Original Article

https://doi.org/10.1590/2317-6431-2021-2589en

Audiology Communication Research
ISSN 2317-6431

Translation and cultural adaptation of Hearing Aid Skills and Knowledge Test into Brazilian Portuguese

Tradução e adaptação cultural do *Hearing Aid Skills and Knowledge Test* para o português brasileiro

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ABSTRACT

Purpose: The study aimed at the translation and cultural adaptation of the Hearing Aid Skills and Knowledge Test (HASK) into Brazilian Portuguese. **Methods:** This is a qualitative study of the translation and cultural processes of an adaptation measure from English to Brazilian Portuguese based on the method proposed by Lins et al. (2017) and Beaton et al. (2000). In all, 38 hearing aids users were selected for the study, recruited in Hearing Health Service of the Institution, eligible by inclusion and exclusion criteria, accepted under the number 3,228,085. **Results:** The process of translation and cultural adaptation chosen was divided into 5 stages, among them: (1) Translation of the original version into Portuguese, carried out by two different translators, which gave rise to the Portuguese Consensus 1 version; 2) Evaluation by the professional committee. Among of the 53 translated terms, 23 obtained semantic equivalence and two did not achieved conceptual, idiomatic and experimental equivalence. This step resulted in Consensus Version 2; (3) The Back-Translation was carried out to compare the Consensus 2 Version to the original. The test author confirmed the equivalence between both; (4) Consensus Version 2 was submitted to a panel of patients, in which three participants indicated the test difficulty level as easy and three as medium. At this stage, it was established the Final Version of the test; (5) Application of the Final Version in the step pre-test, which highlights the importance of contextualizing two terms by the professional who applied the test. **Conclusion:** The HASK test was translated and adapted to the Portuguese language, with semantic, experimental and conceptual equivalence.

Keywords: Translation: Hearing aids; Adaptation; Rehabilitation; Methodology

RESUMO

Objetivo: o estudo teve como objetivo a tradução e adaptação cultural do *Hearing Aid Skills and Knowledge Test* (HASK) para o português brasileiro. **Métodos:** trata-se de um estudo qualitativo dos processos de tradução e adaptação cultural de um instrumento de medida da língua inglesa para o português brasileiro, baseado no método proposto por Lins et al. (2017) e Beaton et al. (2000). Ao todo, foram submetidos ao estudo 38 voluntários usuários de aparelho de amplificação sonora individual, recrutados no Serviço de Saúde Auditiva da instituição, elegíveis por critérios de inclusão e exclusão. **Resultados:** o processo de tradução e adaptação cultural eleito foi subdividido em cinco etapas: (1) tradução da versão original para a língua portuguesa, realizada por duas tradutoras distintas, que originou a Versão Português Consenso 1; (2) avaliação pelo comitê profissional. Dentre os 53 termos traduzidos, 23 obtiveram equivalência semântica e dois não alcançaram equivalência conceitual, idiomática e experimental. Essa etapa resultou na Versão Consenso 2; (3) retrotradução, realizada para comparação da Versão Consenso 2 com a original. Foi constatada pela autora do teste a equivalência entre ambas; (4) submissão da Versão Consenso 2 para consenso pelo Painel de Pacientes, em que três participantes apontaram o nível de dificuldade do teste como fácil e três, como médio. Nessa etapa, foi estabelecida a Versão Final do teste; (5) aplicação da Versão Final na etapa pré-teste, na qual foi evidenciada a importância de contextualização de dois termos pelo profissional que aplicou o teste. **Conclusão:** o teste HASK foi traduzido e adaptado para a língua portuguesa, obtendo-se equivalências semânticas, idiomáticas, experimentais e conceituais.

Palavras-chave: Tradução; Auxiliares de audição; Adaptação; Reabilitação; Metodologia

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Conflict of interests: No.

