Brazilian Portuguese translation, cross-cultural adaptation, and apparent validation of the Trauma and Attachment Belief Scale

Tradução para o Português brasileiro, adaptação transcultural e validação aparente da Trauma and Attachment Belief Scale

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Abstract

Objective: This article concerns the translation, cross-cultural adaptation, and apparent validation of the Trauma and Attachment Belief Scale (TABS), an instrument used to assess the psychological effects of traumatic life experiences and vicarious trauma.
Methods: This study involved literature review and evaluation of conceptual and item equivalences involving expert discussion groups focused on the existence and pertinence of the underlying theoretical concepts and corresponding items in a Brazilian context. Two translations and respective back-translations were performed during the evaluation of semantic equivalence, as well as an evaluation considering the referential and general equivalences between the original TABS and each version. Twenty-eight psychiatrists and psychologists completed a pretest. The final version was tested for reliability through the Cronbach's alpha and for verbal comprehension through the adapted verbal-numeric scale (ranging from 0 [I didn't understand anything] to 5 [I understood perfectly and I had no doubt]) in another 64 health professionals.
Results: The cross-cultural adaptation demonstrated high semantic equivalence for both the general (>95.0%) and the referential (>90.0%) meaning. The total Cronbach's alpha was 0.9173. All 84 items were maintained, and they favorably contributed to the internal consistency of the scale. The mean values of the adapted verbal-numeric scale for verbal comprehension obtained from health professionals varied from 4.2 to 4.9.
Conclusion: The Brazilian version of the TABS demonstrated high-quality conceptual, item, and semantic equivalence with the original instrument, as well as high acceptability, internal consistency, and verbal comprehension. The scale is now available for use.
Keywords: Interdisciplinary relations, oncology, other specialties, posttraumatic stress disorder, vicarious trauma.

Resumo

Objetivo: Este artigo se refere à tradução, adaptação transcultural e validação aparente da Trauma and Attachment Belief Scale (TABS), instrumento utilizado para avaliar os efeitos psicológicos das experiências de vida traumáticas e do trauma vicário.
Métodos: Este estudo envolveu uma revisão de literatura e avaliação da equivalência conceitual e dos itens, empregando grupos de discussão de especialistas, focando na existência e pertinência dos conceitos teóricos subjacentes e na correspondência dos itens dentro de um contexto brasileiro. Duas traduções e respectivas retrotraduções foram realizadas durante a avaliação da equivalência semântica, bem como foi feita uma avaliação considerando a equivalência referencial e geral entre a TABS original e cada versão. Vinte e oito psiquiatras e psicólogos completaram um pré-teste. A versão final foi testada para confiabilidade através do alfa de Cronbach e para compreensão verbal através de uma escala verbal-numérica adaptada [variando de 0 (Eu não entendi nada) a 5 (Eu entendi perfeitamente e não tive qualquer dúvida)] em outros 64 profissionais de saúde.
Resultados: A adaptação transcultural demonstrou alta equivalência semântica, tanto para o significado geral (>95,0%) quanto referencial (>90,0%). O alfa de Cronbach total foi de 0,9173. Todos os 84 itens foram mantidos e contribuíram favoravelmente para a consistência interna da escala. Os valores médios da escala verbal-numérica adaptada para a compreensão verbal obtidos dos profissionais de saúde variaram de 4,2 a 4,9.
Conclusão: A versão brasileira da TABS demonstrou equivalência conceitual, de itens e semântica de alta qualidade com o instrumento original, bem como elevada aceitabilidade, consistência interna e compreensão verbal. A escala está atualmente disponível para uso.
Descritores: Relações interdisciplinares, oncologia, outras especialidades, transtorno de estresse pós-traumático, trauma vicário.

