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Trends

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Psychometric properties of the Brazilian version of the big five inventory

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ABSTRACT

Context: There is a growing interest in the fields of psychiatry and psychology to investigate the relationship between personality and psychopathology. The Big 5 is a model developed to investigate five personality dimensions: Extroversion, Amiability, Conscientiousness, Neuroticism and Openness. In the present study, we describe the process of translation and adaptation of a free tool to evaluate the Big 5 model into Brazilian Portuguese: The Big-5 Inventory (BFI). **The instrument has 44 items with a Likert scale of response from 1 to 5.** **Objective:** To translate and adapt the BFI into Brazilian Portuguese. **Method:** The adaptation was conducted in the following steps: 1) Translation 2) Evaluation Committee 3) Back-translation 4) Pilot study 5) Evaluation Committee 6) Application. **The sample had 490 participants from various regions of Brazil, the age of the participants ranged from 18 to 71 years, and most of them have completed high school (62.9%) and are women (75%).** **Results:** A model with the following adjustment indexes was found: X^2/df : 1.954; GFI: 0.924; CFI: 0.920; RMSEA: 0.044. **Conclusion:** **The results are suggestive of a Brazilian version of this instrument and represent a free option for investigating associations with the Big-5 in psychiatry.**

KEY WORDS: Personality. BFI. Cross-cultural adaptation.

INTRODUCTION

One of the best-known constructs in the study of personality is the Big Five Factors theory (Big 5), which involves five dimensions of personality: neuroticism, conscientiousness, amiability, openness and extraversion.¹ Each trait encompasses different characteristics of an individual, with “openness” being related to creativity and imagination;

“conscientiousness” to ease or enthusiasm; the “extroversion” as the tendency towards sociability and assertiveness; “amiability” as to the tendency towards reliability and altruism; and “neuroticism”, the tendency to sadness and negative emotions.²

Research have been investigating the association of the big five model with psychiatric disorders, psychological well-being and general well-being.³⁻⁶ A recent systematic review of stroke patients showed that personality may indicate a prognosis for treatment. The study demonstrated that post-stroke patients who had high neuroticism scores were more likely to be affected by depression.⁷ Another study identified a strong association between one’s ability to delay gratification and the conscientiousness trait, which is especially relevant to health problems such as overweight, drug abuse and risky sexual behavior.⁸

In Brazil, the most used inventory for evaluating the Big-5 model is the NEO Personality Inventory (NEO-PI-R), prepared by Costa and McRae⁹ and adapted to Brazilian Portuguese by Carmen Flores Medonza by the publisher Vetor.¹⁰ Its use in research is limited, however, because it is restricted to psychologists, and prohibited to other professionals whose research could greatly benefit from the evaluation of the Big-5 model, such as psychiatrists, neurologists and neuroscientists. Furthermore, the NEO-PI-R can be acquired only by purchasing for a fee, which poses an additional difficulty for its use, especially at a time when the country’s research funding is suffering from drastic budget cuts.

The Big Five Inventory (BFI) is an instrument for use in research, consisting of 44 Likert-type questions, designed to assess the five major personality factors. The BFI is an instrument used in research in several countries,² for example: France on higher education students with an average age of 21 years;¹¹ the Bolivian Amazon area on

farmers between 20 and 88 years old;¹² Rwanda and the Philippines on young people and adolescents,¹³ averages of 21 and 15.5 years for each country, respectively; on Chinese youngsters - average age of 25.3 years - residing in Germany;¹⁴ England on adults aged between 20 and 80 years;¹⁵ New Zealand on construction workers aged between 20 and 50 years.¹⁶

Based on the above-mentioned evidence, it is necessary to make a free instrument available to assess the five major personality traits, which is very useful for researchers in Brazil as well.¹⁷

METHOD

The present study consisted of the translation and cross-cultural adaptation of the original instrument from the English language (North American), the Big Five Inventory (BFI) (44-item version) into the Brazilian Portuguese version. **The instrument is free to use for research purposes.**

The translation process was based on the general guidelines described by Hungerbuhler and Wang,¹⁷ International Test Commission and consisted of the following steps:¹⁸

1. Translation: two independent translators translated the original Big Five Inventory into Brazilian Portuguese.
2. Evaluation Committee: Two translators with experience in Psychology and Psychiatry analyzed and produced a synthesis version.
3. Back-translation: An American bilingual researcher (English and Portuguese) performed a back-translation of the synthesis version.

