Original Article

Artigo Original

Cross-cultural adaptation of the Western Aphasia Battery – Revised screening test to Brazilian Portuguese: a preliminary study

Adaptação transcultural para o Português Brasileiro do Teste de Rastreamento Western Aphasia Battery – Revised: um estudo preliminar

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ABSTRACT

Purpose: The purpose of this study was to translate and cross-culturally adapt the *Western Aphasia Battery – Revised* (WAB-R) screening test, thus contributing to future applications of the instrument with Brazilian adults. **Methods:** The adaptation was based on a universalist perspective. The steps for conceptual, item, semantic and operational equivalence were strictly followed, resulting in a short version used in the pretest. The study participants were 30 individuals, between 18 to 89 years old; all were Brazilian speakers, with Portuguese as their first language. However, only 28 volunteers met the criteria for inclusion in the study. Two participants were excluded because they had low scores on the mini-mental state examination and were referred to geriatric assessment. **Results:** The short version of the WAB-R screening test, used in the pretest, allowed us to observe the behavior and language of the individuals during interactions, to collect impressions of overall communication, and to quantify communication ability by calculating the aphasia quotient and the language quotient, according to parameters of the original instrument. **Conclusion:** When adapting an instrument, it is important to maintain its original characteristics. However, the properties of measurement may not be in accordance with the psychometric properties of Brazilian culture. Therefore, we propose further analyses of the reliability and validation of the instrument in question in Brazil, which will occur by means of measurement and functional equivalence.

Descritores

Afasia
Linguagem
Testes de linguagem
Diagnóstico
Fonoaudiologia

RESUMO

Objetivo: A proposta deste estudo foi traduzir e adaptar transculturalmente o Teste de Rastreamento *Western Aphasia Battery-Revised* (WAB-R), colaborando para futura aplicação do instrumento em adultos brasileiros. **Métodos:** O roteiro de adaptação foi baseado na perspectiva universalista. As etapas de equivalência conceitual e de itens, semântica e operacional foram cumpridas rigorosamente, chegando-se a uma versão síntese usada no pré-teste. Participaram do estudo 30 indivíduos, dos 18 aos 89 anos, todos apresentando o Português Brasileiro como primeira língua. No entanto, apenas 28 voluntários preencheram os critérios de inclusão na pesquisa. Dois participantes foram excluídos, porque apresentaram pontuação baixa no Mini-Exame do Estado Mental, e foram encaminhados para avaliação geriátrica. **Resultados:** A versão síntese do Teste de Rastreamento WAB-R, usada no pré-teste, permitiu observar o comportamento e a linguagem dos sujeitos em interações, coletar impressões do quadro geral de comunicação e quantificar a habilidade comunicativa de acordo com o cálculo do quociente de afasia e do quociente de linguagem, com parâmetros do instrumento original. **Conclusão:** Ao se adaptar um instrumento, é importante manter suas características originais. Contudo, as propriedades de medidas podem não estar de acordo com as propriedades psicométricas da cultura brasileira. Sendo assim, propõe-se a análise da confiabilidade e validação no cenário brasileiro, que ocorrerão na equivalência de mensuração e funcional.

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INTRODUCTION

Human language is the result of a set of brain activities responsible for the reception, integration, and elaboration of linguistic messages, from the phonetic and phonological plane to the pragmatic and discursive sphere[1].

Research studies in the field of neurocognition have demonstrated the importance of different cortical areas in language processing other than Wernicke's and Broca's areas. The left cerebral hemisphere, dominant for language, and the right hemisphere, acting in paralinguistic aspects and complementing the linguistic role of the left hemisphere, propitiate true communication[2-4].

The variety of syndromes found in the literature has turned aphasia into one of the most frequently classified disorders, namely those that result from cranioencephalic trauma and cerebrovascular, neoplastic, inflammatory, and degenerating diseases[5-7].

Aphasia is a neurological language disorder consequential of some type of anomaly in the central nervous system. When aphasia is present, several areas can be compromised, with different severity degrees; it is characterized by alterations in the content, form, and/or use of language[8,9].

In 1974, Kertesz and Poole organized criteria that distinguish aphasias according to similarities and differences in the linguistic processes of patients with neurological lesions — focal, diffuse, and/or progressive — classifying them as global, broca, isolated, transcortical motor, Wernicke, transcortical sensory, conduction, and anomic aphasia[8,9].