Introduction

The need for instruments designed to evaluate the psychological impact of traumatic life experiences is increasing. To meet this need, researchers have developed trauma-specific tools, ranging from childhood maltreatment inventories (such as the Childhood Trauma Questionnaire)[1] to posttraumatic stress disorder (PTSD) scales, including the Primary Care PTSD (PC-PTSD),[2] SPAN (Startle, Physiological arousal, Anger, and Numbness),[3] and the Posttraumatic Stress Disorder Checklist-Civilian Version (PCL-C).[4,5]

Another important type of trauma is the one that affects professionals who are repeatedly exposed to traumatic narratives, termed vicarious traumatization. This form of trauma was first described by Pearlman & Mac Ian in 1990.[6] The authors noted the pervasive effects of performing trauma therapy on the identity, world view, psychological needs, beliefs, and memory system of the therapist. They defined it as "the transformation that occurs within the therapist or another trauma worker as a result of empathic engagement with the client's trauma experiences and their sequelae."[6,7]

The Trauma and Attachment Belief Scale (TABS) is an American self-report, paper-and-pencil psychometric instrument developed to assess the effects of direct traumatization and the impact of indirectly experienced trauma.[8,9] It was designed with items that do not focus on trauma-related symptoms, and it measures beliefs related to five need areas that are sensitive to the effects of trauma: safety, trust, esteem, intimacy, and control. It utilizes separated sets of items within each need area, approaching beliefs about oneself and those about others.[8]

Trauma impacts the lives of people from all cultures, races, ethnicities, gender, ages, communities, and countries. The strengths of the TABS combined with the lack of instruments available for vicarious trauma assessment in Brazil indicates the need for a Brazilian Portuguese scale. Therefore, the present study aimed to describe the translation, cross-cultural adaptation, and apparent validation of the Brazilian Portuguese version of the TABS.[10]

Methods

The Brazilian Portuguese translation, adaptation, and apparent validation of the TABS were authorized by the original author. This study was approved by the research ethics committee of Universidade Federal do Rio Grande do Sul (protocol no. 1.694.773).

Evaluation of conceptual and item equivalences

This evaluation involved a literature review on vicarious traumatization and discussions with a group of specialists comprising seven psychiatrists and four psychologists. The appropriateness of the items presented in the original instrument for assessing psychological trauma in the Brazilian population was also examined.

Evaluation of semantic equivalence

This process was divided into the steps described below.

1) Initial translation into Portuguese

The first translation stage was conducted by two bilingual translator groups (G1 and G2) with expertise in mental health and psychometrics. Each group comprised two psychologists and three psychiatrists. G1 produced translation P1, and G2 produced translation P2. The translators did not interact during the time they were working.

2) Evaluation by three judges

In the second stage, both translations (P1 and P2) were examined by a committee of experts composed of three professors from the Department of Psychiatry and Legal Medicine of Universidade Federal do Rio Grande do Sul (UFRGS). They compared the different translations and evaluated any semantic discrepancies (including any linguistic or conceptual issues). Subsequently, consensus was obtained, and a single final version (PF1) was produced.

3) Back-translation

The final version (PF1) was translated back into English by two native English speakers working independently, producing BT1 and BT2. The first translator was an American psychologist and the second was a British teacher. Neither of the translators was informed of the study objectives.

BT1 and BT2 were assessed to ascertain whether the original meaning of the items (semantic equivalence) of the Visual Analog Scale (VAS) was maintained for referential equivalence. Referential meaning refers to the ideas or objects of the world to which one or several words refer. If a word has the same referential meaning in both the original and the translated versions, it is assumed that an identical match exists between them.[11] Using VAS, equivalence between pairs of statements was judged in a continuous manner, ranging from 0% (no equivalence) to 100% (full equivalence). Another form was also used to assess general meaning, using a classification involving four levels: unchanged, somewhat changed, much

changed, or completely changed. Next, BT1 and BT2 were carefully evaluated for the adequacy of each item and its stability over the translation processes.

4) Synthesized version of the new translations into Portuguese

The same three psychiatrist judges from the previous steps performed all necessary adjustments and produced PF2.

5) Pretest

Participant selection was conducted between August and September 2016. A preliminary test was then performed to investigate whether the items, instructions, and response scale were comprehensible for the target population.

Evaluation of psychometric properties

In the next step, the final version of the Brazilian Portuguese TABS was tested for reliability and verbal comprehension in another sample of health professionals.