4. Pilot study: The version was applied in google forms to 46 participants in test and re-test format.
5. Evaluation Committee: A group of researchers in Neuropsychology conducted a new analysis with some alterations, and the product was a definitive version. The evaluation committee was composed of two Ph.D. professors with extensive experience in Psychiatry and Psychology; 3 master's students; 1 master's student in Health Sciences, 1 psychologist, and 2 undergraduate students. The items were presented on a slide, and the participants were asked which ones they agreed with or suggested changing.
6. Final application: The definitive version of the instrument was applied to validate the instrument with Confirmatory Factor Analysis.

Sample

The sample followed a 10:1 ratio,¹⁷ so that the proportion was ten subjects for each item of the instrument. This ratio is widely used for instrument validation.

Thus, the sample was characterized as non-probabilistic and by convenience, consisting of 490 participants (369 women, 118 men, 3 non-binary) (M=35.01, STD: 11.99), of different levels of education with most having completed college (306), single (297), and from the northeast region of Brazil (327).

Procedures

The administration of the Brazilian Portuguese Big Five Inventory instrument, definitive version, was conducted between May 3rd, 2021, and June 13th, 2021, via Google Forms.

A link was posted on social networks along with an ad that invited several people to answer the survey. The ad made it clear that the survey should be answered by people over 18. The ad also informed how long it should take to complete the instrument. By clicking on the survey link, the participant would choose whether or not to sign the informed consent form, which contained all the information about the project, as well as contact information. The present study was approved by the Research Ethics Committee (Protocol 36899520.6.0000.5526) of the State University of Santa Cruz (UESC), according to the CNS/MS Resolution MS n. 466/2012.

Data analysis

AMOS 23.0 was used to test the models, the Maximum likelihood model was used, where at least 10 observations per item were respected.¹⁹ After specifying and estimating the model, its applicability was evaluated through a set of fit indices. The analyzed adjustment indices were χ^2/df chi squared by degrees of freedom, where accepted values were greater than 2 (ULLMAN, 2001). CFI (Comparative Fit Index) and GFI (Goodness Fit Index) and their values can vary between 0 and 1. According to Bentler and Bonnet²⁰ a value greater than 0.90 represents an adequacy of the model. RMSEA (Root Mean Square Error of Approximation), where a value less than 0.06 indicates acceptable adequacy,²¹ and the AIC (Akaike Information Criterion), which shows the simplicity of the model by testing the lowest value in the model.

Composite Reliability (CR) and Average Variance Extracted (AVE) were also analyzed, both allow us to assess the quality of the instrument (22). Acceptable reference values for CR and AVE were greater than 0.7 (22) and greater than or equal to 0.5 (23) respectively.

RESULTS

The review committee decided to keep the same instrument title but add the language version to it: The Big Five Inventory Brazilian Portuguese version (Appendix I).

Table 1 - Original, translated and back-translated versions of the Big Five Inventory

Big Five Inventory (Big 5)	Synthesis version	Back-translation	Definitive version
	Eu me considero uma pessoa que..	I consider myself to be a person that...	Eu me considero uma pessoa que...
1. Is talkative*	Gosta de conversar. É comunicativa	Likes to talk/have conversations. Is communicative/ (is a good communicator)*	Gosta de conversar é comunicativa
2. Tends to find fault with others**	Tende a ser crítica com os outros	Tends to be critical of others**	Tende a criticar os outros
3. Does a thorough job	É minuciosa e detalhista no trabalho	Is thorough and detailed/pays attention to detail at work**	É minuciosa e detalhista no trabalho
4. Is depressed, blue	Depressiva, triste	Depressed, sad**	Depressiva, triste
5. Is original, comes up with new ideas	É original, tem ideias novas	Is original, has new ideas**	É original, tem ideias novas
6. Is reserved	É reservada	Is reserved*	É reservada