Concerning the communication aspects of a patient, an adequate profile allows medical and rehabilitation teams to associate information and circumstances, thus reaching a differential diagnosis and predicting measures, therapy, and prognosis[10].

Research studies that refer to the normal language of adults and elderly individuals and to the analysis of its structure and processes should expand possibilities when it comes to the study of acquired language disorders[11]. However, despite the existence of international assessment batteries that have been adapted to the Brazilian context, there is still room for instruments that assess the communication components of individuals.

Upon reviewing the available instruments to screen language disorders, we did not find any instrument adapted for use in Brazil. Owing to a lack of theoretical foundation on neurological language disorders, we, speech-language pathologists and audiologists, take on the role of researchers and introduce a cross-cultural adaptation of the *Western Aphasia Battery – Revised* (WAB-R) to Brazilian Portuguese, thus attenuating the time and financial resources spent to create new instruments. Conceptual, item, semantic, and operational equivalences were rigorously followed, according to Herdman's universalist perspective[12-14].

The WAB-R is a language assessment instrument created by Dr. Andrew Kertesz in Canada (2007), based on principles of neurolinguistics and on the neuroanatomic model of language. It is applicable to adults from 18 to 89 years of age. It is recognized internationally and recommended by the Scientific Department of Cognitive Neurology and Ageing of the Brazilian Academy of Neurology, and it has not yet been standardized or validated in Brazil[15-17].

The complete battery can be applied in about 45 minutes, but the screening test — the reason for this study — can be applied in a short period of time, approximately 15 minutes, with the purpose of estimating an individual's communication functionality. The tasks refer to spontaneous speech (content and fluency), auditory and verbal comprehension, sequential commands, repetition, naming, reading, writing, and apraxia.

The aphasia quotient (AQ) and the language quotient (LQ) inform the severity of a language disorder, predicting and establishing relations between the location of the lesion and the clinical manifestations of language, thus allowing for the assessment of linguistic competence, including that of individuals with dementia[9,18,19]. The cut-point for normality in the original version of the WAB is 93.8, which correlates good abilities of functional communication and highlights communication efficacy.

An imprecise approach to a diagnosis leads to inadequate therapy[9]. The importance of screening the profile of a language disorder lies, above all, in the predictability of a differential diagnosis, in the possibility of replicating the test by means of a baseline for future comparisons (of the same case), and in the urgency of combined medical treatment[9].

The present article is dedicated to studying the cross-cultural adaptation of the WAB-R to Brazilian Portuguese, all the while complying with conceptual, item, semantic, and operational equivalence.

METHODS

This study was approved by the National Research Ethics Committee (Plataforma Brasil), under protocol number 54747-2012, without any conflict of interest. The informed consent was signed by all participants.

This is a preliminary study for the cross-cultural adaptation of the WAB-R screening test to Brazil.

For the purposes of this preliminary proposal, we followed these stages, as suggested by Reichenheim and Moraes[14]:

1. Conceptual and item equivalency – this stage comprised a discussion with a group of health professionals (three speech-language pathologists and audiologists, one medical doctor and one psychologist) who reviewed the WAB-R screening test by exploring whether the different dimensions approached by the original instrument were relevant and pertinent to the Brazilian culture. Five volunteers were part of the analysis of the instrument, each representing the following age ranges: 18 to 29 years; 30 to 44 years; 45 to 59 years; 60 to 74 years; and 75 to 89 years.

The conceptual and item equivalence stage was developed in two moments, with the purpose of identifying the perceptions and ideas of the specialists and of the individuals who represented the population of this study. In both moments, a non-tendentious discussion was conducted by a moderator (a social worker) who remained neutral in relation to the viewpoints presented.

At the end of both meetings, the moderator expressed his conclusions and recommendations according to the subjective nature of the discussion. The WAB-R screening test was evaluated as a possibility of language triage for the adult and elderly Brazilian population, and the continuation of the study was suggested.

2. Semantic equivalence – this stage comprised three parts, namely:
- Production of initial translations – two translations from the original in English were independently performed by two professionals active in the area of speech-language pathology — one who knew the topic in question and another who did not, both were Brazilian and had knowledge of their mother tongue and English.
- Retranslations – the preliminary versions were compared, few discrepancies were solved, and the instrument was translated once again, simultaneously, by two English teachers. Relevant and complementary aspects were taken into consideration by both teachers, who sought a semantic equivalence between the original version and the translations, as well as literal meanings and senses. Few adjustments were made in the retranslation proposed here and the initial versions.