Authors' contribution: MM was responsible for the tabulation, and adjustments presented for publication. BC performed the data analysis and manuscript preparation; JRMO supervised the collection, tabulation and analysis of data and guided the stages of execution and elaboration of the manuscript; MFCGM provided supervision for the elaboration and reviewed the manuscript.

Funding: None.

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Received: January 11, 2022; Accepted: September 28, 2022

INTRODUCTION

Scholars in the field of Audiology question the reasons why some individuals do not make effective use of individual sound amplification devices (ISAD) and try to understand them[1,2]. Among the main reasons, it was observed that the handling of the device has been a recent target of investigation[3]. Information obtained in this field of study is of great importance to obtain successful guidance and counseling by the clinician in order to ensure the effectiveness of the use of the devices[4].

Some questionnaires already available in Brazilian Portuguese measure important aspects for clinical guidance: *Abbreviate Profile of Hearing Aid Benefit* (APHAB)[5,6]; *Satisfaction with Amplification in Daily Life* (SADL)[7,8], *Aid Probed Recall Inventory* (HAPRI)[9] and *Practical Hearing Aid Skills Test* (PHAST-R)[10,11].These studies also show that obtaining information collected by such instruments is relevant to the hearing rehabilitation process of hearing aid users[11], and that the use of questionnaires in clinical practice guide the therapeutic process, measuring the understanding, use, benefit, skills and satisfaction of the individual user[8].

In order to assess the knowledge skills of the hearing aid user, the HAPRI inventory is found in the literature[9] and, to measure hearing aid management skills, the revised version of the PHAST-R is available[10], translated and adapted by Campos et al.[11]. However, to optimize data collection in the clinic, it is extremely important that the available instruments are easy to apply[12].

Based on these tools and adding specific skills, the Hearing Aid Skills and Knowledge (HASK) test was recently developed in English, whose purpose is to assess both the knowledge and the management capacity demonstrated by users of hearing aids[13].

HASK evaluates up to 12 categories of tasks associated with skills with hearing aids, namely: removal of the device, opening the battery compartment, battery management, device cleaning, distinction between left and right devices, device insertion, volume adjustment, telephone use, program use, feedback management, problem solving and device storage.

Scoring for each task is based on knowledge and/or skill. For knowledge items, 1 point is awarded if the subject answers correctly and zero points if the subject answers incorrectly. For skill items, 2 points are awarded if the individual completes the task without difficulty on the first attempt, 1 point if the individual completes the task with some difficulty (if more than one attempt was used, a deviant method was used), and zero points if the individual cannot perform the task.

The percentage of correct knowledge and skills is obtained by adding the total score on each scale, dividing by the total number of items and multiplying by 100.

When HASK items are not applicable - for example, if the hearing aid does not have the volume control activated - the total number of items on a scale must be readjusted.

If an item is not applicable, it must be assumed that the volunteer is correct. For example, if a participant reported that the volume control is on, the researcher did not verify the hearing aid programming.

In order to clinically use a questionnaire developed in another country, it is essential to go through the processes of translation and cultural adaptation in order to adjust the instrument to another language, population, context and culture[14]. These processes must be conducted in order to achieve a result that is reliable, accurate, understandable and within the cultural aspects of the target population[15]. In addition, they lead to greater accuracy in the measurement of aspects inherent to the population in question, less effort, time and financial resources when compared to the creation of a new instrument, as well as providing the comparison of results between different samples, allowing the performance of cross-cultural studies using the same instrument[16]. In this context, the present study aimed to translate and culturally adapt the Hearing Aid Skills and Knowledge Test (HASK) into Brazilian Portuguese.

METHODS

The ethical standards established by the National Research Ethics Commission (CONEP) were followed, respecting resolution 466/12, and the work was approved by the Ethics Committee in Research on Human Beings - CEP-HRAC-USP under opinion number 3,228,085.

The present is a methodological study with a guiding reference in the literature[17,18], qualitative, which proposed to carry out the process of translation and cultural adaptation of the HASK (Figure 1).