7. Is helpful and unselfish with others	É prestativa e solidária com os outros	Is helpful and supportive of others**	É generosa e não é egoísta com outras pessoas/
8. Can be somewhat careless	Pode ser um pouco descuidada nas tarefas	Can be a little careless with tasks**	Pode ser desleixada para fazer as coisas
9. Is relaxed, handles stress well	É tranquila, lida bem com estresse	Is calm/easygoing, deals well with stress**	É tranquila, lida bem com estresse
10. Is curious about many different things	É curiosa, interessada em várias coisas diferentes	Is curious, interested in many different things **	Se interessa por áreas diferentes do conhecimento/
11. Is full of energy	É cheia de energia	Is full of energy*	É cheia de energia
12. Starts quarrels with others	Começa discussões com os outros	Argues with others**	Inicia bate-boca com outros/
13. Is a reliable worker	É confiável no trabalho	Is reliable/trustworthy at work**	É confiável no trabalho
14. Can be tense	Pode ser tensa	Can be stressed **	Pode ser tensa
15. Is ingenious, a deep thinker	Que pensa profundamente nas coisas	That thinks deeply about things**	É inovadora, pensa profundamente nas coisas
16. Generates a lot of enthusiasm	Gera muito entusiasmo	Creates lots of enthusiasm*	Gera muito entusiasmo
17. Has a forgiving nature	Desculpa, perdoa os outros	Excuses, forgives others**	Desculpa, perdoa os outros

18. Tends to be disorganized	Tende a serdesorganizada	Tends to be disorganized**	Tende a ser desorganizada
19. Worries a lot	Se preocupa muito	Worries often/alot**	Se preocupa muito, em excesso
20. Has an active imagination	Tem uma imaginação fértil	Has a creative/good imagination**	Tem uma imaginação fértil
21. Tends to be quiet	Tende a ser quieta	Tends to be quiet*	Tende a ser quieta
22. Is generally trusting	Geralmente confia, acredita nos outros	Generally trusts, believes in others**	Geralmente confia, acredita nos outros
23. Tends to be lazy	Tende a ser preguiçosa	Tends to be lazy*	Tende a ser preguiçosa
24. Is emotionally stable, not easily upset	É emocionalmente estável, não se perturba facilmente	Is emotionally stable, is not easily disturbed**	É emocionalmente estável, não se perturba facilmente
25. Is inventive	É inventiva	Is creative**	É inventive
26. Has an assertive personality	É assertiva, não tem medo de expressar o que sente	Is assertive, is not afraid to express what i feel/my feeling**	É assertiva, não tem medo de expressar o que sente
27. Can be cold and aloof	Pode ser fria e indiferente com os outros	May be cold and indeferent towards others**	Às vezes é indiferente com os outros
28. Perseveres until the task is finished	Persevera até concluir as tarefas	Completes tasks/ sees tasks through to the end**	Persevera até concluir as tarefas
29. Can be moody	Fica triste ou irritada facilmente	Easily gets sad or irritated**	É temperamental e instável emocionalmente/

30. Values artistic, aesthetic experience	Valoriza experiências artísticas e estéticas	Values artistic and expressive experiences**	Valoriza experiências artísticas e estéticas
31. Is sometimes shy, inhibited	Às vezes é tímida, inibida	Is sometimes timid, shy**	Às vezes é tímida, inibida
32. Is considerate and kind to almost everyone	É gentil e tem consideração com quase todo mundo	Is kind and considerate of almost everyone**	É boa e atenciosa com quase todo mundo/
33. Does things efficiently	Faz as coisas com eficiência	Does things efficiently*	Faz as coisas com eficiência
34. Remains calm in tense situations	Se mantem calma em situações tensas	Stays/remains calm in tense/difficult situations**	Se mantem calma em situações tensas
35. Prefers work that is routine	Prefere trabalhos com rotina	Prefers work with a routine**	Gosta de rotina/
36. Is outgoing, sociable	É extrovertida e sociável	Is extroverted and sociable**	É extrovertida e sociável
37. Is sometimes rude to others	Às vezes é rude, mal-educada, com os outros	Is sometimes rude, unpolite, with others**	Às vezes é grosseira com outras pessoas/
38. Makes plans and follows through with them	Faz os planos e não se desvia deles	Makes plans and does not change them**	Cumpre, finaliza os planos que faz
39. Gets nervous easily	Fica nervosa facilmente	Becomes/ is made nervous easily**	Fica nervosa facilmente