In the subtest for auditory and verbal comprehension — yes/no answers, the names used were *Luís* and *João*, in accordance with a previous informal version of the WAB[15], because in the original version in English, *Smith* and *Brown* are surnames and had to be modified in order to fit into the Brazilian context.

In the sequential commands subtest, we used the verb ("apontar") ("to point at") in the infinitive, because the word "aponte" ("point at"), which should be the one used, could be confused upon hearing with "a ponte" ("the bridge").

In the repetition subtest, instead of the literal translation, the English teachers suggested a Brazilian Portuguese pangram, which is a meaningful sentence using all alphabet letters (in the literal translation, the sentence in English would no longer be a pangram). We were careful to assimilate the number of elements in the sentence and the context that refers to animals. Thus, the final proposition was "*Um pequeno jabuti xereta viu dez cegonhas felizes"* (eight elements in the sentence), and this sentence replaced the original "The quick brown fox jumps over the lazy dog" (nine elements).

In the object naming subtest, we replaced the item "bed" with *"mesa"* ("table"), given that the author offers the flexibility of substituting objects[9].
- Review by specialists and short version – this phase consisted of reviewing and assembling the short version (through the retranslations performed by the two English teachers in comparison with the original instrument). The same three speech-language pathologists who evaluated the conceptual and item equivalence analyzed the content, prioritizing the Brazilian cultural context.

All the materials for screening language disorders were stowed in a box. There were no difficulties to select the objects used in an individual's routine.

A short-version form was printed, and the choices for answers were displayed in parenthesis, exactly as in the original version.

As proposed in the original instrument, we chose images and paragraphs from magazines, with some degree of complexity, to be applied with the subtests for spontaneous speech/content, reading, and writing.

3. Operational equivalence – the research trio evaluated the suitability and the appropriation of the manner of conducting the test, with regard to the questions, instructions, location and manner of application, as well as categorization.

This same group of researchers thoroughly examined the original manual, by surveying its technical and psychometric properties, especially when calculating the AQ and the LQ. These professionals also studied the possibilities of language disorders (paraphasias, hesitation, circumlocution, etc.), displayed on the WAB-R screening test form.

The training that elucidated the application, scoring, and interpretation of the results of the short version was conducted as indicated in the manual — in a calm and well-lit place, without distractions and with a table. All the materials selected were in the box, and the form for the short version of the WAB-R screening test was printed and duly explicated.

4. Pretest – 30 individuals participated in this study. They were allocated in five groups composed of three men and three women each, according to their age range, as follows: from 18 to 29 years of age; from 30 to 44 years; from 45 to 59 years; from 60 to 74 years; and from 75 to 89 years of age.

The convenience sample, composed of volunteer elderly individuals from a Community Center in Rio de Janeiro and of their adult relatives, enabled us to organize the pretest of the short version of the WAB-R screening test.

We adopted the following inclusion criteria: volunteers who spoke Brazilian Portuguese as their first language; with reading and writing skills (we did not take years of schooling into consideration); and without cognitive impairments.

We used the following exclusion criteria: individuals with visual and/or auditory deficiencies that were not compensated with the use of prostheses; those who could not write due to motor impairments; and volunteers with cognitive impairments.

First, the participants were contacted in person, with the purpose of informing them about the proposal of this study. A date and time to sign the informed consent was agreed upon, as stated in Resolution 196/96 of the National Health Council, and thus their participation in the study was authorized.

Second, an interview was conducted with the purpose of identifying the individuals' health condition and socioeducational profile for the pretest application. Each participant informed his/her health condition and the medical monitoring routine in place to avoid any disease or medication effects on cognition.

It was in this second moment that we applied a cognition screening test, namely the mini-mental state examination (MMSE)[20,21], with the purpose of finding individuals without cognitive impairments to be included in the study. After this,

we applied the pretest per se. Then, a meeting was held with the participants to clarify and discuss the acceptability of the short version and their observations about the application of the instrument, such as those concerning their understanding of the questions. The volunteers had no questions or suggestions, which denotes comprehensibility and easiness to answer the questions on the short version we applied.

5. Statistical procedures – we used the statistical package SPSS, version 17.0, to file and analyze the data and results, as well as the averages and intervals of the subtests.

The individuals were informed about their score on the language screening test, and two participants who had difficulties to answer the questions on the pretest were referred for medical assessment. We worked with a convenience sample, which justifies the study, considering that we did not find a totally homogeneous group.

