the BPQ was conducted both at the subscale level and at the item level. We also studied in depth the phenotypic expression of the borderline personality traits as a function of participants' gender and age, and examined the relationship of the BPQ subscales to depressive symptomatology, anxiety, stress, hallucinatory predisposition and paranoid ideation.

**METHOD**

**PARTICIPANTS**

The sample comprised 809 university students, 562 (69.5%) of whom were women, enrolled in a total of 9 different courses at the University of Oviedo: Law, Psychology, Education, Languages, Philosophy, Tourism, Teaching, Mathematics, and Speech Therapy. Mean age of the participants was 20.2 (SD = 2.9), with a range of 17 to 32. Average number of years of education was 16.2 (SD = 2.7). Participants did not receive any type of incentive for their participation in the study.

**INSTRUMENTS**

Borderline Personality Questionnaire (BPQ; Poreh et al., 2006). The BPQ is a self-report made up of 80 statements with dichotomous response format (True/False) and developed for assessment of the borderline personality based on DSM-IV criteria (APA, 1994). It has a total of 9 subscales: Impulsiveness, Affective Instability, Abandonment, Relationship, Self-Image, Suicide/Self-Mutilation, Emptiness, Intense Anger, and Quasi-Psychotic States. The levels of internal consistency (KR-20) ranged between .51 and .89 for the subscales, and between .92 and .94 for the total score (Chanen et al., 2008; Poreh et al., 2006). Likewise, the instrument has shown adequate levels of sensitivity (.68), specificity (.90), positive predictive value (.65), negative predictive value (.91) and test-retest reliability (.92), and has been specifically accredited for use in the detection of BPD in young population (Chanen et al., 2008).

Depression Anxiety Stress Scale-21 (DASS-21; Antony, Bieling, Cox, Enns, & Swinson, 1998). The DASS-21 is a self-report with 21 statements in a Likert-type format with 4 categories (0 = did not apply to me at all,
3 = applied to me very much, or most of the time) distributed over three subscales: Depression, Anxiety, and Stress. The DASS-21 assesses negative emotional states over the past week, and has been used in representative samples of the general population (Henry & Crawford, 2005) and in clinical samples (Antony et al., 1998). Evidence of convergent and divergent validity with other self-reports of anxiety, depression, and psychopathology has been obtained, as well as a three-dimensional solution that empirically supports the proposed subscales (Antony et al., 1998; Bados, Solanas, & Andrés, 2005; Daza, Novy, Stanley, & Averill, 2002; Henry & Crawford, 2005). In this study we used the version that was validated in Spanish population (Daza et al., 2002). Levels of consistency in Spanish clinical and nonclinical samples ranged between .70 and .96 (Bados et al., 2005; Daza et al., 2002).

Launay-Slade Hallucination Scale-revised (LSHS-R; Bentall & Slade, 1985). The LSHS-R is a 12-item self-report, which was developed based on the assumption that hallucinatory experiences are part of a continuum of normal-psychosis functioning. It has been used in patients with schizophrenia (Serper, Dill, Chang, Kot, & Elliot, 2005) and in relation to diverse psychological variables (Cella, Cooper, Dymond, & Reed, 2008), and has shown adequate psychometric properties (Waters, Badcock, & Maybery, 2003), as well as adequate temporal stability (Morrison, Wells, & Northard, 2002). In this work we used the version adapted to Spanish, which uses a Likert-type response format with 4 categories (1 = certainly does not apply to you, 2 = possibly does not apply to you, 3 = possibly applies to you, 4 = certainly does apply to you), in which the levels of internal consistency were higher than .83 (Fonseca-Pedrero et al., 2010).

Persecutory Ideation Questionnaire (PIQ; McKay, Langdon, & Coltheart, 2006). The PIQ is a 10-item self-report with a 5-point Likert-type response format (1 = strongly disagree, 5 = strongly agree), which measures paranoid ideation of a persecutory nature. The PIQ has been used in various investigations (Fernyhough, Jones, Whittle, Waterhouse, & Bentall, 2008). Levels of internal consistency in a sample of college students was .87, and in clinical samples .90 (McKay et al., 2006).