40. Likes to reflect, play with ideas	Gosta de refletir, brincar com as ideias.	Likes to reflect, play with ideas**	Gosta de refletir, jogar com as ideias.
41. Has few artistic interests	Não tem muitos interesses em arte	Does not have much interest in art**	Tem poucos interesses artísticos/
42. Likes to cooperate with others	Gosta de cooperar com outros	Likes to cooperate/work with others**	Gosta de cooperar com outros
43. Is easily distracted	Se distrai facilmente	Is easily distracted*	Se distrai facilmente
44. Is sophisticated in art, music, or literature	é sofisticada em arte, música ou literatura	Is sophisticated/refined in art, music or literature*	é sofisticada em arte, música ou literatura

Legend: *There were no changes between the original version and the back translation

** There were changes between the original version and the back translation

/ Change in relation from the adjusted synthesis version to the definitive version

PARTICIPANT DATA

The mean response values of the items were between 1.48 ± 0.73 (item 20) and 3.31 ± 0.77 (item 15). The univariate normality values tended to lie in a range associated with a normal distribution, with a few The mean scores of the BFI factors were as follows: Extroversion (M = 3.30; SD = 0.74), Agreeableness (M = 3.68; SD = 0.54) Conscientiousness (M = 3.74; SD = 0.64). Neuroticism (M = 2.95; SD = 0.81) and Openness (M = 3.78; SD = 0.59).

Table 2 - Participant data

Variable	Category	Frequency	Percentual
Gender	Female	369	75
	Male	118	24
	Non-binary	3	1
Age	18 to 30 years	221	45,1
	31 to 40 years	125	26,9
	41 to 50 years	62	15,3
	51 to 60 years	42	7,5
	61 to 71 years	20	4,5
Education level	Incomplete primary school	3	0,6
	Complete primary school	4	0,8
	Incomplete secondary school	3	0,6
	Complete secondary school	51	10,4
	Incomplete Higher Education	122	24,9
	Complete Higher Education	306	62,9
Marital status	Married	162	33,1
	Divorced	27	5,5
	Single	297	60,6
	Widowed	4	0,6
Geographic region	Northeast	327	66,7
	Center- East	13	2,7
	South	57	11,6
	Southeast	60	12,2
	North	33	6,7

Confirmatory Factor Analysis

Table 3 – Adjustment indices of the CFA in the different models tested.

	X²/GL	GFI	CFI	RMSEA	AIC
Model 1	5.619	0,609	0,423	0,097	4100,62
Model 2	3.195	0,788	0,730	0,067	2386,94
Model 3	3.179	0,763	0,683	0,067	3031,75
Model 4	3.920	0,765	0,689	0,077	2201,794
Model 5	3.334	0,805	0,756	0,069	1879,762

Model 6	5.391	0,675	0,533	0,095	2973, 713
Model 7	1.961	0,922	0,912	0,044	639,704
Model 8	1.954	0,924	0,920	0,044	637,988
Model 9	9.911	0,898	0,837	0,135	230,227
Model 10	5.178	0,937	0,784	0,092	175,802
Model 11	8.674	0,890	0,779	0,125	270,199
Model 12	4.289	0,958	0,938	0,082	117,789
Model 13	4.468	0,932	0,867	0,084	196,370

Caption: **Model 1** – Unifactorial; **Model 2** – Removed items A: 2r, 37r, 12r, 22; Ab: 35r. ; **Model 3** – All items; **Model 4** – Removed items 2,17,22, 27.37, 4, 19.35 . No correlation between factors – Benet-Martinez and John model;²⁴ **Model 5** – removed items 2,17,22, 27.37, 4, 19.35 . with correlation between factors – Chiorri, Ubbiati and Donatti;²⁵ **Model 6** – Five primary factors and two second order factors;²⁶ **Model 7** – Removal of items E: 6,11,21,31,36; A: 2, 12, 27, 37; C: 3, 13.33.38; N: 4.29; Ab: 20.30,35.41. Added covariances between item errors: 14-19; 40-44; **Model 8** – Removal of items E:6, 21,31,36; A:2, 12.22, 27, 37; C:3, 13.33.38; N 4.29, Ab 20.30,35.41; Added covariances between item errors: 11 -23; 8-18; 9-10; 40-44. **Model 9** – Extroversion factor items only; **Model 10** – Only Agreeableness factor items; **Model 11** – Conscientiousness factor items only; **Model 12** – Factor items only: Neuroticism; **Model 13** – Factor Items Only: Openness