RESULTS

The steps for conceptual, item, semantic, and operational equivalence were carefully carried out with the purpose of reaching a short version of the WAB-R screening test in Brazilian Portuguese, in accordance with the convenience sample used.

The pretest application allowed us to observe the individuals' behavior and language during interactions, collect impressions about their functional language, and quantify their communication skills.

The group with participants who were between 18 and 29 years old presented excellent performance in all sections (Table 1).

All individuals in this group counted at least 12 years of schooling and were in very good health condition. Although one participant complained about anxiety and reported that he had been followed up periodically by a doctor in the past, he had a very good score and lost two points in the mini-mental state examination possibly due to the tension of taking the test. The averages in this group were: age – 22.16; schooling years – 13.16; MMSE – 29.66; AQ – 99.56; LQ – 98.65; and apraxia – 10.

The group with participants who were between 30 and 44 years old (Table 2) was heterogeneous in relation to years of schooling, which varied from 3 to 15 years. The means in this group were: age – 37.83; schooling years – 9.8; MMSE – 28.16; AQ – 96.51; LQ – 94.28; and apraxia – 10.

The group with individuals who were between 45 and 59 years old had homogeneous results. The means were: age, 54.83; schooling years – 11.16; MMSE – 29.5; AQ – 99.71; LQ – 98.55; and apraxia – 10 (Table 3).

Table 1. Data and results of the group with individuals between 18 and 29 years of age

Group	Gender	Age (years)	Schooling (years)	Health condition	MMSE	AQ	LQ	Apraxia
18 to 29 years	Woman	22	12	No illness	30	98.3	98.8	10
	Woman	22	13	No illness	30	100	100	10
	Woman	26	16	No illness	30	100	97.5	10
	Man	19	13	No illness	30	99.1	98.1	10
	Man	22	12	Anxiety (periodical medical treatment)	28	100	100	10
	Man	22	13	No illness	30	100	97.5	10
	Mean	22.16	13.16		29.66	99.56	98.65	10

Caption: MMSE = mini-mental state examination; AQ = aphasia quotient; LQ = language quotient

Table 2. Data and results of the group with individuals between 30 and 44 years of age

Group	Gender	Age (years)	Schooling (years)	Health condition	MMSE	AQ	LQ	Apraxia
30 to 44 years	Woman	33	10	Obesity, SAH (medical treatment)	28	98.3	92.5	10
	Woman	41	3	No illness	25	90	88.8	10
	Woman	42	10	Thyroid dysfunction (medical treatment)	28	98.3	98.8	10
	Man	34	8	Anxiety (medical treatment)	28	93.3	90	10
	Man	36	15	SAH (medical treatment)	30	99.2	98.1	10
	Man	41	13	No illness	30	100	97.5	10
	Mean	37.83	9.8		28.16	96.51	94.28	10

Caption: MMSE = mini-mental state examination; AQ = aphasia quotient; LQ = language quotient; SAH = systemic arterial hypertension

The group with individuals who were between 60 and 74 years old (Table 4) presented precarious health conditions in some cases. The participants were functionally active and independent, but were on a combination of medical treatments. This group of elderly people demonstrated diversity regarding years of schooling, which did not prevent them from achieving good scores in the pretest, as they presented reading and writing skills, part of the inclusion criteria. (One elderly man was excluded from the research study, since he obtained 19 points in the mini-mental state examination, despite having abilities that were compatible with the four years of elementary school, which may suggest lower cognition. He was instructed to undergo a geriatric assessment.) The means of this group were: age – 69; schooling years – 8.2; MMSE – 27.2; AQ – 97.3; LQ – 96.12; and apraxia – 10.

The group with individuals who were between 75 and 89 years old (Table 5) also presented precarious health conditions in some cases. Although they were functionally active and independent, the elderly individuals in this group maintained a routine of combined medical treatments. The means of this

Table 3. Data and results of the group with individuals between 45 and 59 years of age

Group	Gender	Age (years)	Schooling (years)	Health condition	MMSE	AQ	LQ	Apraxia
45 to 59 years	Woman	50	16	No illness	30	100	100	10
	Woman	51	13	Hormone replacement therapy (medical treatment)	30	100	97.5	10
	Woman	58	13	Obesity, SAH, hormone replacement therapy, arthrosis (medical treatment)	30	100	97.5	10
	Man	54	16	No illness	30	100	100	10
	Man	57	16	SAH, diabetes (medical treatment)	28	100	97.5	10
	Man	59	13	No illness	29	98.3	98.8	10
	Mean	54.83	11.16		29.5	99.71	98.55	10