PROCEDURE

Translation and adaptation of the BPQ and PIQ was carried out using the back translation procedure and following international guidelines (Hambleton, Merenda, & Spielberger, 2005). The English original version was translated into Spanish by an expert in the subject matter. Subsequently, this version was translated into English by another bilingual researcher familiar with English culture. Finally, a third researcher compared the two English versions (original and translated).

The questionnaire was administered collectively in groups of 15–40 participants, who were assured of the confidentiality of their answers and the voluntary nature of their participation. In order to minimize errors, the administration took place under the supervision of the researchers.
DATA ANALYSIS

First, the descriptive statistics of the subscales and of the total scores on the self-reports were analyzed. For the BPQ subscales, internal consistency was estimated via Cronbach’s alpha using the FACTOR program (Lorenzo-Seva & Ferrando, 2006), which takes into account the dichotomous nature of the variables. Second, a study of the internal structure of the BPQ, at both the subscale and the item level, was carried out. At the subscale level we performed Principal Components Analysis (PCA), and the procedure for determining the number of components was Minimum Average Partial (MAP; Velicer, 1976). At the item level we conducted a second-order PCA on the correlation matrix of the first-order components. Only the components with eigenvalues above 1 (Kaiser’s criterion) were included in the second-order factor analysis. The aim of the second-order PCA was to reduce the dimensionality of the data and to improve their interpretation. Third, the mean scores on the BPQ subscales as a function of gender and age were examined. For this purpose, Multivariate Analysis of Variance (MANOVA) was performed, with the BPQ subscales as the dependent variable and gender and age as fixed factors. Age was recoded in two homogeneous groups: Group 1 participants aged 17 to 19 years and Group 2 participants ≥20 years. We used Wilks’ Lambda (\(\lambda\)) to determine whether there were significant differences in all the dependent variables considered jointly. In the cases where Wilks’ Lambda was significant (\(p < .05\)), we considered the results of the individual Analyses of Variance (ANOVAs). As an indicator of the effect size we used partial Eta squared (partial \(\eta^2\)). Lastly, we examined the Pearson correlations among the BPQ subscales and the DASS-21, LSHS-R, and PIQ. SPSS 15.0 and FACTOR (Lorenzo-Seva & Ferrando, 2006) were used for all data analyses.

RESULTS

DESCRIPTIVE STATISTICS

Table 1 shows the number of items, mean, standard deviation, skewness, kurtosis, range of scores, and Cronbach’s alpha coefficients for the BPQ and DASS-21 subscales and for the total scores of the LSHS-R and the PIQ. Levels of internal consistency for the BPQ subscales ranged between .78 and .93. The pairwise correlations among the BPQ subscales are shown in Table 2. All correlations were statistically significant, and their values ranged between .11 and .69.

EVIDENCE OF THE INTERNAL STRUCTURE:
PRINCIPAL COMPONENTS ANALYSIS OF THE BPQ

The Bartlett’s sphericity index was 2065.2 (\(p < .001\)) and the Kaiser-Meyer-Olkin (KMO) index was .83. The advised number of dimensions for Minimum Average Partial (MAP) was one. The Scree Plot analysis, the Kai-
ser criterion and the interpretation of the components are in accordance with the one-factor solution that explained 40.17% of the total variance. For this factorial solution, the Root Mean Square of Residuals was .09. Table 3 shows the factor loadings and the communalities, the eigenvalue, and the proportion of explained variance resulting from the PCA at the level of the BPQ subscales. Next, we carried out a PCA with subsequent oblimin rotation on the 80 items of the BPQ. The KMO value was .87, and Bartlett’s sphericity index was 18140.6 (p < .001). A total of twenty-three eigenvalues reached values higher than 1, explaining 58.63% of the total variance. In order to reduce the dimensionality of the data and to improve their interpretation, we conducted a second-order PCA. The KMO sample adequacy measurement was .76, and Bartlett’s sphericity index was 927.2 (p < .001). A total of seven eigenvalues reached values higher than 1, explaining 42.08% of the total variance. The results can be seen in Table 4, from which the values lower than .30 were eliminated. In accordance with the preceding analyses, the most easily-interpreted solution involves the grouping together of five second-order components that explain 32.86% of the total variance.