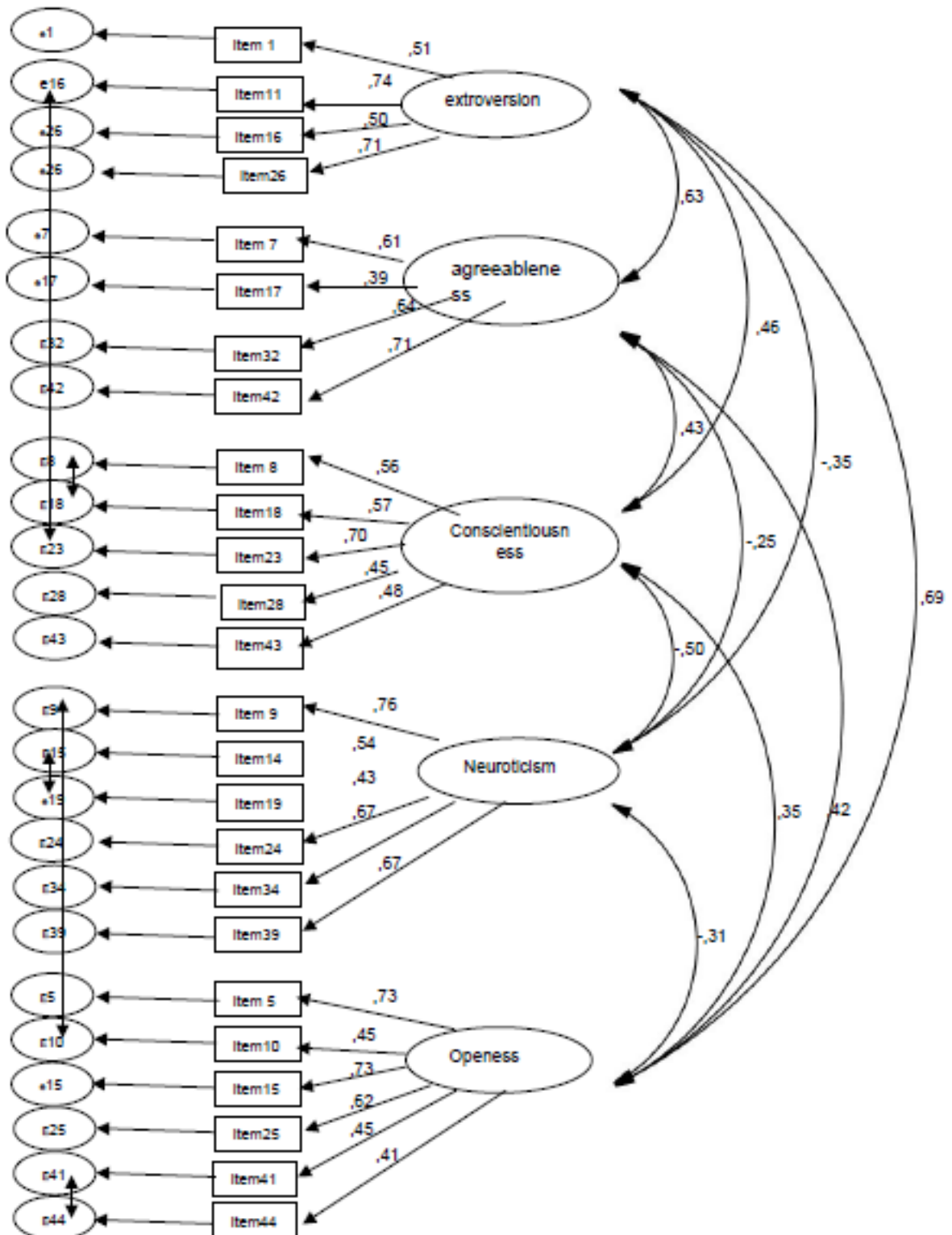
Seven models were tested, three of which were used in previous literature (M4;M5;M6). The M4 and M5 models removed items 2.4, 17.19, 22, 27.35, 37, the former without correlation between the factors, and the latter correlating the factors. The M6 was conducted without the aforementioned items, but with the inclusion of two second order factors. The models: In M1 a single factor was used with all items; All items that presented a factor loading less than 0.3 were removed from M3 (2,12,22,35,37). In M7, the items that presented residual covariances were removed until the model was adjusted.

