The psychometric properties of the Portuguese version of the Personality Inventory for DSM-5

Running head: The Portuguese version of the PID-5

Abstract

The DSM-5 Section III proposes a hybrid dimensional-categorical model of conceptualizing personality and its disorders that includes assessment of impairments in personality functioning (criterion A) and maladaptive personality traits (criterion B). The Personality Inventory for the DSM-5 is a new dimensional tool, composed of 220 items organized into 25 facets that delineate five higher order domains of clinically relevant personality differences, and was developed to operationalize the DSM-5 model of pathological personality traits. The current studies address the internal consistency (Study 1), the test-retest reliability (Study 2) and the criterion validity (Studies 3 and 4) of the Portuguese version of the PID-5 in samples of native speaking psychology students. Results indicated good internal consistency reliabilities and good temporal stability reliabilities for the majority of the PID-5 traits. The correlational pattern of the PID-5 traits with two measures of personality and psychopathological symptoms was in accordance with theoretical expectations and showed its concurrent validity.

Key words: DSM-5 Section III, personality disorders, assessment, Portuguese version of the PID-5, psychometric properties

Introduction

In the former editions of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), a personality disorder (PD) diagnosis was presumed, based on clinical authority, to be categorical and polythetic with arbitrary thresholds. The assumption that mental disorders are dichotomous has led to several problems such as comorbidity and within-category heterogeneity which have been widely acknowledged across time (Krueger, Hopwood, Wright, & Markon, 2014; Krueger & Markon, 2014; Widiger & Simonsen, 2005). Although the main DSM-5 manual (APA, 2013) perpetuates the categorical paradigm, its Section III, entitled "emerging measures and models", proposes a hybrid dimensional-categorical classification system, based on empirical evidence of the continuous nature of psychopathological variation for further study. According to this alternative methodology, the assessment of personality and the diagnosis of personality disorder encompass the assessment of the level of personality functioning (criterion A), the core of PD, and the assessment of specific patterns of pathological traits (criterion B).

Personality functioning refers to the ways individuals experience the *self* (identity and self-direction) and the relationships with others (empathy

and intimacy) and the overall level of personality functioning addresses the severity of the diagnosis. In DSM-5 Section III, the level of personality pathology is assessed through the Levels of Personality Function Scale (Bender, Morey, & Skodol, 2011) that ranges from little or no impairment to extreme impairment.

Criterion B of a PD diagnosis corresponds to specific personality traits in the DSM-5 personality trait model. These specific traits reflect the stylistic manner with which the severity of the diagnosis is expressed. Specific combinations of impairments and traits define six personality disorder types (Borderline, Obsessive-Compulsive, Avoidant, Schizotypal, Narcissistic and Antisocial Personality Disorders) plus a diagnosis of Personality Disorder – Trait Specified (PD-TS) that can be made whenever a PD is present, although the criteria for a specific PD may not be fully met.

From a conceptual point of view, personality functioning (criterion A) is distinguishable from pathological personality traits (criterion B). However, research draws attention to the empirical overlap between maladaptive personality functioning and maladaptive personality content and recommends further studies on the ways criteria A and B interweave (Krueger & Markon, 2014)

Krueger, Derringer, Markon, Watson, and Skodol (2012) developed the DSM-5 personality trait model and the corresponding instrument to measure maladaptive traits, the Personality Inventory for DSM-5 (PID-5). The PID-5

assesses 25 maladaptive traits in which individuals differ (facets) and which express five higher order domains of personality variation (Negative Affectivity vs. Emotional Stability, Detachment vs. Extraversion, Antagonism vs. Agreeableness, Disinhibition vs. Conscientiousness, and Psychoticism vs. Lucidity). The development of the PID-5 facets and domains was influenced by previous existing models and measures of maladaptive personality traits and operationalized experts' views of the most important clinical features of the PD considered in the DSM-IV-TR (DeYoung, Carey, Krueger, & Ross, 2016; Krueger et al., 2012). Factor analysis of the PID-5 facets consistently revealed a five factor structure, congruent with the five-factor model (FFM; Costa & Widiger, 2012) in which at least four of the PID-5 domains (the association between Psychoticism and Openness is the less clear and requires further investigation, e.g., Sleep, Hyatt, Lamkin, Maples-Keller, & Miller, 2017) seem to be extreme, maladaptive extensions of the five-factor model (Krueger & Markon, 2014; Maples et al., 2015; Skodol et al., 2011). They also closely resemble the domains of Harkness' Personality Psychopathology Five model (PSY-5; Harkness & McNulty, 1994; Krueger & Markon, 2014). The accumulating evidence suggesting that the DSM-5 trait model and the FFM are empirically and conceptually related supports the premise of the universality, as well as of the continuity among the dimensions that underlie both normal and pathological personality.