1) Reliability

To maintain comparability between the original TABS and this new version, Cronbach's alpha coefficient was used to estimate the reliability of internal consistency of the Brazilian Portuguese TABS.[9]

2) Verbal comprehension

Each participant was requested to assess the clarity and degree of understanding of each item and the instruction for the use of the instrument using an adapted verbal-numeric scale contained in a questionnaire attached to the final version of the Brazilian Portuguese TABS. They answered the following question: "Did you understand the item?" Answers followed a Likert-type scale, as follows: 0, I did not understand anything; 1, I understood just a little bit; 2, I understood more or less; 3, I understood almost everything, but I had some doubts; 4, I understood almost everything; and 5, I understood perfectly, and I had no doubt. Scores 0, 1, 2, and 3 were considered as insufficient understanding, as suggested by Conti et al.[12,13]

Statistical analysis and ethical procedures

Statistical analysis was performed using STATA version 12.

Written informed consent was obtained from all pretest participants after completely explaining the procedures to them and before including them in the study; anonymity was assured. The participants were given the opportunity to express their comprehension of the scale and suggest any changes that they considered to be necessary.

Results

Conceptual and item equivalences

According to the experts participating in the discussions, 84 items from the original TABS were found to adequately represent the dimensions of vicarious traumatization in the cultural context of Brazil.

Semantic equivalence

Extremely high referential and general equivalences were obtained through the VAS for BT1 and BT2 items vs. the original instrument (Table 1). Referential equivalence was obtained for 76 of 84 (90.5%) items in BT1 and for 77 of 84 (91.7%) items in BT2, with 90-100% equivalence with the original scale. General equivalence was obtained for 81 of 84 (96.4%) items in BT1 and for 82 of 84 (97.6%) in BT2, again with 90-100% equivalence with the original scale. A few changes were made to the scale synthesized version, intended to make the English version more accessible to the target population.

Table 1 - Evaluation of semantic equivalence based on referential and general equivalence between back-translated items and the original TABS

Degree of equivalence between the two back-translations (VAS)	Referential meaning BT1/O, no. items (%)	Referential meaning BT2/O, no. items (%)	Judgment of the evaluators	General meaning BT1/O, no. items (%)	General meaning BT2/O, no. items (%)
90-100%	76 (90.5)	77 (91.7)	Unchanged	81 (96.4)	82 (97.6)
70% ≤ X < 90%	6 (7.1)	7 (8.3)	Little changed	2 (2.4)	1 (1.2)
50% ≤ X < 70%	2 (2.4)	-	Much changed	1 (1.2)	1 (1.2)
< 50%	-	-	Completely changed	-	-
Total	84 (100.0)	84 (100.0)	Total	84 (100.0)	84 (100.0)

BT1 = back-translation 1; BT2 = back-translation 2; O = original scale; TABS = Trauma and Attachment Belief Scale; VAS = Visual Analog Scale.

Pretest

A total of 28 volunteer psychologists and psychiatrists participated in the pretest. The mean time needed to respond the instrument was 15 minutes. The participants highlighted several doubts related to scale items and considered the instrument easy to understand. The pretest, which was completed by all participants, demonstrated high acceptability of the instrument.

The suggestions made by pretest participants were evaluated by the experts, and 5 of 84 (5.9%) items were modified for the final scale (Table 2). For example, it was suggested that item (6) be modified from "Eu nunca penso que alguém esteja a salvo do perigo" to "Eu penso que as pessoas nunca estão a salvo do perigo," moving the negative term "nunca" to the second part of the sentence. This made the phrase more typical of a Brazilian native speaker.

Final version in Portuguese

The final version of the Brazilian Portuguese TABS was then sent to and approved by the original author of the instrument.

Psychometric properties

Following translation and cultural adaptation, the psychometric properties of the scale were assessed in a sample of 64 health professionals (psychiatrists, psychologists, social workers, physicians, and speech therapists) between March and April 2017.

Internal consistency

The instrument showed excellent internal consistency (total Cronbach's alpha: 0.9173). All items favorably contributed to the internal consistency of the scale (Table 3).