Sample

For the composition of the sample, 38 samples of hospital anomalies, and 38 samples of auditory anomalies were selected, recruited in the Division of Rehabilitation in Craniofacial Health – HRAC, in which they will attend the routine of service users. It is noteworthy that all those involved sign the Free and Informed Consent Term (FICT).

Regarding the selection of the sample for the patient panel, a total of six tests were implemented (three for each domain of knowledge and management)[17,18]. Among them, four were

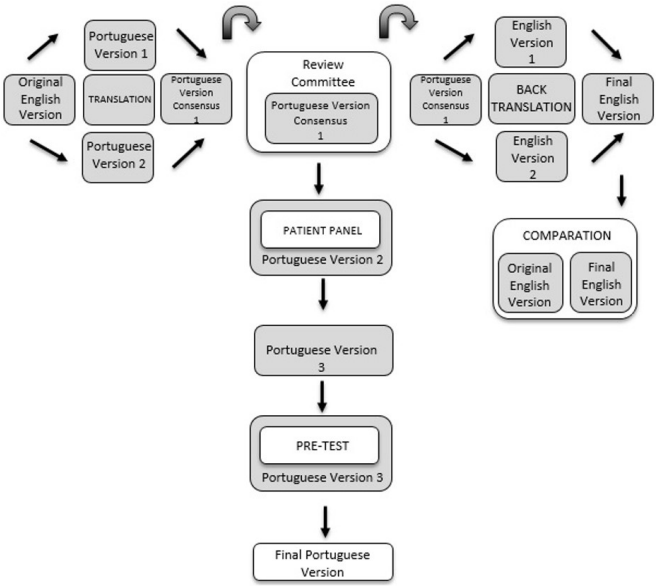

Figure 1. Illustration of the methodology of translation and cultural adaptation of the *Hearing Aid Skills and Knowledge Test* into Brazilian Portuguese based on the organizational chart used by Lins et al.[17]

female and two were male, aged between 18 and 68 years. Regarding education, two had completed high school, three had incomplete high school, and only one had incomplete elementary school. Half of them had sensorineural hearing loss and the other half had mild to severe mixed hearing loss.

With regard to the selection of the sample for the pre-test stage, the number of 32 individuals with hearing loss was defined, representing 10% of a sample of 320, who later participated in a new study to validate the instrument[19].

All participants met the following eligibility criteria: age greater than or equal to 18 years, of any gender; present conductive, mixed or sensorineural hearing loss, bilaterally or unilaterally and mild to severe and have been using hearing aids for more than a month.

The non-inclusion criteria were: not having the ability to read and respond to what was requested in the assessment of the instrument, present visual impairment that prevented the reading of the evaluated questions, having neurological alterations, such as, for example, memory failure to remember the questions and answer them and/or emotional disturbances such as nervousness and agitation that prevented adequate participation in the assessment of the instrument.

Process - Translation and cultural adaptation

Firstly, contact was made with the author of the HASK, via e-mail, requesting authorization for translation and cultural adaptation of the test into Brazilian Portuguese. The author of the original version responded to the contact, authorizing the process.

Step 1 - Translation of the original version into Brazilian Portuguese

After authorization, the test was submitted to its first stage, whose objective was to carry out a Portuguese Consensus Version 1. As a result, the test in English was sent to two Brazilian translators fluent in the English language, one of them knowledgeable in the area of audiology and the other who had no such knowledge.

The translation process took place independently and blindly to each other, and both were asked to be cautious about the technical terms and their proper translations, considering the context of the test. Thus, the different translations originated Version 1 and Version 2 of the HASK in Brazilian Portuguese.

Versions 1 and 2 were made by the research team for discussion, comparison and selection of the best terms. This1st analysis was the Portuguese Consensus Version 1

Step 2 - Evaluation of Consensus Version 1 by the professional committee

Stage 2 aimed at evaluating the Portuguese Consensus Version 1 in order to generate the semantic, idiomatic, experimental and conceptual equivalence of the instrument. At the end of this step, Consensus Version 2 was generated. A professional review committee was formed by three invited university professors, who volunteered to contribute to the evaluation. The professionals met the following requirements: more than two years of experience in the field of audiology, a postgraduate degree in audiology, fluency in English and experience in the process of translation and cultural adaptation.

