

Personality Inventory for DSM-5 (PID-5): cross-cultural adaptation and content validity in the Brazilian context

Inventário de Personalidade para o DSM-5 (PID-5): adaptação transcultural e validade de conteúdo para o contexto brasileiro

Ana Maria Barchi-Ferreira,¹ Sonia Regina Loureiro,^{1,2} Albina Rodrigues Torres,³ Thiago Dornela Apolinário da Silva,¹ André Luiz Moreno,¹ Diogo Araújo DeSousa,⁴ Marcos Hortes Nishihara Chagas,^{1,5} Rafael Guimarães dos Santos,^{1,2} João Paulo Machado-de-Souza,^{1,2} Natália Mota de Sousa Chagas,¹ Jaime Eduardo C. Hallak,^{1,2} José Alexandre de Souza Crippa,^{1,2} Flávia L. Osório^{1,2}

Abstract

Objective: To describe the process of cross-cultural adaptation of the Personality Inventory for DSM-5 (PID-5) to the Brazilian context.

Methods: Cross-cultural adaptation involved the steps of independent translation of the instrument, synthesis version, and back-translation. Analysis of content validity was conducted by a multidisciplinary expert committee and consisted of quantitative assessment of agreement indicators. The test was then applied to a target population.

Results: All the steps required for a cross-cultural adaptation were followed and satisfactory agreement values (≥ 4.75) were reached for most of the structures assessed. Most of the changes suggested by the experts were followed; these changes consisted primarily of adjustments to verb tense and agreement and the inclusion of letters and words to allow gender inflection. In the pre-test, no suggestions were made and the instrument was considered comprehensible.

Conclusion: The Brazilian version of the PID-5 was found to be adequate to the Brazilian context from semantic, idiomatic, cultural, and conceptual perspectives. The Brazilian version assessed here can be freely used, was approved by the publishers who hold the copyright on the instrument, and is considered the official version of the instrument. New studies are underway to determine the validity and reliability of the PID-5.

Keywords: Personality, scale, cross-cultural adaptation, content validity, PID-5.

Resumo

Objetivo: Apresentar o processo de adaptação transcultural do Personality Inventory for DSM-5 (PID-5) para o contexto brasileiro.

Métodos: A adaptação transcultural envolveu as etapas de tradução independente, versão síntese e retrotradução. A validade de conteúdo foi realizada por um comitê multidisciplinar de especialistas, com avaliação quantitativa dos índices de concordância. Por fim, o pré-teste foi conduzido com a população-alvo.

Resultados: Todos os estágios da adaptação transcultural foram seguidos, e na maioria das estruturas avaliadas, os valores de concordância foram satisfatórios (≥ 4.75). Grande parte das sugestões de modificações feitas pelos especialistas foram acatadas, sendo as principais relacionadas a ajustes no tempo e concordância verbal e a inclusão de letras e palavras para permitir a flexão de gênero. No pré-teste nenhuma sugestão foi apresentada e o instrumento foi considerado compreensível.

Conclusão: A versão brasileira do PID-5 mostrou-se adequada ao contexto brasileiro sob as perspectivas semântica, idiomática, cultural e conceitual. A versão brasileira avaliada é de uso livre, foi aprovada pelas editoras responsáveis pelos direitos autorais do instrumento e é considerada oficial. Novos estudos estão sendo conduzidos para aprimorar a busca por evidências de validade e confiabilidade.

Descritores: Personalidade, escalas, adaptação transcultural, validade de conteúdo, PID-5.

¹ Departamento de Neurociências e Ciências do Comportamento, Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo (USP), Ribeirão Preto, SP, Brazil. ² Instituto Nacional de Ciência e Tecnologia – Medicina Translacional, Ribeirão Preto, SP, Brazil. ³ Departamento de Neurologia, Psicologia e Psiquiatria, Faculdade de Medicina de Botucatu, Universidade Estadual Paulista (UNESP), Botucatu, SP, Brazil. ⁴ Faculdade Pio Décimo, Aracaju, SE, Brazil. ⁵ Centro de Ciências Biológicas e da Saúde, Universidade Federal de São Carlos, São Carlos, SP, Brazil.

Submitted Nov 12 2018, accepted for publication Jan 07 2019.