The original BFI model with five factors and 44 items (M3) showed several adjustment problems (CFI and GFI < 0.90), suggesting that this factor structure unsatisfactorily represents the data. Analysis of the coefficients (standardized and non-standardized) of model 3 (BFI) revealed that item loadings ranged from 0.05 (item 12) to 0.79 (item 39), with all of these parameters being significant at $p < 0.001$. The factor correlation ranged

between -0.46 ($p < 0.001$) for neuroticism and conscientiousness, and 0.53 ($p < 0.001$) for extroversion and Agreeableness.

The analysis of the standardized and non-standardized coefficients of the factor loadings of Model 8 (BFI) revealed that the item loadings ranged from 0.39 (item 17) to 0.76 (item 9), all of these parameters being significant at $p < 0.001$ ($R^2 > 0.19$). The correlation between the residual errors of the following items was equal to: items 11 and 23 (0.28), items 8 and 18 (0.23); items 9 and 10 (0.24); items 14 and 19 (0.18); items 9 and 10 (0.24); items 40 and 44 (0.19). The correlation between factors ranged from -0.50 ($p < 0.001$) for neuroticism and conscientiousness, to 0.69 ($p < 0.001$) for extroversion and openness.

Table 4 – Model 8



Covariances between the following items 11 were added: (*É cheia de energia*) - 23 (*tende a ser preguiçosa*); 8 (*Pode ser desleixada para fazer as coisas*) - 23 (*tende a ser preguiçosa*); 9 (*É tranquila, lida bem com estresse*) - 10 (*É curiosa, interessada em várias coisas diferentes*); 40 (*Gosta de refletir, brincar com as ideias*) - 44 (*É sofisticada em arte, música ou literatura*).

Table 5 – Model 8 CR and AVE

Factors	Items	Λ	ϵ	CR	AVE
Extroversion	item 2	0,51	0,26		
	Item 11	0,71	0,5	0,79	0,5
	item 16	0,74	0,55		
Amiability	item 26	0,5	0,25		
	item 7	0,61	0,38		
	Item 17	0,39	0,15		
	item 32	0,64	0,41	0,79	0,5
Conscientiousness	item 42	0,71	0,5		
	item 8	0,56	0,32		
	item 18	0,57	0,33		
	item 23	0,7	0,5	0,83	0,5
	item 28	0,48	0,23		
Neuroticism	item 43	0,48	0,23		
	item 9	0,76	0,58		
	item 14	0,54	0,25		
	item 19	0,43	0,16	0,86	0,51
	item 24	0,67	0,45		
Openness	item 34	0,65	0,42		
	item 39	0,67	0,46		
	item 5	0,73	0,53		
	item 10	0,45	0,2		
	item 15	0,73	0,59	0,85	0,49
	item 25	0,62	0,38		
	item 40	0,45	0,2		
	item 44	0,41	0,17		

Caption: Λ : factor loading, CR: Composite reliability, AVE: Average variance extracted

The results in table 5 demonstrate that, in general, all factors presented adequate Composite Reliability, with values above 0.7. Regarding the Average Variance Extracted, the factors reached acceptable indices, except for Openness, which reached a marginal index.

DISCUSSION

The Big Five Inventory Brazilian Portuguese version showed, in general, adequate results in terms of reliability. Data are consistent with the Italian, Danish, Dutch, German and English versions.^{2,27-30} This demonstrates the high applicability level of the instrument.

The process of translation followed the stages of translation, synthesis, back-translation, committee analysis, pre-test and application, as the model related to that described by Beaton and collaborators.³¹ The application using the English and Brazilian versions in bilingual participants followed the model established by Oquendo et al.,³² and aimed to improve agreement with the original version.

There was a concern to use shorter sentences in the translation from English to Portuguese, since, according to Pallson et al.,²⁷ long periods hinder the ability of participants in pain and the elderly to use the instrument.

The α Cronbach values were above the established (0.7) for the Conscientiousness, Neuroticism, Openness, and Extraversion items, which demonstrates good internal consistency. However, the Amiability domain obtained scores below the expected value, which corroborates the findings in the German, Danish and Italian versions, 0.67, 0.66 and 0.69.^{27,28,30}

Regarding the construct validity of the Big Five Inventory, Confirmatory Factor Analysis showed that the model (M8) with 25 items obtained better adjustment indexes than the original model (M3) with 44 items. The models suggested by Benet-Martinez and John;²⁵ Chiorri, Ubbiati and Donatti;²⁶ Jang et al.,²⁷ presented adjustment indices below the reference values. Model 7 had good fit indices, however, the extraversion factor had only 3 items, while Model 8, with 4 items for the extraversion factor had better results.