The Portuguese Consensus Version 1 and the Original Version in English were submitted to the professional committee, which received the online form on the Google Forms platform with the following guidelines: in semantic equivalence, the meaning of words should be evaluated since, grammatical changes could occur . In idiomatic equivalence, colloquialism will be verified, since these, in general, do not have a corresponding translation and are replaced by local expressions as close as possible. For experimental evaluation, the adjustment of situations experienced locally will be analyzed since they may not make sense for the culture of the target population. Finally, in conceptual equivalence, it will be verified whether the concept expressed represented the event experienced by the individual.

With regard to equivalences, the professional review committee was instructed to assign the number +1 when considering the translation of the instrument into Portuguese as equivalent in all its aspects (semantics, idiomatic, experimental and conceptual); zero when they had doubts about the translation and -1 when they considered that the equivalence was not reached. If a score of zero or -1 was assigned, the specialist should justify the choice and suggest relevant changes.

The sentences were considered equivalent when 80% or more[20] of the experts assigned a score of +1. The sentences that did not reach this agreement index were reviewed by the research team so that the suggestions proposed by the committee could be discussed. Thus, the Portuguese Consensus Version 2 was created, which was submitted to two procedures simultaneously: back-translation and evaluation of the Consensus Version by the panel of patients.

Step 3 - Back-translation

The back-translation of the Portuguese Consensus Version 2 aimed to validate the maintenance of the characteristics of the Original Version. The result of the back-translations generated the Final Version in English, which was evaluated by the author of the original instrument.

Two native English translators, and fluent in Brazilian Portuguese, were chosen. The translators did not have access to the original version of the instrument and performed the translation procedure blindly and independently. This step gave rise to the English Version 1 and the English Version 2, which were compared with each other by the research team and the Final English Version was created.

The Final English Version was sent to the original author of the HASK and asked to compare it with her Original Version to validate the maintenance of the original characteristics of the test. After analysis, the author attested, via e-mail, that the characteristics of the original instrument were maintained.

Step 4 - Assessment of the Consensus Version by the Patient Panel

The Portuguese Consensus Version 2 was submitted, in parallel, to back-translation for the target population, that is,

was presented to six individuals with hearing loss and hearing aid users, inclusion recommended for the research. This step aimed to verify the level of applicability and understanding of the test in clinical practice to originate the Consensus Version 3.

The researcher invited each participant individually, the research objectives were clarified and they were informed that the instrument would be conducted by them, that is, the reading of the test and the request for the participants to perform the tasks according to the test instructions. If the user did not understand any term or task, they could ask for clarification during the application. At the end of the application, even if the participants did not present questions, they were submitted to the following questions:

1 – Is there a word or phrase that you don't understand?

2 – Do you have any suggestions to make the test easier to understand?

3 – How do you rate the level of difficulty to answer the test: easy, medium or difficult?

The questions and answers of the participants were analyzed by the research team and those that were considered relevant originated the Portuguese Consensus Version 3.

Step 5 - Application of the pre-test

Step 5 aimed to generate the Final Portuguese Version, making sure that the applicability of the test is easy to handle and understood by the user.

The Portuguese Consensus Version 3 was submitted to 32 participants randomly chosen during the clinical routine of care, respecting the inclusion criteria for the present research.

The researcher invited each participant individually, the research objectives were clarified and informed that the instrument would be conducted by them, that is, the reading of the test and the request for the participants to perform the tasks as instructed. At this stage, no questions were asked about the understanding of the test, therefore all doubts that arose were spontaneous.

Doubts regarding the terms of the test were discussed among the research team and those considered relevant were accepted. Therefore, the adjusted Portuguese Consensus Version 3 generated the Final Portuguese Version (Appendix 1).