Since the PID-5 was published, a vast body of research on its psychometric properties has increased exponentially (Al-Dajani, Gralnick, & Bagby, 2016; Krueger & Markon, 2014). The PID-5 has also been recently translated into a number of different languages including Italian (Fossati, Krueger, Markon, Borroni, & Maffei, 2013), Dutch (De Fruit et al., 2013; De Clercq et al., 2014), German (Zimmermann et al., 2014), French (Roskam et al., 2015), Danish (Bach, Maples-Keller, Bo, & Simonsen, 2016) and Arabic (Al-Attiyah, Megreya, Alrashidi, Dominguez-Lara, & Al-Sheerawi, 2017). Although the majority of the above studies were conducted in western countries, the last study mentioned draws attention to the relevance of the study of cultural influence on psychopathology, particularly on PD whose diagnostic criteria refer explicitly to patterns of inner experience and behaviour that diverge plainly from what is expected of the individual's culture. In sum, research has revealed that the PID-5 is a reliable measure and that its structure replicates across samples and countries, even non-western countries, converging conceptually with other personality and psychopathology measures.

Within the scope of the APA recommendation (2013) to conduct further research on the DSM-5 pathological trait model (Krueger et al., 2014), this study is the first to investigate the psychometric properties of the Portuguese translation of the PID-5 (Pires, Silva, Fagulha, & Gonçalves, 2014; Pires,

Silva, & Sousa Ferreira, 2015) and pertains to contribute to the cross-cultural validity of the PID-5.

The Portuguese version of the self-report form of the PID-5 was administered to Portuguese university students to accomplish three objectives. The first objective (Study 1) was to address the internal consistency of the Portuguese PID-5 scales, as well as to compare means and standard deviations of the Portuguese PID-5 facets and domains with the same measures of the representative sample described in Krueger et al. (2012). The second objective (Study 2) was to explore the test-retest reliability of the Portuguese PID-5 facets and domains. Although the influence of situational factors on test scores is a major issue in the assessment of personality traits, the stability of the PID-5 traits was not addressed by Krueger et al. (2012). To date, there are only two published studies on the temporal consistency of the PID-5 (Wright et al., 2015; Zimmermann et al., 2017), therefore additional test-retest assessment of the PID-5 traits is necessary (Al-Dajani et al., 2016). With the first objective, we expected to replicate the original test data (Krueger et al., 2012), whereas with the second we hoped to contribute to research on the stability of the PID-5 facets and domains. Both objectives aim to attest the reliability of the Portuguese version of the PID-5. Finally, the third objective was to explore the empirical associations between the PID-5 facets and domains and other personality constructs such as the five factors measured by the Portuguese version of the

NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1992; Lima et al., 2014), a shortened version of the Revised NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 2000) and the psychopathological symptoms measured by the Portuguese version of the Brief Symptom Inventory (BSI; Canavarro, 2007; Derogatis, 1982/1983) that provides an overview of patients' symptoms and their intensity at a specific point in time.

Regarding the aforementioned empirical and conceptual convergence between the PID-5 scales and the NEO-FFI domains (Al-Dajani et al., 2016; Krueger et al., 2014; Krueger & Markon, 2014; Maples et al., 2015), in Study 3, we hypothesized positive associations for the PID-5 Negative Affectivity domain and the NEO-FFI Neuroticism domain. Furthermore, we hypothesized negative associations for the PID-5 Detachment domain and the NEO-FFI Extraversion domain; the PID-5 Antagonism domain and the NEO-FFI Agreeableness domain and finally for the PID-5 Disinhibition domain and the NEO-FFI Conscientiousness.