Verbal comprehension

Considering both the instructions for the use of the scale and the 84 items, the mean values obtained in the adapted verbal-numeric scale among the mental health professionals were >4.0. The degree of understanding varied from 4.2 to 4.9 (maximum 5.0), as shown in Table 3.

The whole translation, cross-cultural adaptation, and apparent validation procedure is further illustrated in Figure 1.

Discussion

The TABS is a useful instrument for identifying target areas and the best therapeutic intervention for those who have experienced trauma directly or vicariously. In the present study, the cross-cultural adaptation process followed all the recommended steps to develop the official Brazilian Portuguese version of the TABS.

It is interesting to note that the TABS investigates aspects of personality, differently from clinical scales, which focus mainly on symptomatology. Moreover, the TABS measures disruptions in beliefs about personal and interpersonal safety, trust, esteem, intimacy, and control. In turn, these disruptions are related to the harmful effects of traumatic life events.[8]

The adaptation process presented in this article indicated satisfactory equivalence between the original TABS and the Brazilian Portuguese version. This scale can thus help psychologists and psychiatrists in Brazil to assess direct trauma experienced by their patients, such as in cases of PTSD. In addition, it has been established that practitioners working with clients who have experienced trauma are vulnerable to vicarious trauma.[14] Paying attention to the potential impact of

Table 2 - Modifications made during the translation and cross-cultural adaptation procedures

Item from the original TABS	Item from the synthetized version of new translations into Portuguese (P2)	Item after the final adjustments
(6) I never think anyone is safe from danger.	"Eu nunca penso que alguém esteja a salvo do perigo."	"Eu penso que as pessoas nunca estão a salvo do perigo."
(9) When my feelings are hurt, I can make myself feel better.	"Quando meus sentimentos são feridos, eu consigo fazer com que eu me sinta melhor."	"Quando meus sentimentos são feridos, consigo me recuperar."
(21) I feel good about myself most days.	"Eu me sinto bem sobre mim mesmo na maioria dos dias."	"Eu me sinto bem na maioria dos dias."
(56) I have problems with self-control.	"Eu tenho problemas com autocontrole."	"Tenho dificuldades em me autocontrolar."
(76) I don't respect the people I know best.	"Eu não respeito as pessoas que conheço melhor."	"Quando eu conheço melhor uma pessoa, tendo a desrespeitá-la."

TABS = Trauma and Attachment Belief Scale.

clinical work with trauma survivors on the professionals themselves is extremely important for supervision and clinical training.[15] The availability of a tool to monitor the health of those who provide care is important because it considers the existence of humanity on both sides of the situation.

Different professionals (e.g., oncologists and other medical specialties, nurses, social workers, counselors working with clients in substance abuse treatment, firefighters, lawyers, and penitentiary agents) will also be able to use the Brazilian Portuguese version of the TABS, illustrating its potential interdisciplinary relations.[14] Thus,

Table 3 - Evaluation of verbal comprehension and internal consistency of the Brazilian version of the Trauma and Attachment Belief Scale (n = 64)