### Table 1. Descriptive Statistics for the Borderline Personality Questionnaire, the Depression Anxiety Stress Scale-21, the Launay-Slade Hallucination Scale-Revised, and the Persecutory Ideation Questionnaire

<table>
<thead>
<tr>
<th>No items</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Range</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulsiveness</td>
<td>2.37</td>
<td>1.48</td>
<td>.81</td>
<td>.74</td>
<td>0–9</td>
<td>.78</td>
</tr>
<tr>
<td>Affective Instability</td>
<td>3.98</td>
<td>2.80</td>
<td>.40</td>
<td>-.86</td>
<td>0–10</td>
<td>.89</td>
</tr>
<tr>
<td>Abandonment</td>
<td>1.48</td>
<td>1.41</td>
<td>1.22</td>
<td>2.05</td>
<td>0–9</td>
<td>.81</td>
</tr>
<tr>
<td>Relationships</td>
<td>2.07</td>
<td>2.10</td>
<td>1.09</td>
<td>.35</td>
<td>0–8</td>
<td>.91</td>
</tr>
<tr>
<td>Self Image</td>
<td>1.28</td>
<td>1.81</td>
<td>1.99</td>
<td>3.78</td>
<td>0–9</td>
<td>.92</td>
</tr>
<tr>
<td>Suicide</td>
<td>.34</td>
<td>.90</td>
<td>3.40</td>
<td>12.88</td>
<td>0–6</td>
<td>.93</td>
</tr>
<tr>
<td>Emptiness</td>
<td>1.92</td>
<td>2.16</td>
<td>1.26</td>
<td>.98</td>
<td>0–10</td>
<td>.90</td>
</tr>
<tr>
<td>Intense Anger</td>
<td>2.85</td>
<td>2.27</td>
<td>.86</td>
<td>-.01</td>
<td>0–10</td>
<td>.89</td>
</tr>
<tr>
<td>Quasi-Psychotic States</td>
<td>.73</td>
<td>1.10</td>
<td>1.80</td>
<td>3.69</td>
<td>0–7</td>
<td>.82</td>
</tr>
<tr>
<td>Depression DASS-21</td>
<td>2.24</td>
<td>2.87</td>
<td>2.36</td>
<td>7.62</td>
<td>0–20</td>
<td>.80</td>
</tr>
<tr>
<td>Anxiety DASS-21</td>
<td>2.73</td>
<td>2.99</td>
<td>1.89</td>
<td>4.74</td>
<td>0–20</td>
<td>.74</td>
</tr>
<tr>
<td>Stress DASS-21</td>
<td>4.67</td>
<td>3.94</td>
<td>1.16</td>
<td>1.45</td>
<td>0–20</td>
<td>.82</td>
</tr>
<tr>
<td>LSHS-R</td>
<td>17.42</td>
<td>3.68</td>
<td>1.20</td>
<td>2.07</td>
<td>12–38</td>
<td>.71</td>
</tr>
<tr>
<td>PIQ</td>
<td>14.10</td>
<td>5.59</td>
<td>1.98</td>
<td>4.85</td>
<td>10–50</td>
<td>.88</td>
</tr>
</tbody>
</table>

**Notes.** DASS-21: Depression Anxiety Stress Scale-21; LSHS-R: Launay-Slade Hallucination Scale-Revised; PIQ: Persecutory Ideation Questionnaire