Personality and psychopathology have long been viewed as related domains, although the precise nature of their relationship remains unclear and subject of extensive research (Clark, 2005; DeYoung et al., 2016; Widiger & Trull, 2007). Clark (2005) refers to six etiological models to explain the nature of the associations between personality traits and psychopathology. In the *vulnerability* model and in the *pathoplasty* model there is causality between the personality trait and the subsequent mental disorder. In the

former, the first condition is a risk factor for the second (for instance, a high level of neuroticism may be a risk factor for depression), in the latter, the personality trait influences the severity, course, or response to treatment of a later onset disorder. The *scar* and the *complication* models are variants of the *pathoplasty* model and posit that the experience of psychopathology leads to change in personality traits. The *scar* posits fundamental and long-lasting changes in personality, whereas the *complication* model suggests that the traits return to premorbid baseline after an episode of illness. The last two models do not propose a causal relationship between personality and psychopathology. The *shared factor* model presupposes a shared genetic basis, while the *spectrum* model proposes underlying continua from normality to mild, moderate and severe psychopathology (for instance, social phobia and avoidant PD or schizotypal PD with schizophrenia). These models overlap and are not mutually exclusive; however, all of them have received some empirical support (Kotov, Gamez, Schmidt, & Watson, 2010).

Extensive research has established that the FFM personality variables correlate with the former DSM-IV-R Axis I and II disorders (APA, 2000), pointing to relations between high levels of neuroticism and internalizing disorders (anxiety and depression) and relations between externalizing disorders (substance use disorders and antisocial behaviour) and high levels of both neuroticism and disinhibition (Clark, 2005; Kotov et al., 2010). Given that the DSM-5 trait model and the FFM are strongly related, perhaps it may

be possible to generalize the vast theoretical and empirical literature on the FFM to the DSM-5 trait model. However, researchers acknowledge that further research on how the PID-5 traits relate to mental disorders is sorely needed (Sleep et al., 2017). To our knowledge, Study 4 is the first to relate the PID-5 facets and domains to the BSI scales. Therefore, although our hypotheses were tentative, we expected the relations found between the PID-5 and this symptomatic questionnaire to provide incremental information on the relations between the maladaptive traits assessed by the PID-5 and mental disorders.

Method

Participants

The participants were Portuguese graduate students from the Faculty of Psychology, University of Lisbon, recruited by one of the authors during a course they were attending. In Study 1, the sample consisted of 107 individuals, 88.8% female and 11.2% male, M_{age} = 24.8 years, *SD* = 7.9. In Study 2, the sample consisted of 75 individuals, 89.3% female, 10.7% male, M_{age} = 24.5 years, *SD* = 7.8. In Study 3, the sample consisted of 99 individuals, 89.9% female and 10.1% male, M_{age} = 25.0 years, *SD* = 8.1. In Study 4, the sample consisted of 82 individuals, 87.8% female and 12.2% male, M_{age} = 24.2 years, *SD* = 7.5.

Procedures

The experimental sessions were held collectively and were conducted at the Faculty of Psychology, after the obtained approval from the Ethics Committee of the Faculty of Psychology. Individuals were informed that participation in the studies was voluntary, that they could give up participation at any time they wished, that no identifying information would be asked and that the data would be used exclusively in a scientific study. In Study 2, the interval between the 1st and the 2nd application was 4 weeks and data were matched through a code given to the participant in the first application of the PID-5.

Measures

The Personality Inventory for DSM-5 (Krueger et al., 2012)

The PID-5 is a self-report measure which operationalizes the DSM-5 model of pathological personality traits. It is composed of 220 items, rated on a 4-point Likert scale ranging from 0 (very false or often false) to 3 (very true or often true) that characterize 25 empirically derived lower level facets grouped into five major domains of maladaptive personality variation. The PID-5 is to be used with adults (18 years or above) and most of its items require 8 years of prior schooling in order to complete. Most individuals finish the task in 40 minutes or less.

The license translation rights for the Personality Inventory for DSM-5 (PID-5) - Adult as well as other cross-cultural translation requirements were requested from the American Psychiatric Association which referred us to the publisher of the DSM-5 in Portugal. Upon authorization, an expert in the field of personality research and proficient in the English language, translated the original English items into Portuguese. The Portuguese translation of the PID-5 was independently evaluated by three senior personality researchers and a native English-speaking lecturer, all well acquainted with the test development procedures. The final wording was obtained after consensus among the three researchers, the native English-speaker and the author of the translation.

The Portuguese version of the NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 2000; Lima et al., 2014)

The NEO-Five Factor Inventory (NEO-FFI) is a shortened version of the NEO-PI-R, composed of 60 items (12 items from each of the NEO-PI-R dimensions) designed to measure the Five Factor Model.

The Portuguese version of the Brief Symptom Inventory (BSI; Canavarro, 2007; Derogatis, 1982/1983)

The BSI is a 53-item self-report inventory in which participants rate the extent to which they have been bothered, ranging from 0 (not at all) to 4

(extremely), in the past week by various symptoms. The BSI has nine subscales designed to assess individual symptom groups and three scales that capture general psychopathology and global psychological distress.