Question	Verbal comprehension Mean (SD)	Corrected item-total correlation	Cronbach's alpha if item is deleted	Question	Verbal comprehension Mean (SD)	Corrected item-total correlation	Cronbach's alpha if item is deleted
1	4.3 (1.0)	0.1404484	0.9181	43	4.7 (0.6)	0.1363441	0.9162
2	4.6 (0.8)	0.1373516	0.9164	44	4.8 (0.3)	0.139624	0.9168
3	4.2 (1.3)	0.1378344	0.9166	45	4.6 (0.6)	0.1389352	0.9170
4	4.8 (0.5)	0.1359875	0.9151	46	4.7 (0.6)	0.1353753	0.9182
5	4.7 (0.5)	0.1366883	0.9153	47	4.5 (0.8)	0.1387439	0.9157
6	4.5 (0.8)	0.1383451	0.9173	48	4.6 (0.7)	0.1360627	0.9157
7	4.8 (0.4)	0.1380258	0.9166	49	4.7 (0.5)	0.1374892	0.9160
8	4.6 (0.7)	0.1380305	0.9163	50	4.7 (0.8)	0.1392142	0.9172
9	4.6 (0.7)	0.1383058	0.9161	51	4.9 (0.2)	0.1392444	0.9166
10	4.7 (0.5)	0.1393668	0.9169	52	4.7 (0.5)	0.1371525	0.9160
11	4.7 (0.6)	0.1365181	0.9155	53	4.7 (0.5)	0.1394916	0.9180
12	4.6 (0.6)	0.1364364	0.9160	54	4.7 (0.6)	0.1358045	0.9148
13	4.7 (0.6)	0.1356586	0.9152	55	4.8 (0.5)	0.1355607	0.9146
14	4.8 (0.4)	0.1416595	0.9190	56	4.7 (0.7)	0.1384894	0.9165
15	4.6 (0.7)	0.1365893	0.9154	57	4.6 (0.6)	0.1374299	0.9168
16	4.5 (0.8)	0.1387383	0.9174	58	4.8 (0.3)	0.1388485	0.9166
17	4.7 (0.5)	0.1366356	0.9157	59	4.7 (0.6)	0.1362504	0.9155
18	4.5 (0.8)	0.1381098	0.9163	60	4.7 (0.6)	0.1383016	0.9159
19	4.6 (0.7)	0.1383871	0.9164	61	4.7 (0.5)	0.1394762	0.9170
20	4.8 (0.4)	0.1375594	0.9161	62	4.7 (0.6)	0.1412245	0.9199
21	4.8 (0.3)	0.1370603	0.9154	63	4.7 (0.6)	0.1401219	0.9174
22	4.8 (0.3)	0.1375728	0.9160	64	4.8 (0.5)	0.1395219	0.9165
23	4.7 (0.6)	0.1378577	0.9164	65	4.7 (0.5)	0.1380276	0.9171
24	4.7 (0.5)	0.1379	0.9171	66	4.7 (0.6)	0.1397331	0.9174
25	4.7 (0.7)	0.1402682	0.9171	67	4.7 (0.6)	0.134425	0.9143
26	4.7 (0.7)	0.1378048	0.9159	68	4.7 (0.4)	0.1380349	0.9164
27	4.7 (0.5)	0.1375419	0.9186	69	4.6 (0.7)	0.1376338	0.9162
28	4.7 (0.6)	0.1371623	0.9159	70	4.8 (0.4)	0.1376828	0.9161
29	4.6 (0.7)	0.1399278	0.9188	71	4.6 (0.8)	0.135791	0.9153
30	4.7 (0.7)	0.1393736	0.9167	72	4.7 (0.7)	0.1387885	0.9162
31	4.7 (0.7)	0.1371953	0.9158	73	4.7 (0.6)	0.1402497	0.9172
32	4.8 (0.4)	0.1396566	0.9178	74	4.6 (0.7)	0.1368102	0.9158
33	4.5 (0.8)	0.1372551	0.9156	75	4.7 (0.8)	0.1386646	0.9161
34	4.7 (0.6)	0.1339433	0.9145	76	4.7 (0.8)	0.137888	0.9163
35	4.7 (0.5)	0.1357727	0.9150	77	4.7 (0.6)	0.1395232	0.9175
36	4.8 (0.4)	0.1365648	0.9152	78	4.7 (0.6)	0.1389156	0.9166
37	4.5 (0.8)	0.1383941	0.9164	79	4.7 (0.7)	0.1363394	0.9162
38	4.6 (0.7)	0.1386183	0.9171	80	4.7 (0.6)	0.1400904	0.9179
39	4.7 (0.6)	0.1377582	0.9160	81	4.8 (0.5)	0.138258	0.9161
40	4.6 (0.8)	0.1371618	0.9158	82	4.7 (0.6)	0.1371152	0.9153
41	4.7 (0.7)	0.1382765	0.9161	83	4.8 (0.6)	0.1379393	0.9158
42	4.8 (0.3)	0.1400315	0.9174	84	4.7 (0.5)	0.1356377	0.9154
				Total	-	-	0.9173

SD = standard deviation.