Data were analyzed using simple descriptive statistics and evaluations of semantic, conceptual and experimental idiomatic equivalences were performed.

RESULTS

Step 1

All the terms translated in Version 1 and Version 2 were analyzed to define the Consensus Version 1. It is important to highlight that changes were made to the terms that were different from the initial translations (Versions 1 and 2 in Portuguese), and the concordant terms regarding translations were forwarded to the next step (Table 1).

Step 2

Among the 53 terms translated, 23 obtained semantic, idiomatic, conceptual and experimental equivalence, 8 did not obtain semantic equivalence with regard to number agreement, for example, opening of battery door was translated to "abertura do compartment de batteries". In 20 terms, doubts were raised regarding the translation, as presented in Table 2.

It is worth mentioning that, if the same term was discussed by the research team more than once in different sentences, the table presents only one of the examples of the changes made.

Finally, 2 terms did not obtain conceptual, idiomatic and experimental equivalence: ear tip/sound bore (loop or wash), and placed the hearing aid in a case or dry-aid kit. After discussion with the research team and considering the suggestions of the expert committee, the consensus of the translations was, respectively, "olive/sound output (with accessory or wash)" and "put the hearing aid in the case or silica".

For some terms, the professionals' suggestions were discordant, requiring the last opinion formed by the team, defining the following expressions: cleaning of hearing aids, translated as "cleaning hearing aids"; ear tip/ sound bore (loop or wash), as "sound tip/ opening (with accessory or wash)"; body and canal tip/earmold are seated properly in the right ear, for "capsule or mold are correctly adjusted in the right ear" and, finally, checks sound bore for blockage, for "checks for obstruction in the sound opening".

After aligning all the terms, the Portuguese Consensus Version 2 was created.

Step 3

The English Version 1 and the English Version 2 did not present divergences between them. The Final English Version was unified without discussion of terms. The author of the test attested via e-mail that the characteristics of the original instrument were maintained when they compared the Final English Version and the Original Version.

Step 4

All the suggestions that the participants presented to the researcher when faced with the difficulty of understanding a term were discussed and accepted, resulting in Consensus Version 3 (Table 3).

At this stage, it was observed that the participants had difficulty understanding specific terms linked to hearing aid models. For example, a patient who did not understand the term "olive" uses a hearing aid fitted with a mold. In addition, it was observed that, in some cases, the lack of understanding was associated with the terms that were used and not with the degree of hearing loss.

This sample of participants had mild, moderate and severe sensorineural or mixed hearing loss. Regarding educational data, 3 had incomplete high school, 2 had completed high school and 1 had incomplete elementary school. Three participants rated the level of difficulty in answering the test as easy and 3 rated it as medium.

Table 1. Main discussions to define the Consensus Version 1

Original	Version 1	Version 2	Consensus Version 1
Opening of battery door	Battery compartment opening	Battery drawer opening	Semantic sense of compartment is more suitable.
Left versus Right	Left *versus* Right	Left *versus* Right	Semantic sense (grammar) of left and right sides.
Knows when to change battery (hearing aid dead or battery warning tone)	Knows when to change the battery (ISAD not working or battery audible alert).	Knows when to change battery (ISAD not working or battery audible alert).	We opted for the literal translation "change" since it presents equivalence in the translation.
Feedback troubleshooting	Return troubleshooting	Microphone troubleshooting	The translation "microphone" more adequately represents the local culture.
Tested Skills	Skills assessed	Skills tested	"Evaluated" semantically best represents the concept of the test.
Opens battery door (or pushed the correct button appropriately)	Opens the battery compartment (or pressed the correct button properly).	Open the battery drawer (or pressed the correct button properly).	"Appropriately" encompasses cultural meaning best suited to the target population.
Inserts battery into aid	Insert the batteries into the device.	Insert the batteries into the device.	Equivalent semantic sense.
Ear tip/ sound bore (loop or wash)	Ear tip/sound bore (strap or wash)	Ear tip/sound bore (cycle or wash)	"Strap" has greater semantic meaning within the sentence.
Body of aid (with cloth)	Device body (with fabric)	Device body (with cloth)	"Fabric" is equivalent in all respects, better represents the target population.
Body and canal tip/earmold are seated properly in the right ear	The canal tip body and ear mold are properly seated in the right ear.	Body and tip of the ear canal/ mold are seated correctly in the right ear.	"and" has equivalent semantic meaning.
Switches to telephone program / t-coil switch (if appropriate)	Switches to the telephone/ telecoil program (if appropriate).	Switch to telephone/telecoil program (if appropriate).	"Alternate" better represents the target population.
Places phone in correct relation to hearing aid	Places the phone in correct relationship with the hearing aid.	Places the phone in the correct position with the hearing aid.	"In the correct position" has equivalent semantic meaning.
Goes through programs (if appropriate)	Use programs (if appropriate).	Go through programs (if appropriate).	"Go through the programs" better represents the target population.
Checks microphone for blockage	Verify microphone blockage.	Verify microphone blockage.	"Microphone blockage" has equivalent semantic meaning.