Analysis strategy

Statistical data analysis was performed with the IBM SPSS Statistics 23. Given that the dataset did not follow a normal distribution, test-retest and validity analyses were conducted by calculating the cross-measure Spearman correlation coefficient.

Results

Study 1

In order to evaluate the internal consistency of the scales, Cronbach's alpha coefficients (α) for the 25 facets and the five domains were calculated. The university students' self-reported PID-5 traits showed good internal consistencies (see Table 1) for the majority of the PID-5 facets ($\alpha \geq .80$ for 20 out of 25 facets). The mean Cronbach's alpha for the facets was .84, ranging from .70 at the lowest level for Irresponsibility to .95 for Eccentricity. The alphas obtained for the facets were similar to those obtained in the PID-5 construction project that ranged from .72 (Grandiosity) to .96 (Eccentricity), with a median of .86 (Krueger et al., 2012) and to those obtained in other cross-cultural validations, such as the French version of the PID-5 in which

the Cronbach's alpha for the facets ranged from .68 (Suspiciousness and Irresponsibility) to .95 (Eccentricity), with a mean of .82 (Roskan et al., 2015) and the Dutch version of the PID-5 in which the Cronbach's alpha for the facets in a sample of adolescents ranged from .58 (Suspiciousness) to .95 (Eccentricity), with a mean of .82 (De Clercq et al., 2014).

At the domain level, the internal consistencies of the Portuguese version of the PID-5 were also similar to those obtained with the original PID-5. In the Portuguese version of the PID-5, the mean internal consistency for the five domains was .92, ranging from .89 for Antagonism to .94 for Psychoticism, while in the PID-5 construction project (Krueger et al., 2012) the mean internal consistency for the five domains was .93, ranging from .84 for Disinhibition to .96 for Detachment and Psychoticism.

These results showed that the 25 facets and five domains were reliable. Moreover, the similar alphas obtained in the independent research reviewed above show that the PID-5 scales appear to be reliable measures of the traits they intend to measure.

Descriptive statistics for the 25 facets and the five domains of the Portuguese version of the PID-5 were compared with the original data (Krueger et al., 2012) through Cohen's d. Apart from Disinhibition that showed a high effect size, the majority of the variations displayed low ($\leq .2$) to medium effect sizes (].2-.5]). These slight variations suggest that the

Portuguese version of the PID-5 produces scores in the same range as those found with the original version of the PID-5.

(Insert Table 1)

Study 2

The temporal stability coefficients of the facets and domains of the Portuguese version of the PID-5 are shown in Table 2. At the facet level, the mean retest reliability was .79. The retest reliabilities ranged from a low of r_s = .56 (p < .01), for the Submissiveness scale to a high of r_s = .90 (p < .01), for the Anxiety scale ($r_s \geq$ .80 for 15 out of 25 facets). At the domain level, the mean retest reliability was .87. The retest reliabilities ranged from a low of r_s = .79 (p < .01) for the Disinhibition domain to a high of r_s = .92 (p < .01) for the Negative Affectivity domain.

(Insert Table 2)

Studies 3 and 4

Regarding the concurrent validity of the Portuguese version of the PID-5, its scales were correlated with other trait constructs of personality, namely the five NEO-FFI factors (Study 3) and with psychopathological symptomatology assessed through the BSI scales (Study 4). Table 3 displays the correlations between the PID-5 domains and the NEO-FFI factors.

(Insert Table 3)

The obtained correlational pattern confirms the theoretical expectations between the PID-5 and the NEO-FFI domains and supports the continuity between normative and pathological personality. As would be expected, the PID-5 Negative Affectivity domain and the NEO-FFI Neuroticism factor displayed a moderate positive relationship (r_s = .76, p < .01) and the PID-5 Detachment, Antagonism and Disinhibition domains displayed negative relations with the NEO-FFI Extraversion (r_s = -.59, p < .01), Agreeableness (r_s = -.46, p < .01) and Conscientiousness (r_s = -.64, p < .01) factors, respectively.

Table 4 displays significant correlations between the majority of the PID-5 and the BSI scales.