Suggested citation: Barchi-Ferreira AM, Loureiro SR, Torres AR, da Silva TDA, Moreno AL, DeSousa DA, et al. Personality Inventory for DSM-5 (PID-5): cross-cultural adaptation and content validity in the Brazilian context. Trends Psychiatry Psychother. 2019;00(0):000-000. <http://dx.doi.org/10.1590/2237-6089-2018-0098>

Introduction

Personality disorders are considered to be risk factors for mental, social, and physical problems. Hence, it has been argued that “personality assessment is an essential part of good clinical assessment.”¹ The Diagnostic and Statistical Manual of Mental Disorders (DSM) has been the main reference in the assessment of personality disorders. Currently, personality disorders are operationalized according to models described in Sections II and III of the DSM-5.²

The model in Section II is termed the “categorical model” and is identical to that presented in the 4th revised edition of the DSM.³ However, many studies have shown significant flaws of the categorical approach to the diagnosis of such disorders, including the extensive overlap between different categories of personality disorders, arbitrary diagnostic thresholds, and inadequate construct validity.⁴

Section III, conversely, proposes a change from this approach to a hybrid dimensional model with less emphasis on behavior and increased relevance of dimensional personality traits and functional impairment.⁵ This model comprises two main criteria: the characteristics listed in Criterion A express a dimensional specification of personality functioning, with problems that reflect impairments in the self (identity and self-direction) and in interpersonal functioning (empathy and intimacy); Criterion B, in turn, assesses nonadaptive personality traits in five broad domains (negative affect, detachment, antagonism, disinhibition, and psychoticism), divided into 25 specific facets.²

In order to operationalize Criterion B of the new model, a new assessment instrument termed Personality Inventory for DSM-5 (PID-5) has been proposed. It is a self-report questionnaire comprising 220 items scored using a 4-point Likert scale. The instrument is intended to assess and diagnose the six types of personality disorders listed in the DSM-5 as well as trait-specified disorders.⁶ The PID-5 was originally proposed in English and has been the subject of many studies involving cross-cultural adaptation to different languages (Italian, German, Dutch, Spanish, and Arabic) and the examination of its psychometric properties, which have proven fairly adequate to date.⁷⁻¹⁵

Therefore, considering that the PID-5 has been widely investigated in the international literature, standing out as a reference in the assessment of nonadaptive personality traits, the present study aimed to describe the process of cross-cultural adaptation of the PID-5 to the Brazilian context and to assess its content validity.

Method

The study was approved by the ethics committee of Hospital das Clínicas, Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo (USP), (process 4058/2018) and was performed according to Resolution no. 466/2012 of the Brazilian National Health Council for research with human beings.

The cross-cultural adaptation process started once permission was obtained from Editora Artmed, which holds the copyright on the instrument in Brazil. The process was based on the steps proposed by Beaton et al.,¹⁶ namely, translation, synthesis, back-translation, review by an expert committee, and pre-test.

The original inventory was independently translated into Brazilian Portuguese by three Brazilian researchers with fluency in English, including a psychologist (D.A.S.), a psychiatrist (N.M.S.C.), and a biologist (R.G.S.) (Supplementary Material S1, available online only). A synthesis version of the three translations was then produced to resolve discrepancies and select the terms deemed more adequate to the Brazilian context by two judges (F.L.O., A.M.B.F.) with previous experience in the areas of psychometrics and psychological/personality assessment.

The synthesis version was then back-translated by a bilingual Brazilian psychologist (J.P.M.S.; Supplementary Material S1, available online only) with experience in psychopathology and assessment instruments. The back-translated version was submitted to and approved by Editora Artmed and the American Psychiatric Association Publishing. Analyses of conceptual, semantic, idiomatic, and cultural equivalence were performed by an expert committee consisting of five university professors from the areas of psychopathology (S.R.L., A.L.M.) and psychiatry (A.R.T., M.H.N.C., T.D.A.S.) and with a vast experience in psychometrics and/or personality assessment.

The following aspects were taken into account by the experts in each analysis: a) conceptual equivalence: refers to whether the terms used effectively reflect the original concept; b) semantic equivalence: refers to whether words retained their meaning in the original and translated versions; c) idiomatic equivalence: refers to whether denotative and literal meanings of the terms/expressions used corresponded to or retained the same meaning as those used in the original scale; d) cultural equivalence: refers to the coherence and compatibility of the terms used with the Brazilian cultural context.¹⁶

The analyses were independently performed and documented in an assessment form developed for the study. The experts were instructed to rate each item according to the following scale: 1 = not equivalent; 2 = poorly equivalent; 3 = somewhat equivalent; 4 =

fairly equivalent; and 5 = very equivalent. Next, means and standard deviations were calculated for each item, with values ≥ 4.0 considered satisfactory.¹⁷

Finally, the judges examined the committee's considerations, accepting pertinent suggestions and elaborating the final synthesis version to be used in the pre-test. The pre-test involved five participants with different levels of education, varying from complete primary school to higher education degree. Participants were asked to read, paraphrase, and comment on their understanding of the instructions, items, and response options of the instrument.