this translated version serves as a novel health promotion instrument, and it can be recommended for application.
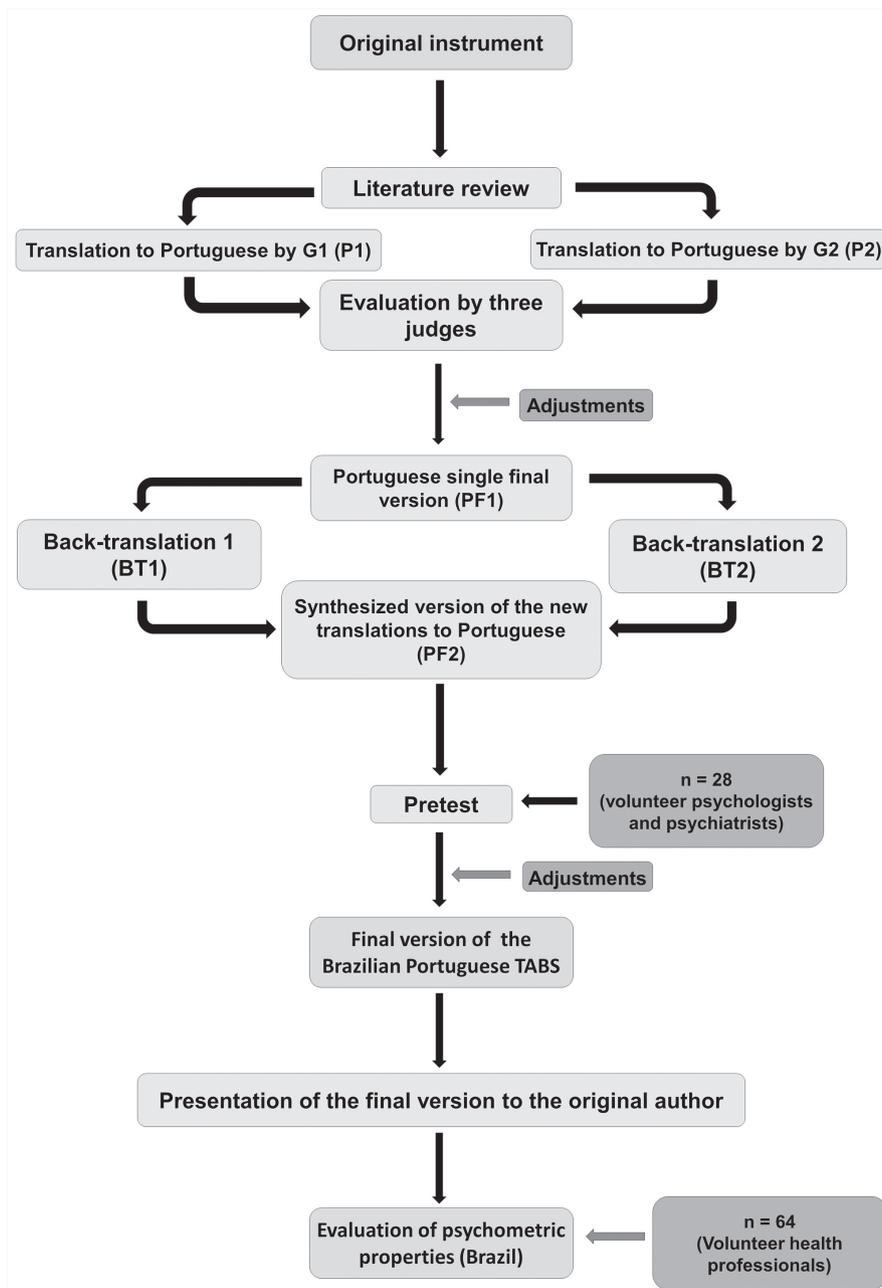
We performed the apparent validation of the TABS. Additional studies should assess criterion validity and construct validity.

For the future use of the Brazilian Portuguese version of the TABS, the Western Psychological Services Rights and Permissions department (wpspublish.com) must be contacted and a license must be requested.

Acknowledgements

Figure 1 - Steps of the cross-cultural adaptation and apparent validation of the Trauma and Attachment Belief Scale

Disclosure

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

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