(Insert Table 4)

As might have been predicted, in order to point out some of the most expectable relations between the PID-5 constructs and the BSI symptomatic scales, at the domain level, the PID-5 Negative Affectivity domain showed a moderate correlation with the BSI Anxiety scale (r_s = .65, p < .01). The PID-5 Detachment domain showed moderate correlations with the BSI Psychoticism scale (r_s = .56, p < .01), the BSI Interpersonal Sensitivity scale (r_s = .53, p < .01) and also with the BSI Depressivity scale (r_s = .52, p < .01), the latter probably due to the withdrawal and loss of interest or pleasure that characterize depressive patients. The PID-5 Antagonism domain showed moderate correlations with the BSI Paranoid Ideation scale (r_s = .48, p < .01)

and the BSI Hostility scale (r_s = .45, p < .01). The PID-5 Disinhibition domain showed the highest correlations with the BSI Global Severity Index, a measure of the overall psychological distress level (r_s = .73, p < .01) and with the BSI Positive Symptom Total, a measure of symptoms complexity (r_s = .70, p < .01). The PID-5 Disinhibition domain also showed moderate correlations with the BSI Psychoticism scale (r_s = .69, p < .01) and with the BSI Obsessive-Compulsive scale (r_s = .68, p < .01). These correlations probably reflect the difficulty of restraining impulsive behaviours that characterize both pathologies. Finally, the PID-5 Psychoticism domain showed moderate correlations with the BSI Global Severity Index (r_s = .68, p < .01) and the BSI Psychoticism scale (r_s = .65, p < .01).

As might have been expected, at the facet level, the strongest relations were found between the PID-5 facets and their BSI counterparts. For instance, the PID-5 Anxiousness facet showed a substantial correlation with the BSI Anxiety scale (r_s = .72, p < .01), as well as the PID-5 Depressivity facet which showed a moderate and significant relation with its counterpart, the BSI Depression scale (r_s = .67, p < .01). Moreover, the PID-5 Hostility facet related moderately to the BSI Hostility scale (r_s = .61, p < .01) and the PID-5 Suspiciousness facet related moderately to the BSI Paranoid Ideation scale (r_s = .66, p < .01). It is worth mentioning that the BSI Psychoticism scale showed moderate relations with several of the PID-5 facets. Perhaps this trend is due to the fact that the BSI Psychoticism scale measures a dimensional

continuum that covers plain symptoms, ranging from moderate isolation and schizoid personality style, to the more severe symptoms of schizophrenia. Accordingly, the BSI Psychoticism scale not only showed moderate relations with the PID-5 Depressivity facet (r_s = .72, p < .01), but also with the PID-5 Cognitive and Perceptual Dysregulation facet (r_s = .61, p < .01) or the Unusual Beliefs and Experiences (r_s = .48, p < .01). Finally, as would be expected, the overall psychological distress level (the BSI Global Severity Index) correlated moderately with most of the PID-5 facets.

Discussion

Following the suggestion of APA to conduct further research on the validity of the DSM-5 trait system, the current studies addressed the internal consistency (Study 1), the test-retest reliability (Study 2) and the criterion validity (Studies 3 and 4) of the Portuguese version of the PID-5 in samples of Portuguese university students.

The studies with the Portuguese version of the PID-5 indicate that its scales were reliable and that they converged meaningfully with other conceptually related personality constructs.

With regard to reliability, internal consistency indices for the facets and domains (Study 1) were good and similar to those obtained in the PID-5 construction project (Krueger et al., 2012) and to those obtained in other cross-cultural validations, such as the French version (Roskan et al., 2015)

and the Dutch version of the PID-5 (De Fruit et al., 2013; De Clercq et al., 2014). These results provide evidence supporting that the PID-5 scales are reliable measures of the traits they intend to measure.

As for the retest reliability, after a period of four weeks between test administrations (Study 2), the facets and domains of the Portuguese version of the PID-5 proved to be reliable measures. The high mean retest reliability of the facets and domains of the Portuguese version of the PID-5 provide evidence in support of the dependability and stability of the test scores across time. Since the DSM-5 trait model has been considered unreliable due to its possible temporal instability, which is one of the main arguments against adopting the alternative model from Section III over the official classification (DSM-5 Section II), our study, in line with the studies of Wright et al. (2015) and Zimmermann et al. (2017), contributes to enhancing this alternative model of Section III.