Results

The first three steps of the cross-cultural adaptation of the PID-5 were followed as proposed by Beaton et al.,¹⁶ including approval by the publishers that hold the copyright on the original instrument. Most of the items assessed in respect to the different types of equivalence presented satisfactory agreement values (≥ 4.75); only items 2, 17 and 86 presented agreement values < 4.0 , as presented in Supplementary Material S2 (available online only) and, briefly, in Table 1.

No suggestions were made for the title or the instructions, which maintained the wording of the synthesis version. The committee's suggestions for response statements #2 and #3 were accepted and changed from "de vez em quando falso ou um pouco falso" and "de vez em quando verdadeiro ou um pouco verdadeiro" to "algumas vezes ou um pouco falso" and "algumas vezes ou um pouco verdadeiro".

Concerning the items in general, the following changes were made: a) the phrase "muitas vezes" was replaced with the adverb "frequentemente"; b) words and letters were included to reflect gender inflections when necessary, for example "sozinho(a)" and "bom(boa)"; and c) verb tense and agreement were adjusted. Further changes related to particular items are shown in Supplementary Material S3 (available online only).

Minor changes were made in a total of 25 items (11.4%). Items #17 and #86 were the ones with the lowest agreement values. In item #17, the low score was associated with idiomatic equivalence, whereas in item #86 it was related to conceptual equivalence. These items were changed according to the experts' suggestions.

In the pre-test assessment, participants made no suggestions and considered the instrument comprehensible. The Brazilian version of the PID-5, termed "Inventário de Personalidade para o DSM-5," was recognized as the official Brazilian Portuguese version of the instrument by the copyright holder.

Discussion

The PID-5 is intended to assess nonadaptive personality traits according to the new dimensional model of the DSM-5 and has been widely used worldwide in both clinical and research settings. The instrument has been investigated in many studies, which have provided evidence of its validity and reliability in different cultures.^{14,15} Until now, cross-cultural adaptation complemented by content validity analysis had not been performed in Brazil, a gap that was filled with the present study.

The process of cross-cultural adaptation of an instrument is important because it enables the equivalence of measures regardless of the context in which the instrument is used.¹⁸ The process of content validation of the Brazilian version of the PID-5 was rigorous and followed the method proposed by Beaton et al.,¹⁶ one of the most commonly used in studies with similar goals.

Among the pre-established steps, a translation team was created with translators from different academic backgrounds to increase the likelihood of finding the most suitable terms for the general population and to avoid technical and specific terms. Nevertheless, the experience of psychiatry and psychology professionals was crucial to preserve those characteristics of the

Table 1 - Experts' agreement on different types of equivalence for the Brazilian version of the Personality Inventory for DSM-5 (PID-5).

Structure	Semantic		Idiomatic		Cultural		Conceptual	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Title	5.00	0.00	4.80	0.45	5.00	0.00	5.00	0.00
Instructions	4.80	0.45	4.60	0.55	4.40	1.34	5.00	0.00
Statements (n=4)	4.90	0.12	4.40	0.49	4.58	0.19	4.60	0.00
Items (n=220)	4.87	0.26	4.76	0.31	4.92	0.21	4.92	0.21
Total	4.87	0.26	4.75	0.32	4.91	0.22	4.92	0.21

SD = standard deviation.

instrument that make it appropriate for the target population, since an adequate translation requires a balanced handling of linguistic, cultural, contextual, and scientific considerations about the construct in question.¹⁹

The board of professionals selected to assess the content validity of the PID-5 comprised bilingual experts from the areas of psychometrics and psychological assessment with extensive knowledge of the construct assessed by the instrument, as recommended in scientific literature.¹⁸ Quantitative methods were also used to minimize the influence of subjective factors on the process.²⁰ Most of the structures assessed in this study presented satisfactory equivalence indices, and each suggestion made by the expert committee was rigorously examined. Many of these suggestions were included in the final version of the instrument and were essential in the cross-cultural adaptation of the PID-5 to the Brazilian context.

In order to expand the use of the PID-5 in the Brazilian territory, and to account for diverse social and demographic characteristics of this vast country, the investigators ensured the exclusion of slangs or words that could hinder comprehension. The pre-test showed that the instructions, response statements, and items of the Brazilian version of the PID-5 were understood by the target population.

Based on the procedures described, we conclude that the PID-5 has been [successfully?] adapted to the Brazilian context in semantic, idiomatic, cultural, and conceptual terms, and is now available to be tested with respect to its psychometric properties in the search for evidence of validity and reliability. The instrument can be used freely and may be requested via e-mail to the authors (flaliosorio@ig.com.br, anabarchif@gmail.com). It is also available at the website of Editora Artmed through the URL <https://loja.grupoa.com.br/dsm-5-p990255>.