Subtitle: ISAD = Individual sound amplification device

Step 5

Finally, the volunteers of the pre-test stage were invited individually during the clinical routine, and it was observed during the application, that the spontaneous doubts were about the terms "acquire" and "microphony."

The terms were not changed in the Final Version, that is, the Consensus Version 3 was the same as the Final Version because the word "acquire", for example, in the current health scenario, corresponds to the fact that the patient has the possibility to buy new batteries or receive through donation from some service or institution, not finding another word that could be replaced and understand the meaning of both concepts. The term "microphonia" was kept since no word was found in the Portuguese language that had the same meaning and that was easy to understand without losing the equivalences achieved in the previous steps.

DISCUSSION

Currently, to measure the ability to manage amplification devices, the PHAST-R is used[10,11], which does not cover the number of desired categories. With this, it was decided to translate and adapt the HASK, because it was developed, validated and intended to measure issues regarding the knowledge and management of the user of hearing aids in the same instrument, being easy to apply and measure the data[13]. Additionally, because this questionnaire was developed by experts with the participation of the user, it becomes more effective for the benefit of person-centered care[21].

The translation and cultural adaptation of a test is not a simple procedure since it is extremely important that the instrument has applicability in the target population[22]. In Brazil, cultural adaptation is essential since the country is characterized by a heterogeneous population and different dialect formations, with some terms being used only regionally[23]. As a result, after translation and cultural adaptation, a questionnaire should only be used in the population and with the specifications in which it was validated[24].

The difficulties faced when adapting an instrument occur due to the diversification of linguistic and cultural differences. In this sense, finding equivalence between versions requires previously designed steps[24]. A recent study[25] aimed to review the methods used in translation and cultural adaptation was observed. After analysis, it was identified that, of 31 guidelines analyzed, no unified methods were found. According to the study, most achieve similar and comparable results and choosing