Concerning the criterion validity of the Portuguese version of the PID-5, the pattern of correlations found between the PID-5 and the NEO-FFI domains (Study 3) confirmed the previously raised hypotheses. A positive association between the Negative Affectivity domain and the Neuroticism NEO-FFI factor was observed, as well as negative associations for the Detachment domain and the Extraversion NEO-FFI factor; the Antagonism domain and the Agreeableness NEO-FFI factor and the Disinhibition domain and the Conscientiousness NEO-FFI factor. The current results sustain the

conceptual convergence between the PID-5 scales and the NEO-FFI domains and the theoretical expectation of a continuity between normative personality and pathological personality (Krueger et al., 2014; Krueger & Markon, 2014; Maples et al., 2015; Skodol et al., 2011).

In a recent study (Sleep et al., 2017), the relations between the PID-5 and the FFM domains with externalizing and internalizing symptoms were addressed. Not only did the authors find strong correlations between the PID-5 and the FFM domains (supporting our own Study 3), but also that the PID-5 and the FFM had similar patterns of relations with externalizing and internalizing symptoms and behaviours (e.g., alcohol use, antisocial behaviour, aggression, depression, anxiety). The PID-5 Antagonism (FFM low Agreeableness) and the PID-5 Disinhibition (FFM low Conscientiousness) were related to externalizing behaviours, whereas the PID-5 Negativity Affectivity (FFM Neuroticism), the PID-5 Detachment (FFM low Extraversion) and to a less extent the PID-5 Disinhibition (FFM low Conscientiousness) were related to internalizing symptoms, such as depression and anxiety. In Study 4, the number of significant relations found between the PID-5 domains and the BSI scales also suggests important connections between the PID-5 personality traits and mental disorders that should be explored in future studies, in order to gain further understanding of the eventual shared processes in the aetiology of mental illness.

In sum, the current results proved prelusive evidence on the psychometric qualities (reliability and validity) of the Portuguese version of the PID-5. Although these studies are a first attempt to validate the Portuguese version of the PID-5, a number of limitations should be borne in mind when interpreting their results. First of all, the small size of the samples and secondly, the fact that they consisted predominantly of female students. Another limitation may be the high level of schooling of the samples, which may have influenced participants' reaction to the psychological tests. Further research with a sample representing different levels of schooling is advisable. Future studies should report on the factor structure of the Portuguese version of PID-5 in order to analyse facet and domain unidimensionality, to replicate the five factor structure and the PID-5 hierarchical structure.

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Table 1. Internal consistencies (α), means (*M*) and standard deviations (*SD*) for the 25 facets and the 5 domains

	Portuguese data		Krueger et al., 2012	
	α	*M* (*SD*)	α	*M* (*SD*)

	(*N* = 107)			(*N* = 264)			
	α	*M*	*SD*	α	*M*	*SD*	*d*
Anhedonia	.87	.84	.58	.88	.89	.64	-.08
Anxiousness	.89	1.41	.75	.91	1.02	.73	.53
Attention seeking	.87	.75	.59	.89	.81	.65	-.09
Callousness	.83	.27	.32	.91	.40	.50	-.05
Cognitive and perceptual dysregulation	.82	.46	.42	.86	.44	.48	.04
Deceitfulness	.82	.41	.41	.85	.52	.54	-.24
Depressivity	.92	.59	.58	.95	.53	.62	.11
Distractibility	.87	1.09	.65	.91	.82	.69	.43
Eccentricity	.95	.60	.67	.96	.82	.76	-.32
Emotional lability	.86	1.18	.71	.89	.94	.74	.32
Grandiosity	.80	.48	.50	.72	.82	.58	-.50
Hostility	.85	1.04	.57	.89	.91	.67	.20
Impulsivity	.87	.83	.65	.77	.77	.57	.10
Intimacy avoidance	.84	.41	.55	.84	.61	.65	-.32
Irresponsibility	.70	.43	.42	.81	.39	.49	.09
Manipulativeness	.73	.65	.51	.81	.80	.67	-.24
Perseveration	.83	.86	.58	.88	.82	.62	.07
Restricted affectivity	.85	.81	.65	.73	.97	.56	-.27
Rigid perfectionism	.89	1.04	.65	.90	1.05	.68	-.01
Risk taking	.84	1.16	.47	.85	1.05	.51	.22

Separation insecurity	.82	.89	.63	.85	.80	.68	.14
Submissiveness	.79	.80	.63	.78	1.17	.66	-.57
Suspiciousness	.72	.87	.52	.73	.95	.58	-.14
Unusual beliefs and experiences	.78	.31	.40	.83	.64	.63	-.58
Withdrawal	.90	.67	.58	.93	1.01	.72	-.50
Negative affectivity	.91	1.16	.56	.93	1.07	.44	.19
Detachment	.93	.64	.47	.96	.78	.54	-.27
Antagonism	.89	.52	.41	.95	.61	.46	-.20
Disinhibition	.91	.78	.47	.84	1.06	.30	-.79
Psychoticism	.94	.46	.43	.96	.64	.57	-.34