Disclosure

No conflicts of interest declared concerning the publication of this article.

Acknowledgements

The study was supported by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) and Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq; Productivity Research Fellow, process 301321/2016-7).

References

1. Tyrer P. Personality dysfunction is the cause of recurrent non-cognitive mental disorder: A testable hypothesis. *Pers Ment Health*. 2015;9:1-7.
2. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*. Arlington: American Psychiatric Publishing; 2013.
3. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)*. Arlington: American Psychiatric Publishing; 2000.
4. Widiger TA, Trull TJ. Plate tectonics in the classification of personality disorder. *Am Psychol*. 2007;62:71-83.
5. Krueger RF, Eaton NR, Clark LA, Watson D, Markon KE, Derringer J, et al. Deriving an empirical structure of personality pathology for DSM-5. *J Pers Disord*. 2011;25:170-91.
6. Krueger RF, Derringer J, Markon KE, Watson D, Skodol AE. Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychol Med*. 2012;42:1879-90.
7. Fossati A, Krueger RF, Markon KE, Borroni S, Maffei C. Reliability and validity of the personality inventory for DSM-5 (PID-5): Predicting DSM-IV personality disorders and psychopathy in community-dwelling Italian adults. *Assessment*. 2013;20:689-708.
8. Zimmermann J, Altenstein D, Krieger T, Holtforth MG, Pretsch J, Alexopoulos J, et al. The structure and correlates of self-reported DSM-5 maladaptive personality traits: findings from two German-speaking samples. *J Pers Disord*. 2014;28:1-23.
9. De Fruyt F, De Clercq B, De Bolle M, Wille B, Markon KE, Krueger RF. General and maladaptive traits in a five-factor framework for DSM-5 in a university student sample. *Assessment*. 2013;20:295-307.
10. Gutiérrez F, Aluja A, Peri JM, Calvo N, Ferrer M, Baillés E, et al. Psychometric properties of the Spanish PID-5 in a clinical and a community sample. *Assessment*. 2017;24:326-36.
11. Al-Attayah AA, Megreya AM, Alrashidi M, Dominguez-Lara SA, Al-Sheerawi A. The psychometric properties of an Arabic version of the personality inventory for DSM-5 (PID-5) across three Arabic speaking middle eastern countries. *Int J Cult Ment Health*. 2017;10:197-205.
12. Anderson JL, Sellbom M, Ayeast L, Quilty LC, Chmielewski M, Bagby RM. Associations between DSM-5 Section III personality traits and the Minnesota Multiphasic Personality Inventory-2 - Restructured Form (MMPI-2-RF) scales in a psychiatric patient sample. *Psychol Assess*. 2015;27:801-15.
13. Wright AGC, Pincus AL, Hopwood CJ, Thomas KM, Markon KE, Krueger RF. An interpersonal analysis of pathological personality traits in DSM-5. *Assessment*. 2012;19:263-75.
14. Al-Dajani N, Gralnick TM, Bagby RM. A psychometric review of the personality inventory for DSM-5 (PID-5): Current status and future directions. *J Pers Assess*. 2016;98:62-81.
15. Watters CA, Bagby B. A meta-analysis of the five-factor internal structure of the Personality Inventory for DSM-5. *Psychol Assess*. 2018;30:1255-60.
16. Beaton DE, Bombardier C, Guillemin F, Ferraz MB. Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*. 2000;25:3186-91.
17. Morales JCP, Greco PJ, Andrade RL. Content validity of the instrument for assessment of the tactical procedural knowledge in basketball. *Cuad Psicol Deporte*. 2012;12:31-6.
18. Borsa C, Damasio JF, Bandeira DR. Adaptação e validação de instrumentos psicológicos entre culturas: algumas considerações. *Paideia*. 2012;22:423-32.
19. Tanzer NK. Developing tests for use in multiple languages and cultures: A plea for simultaneous development. In: Hambleton RK, Merenda PF, Spielberger CD, editors. *Adapting educational and psychological tests for cross-cultural assessment*. Mahwah: Lawrence Erlbaum; 2005. p. 235-64.
20. Alexandre NMC, Coluci, MZO. Validade de conteúdo nos processos de construção e adaptação de instrumentos de medidas. *Cienc Saude Coletiva*. 2011;16:3061-8.

Correspondence:

Flávia de Lima Osório
Av. dos Bandeirantes, 3900
14048-900 - Ribeirão Preto, SP - Brazil
Tel.: +55 (16) 36022837
E-mail: flaliosorio@ig.com.br