Caption: MMSE = mini-mental state examination; AQ = aphasia quotient; LQ = language quotient; SAH = systemic arterial hypertension

Table 4. Data and results of the group with individuals between 60 and 74 years of age

Group	Gender	Age (years)	Schooling (years)	Health condition	MMSE	AQ	LQ	Apraxia
60 to 74 years	Woman	67	4	No illness	27	100	97.5	10
	Woman	70	4	SAH, arthrosis (medical treatment)	26	91.7	91.2	10
	Woman	74	16	Circulatory problems (medical treatment)	27	100	100	10
	Man	65	4	Anxiety (medical treatment)	27	95.8	91.9	10
	Man	69	13	SAH, cardiopathy, cataracts (medical treatment)	29	100	100	10
	Mean	69	8.2		27.2	97.3	96.12	10

Caption: MMSE = mini-mental state examination; AQ = aphasia quotient; LQ = language quotient; SAH = systemic arterial hypertension

Table 5. Data and results of the group with individuals between 75 and 89 years of age

Group	Gender	Age (years)	Schooling (years)	Health condition	MMSE	AQ	LQ	Apraxia
75 to 89 years	Woman	75	4	Arthrosis, osteosclerosis (medical treatment)	28	100	98.8	10
	Woman	76	4	SAH (medical treatment)	28	100	100	10
	Man	77	12	SAH (medical treatment)	28	95	96.3	10
	Man	83	12	Cardiopathy (medical treatment)	24	93.3	95	10
	Man	88	4	SAH, diabetes (medical treatment)	28	96.7	95	10
	Mean	79.8	7.2		27.2	97	97	10

Caption: MMSE = mini-mental state examination; AQ = aphasia quotient; LQ = language quotient; SAH = systemic arterial hypertension

group were: age – 79.8; schooling years – 7.2; MMSE – 27.2; AQ – 97; LQ – 97; and apraxia – 10. (One elderly woman was excluded from the research study, as she obtained 22 points in the mini-mental state examination, although her schooling was compatible with a finished high school degree, totaling 12 years of schooling. She was instructed to undergo a geriatric assessment due to the possibility of having cognitive impairments.)

Scores were recorded for each section, resulting in the AQ and the LQ of the population studied here. It is possible to observe that, although the sample was heterogeneous, there are relevant aspects to be taken into consideration concerning ageing. Elderly people systematically present more alterations in their health states, need periodical medical care in order to maintain functionality, and lose points in reading and writing skills tests, regardless of their level of education.

The averages and interval on the AQ subtests indicate that better results were achieved by the groups with individuals who were between 18 and 29 years old and between 45 and 59 years old. The group with participants who were between 30 and 44 years old presented shortcomings, possibly due to low schooling. Nevertheless, these individuals were included in the study because they had preserved reading and writing skills.

In the sequential commands section, the average 9.2 (8–10 interval) was obtained by the group with individuals from 60 to 74 years of age, which presented the lowest performance. All groups made more mistakes in the repetition subtest. The group of participants who were between 30 and 44 years of age had the lowest average – 9.25 (8–10 interval). The averages and intervals obtained in the LQ subtests indicated better performances for the group between 18 and 29 years of age, in which all participants had 12 or more years of schooling.

The group that counted participants from 30 to 44 years of age had heterogeneous schooling. The average was 9.08 (8–10 interval) for reading, and the lowest average was 8.6 (7–10 interval) for writing.

The other groups, with individuals between 45 and 59 years, 60 and 74 years, and 75 and 89 years, had more homogeneous scores. In the reading section, the average was 9.7 (8–10 interval), 9.2 (8–10 interval), and 10, respectively. In the writing section, the average was 9.3 (8–10 interval), 9.2 (8–10 interval), and 9.4 (8–10 interval), respectively. In the apraxia section, all individuals included in the study did not present any impairments, reaching an average of 10 points.

DISCUSSION

The translation and cross-cultural adaptation of the WAB-R screening test is the result of minutely followed instructions and stages, in accordance with Herdman's universalist perspective[12-14]. Few original items had to be adapted — the entire test was linguistically treated, both with regard to context and the process of literal translation.

There are disadvantages and difficulties to adapt an instrument elaborated in a certain cultural context, such as Canada, where the individuals' normative data confirm their good socioeconomic and educational level, in addition to the opportunities that arise in developed countries[14]. Nevertheless, the results of the pretest application, conducted with the Brazilian short version of the WAB-R screening test, suggest that the aforementioned version has been assimilated, as the performances were favorable, including those of individuals with only a few years of schooling.

