Inventory of Personality Organization

Preliminary Validation of the European Portuguese Version

João Francisco BARRETO [1][2]
Helena Moura CARVALHO [1]
Paula MENA MATOS [1]

[1] Faculty of Psychology and Sciences of Education, Centre for Psychology at University of Porto
[2] School of Allied Health Sciences, Polytechnic Institute of Porto

INTRODUCTION

- Personality pathology is often organized in two orthogonal axes representing variations in type and severity (Westen et al., 2006). The psychoanalytic model developed by Otto F. Kernberg and colleagues (e.g., Kernberg & Caligor, 2005) is an example of the second trend, consisting of a dimensional approach describing personality organization (PO) in a continuum ranging from normal-neurotic (NPO), through high and low borderline (BPO), to psychotic (PPO) levels.
- In this model, borderline-level PO underlies most of the personality disorders considered in the categorical-typological approach held in DSM-IV-TR (APA, 2000). Kernberg's approach is clinically useful in identifying subthreshold/higher level personality pathology poorly covered by DSM-IV-TR Axis II, and understanding different meanings in common symptoms according to underlying levels of PO (Caligor et al., 2007).
- As an effort at operationalization, Kernberg and Clarkin (1995) created the Inventory of Personality Organization (IPO), a self-report questionnaire including 3 primary scales (57 items): Identity Diffusion, Primitive Defenses, and Reality Testing. IPO has been used to investigate the relationship of PO to psychopathology and measure structural change as a psychotherapy outcome (cf. Ellison & Levy, 2011).
- IPO has been translated into several languages and latent structure has been tested with clinical and nonclinical population (Berghuis et al., 2008; Iragashi et al., 2009; Lenzenweger et al., 2001; Normandin et al., 2002; Smits et al., 2009), yielding 2- or 3-factor solutions for the 3 primary scales. However, a recent study of the original English-language version conducted with a large nonclinical sample suggests that a 4-factor solution provides a better fit, with factors representing Instability of Self and Others, Instability of Goals, Psychosis, and Instability of Behavior (Ellison & Levy, 2011).

OBJECTIVES

- To present preliminary results of a validation study of the European Portuguese version of the IPO primary scales with a nonclinical population. To test internal consistency and factor structure validity. To analyse concurrent validity through correlations with dimensions from other instruments.

METHOD

Participants

- 1062 adults, ages ranging from 17 to 72 years-old (M=27.3, SD=9.69).
- 70.7% women (n=751).
- Highest degree completed: 39.0% high school, 34.2% undergraduate, 15.1% masters degree, 3.2% doctorate.

Instruments

- *Inventory of Personality Organization* (IPO; Kernberg & Clarkin, 1995; Portuguese version by study authors): Self-report questionnaire assessing PO according to Kernberg's model. The three primary scales (57 items) were adapted: Identity Diffusion (ID; 21 items), Primitive Defenses (PD; 16 items), and Reality Testing (RT; 20 items).
- *Self-Concept Clarity Scale* (SCCS; Campbell et al., 1996; Portuguese version by study authors): 12-item self-report measure assessing whether self-beliefs are clearly and confidently defined, internally consistent, and stable.
- *Difficulties in Emotional Regulation Scale* (DERS; Gratz & Roemer, 2004; Portuguese version by Coutinho et al., 2010): 36-item self-report assessing emotion regulation strategies. Six-factor structure with highly intercorrelated factors often summarized in a total score.
- *Brief Symptom Inventory* (Derogatis & Spencer, 1982; Portuguese version by Canavarro, 1999): short version of the SCL-R-90 composed by 53 items covering nine symptom dimensions and three global indices of distress – Global Severity Index (GSI), Positive Symptom Distress Index (PSDI), and Positive Symptom Total (PST). Personality Severity Index (PSI) and Current Symptom Index (CSI) elsewhere derived from the SCL-R-90 were calculated (Pedersen & Karterud, 2010). Psychoticism and Paranoid Ideation subscales were used for comparison with IPO RT.
- *Socio-Demographic Questionnaire* (by study authors): included questions about age, sex, marital status, educational degree and domain, professional situation, and previous or current psychological and/or psychiatric help.