Table 2. Main discussions for the definition of Consensus Version 2

Original	Translation	Doubt on Equivalence	Suggestion	Consensus Version 2
Hearing aid insertion	Hearing aid insertion	Experimental	Use the term "placement" instead of "insertion".	Insertion of ISAD
Feedback troubleshooting	Microphone troubleshooting	Experimental	Use the English word *Feedback*.	Microphone troubleshooting
Knows how to turn hearing aid oM	Knows how to turn off the hearing aid.	Experimental idiomatic	Do not use the term "hearing aid."	Knows how to turn off the ISAD.
Ear tip/ sound bore (loop or wash)	Ear tip/sound bore (strap or wash)	Conceptual Idiomatic Experimental	Substitute the terms "ear tip" for "olive", "sound bore" "for "sound opening" and "strap" for "accessory".	"Olive"/"sound bore" (with accessory or washing)
Goes through programs (if appropriate)	Go through programs (if appropriate).	Conceptual Idiomatic Experimental	Substitute the term "pass through" for "change".	"Change programs" (if appropriate).
Knows how to order new batteries	Knows how to order new batteries.	Experimental	Substitute "request" for "buy", "acquire".	Knows how to buy new batteries.
Body and canal tip/ earmold are seated properly in the right ear	Body and tip of the ear canal/mold are seated correctly in the right ear.	Semantics Experimental Conceptual	Use the terms "capsule" or mold, and "inserted" or "adjusted".	'' Capsule or 'mold' are fitted correctly in the right ear.
Switches to telephone program / t-coil switch (if appropriate)	Switches to the telephone/ telecoil program (if appropriate).	Semantics Experimental	Change "telecoil" to "telephone coil".	Switch to telephone/telecoil program (if appropriate).
Verify if hearing aid is seated properly	Verify that the hearing aid is properly seated.	Semantics Experimental	Substitute "seated" for "adjusted", "inserted" or placed	Verify that the olive/dome/ mold/ is properly adjusted (a).
Checks hearing aid battery	Check the hearing aid batteries.	Semantics Experimental Idiomatic	Use "battery" in the singular and not use the term "hearing aid."	Check the ISAD battery.
Checks microphone for blockage	Check microphone blockage.	Experimental Idiomatic	Checks for microphone obstruction.	Checks for obstruction in the microphone.
Checks sound bore for blockage	Check blockage in sound bore.	Experimental Idiomatic	""Sound canal" or "sound bore"	Checks for obstruction in the sound bore.
Changes wax Mter (if appropriate)	Change the wax filter (if appropriate).	Experimental	(if necessary)	Change the wax filter (if appropriate).
Knowledge Score	Knowledge score	Semantics Experimental Idiomatic	Knowledge score	Knowledge score
Skills Score	Skills score	Experimental Idiomatic Semantics	Skills score	Skills score
Total Score	Total Score	Semantics Idiomatic	Total Score	Total Score

Subtitle: ISAD = Individual sound amplification device

one is a matter of preference. However, the choice of a clear and well-defined methodology facilitates reproducibility and allows both the measurement between different samples and the comparison between populations[26].

The process of translation and cultural adaptation involves the participation of translators, both in English and Portuguese, of a review committee formed by expert judges on the topic addressed with mastery of both languages, and also participants who respond to the questionnaire[27]. This broad process seeks to ensure a reliable adaptation to the population, as well as the technical concepts involved[28].

Important questions regarding semantic, idiomatic, conceptual and experimental equivalences must be evaluated, and this was done by the committee of experts in the present study, in view of the need to reduce the inequalities present in the Portuguese language. This care provides comparative studies with different samples, using the same instrument[14]. It is worth noting that changes in terms for the development of the translation and cultural adaptation process were accepted considering the expertise of the specialists, both in the clinical context and in the context of the nuances of the Portuguese and English languages, providing results that combined validity, reliability, precision and understanding of the target population[14]. In the present study, it was also found that there was a consensus on terminology among the evaluators, even when there was no agreement on a term previously. Thus, it was possible to identify, in the Brazilian version of the HASK, which were the items of the instrument that presented great divergence in terms of experimental and semantic equivalence. For example, terms like "compartment," commonly called "stack drawer," called "telecoil" or "telephone coil," were modified in order to facilitate understanding by the participants since their literal translations did not make sense in

Table 3. Main discussions for the definition of Consensus Version 3

Terms	Suggestion	Consensus Version 3
ISAD	Hearing aid	Hearing aid
Press the button properly	Not applicable	Withdrawn from test
Olive	No suggestion	Olive
Microfone	"Whistle"	Microfone
Silica	"Small stone"	Silica
Telephone coil	No suggestion	Telephone coil
Insertion	Placement	Placement
Insert	Place	Place
Drum	Battery	Drum
Sound bore	Sound output	Mold/capsule opening
Device body	No suggestion	Device body
Usage	No suggestion	Usage
Resolution	No suggestion	Resolution
Change The Programs	No suggestion	Program Change
Hook	No suggestion	Hook
Tube	No suggestion	Tube

Subtitle: ISAD = Individual sound amplification deviceand Beaton et al.[18].

the questionnaire. Therefore, they were replaced by contextualized terms that were appropriate to the educational level, understanding and knowledge of the participants.