Table 2. Correlation Matrix of the Borderline Personality Questionnaire Subscales

<table>
<thead>
<tr>
<th>BPQ Subscales</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Impulsiveness</td>
<td>.21*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Affective Instability</td>
<td>.11*</td>
<td>.42*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Abandonment</td>
<td>.11*</td>
<td>.44*</td>
<td>.51*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Relationships</td>
<td>.13*</td>
<td>.35*</td>
<td>.44*</td>
<td>.41*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Self-Image</td>
<td>.18*</td>
<td>.26*</td>
<td>.29*</td>
<td>.25*</td>
<td>.29*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) Suicide</td>
<td>.15*</td>
<td>.47*</td>
<td>.50*</td>
<td>.50*</td>
<td>.69*</td>
<td>.31*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Emptiness</td>
<td>.28*</td>
<td>.59*</td>
<td>.34*</td>
<td>.41*</td>
<td>.28*</td>
<td>.20*</td>
<td>.33*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8) Intense Anger</td>
<td>.16*</td>
<td>.25*</td>
<td>.23*</td>
<td>.23*</td>
<td>.17*</td>
<td>.19*</td>
<td>.27*</td>
<td>.14*</td>
<td></td>
</tr>
</tbody>
</table>

*p < .01
The two remaining factors are considered difficult to interpret and resid-
ual. The first second-order factor was called Emptiness/Identity, and the
second, Impulsiveness/Instability. The third second-order factor was
called Intense Anger, the fourth, Suicide, and the fifth, Quasi-Psychotic
Experiences.

DIFFERENCES AS A FUNCTION OF GENDER AND AGE
IN THE MEAN SCORES ON THE BPQ SUBSCALES

The Multivariate Analysis of Variance (MANOVA) revealed statistically sig-
nificant differences in the mean scores on the BPQ subscales as a func-
tion of gender (Wilks’ \( \lambda \) = .874, \( p < .001 \)) and age (Wilks’ \( \lambda \) = .962, \( p < .001 \)).
The results are shown in Tables 5 and 6. As regards the influence of gen-
der, we found that women scored higher than men on the subscales Affec-
tive Instability, Abandonment and Relationship; in contrast, men scored higher on the subscale Impulsiveness. We also found statistically significant differences as a function of age for the subscales Impulsiveness, Affective Instability, Self Image, and Intense Anger. Younger participants scored higher by comparison with the older ones on the subscales Affective Instability, Self Image, and Intense Anger, though the older participants scored higher on the subscale Impulsiveness. No statistically significant interactions were found between participants’ gender and age.


Finally, Pearson correlations among the BPQ subscales and the DASS-21, the LSHS-R, and the PIQ were examined (see Table 7). All the correlations were statistically significant, ranging between .16 and .52. The highest correlations for the subscale Depression (DASS-21) were with the BPQ subscales Emptiness and Self-image. The subscale Anxiety (DASS-21) showed its highest correlations with the BPQ subscales Emptiness and Abandonment. The DASS-21 subscale Stress correlated highly with the BPQ subscale Affective Instability. The LSHS-R correlated highly with the BPQ subscale Quasi-Psychotic States, and the PIQ correlated highly with the BPQ subscales Relationship and Emptiness.