The individual analysis of the estimated parameters showed that the loadings of most items in their respective factors were greater than 0.40, except for item 17.

Regarding reliability, it is known that Composite Reliability (CR) is a more accurate indicator of precision than Cronbach's Alpha, because for CR factor loads are free and vary among themselves, while in Cronbach's Alpha, factor loads are fixed to be equal. In this way, the CR will be able to present more adjusted accuracy indices. All factors presented values above 0.7 which indicates a homogeneity between the items.

Regarding the Average Variance Extracted (AVE), results were above the reference value (0.5), except for the Openness factor, which obtained a marginal index. This means that most factors (latent variable) explain more than half of the variance of all the items that compose it, according to Valentini and Damásio.³³

The validated model (M8) obtained 25 items and maintained the 5 factors that support the Big Five theory.² Church and Burke³⁴ point to difficulties with the use of Confirmatory Factor Analysis in personality instruments, as there are restrictions in the assessment of the personality structure. The original model (M3), for example, had low adjustment indices. Other models observed in the literature also failed to achieve adequate adjustment indices, Benet-Martinez and John;²⁴ Danu;³⁵ Little et al.;³⁶ Marsh et al.,³⁷

The present study has some limitations, including: the sample was performed by convenience and non-probabilistic; the sample was mostly composed of female and Brazilian-northeastern participants. **Invariance was not the goal of the study because the groups by gender and region are not balanced We suggest that future studies perform invariance analysis.**

CONCLUSION

Research associated with personality has increased considerably, which highlights the need for a measurement instrument that can provide more accurate measurements. The Big Five Inventory is used worldwide and proves to be this instrument.

There is also a need for free instruments to collaborate in research for evidence, as this will facilitate the replicability and accessibility of researchers to studies involving personality. In Brazil there is a need for more studies involving personality, this way this instrument could substantially contribute to the increase of these research.

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Annex I:

De forma geral, como eu sou. Aqui você verá um número de características que pode ou não se aplicar a você. Por exemplo, você concorda que você é alguém que gosta de passar tempo com outros? Por favor escreva um número próximo à cada declaração que indica a extensão que você concorda ou discorda com a declaração.

1. *Discordo totalmente*
2. *Discordo um pouco*
3. *Nem concordo, nem discordo*
4. *Concordo um pouco*
5. *Concordo totalmente*

BIG FIVE INVENTORY VERSÃO PORTUGUÊS BRASILEIRO

Versão definitiva

Eu me considero uma pessoa que...

1. Gosta de conversar é comunicativa

2. Tende a criticar os outros

3. É minuciosa e detalhista no trabalho

4. Depressiva, triste

5.É original, tem ideias novas

6.É reservada

7.É generosa e não é egoísta com outras pessoas

8.Pode ser desleixada para fazer as coisas

9.É tranquila, lida bem com estresse

10.Se interessa por áreas diferentes de conhecimento

11.É cheia de energia

12.Inicia bate-boca com outros

13.É confiável no trabalho

14.Pode ser tensa

15.É inovadora, pensa profundamente nas coisas

16.Gera muito entusiasmo

17.Desculpa, perdoa os outros

18.Tende a ser desorganizada

19. Se preocupa muito, em excesso

20.Tem uma imaginação fértil

21.Tende a ser quieta

22.Geralmente confia, acredita nos outros

23.Tende a ser preguiçosa

24.É emocionalmente estável, não se perturba facilmente

25.É inventiva

26.É assertiva, não tem medo de expressar o que sente

27.Às vezes é indiferente com os outros

28.Persevera até concluir as tarefas

29.É temperamental e instável emocionalmente/

30.Valoriza experiências artísticas e estéticas

31. Às vezes é tímida, inibida

32. É boa e atenciosa com quase todo mundo

33. Faz as coisas com eficiência

34. Se mantém calma em situações tensas

35. Gosta de rotina

36. É extrovertida e sociável

37. Às vezes é grosseira com outras pessoas

38. Cumpre, finaliza os planos que faz

39. Fica nervosa facilmente

40. Gosta de refletir, jogar com as ideias.

41. Tem poucos interesses artísticos/

42. Gosta de cooperar com outros

43. Se distrai facilmente

44. É sofisticada em arte, música ou literatura