Concerning the test's grey areas, we highlight the possibility of different scores given by different evaluators in subjective tasks such as fluency, reading, and writing. For instance, when an individual describes an image, orally or in writing, his/her score may vary from specialist to specialist. The same is true of the quantification of an individual's reading. On the other hand, in expected answers for tasks such as pointing to objects and repeating structures, scoring is objective and does not offer any margin of error to the evaluator.

In the content subtest of the spontaneous speech section, the answers to conversation questions were scored; thus, communication was evaluated, which in turn pointed to a functional communication state devoid of difficulties[22].

The task of describing images contributed substantially in the evaluation of information content and fluency, which are subtests of the spontaneous speech section. All participants presented normal fluency, without hesitations or difficulties to find words, despite a certain tension they experienced for being tested at that moment[23].

In the auditory and verbal comprehension, yes/no answers were requested. The first relevant, and immediately answered, questions referred to personal orientation. The subsequent questions referred to the environment and general topics, with increased linguistic complexity, which required syntax comprehension. In this item, it was important to consider the possibility that an individual could provide only one answer, thus randomly scoring 50% of the section. An experienced evaluator must detect this possibility promptly, without deterring his/her attention exclusively to the score[9].

As another item of auditory and verbal comprehension, the sequential commands were related to a few cognitive operations — phonological perception, auditory processing, short-term memory, lexical retrieval, semantic memory, etc. The tasks of this subtest are considered the most difficult ones to assess comprehension with the WAB-R because they determine the severity of comprehension impairments[9].

In the repetition section, it is possible to assess phonological processing, short-term auditory memory, and working memory, as well as comprehension. Repetition must not be underestimated just because it is not a function of natural language. The items included repetition of words of increasing length and sentences of increasing duration and grammatical complexity[23,24]. All groups made mistakes in this subtest.

The expression *"Sem mas, nem porquês"* ("No buts, nor whys"), composed of words devoid of content, did not pose any difficulty to the participants of this study. On the other hand, young individuals asked the evaluator to repeat the pangram sentence, and the elderly people needed some latency time to fulfill the request; however, they were able to complete the task, which called for phonological support and central

executive working memory[22-25]. In the object naming section, the individuals' lexical retrieval, in a stimulus–response situation, occurred without any mediation, and all presented very good competence.

In the reading and writing sections, difficulties inherent to the individuals' intellect and educational level occurred, including in the youngest ones. Some participants read the paragraph aloud without oral agility and with mistakes in intonation and punctuation, despite successful interpretation[4].

The writing tasks, requested by dictation or spontaneously (image description), were sufficient to identify orthographical mistakes made by participants with low schooling, despite the efforts employed in idea organization, and textual coherence and cohesion.

The apraxia section, considered optional, was also applied. Praxis is intimately linked to language, and, consequently, apraxia follows language disorders[9]. This section had a single score. All participants included in the study obtained satisfactory scores.

Although encouraging, the results obtained deserve to be reviewed after future psychometric assessments that establish mensuration and functional equivalence. It is also important to take into consideration that the results presented here are based on a small number of participants. Further studies with more participants in the groups, distributed according to their age range and similar schooling, are expected. Addressing the quality of information in epidemiologic studies includes caution in the process of cross-cultural adaptation in the research agenda[14].

CONCLUSION

When adapting a scale and submitting it to translations and retranslations, it is important to maintain the specificity and characteristics of the original instrument. The adaptation of the short version of the WAB-R screening test to Brazilian Portuguese followed the adaptation guidelines proposed by Herdman, namely conceptual, item, semantic, and operational equivalence. The cross-cultural adaptation of this test showed the instrument's applicability, and it is a pioneer work in Brazil.

We highlight that the measuring properties of the original version might not be in accordance with the psychometric properties of Brazilian culture, which are still unknown. In light of this, we propose the continuity of this study by means of analyzing its reliability and validation for Brazil, and selecting samples that include a higher number of participants.

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**MBN was responsible for data collection and tabulation, and manuscript elaboration; JVB supervised and outlined the entire study; JVB and MBP were responsible for supervising the study and data collection, and for collaborating with data analysis; JVB and MBP were responsible for supervising the stages of study conduction and manuscript elaboration; EMPP was responsible for the overall supervision of the stages, collaboration with data analysis, and manuscript supervision.*

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