### Table 5. Gender Comparison of Mean Scores on the Borderline Personality Questionnaire Subscales

<table>
<thead>
<tr>
<th>BPQ Subscales</th>
<th>Male (n = 247)</th>
<th>Female (n = 562)</th>
<th>F</th>
<th>p</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulsiveness</td>
<td>2.86 (1.6)</td>
<td>2.15 (1.4)</td>
<td>37.86</td>
<td>.000</td>
<td>.045</td>
</tr>
<tr>
<td>Affective Instability</td>
<td>3.25 (2.6)</td>
<td>4.30 (2.8)</td>
<td>21.54</td>
<td>.000</td>
<td>.026</td>
</tr>
<tr>
<td>Abandonment</td>
<td>1.04 (1.2)</td>
<td>1.68 (1.4)</td>
<td>32.98</td>
<td>.000</td>
<td>.039</td>
</tr>
<tr>
<td>Relationships</td>
<td>1.74 (1.9)</td>
<td>2.20 (2.1)</td>
<td>7.11</td>
<td>.008</td>
<td>.009</td>
</tr>
<tr>
<td>Self Image</td>
<td>1.24 (1.7)</td>
<td>1.30 (1.8)</td>
<td>0.02</td>
<td>.878</td>
<td>.000</td>
</tr>
<tr>
<td>Suicide</td>
<td>0.28 (0.8)</td>
<td>0.36 (0.9)</td>
<td>1.20</td>
<td>.273</td>
<td>.001</td>
</tr>
<tr>
<td>Emptiness</td>
<td>1.75 (1.9)</td>
<td>1.99 (2.2)</td>
<td>1.59</td>
<td>.207</td>
<td>.002</td>
</tr>
<tr>
<td>Intense Anger</td>
<td>2.62 (2.2)</td>
<td>2.94 (2.3)</td>
<td>2.16</td>
<td>.142</td>
<td>.003</td>
</tr>
<tr>
<td>Quasi-Psychotic States</td>
<td>0.75 (1.1)</td>
<td>0.72 (1.1)</td>
<td>.19</td>
<td>.658</td>
<td>.000</td>
</tr>
</tbody>
</table>

### Table 6. Age Comparison of Mean Scores on the Borderline Personality Questionnaire Subscales

<table>
<thead>
<tr>
<th>BPQ Subscales</th>
<th>17-19 years (n = 420)</th>
<th>≥20 years (n = 389)</th>
<th>F</th>
<th>p</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulsiveness</td>
<td>2.25 (1.3)</td>
<td>2.50 (1.6)</td>
<td>4.17</td>
<td>.042</td>
<td>.005</td>
</tr>
<tr>
<td>Affective Instability</td>
<td>4.62 (2.9)</td>
<td>3.67 (2.6)</td>
<td>8.22</td>
<td>.004</td>
<td>.010</td>
</tr>
<tr>
<td>Abandonment</td>
<td>1.58 (1.4)</td>
<td>1.38 (1.4)</td>
<td>3.52</td>
<td>.061</td>
<td>.004</td>
</tr>
<tr>
<td>Relationships</td>
<td>2.18 (2.1)</td>
<td>1.94 (2.1)</td>
<td>2.85</td>
<td>.092</td>
<td>.004</td>
</tr>
<tr>
<td>Self Image</td>
<td>1.45 (1.9)</td>
<td>1.11 (1.6)</td>
<td>6.46</td>
<td>.011</td>
<td>.008</td>
</tr>
<tr>
<td>Suicide</td>
<td>0.32 (0.8)</td>
<td>0.35 (0.9)</td>
<td>.47</td>
<td>.494</td>
<td>.001</td>
</tr>
<tr>
<td>Emptiness</td>
<td>2.02 (2.1)</td>
<td>1.80 (2.2)</td>
<td>1.78</td>
<td>.183</td>
<td>.002</td>
</tr>
<tr>
<td>Intense Anger</td>
<td>3.12 (2.3)</td>
<td>2.55 (2.1)</td>
<td>10.79</td>
<td>.001</td>
<td>.013</td>
</tr>
<tr>
<td>Quasi-Psychotic States</td>
<td>0.75 (1.1)</td>
<td>0.71 (1.1)</td>
<td>1.02</td>
<td>.312</td>
<td>.001</td>
</tr>
</tbody>
</table>
The main goal of this study was to examine the underlying dimensional structure of the borderline personality disorder (BPD) in nonclinical young adults, using the Borderline Personality Questionnaire (BPQ; Poreh et al., 2006). Likewise, we studied in depth the phenotypic expression of the borderline personality traits as a function of gender and age, and analyzed the relationship between these traits and depressive symptomatology, anxiety, stress, hallucinatory predisposition, and paranoid ideation. The study of borderline personality traits in the general population may yield data about their expression at a subclinical level and allow us to further our understanding of these constellations of maladaptive personality traits, eliminating interference effects such as those associated with medication or stigmatization that are frequently found in patients. Moreover, it allows us to establish links between normal personality traits and the maladaptive traits that characterize BPD, as well as to implement detection and early intervention programs in at-risk individuals. The results indicate that: (a) the structure of the borderline personality, measured through the BPQ, depends on the level of analysis employed (subscales or items), and ranges between a one-dimensional and five-dimensional solution; (b) statistically significant differences are found as a function of gender and age in the mean scores on borderline personality traits; (c) participants with high scores in these traits present higher levels of depression, anxiety, stress, paranoid ideation, and hallucinatory predisposition compared to those who score low; and (d) in accordance with previous studies (Chanen et al., 2008; Poreh et al., 2006), the BPQ presents adequate psychometric characteristics which support its use as a measurement instrument for assessing borderline personality traits in the young nonclinical adult population.