Table 2. Stability coefficients of the Portuguese version of the PID-5 facets and domains

PID-5 scales	r_s	PID-5 scales	r_s

Anhedonia	.84**	Manipulativeness	.78**
Anxiousness	.90**	Perseveration	.72**
Attention seeking	.80**	Restricted affectivity	.82**
Callousness	.62**	Rigid perfectionism	.88**
Cognitive and perceptual dysregulation	.77**	Risk taking	.85**
Deceitfulness	.80**	Separation insecurity	.83**
Depressivity	.87**	Submissiveness	.56**
Distractibility	.81**	Suspiciousness	.74**
Eccentricity	.84**	Unusual beliefs and experiences	.73**
Emotional lability	.87**	Withdrawal	.89**
Grandiosity	.84**	Negative affectivity	.92**
Hostility	.86**	Detachment	.89**
Impulsivity	.67**	Antagonism	.87**
Intimacy avoidance	.77**	Disinhibition	.79**
Irresponsibility	.68**	Psychoticism	.90**

Note. N = 75. Interval between the 1st and the 2nd application = four weeks

** Significant correlations $p < .01$

Table 3. Spearman correlations of the Portuguese version of the PID-5 with the NEO-FFI

N	E	O	A	C

Anhedonia	.64**	-.62**	-.19	-.58**	-.44**
Anxiousness	.77**	-.43**	-.12	-.43**	-.25*
Attention seeking	.27**	.07	.20*	-.25*	-.22*
Callousness	.31**	-.23*	-.01	-.63**	-.27**
Cognitive and perceptual dysregulation	.59**	-.13	.09	-.35**	-.37**
Deceitfulness	.29**	-.17	.05	-.52**	-.36**
Depressivity	.82**	-.35**	-.04	-.55**	-.39**
Distractibility	.52**	-.14	-.02	-.45**	-.61**
Eccentricity	.56**	-.20*	.15	-.39**	-.33**
Emotional lability	.60**	-.08	-.01	-.13	-.16
Grandiosity	.12	.14	.15	-.26**	-.06
Hostility	.50**	-.33**	-.21*	-.55**	-.27**
Impulsivity	.33**	-.03	-.00	-.35**	-.38**
Intimacy avoidance	.31**	-.28**	.03	-.35**	-.37**
Irresponsibility	.33**	-.11	.13	-.29**	-.61**
Manipulativeness	.25*	-.03	.14	-.48**	-.21*
Perseveration	.54**	-.30**	-.01	-.46**	-.42**
Restricted affectivity	.22*	-.32**	-.01	-.50**	-.23*
Rigid perfectionism	.48**	-.23*	-.05	-.36**	.00
Risk taking	-.03	.32**	.28**	-.14	-.20*
Separation insecurity	.46**	-.21*	-.06	-.35**	-.24*

Submissiveness	.34**	-.09	-.26**	-.02	-.16
Suspiciousness	.44**	-.19	-.09	-.52**	-.17
Unusual beliefs and experiences	.26*	-.05	.30**	-.28**	-.18
Withdrawal	.42**	-.64**	-.02	-.43**	-.28**
Negative affectivity	.76**	-.28**	-.10	-.36**	-.25*
Detachment	.57**	-.59**	-.06	-.57**	-.43**
Antagonism	.25*	.01	.13	-.46**	-.21*
Disinhibition	.51**	-.10	.03	-.44**	-.64**
Psychoticism	.58**	-.16	.18	-.40**	-.34**

Note. $N = 99$

NEO-FFI domains: N: Neuroticism; E: Extraversion; O: Openness to Experience; A: Agreeableness; C: Conscientiousness

** Significant correlations $p < .01$

* Significant correlations $p < .05$

Table 4. Spearman correlations of the Portuguese version of the PID-5 with the BSI