Researchers claim that, for an adequate translation, experimental equivalence is important so that the terms used in the instrument are coherent with the reality experienced by the target population within their cultural context. If this term is outside the context or experience of that population, it must be modified[15]. During the HASK cultural adaptation procedure, it was possible to make changes that respected the particularities of the instrument's target population with the aim of making it well understood. For example, in the field of audiology, researchers use the term hearing aid for scientific purposes, however, even if it is the correct way to refer to these devices, this term is not part of the routine of patient care. Therefore, the term "hearing aid" was established so that the target population had greater understanding.

In the patient panel stage, users showed difficulty in understanding words that reached equivalence by the expert committee. This fact is linked to the educational level of users who attend the health service where the present study was carried out. Within this context, the research team considered all terms for which users demonstrated difficulty in understanding, however, it is still recommended that professionals be attentive to assist users during the application of such instruments.

In the pre-test stage, the fact that some participants had doubts in just one or two terms regarding the understanding of the instrument indicates that the methodological rigor of the present study enabled the process of translation and adequate cultural adaptation. The adoption of clear, simple and easily accessible language ensured a quick assessment. In this sense, due to the level of education of these users, the professional's discernment is highlighted, which is necessary at the time of application of the test, since if the participant does not understand the meaning of any word, it is extremely important to contextualize it.

The Brazilian version of the HASK will be sent for validation study, that is, it is in the process of evaluating the psychometric properties by the same research team. After the completion of this process, the instrument will be available for use in Brazil.

CONCLUSION

The HASK was translated and adapted to the Portuguese language spoken in Brazil, and the semantic, idiomatic, experimental and conceptual equivalences were obtained to later obtain validation of the instrument.

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Appendix 1. Final Portuguese Version

Topic	Assessed Skills	Knowledge Score	Skills Score
1. Hearing aid removal	i. Remove from ear		
2. Battery compartment opening	i. Know how to turn off the hearing aid		
	ii. Open the battery compartment		
3. Correct battery selection	i. Know the proper battery size/color		
	ii. Know how to get new batteries		
4. Changing the hearing aid battery	i. Knows when to change the battery (hearing aid not working or audible battery alert)		
	ii. Knows battery life (2 days to 4 weeks)		
	iii. Remove the old battery		
	iv. Remove the battery seal		
	v. Let the battery ventilate for at least 1 minute		
	vi. Insert the battery into the hearing aid		
5. Cleaning of hearing aid	i. Olive or mold/capsule opening (with accessory or wash)		
	ii. Microphone (with brush)		
	iii. Device body (with fabric)		
	iv. Knows how to clean (daily and weekly)		
6a. Left *versus* Right	i.Know E *vs* D		
6b. Placement of hearing aid	i. Put on the right ear hearing aid		
	ii. Capsule or mold is correctly fitted in the right ear		
	iii. Put on the left ear hearing aid		
	iv. Capsule or mold is correctly fitted in the left ear		
7. Volume change	i. Increase or decrease the volume		
8. Telephone use	i. Switch to telephone/telephone coil program (if appropriate)		
	ii. Position the phone in the correct position with hearing aid		
9. Program usage	i. Change the programs (if appropriate)		
10. Microphone troubleshooting	i. Check that the olive/mold/capsule is properly adjusted (a)		
11. Problem solving	i. Check if the battery compartment is closed		
	ii. Change the battery		
	iii. Check microphone obstruction		
	iv. Check obstruction of the hook/tube/sound output		
	v. Change the wax filter (if appropriate)		
12. Storage of hearing aid	i. Open the compartment and remove the battery		
	ii. Put it in the case or silica		
	Score	**__of__**	**__of__**