Upon examining the internal structure and the content of the borderline personality traits via the BPQ at the subscale level, we found a one-dimensional solution. Poreh et al. (2006) conducted a Principal Component
Analysis of the BPQ subscales and found both a single borderline factor and a 2-factor solution comprising one general component of Identity/Interpersonal (or perhaps Negative Affectivity/Interpersonal difficulty), and unreliable second component of Impulsiveness. The results of this study are in accordance with Poreh et al. (2006), and coincide with the one-dimensional structure found in both nonclinical (Aggen et al., 2009; Gardner & Qualter, 2009b; Nestadt et al., 2006) and clinical samples (Fossati et al., 1999; Johansen, Karterud, Pedersen, Gude, & Falkum, 2004). Nevertheless, Poreh et al. (2006) did not analyze the dimensional structure of the BPQ at the item level. At the item level, the results suggest five second-order components: Emptiness/Identity, Impulsiveness/Instability, Intense Anger, Suicide, and Quasi-Psychotic Experiences. These second-order components found at the item level are not coherent with the structure found at the subscale level and seem to reflect better the symptom-atological heterogeneity of BPD. These results show clearly how the understanding of BPD, as regards the number and content of its dimensions, depends to a considerable extent on the level of analysis employed, and highlight the need to carry out factor analyses at both levels. Thus, as in previous studies, we found that the structure of BPD in nonclinical samples can range from a two-factor to a six-factor one (De Moor et al., 2009; Gardner & Qualter, 2009b; Jackson & Trull, 2001; Leung & Leung, 2009; Rawlings et al., 2001; Taylor & Reeves, 2007). Although comparison between studies is quite difficult, the five-dimensional solution found shows some parallels with the factor structures reported in previous research (Lieb et al., 2004; Sanislow et al., 2002). Thus, the first component, Emptiness/Identity, is similar to the Disturbed Relatedness dimension found by Sanislow et al. (2002), or Taylor and Reeves’ (2007) Interpersonal Instability component. For its part, the second component, Impulsiveness/Instability, could be considered as a combination of the dimensions of Affective and Behavioral Dysregulation (Sanislow et al., 2002) or Impulsiveness and Affective Disturbances (Lieb et al., 2004). On combining the Impulsivity component with the fourth component of Suicide found in this study, the result would be similar to the Impulsiveness dimension formulated by Lieb et al. (2004), or Sanislow et al.’s (2002) Behavioral Dysregulation. On the other hand, joining the Instability component with the third component of Intense Anger would result in something similar to the Affective Disturbances dimension reported by Lieb et al. (2004), or the Affective Dysregulation of Sanislow et al. (2002). Finally, the fifth component, Quasi-Psychotic Experiences, would be similar to the dimension proposed by Lieb et al. (2004) of Disturbed cognition, though without the Identity disturbances facet.