SOM	O-C	I-S	DEP	ANX	HOS	PHOB	PAR	PSY	GSI	PSDI	PST

Anhedonia	.24*	.46**	.49**	.56**	.46**	.41**	.30**	.43**	.54**	.51**	.33**	.48**
Anxiousness	.38**	.41**	.43**	.46**	.72**	.53**	.36**	.45**	.47**	.57**	.52**	.50**
Attention seeking	.21	.21	.24*	.30**	.37**	.40**	.25*	.28*	.31**	.35**	.19	.34**
Callousness	.31**	.45**	.39**	.44**	.32**	.47**	.29**	.45**	.47**	.51**	.29**	.46**
Cognitive and perceptual dysregulation	.43**	.57**	.52**	.49**	.51**	.51**	.37**	.55**	.61**	.65**	.44**	.60**
Deceitfulness	.08	.36**	.31**	.28*	.33**	.46**	.30**	.45**	.30**	.38**	.17	.38**
Depressivity	.46**	.56**	.66**	.67**	.65**	.54**	.43**	.55**	.72**	.71**	.50**	.66**
Distractibility	.40**	.67**	.53**	.59**	.49**	.47**	.42**	.57**	.64**	.67**	.36**	.65**
Eccentricity	.24*	.55**	.45**	.47**	.48**	.43**	.24*	.35**	.53**	.57**	.45**	.48**
Emotional lability	.35**	.23*	.25*	.29**	.45**	.42**	.20	.26*	.29**	.39**	.30**	.36**
Grandiosity	.17	.21	.25*	.25*	.23*	.35**	.17	.31**	.22*	.29**	.12	.30**
Hostility	.36**	.47**	.46**	.45**	.48**	.61**	.30**	.54**	.46**	.54**	.41**	.49**
Impulsivity	.39**	.56**	.41**	.34**	.39**	.52**	.39**	.41**	.45**	.56**	.33**	.53**
Intimacy avoidance	.14	.30**	.35**	.32**	.18	.12	.12	.21	.42**	.32**	.11	.31**
Irresponsibility	.27*	.50**	.51**	.44**	.40**	.43**	.32**	.45**	.51**	.53**	.38**	.47**
Manipulativeness	.15	.36**	.35**	.35**	.35**	.42**	.27*	.50**	.36**	.40**	.11	.45**
Perseveration	.34**	.52**	.56**	.49**	.61**	.49**	.44**	.61**	.59**	.60**	.29**	.61**

Restricted affectivity	.15	.39**	.45**	.39**	.35**	.21	.19	.36**	.50**	.40**	.19	.39**
Rigid perfectionism	.30**	.50**	.40**	.29**	.56**	.37**	.38**	.41**	.34**	.47**	.37**	.44**
Risk taking	.19	.32**	.14	.21	-.01	.17	-.10	.05	.16	.21	.15	.17
Separation insecurity	.30**	.29**	.35**	.37**	.40**	.41**	.36**	.35**	.36**	.39**	.20	.42**
Submissiveness	.20	.14	.39**	.34**	.27*	.23*	.18	.22*	.28*	.29**	.19	.33**
Suspiciousness	.36**	.50**	.52**	.49**	.39**	.56**	.33**	.66**	.53**	.57**	.18	.59**
Unusual beliefs and experiences	.42**	.41**	.37**	.38**	.39**	.36**	.36**	.38**	.48**	.50**	.28*	.45**
Withdrawal	.09	.40**	.48**	.37**	.27*	.17	.18	.40**	.49**	.38**	.16	.39**
Negative affectivity	.44**	.36**	.43**	.48**	.65**	.57**	.37**	.44**	.46**	.55**	.42**	.52**
Detachment	.23*	.49**	.53**	.52**	.35**	.28*	.25*	.35**	.56**	.47**	.27*	.45**
Antagonism	.17	.33**	.35**	.33**	.34**	.45**	.26*	.48**	.33**	.39**	.14	.42**
Disinhibition	.40**	.68**	.59**	.55**	.54**	.55**	.49**	.64**	.69**	.73**	.39**	.70**
Psychoticism	.39**	.61**	.53**	.54**	.54**	.48**	.36**	.48**	.65**	.68**	.46**	.60**

Note. $N = 82$

BSI scales: SOM: Somatization; O-C: Obsessive-Compulsive; I-S: Interpersonal Sensitivity; DEP: Depression; ANX: Anxiety; HOS: Hostility; PHOB: Phobic Anxiety; PAR: Paranoid Ideation; PSY: Psychoticism; GSI:

Global Severity Index (overall psychological distress level); PSDI: Positive Symptom Distress Index (intensity of symptoms); PST: Positive Symptom Total (number of self-reported symptoms)

** Significant correlations $p < .01$

* Significant correlations $p < .05$