Procedure

- After permission from IPO authors, two independent translations were conducted by the study first two authors, then merged into one by the three study authors, back translated into the original language by a bilingual Psychologist with a Masters Degree on Translation, and finally sent to one of the IPO authors for content checking. Minor final wording adjustments were made after cognitive debriefing with 5 adults.
- All measures administered in online format (LimeSurvey 1.87®).

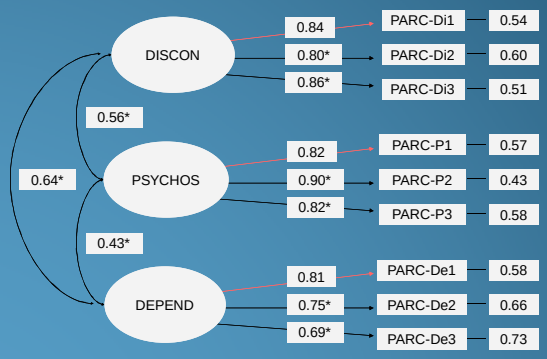
RESULTS

Factor Structure

- PCA was conducted to test construct validity (varimax rotation).
- After testing for 2, 3, and 4 factor extraction, 3 factor solution was selected considering scree plot, explained variance and comparison with recent studies of IPO.
- Items loading under 0.40 and high cross-loadings were dropped.
- Final structure composed by a total of 26 items in 3 subscales (α = 0.901; total variance explained = 47,35%).

Component	Label after interpretation	N items	IPO subscales	α	% variance
1	Discontinuity/Facade	10	8 ID, 2 PD	,854	30,216
2	Psychosis	8	8 RT	,871	10,438
3	Dependence/Idealization	8	3 ID, 3 PD, 2 RT	,788	6,700

- CFA to display additional information about the underlying latent structure and achieve a clearer understanding of the items and factors behaviour.
- Model's fit was estimated using maximum likelihood estimation (MLE). Parceling procedure to reduce the number of parameters to be estimated in order to obtain a more parsimonious model and a more stable structure (Little et al., 2002).



S-χ2 (24, 1062) = 71.75, $p < .001$; CFI = .98; RMSEA = .043 (90% CI = .032 - .055); SRMR = .023

Concurrent Validity

	SCCS	DERS	BSI GSI	BSI PST	BSI PSDI	BSI PSI	BSI CSI	BSI Psych	BSI Paran
IPO	-,720**	,535**	,737**	,641**	,633**	,730**	,708**	,731**	,655**
IPO Dis	-,670**	,424**	,629**	,536**	,553**	,649**	,595**	,644**	,568**
IPO Psy	-,436**	,315**	,516**	,444**	,436**	,482**	,507**	,535**	,453**
IPO Dep	-,610**	,548**	,627**	,563**	,530**	,618**	,603**	,580**	,553**
α	,890		,969	-	-	-	-	,763	,796

** Correlations (Pearson rs) significant at $p < .001$ (two-tailed)

DISCUSSION

- As in other studies of IPO (Berghuis et al., 2008; Ellison & Levy, 2011; Iragashi et al., 2009), exploratory analysis does not conform to the original theoretical subscales (ID, PD, RT), although, consistent with theory and previous findings, ID and PD items tend to aggregate apart from most RT items.
- CFA provides initial support for the solution found, but parceling option encourages further exploratory work.
- The 3 dimensions seem to capture important features of Kernberg's model of PO (e.g., Caligor et al., 2007): for BPO (Components 1 and 3), incoherent experience of/inconsistent differentiation between self and others; for PPO (Component 2), impairment in reality testing.
- The 3 components partly resemble 3 of the 4 factors found by Ellison and Levy (2011) and support their hypothesis that Instability of Goals may have been overemphasized by sample specificity (undergraduate students).
- Pattern of correlations globally supports concurrent validity of the Portuguese IPO.
- IPO and two of its dimensions, contrary to SCCS and DERS, show higher correlations with PSI than with CSI, suggesting particular sensibility of IPO to personality pathology.
- Differences in correlations of Components 1 and 3 with external measures suggest that Component 3 may reflect a higher level of BPO functioning within Kernberg's hypothesized continuum PPO-BPO-NPO.
- Correlations of the Psychosis dimension with external measures, including BSI subscales and compared with the case of the other IPO dimensions, suggest that this component may capture a set of uncommon symptoms rather than structural personality features.
- Main limitations of the study: test-retest data not yet available; studies with clinical population required; not fully appropriate to specify a CFA model based on PCA using the same data set (results must be interpreted on an exploratory basis).