The phenotypic expression of the BPD traits as measured with the BPQ varies according to gender and age. In this sense, women scored higher than men in Affective Instability, Abandonment, and Relationship; in contrast, men scored higher in Impulsiveness. In previous studies, women were also observed to score higher in the BPD traits than the men (Aggen
et al., 2009; De Moor et al., 2009; Ekselius et al., 1996; Lipp et al., 1994; Trull, 1995), while other research found that men scored higher in Impulsivity (Aggen et al., 2009), or even that there were no differences (Gardner & Qualter, 2009b; Rawlings et al., 2001). Recently, De Moor et al. (2009) found that, compared to men, women reported more borderline characteristics for affective instability, identity problems, and negative relationships, but not for self-harm. With regard to age, we found that the younger participants scored higher than the older ones on the subscales Affective Instability, Self-image, and Intense Anger, though on the Impulsiveness subscale the older participants scored higher. These results coincide with those of previous studies which found that the BPD traits seem to correlate negatively with age (De Moor et al., 2009; Rawlings et al., 2001). More specifically, De Moor et al. (2009) found that younger men had higher scores for identity problems and self-harm than did older men, while younger women had higher scores for identity problems and affective instability than did older women.

Participants with high scores in these BPD traits presented higher levels of depression, anxiety, stress, paranoid ideation, and hallucinatory predisposition by comparison with those who did not score highly. Likewise, the correlations found suggested a high degree of overlap between these constructs. Previous studies have found that participants with high scores in self-reports assessing BPD traits present higher levels of depressive symptomatology, negative affect, distress, emotional dysregulation, and psychopathological symptoms (Gardner & Qualter, 2009a; Korfine & Hooley, 2009; Leung & Leung, 2009; Trull, 1995). Paralleling this trend, studies carried out in patients with BPD also found affective and psychopathological alterations and high rates of comorbidity (Becker et al., 2006; Johansen et al., 2004; McGlashan et al., 2000). These results open up the possibility that participants with high scores on the BPD traits may present subclinical symptoms and signs that are qualitatively similar but quantitatively less severe than those found in patients, supporting dimensional models of personality which consider that maladaptive personality traits are not associated exclusively with a psychopathological alteration and they can be found distributed continuously within the population (Widiger & Trull, 2007).

The results found in this study should be interpreted in the light of the following limitations. First, the sample employed in this study was made up of college students with a limited age range and mostly of women, which to some extent limits the generalization of the results to other samples. Furthermore, the sampling method and the excessive homogeneity of the sample may impact directly on the results obtained in the principal components analysis (Bowden, 2004), and hence on the dimensional structure underlying the self-report. This should be taken into account on making possible inferences about the internal structure underlying this or other measurement instruments, especially when making analysis based on nonrepresentative and homogeneous samples of the general popula-
tion. There is no doubt of the need for additional studies in clinical samples which replicate these findings, as well as exploring whether the dimensional structure underlying the BPQ is invariant across gender, age, and other sociodemographic characteristics of the sample (Byrne, 2008). Second, we used self-report measures, and given their limitations, it would have been useful to combine them with structured interviews. And third, we did not gather information about the possibility of psychiatric disorders in the participants, or about whether they were taking any medication.

In spite of these limitations, the present study has allowed us to improve our understanding of the structure of the BPD, of the role played by gender and age in the phenotypic expression of these traits at a subclinical level, and of their relationship to other psychological variables within the dimensional models of personality. Future research should continue to identify participants who are at risk (genetic, clinical, or psychometric) for the development of BPD. Likewise, it would be interesting to combine the use of self-reports, such as the BPQ, with laboratory measures (e.g., Continuous Performance Test) and endophenotypes, with a view to exploring the possible etiopathogenic mechanisms and facilitating the development of early detection and prevention programs.

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