REFERENCES

American Psychiatric Association (2000). *DSM-IV-TR: Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: American Psychiatric Association.

Berghuis, H., Kamphuis, J. H., Boedijn, G., & Verheul, R. (2009). Psychometric properties and validity of the Dutch Inventory of Personality Organization (IPO-NL). *Bulletin of the Menninger Clinic, 73*, 44-60.

Caligor, E., Kernberg, O. F., & Clarkin, J. F. (2007). *Handbook of dynamic psychotherapy for higher level personality pathology.* Washington, DC: American Psychiatric Publishing.

Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavallee, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology, 70*(1), 141-156.

Canavarro, M.C. (1999). Inventário de Sintomas Psicopatológicos – B.S.I. In M. R. Simões, M. M. Gonçalves, & L. S. Almeida (Eds.), *Testes e provas psicológicas em Portugal* (vol. 2, pp. 95-109). Braga: APPORT/SHO.

Coutinho, J., Ribeiro, E., Ferreirinha, R., & Dias, P. (2010). Versão portuguesa da Escala de Dificuldades de Regulação Emocional e sua relação com sintomas psicopatológicos. *Revista de Psiquiatria Clínica, 37*(4), 145-151.

Ellison, W. D., & Levy, K. N. (2011, November 21). Factor structure of the primary scales of the Inventory of Personality Organization in a nonclinical sample using Exploratory Structural Equation Modeling. *Psychological Assessment*. Advance online publication. doi: 10.1037/a0026264

Igarashi, H., Kikuchi, H., Kano, R., Mitoma, H., Shono, M., Hasui, C., & Kitamura, T. (2009). The Inventory of Personality Organisation: Its psychometric properties among student and clinical populations in Japan. *Annals of General Psychiatry, 8*. doi:10.1186/1744-859X-8-9

Kernberg, O. F., & Caligor, E. (2005). A psychoanalytic theory of personality disorders. In J. F. Clarkin & M. F. Lenzenweger (Eds.), *Major theories of personality disorder* (2nd ed., pp. 114–156). New York: Guilford Press.

Kernberg, O. F., & Clarkin, J. F. (1995). *The Inventory of Personality Organization.* White Plains, NY: New York Hospital–Cornell Medical Center.

Lenzenweger, M. F., Clarkin, J. F., Kernberg, O. F., & Foelsch, P. A. (2001). The inventory of personality organization: Psychometric properties, factorial composition, and criterion relations with affect, aggressive dyscontrol, psychosis proneness, and self domains in a nonclinical sample. *Psychological Assessment, 13*, 577–591.

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling, 9*, 151-173.

Normandin, L., Sabourin, S., Diguer, L., Dupont, G., Poitras, K., Foelsch, P., & Clarkin, J. (2002). Évaluation de la validité théorique de l'inventaire de l'organisation de la personnalité. *Revue Canadienne des Sciences du Comportement, 34*, 59–65.

Pedersen, G., & Karterud, S. (2010). Using measures from the SCL-90-R to screen for personality disorders. *Personality and Mental Health, 4* (2), 121-132.

Smits, D. J. M., Vermote, R., Claes, L., & Vertommen, H. (2009). The Inventory of Personality Organization–Revised: Construction of an abridged version. *European Journal of Psychological Assessment, 25*, 223-230. doi: 10.1027/1015-5759.25.4.223

Westen, D., Gabbard, G. O., & Blagov, P. (2006). Back to the future: Personality structure as a context for psychopathology. In R. F. Kreuger & J. L. Tackett (Eds.), *Personality and Psychopathology* (pp. 335-384). New York: Guilford Press.