

Translation and cross-cultural adaptation of the Parental Perception on Antibiotics Scale: Brazilian version

Tradução e adaptação transcultural da *Parental Perception on Antibiotics Scale*: versão brasileira
Traducción y adaptación transcultural de la *Parental Perception on Antibiotics Scale*: versión brasileña

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Abstract

Objective: To translate and cross-culturally adapt the Parental Perception on Antibiotics Scale (PAPA scale) for use in Brazil and assess the reliability of the Portuguese version.

Methods: This is a methodological study for PAPA scale translation and cross-cultural adaptation, developed in six stages, which include initial translation, synthesis of translations, back-translation, review by a committee of seven experts, application of a pre-test of the final version with 73 parents/guardians and submission for approval by the author of the original instrument, as recommended by Beaton. In addition to reliability, we used Cronbach's alpha, considering adequate > 0.7 .

Results: The translated and adapted version of PAPA scale was modified according to experts' suggestions for a better understanding of the target population. The pre-test showed that it is an instrument that is easy to apply and understand. The 36-item scale internal consistency (Cronbach's alpha) was 0.86.

Conclusion: PAPA scale translation and cross-cultural adaptation resulted in the first instrument to assess parents' and/or guardians' perception regarding using antibiotics at home by their children in the Brazilian context.

Resumo

Objetivo: Traduzir e adaptar transculturalmente, para uso no Brasil, a *Parental Perception on Antibiotics Scale* (PAPA *Scale*) e avaliar a confiabilidade da versão em português.

Métodos: Estudo metodológico para tradução e adaptação transcultural da PAPA *Scale*, desenvolvido em seis etapas, que abrangem tradução inicial, síntese da tradução, tradução de volta a língua original (*back-translation*), revisão por um comitê de sete especialistas, aplicação de um pré-teste da versão final com 73 pais/responsáveis e envio para aprovação da autora do instrumento original, conforme recomendações de Beaton. Além da confiabilidade, por meio do Alfa de Cronbach, considerando adequado $> 0,7$.

Resultados: A versão traduzida e adaptada da PAPA *Scale* foi modificada conforme as sugestões dos especialistas para melhor compreensão da população alvo. A realização do pré-teste demonstrou que se trata de um instrumento de fácil aplicação e compreensão. A consistência interna (Alfa de Cronbach) da escala com 36 itens foi de 0,86.

Conclusão: O processo de tradução e adaptação transcultural da PAPA *Scale* resultou no primeiro instrumento para avaliação da percepção dos pais e/ou responsáveis em relação ao uso de antibióticos em domicílio, por suas crianças, no contexto brasileiro.

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Conflicts of interest: nothing to declare.

Resumen

Objetivo: Traducir y adaptar transculturalmente, para su uso en Brasil, la *Parental Perception on Antibiotics Scale* (PAPA Scale) y evaluar la fiabilidad de la versión en portugués.

Métodos: Estudio metodológico para traducción y adaptación transcultural de la PAPA Scale, llevado a cabo en seis etapas, que incluyeron traducción inicial, síntesis de la traducción, traducción de vuelta al idioma original (*back-translation*), revisión por parte de un comité de siete especialistas, aplicación de una prueba piloto de la versión final con 73 padres/responsables y envío para aprobación por parte de la autora del instrumento original, según las recomendaciones de Beaton. Además de la fiabilidad, mediante el Alfa de Cronbach, considerando adecuado $> 0,7$.

Resultados: La versión traducida y adaptada de la PAPA Scale fue modificada de acuerdo con las sugerencias de los especialistas para una mejor comprensión del público destinatario. La realización de la prueba piloto demostró que se trata de un instrumento de fácil aplicación y comprensión. La consistencia interna (Alfa de Cronbach) de la escala con 36 ítems fue de 0,86.

Conclusión: El proceso de traducción y adaptación transcultural de la PAPA Scale dio como resultado el primer instrumento para evaluar la percepción de los padres o responsables con relación al uso de antibióticos de sus niños en el domicilio, en el contexto brasileño.

Introduction

The discovery of antibiotics allowed the fight against bacterial infections. However, its indiscriminate use has caused harm to human health. Often these drugs are used improperly in viral infection treatment.⁽¹⁾ Incorrect antibiotic administration for non-bacterial disease treatment can lead to ineffective treatment, in addition to exposing patients to the risk of suffering side effects with serious consequences.⁽²⁾

Bacterial resistance to antibiotics has become a public health concern worldwide. Among the consequences, there is the increase in the costs of public health systems, due to failed therapies due to resistant microorganisms.^(3,4) It is noteworthy that drugs are responsible for a considerable portion of health spending in several countries.⁽⁵⁾

Some factors are responsible for the indiscriminate use of these drugs, such as the population's ignorance about their correct use. Moreover, it is important to highlight that medical prescription should be adequate, taking into account rational clinical criteria and the profile of each patient.⁽⁶⁾

It is estimated that, worldwide, about 20% of pediatric outpatient consultations and 37 to 78% of consultations in hospital settings result in the prescription of an antibiotic. These figures show that in addition to this class of drugs being the most prescribed in the hospital environment, its use also predisposes to inadequate prescribing practices, in cases where the drug is sometimes prescribed for non-bacterial disease treatment.⁽⁷⁾

In the United States, one in five pediatric outpatient consultations resulted in antibiotic prescrip-

tions, totaling approximately 50 million prescriptions in one year.⁽⁸⁾

Frequent use of drugs can result in medication errors.⁽⁹⁾ The factors that influence the inappropriate use of antibiotics can be associated with health professionals, patients, parents and/or guardians and even society, and may be related both to the unnecessary use of drug and its incorrect form of administration when these are necessary.⁽¹⁰⁾

Thus, the Parental Perception on Antibiotics Scale (PAPA Scale) was developed in English and later translated and adapted into Arabic, to assess parents' perception of abusive use of antibiotics in children in Saudi Arabia, and was also used to identify the psychosocial factors that influence parents to make this misuse.⁽¹¹⁾

Given the importance of using instruments that help in the safe use of antibiotics at home and the absence of a scale in Brazil capable of assessing parents' and/or guardians' perception about factors that influence antibiotic administration to their children, PAPA Scale translation and cross-cultural adaptation into Brazilian Portuguese was carried out.

Therefore, it is believed that the application of this instrument by health professionals, during hospital discharge and/or care at the Basic Health Unit (BHU), it will enable optimizing health care and will favor the detection of misuse of antibiotics in children at home, in addition to contributing to the formation of parents' knowledge, through qualified educational strategies, to mitigate adverse drug events and bacterial resistance.

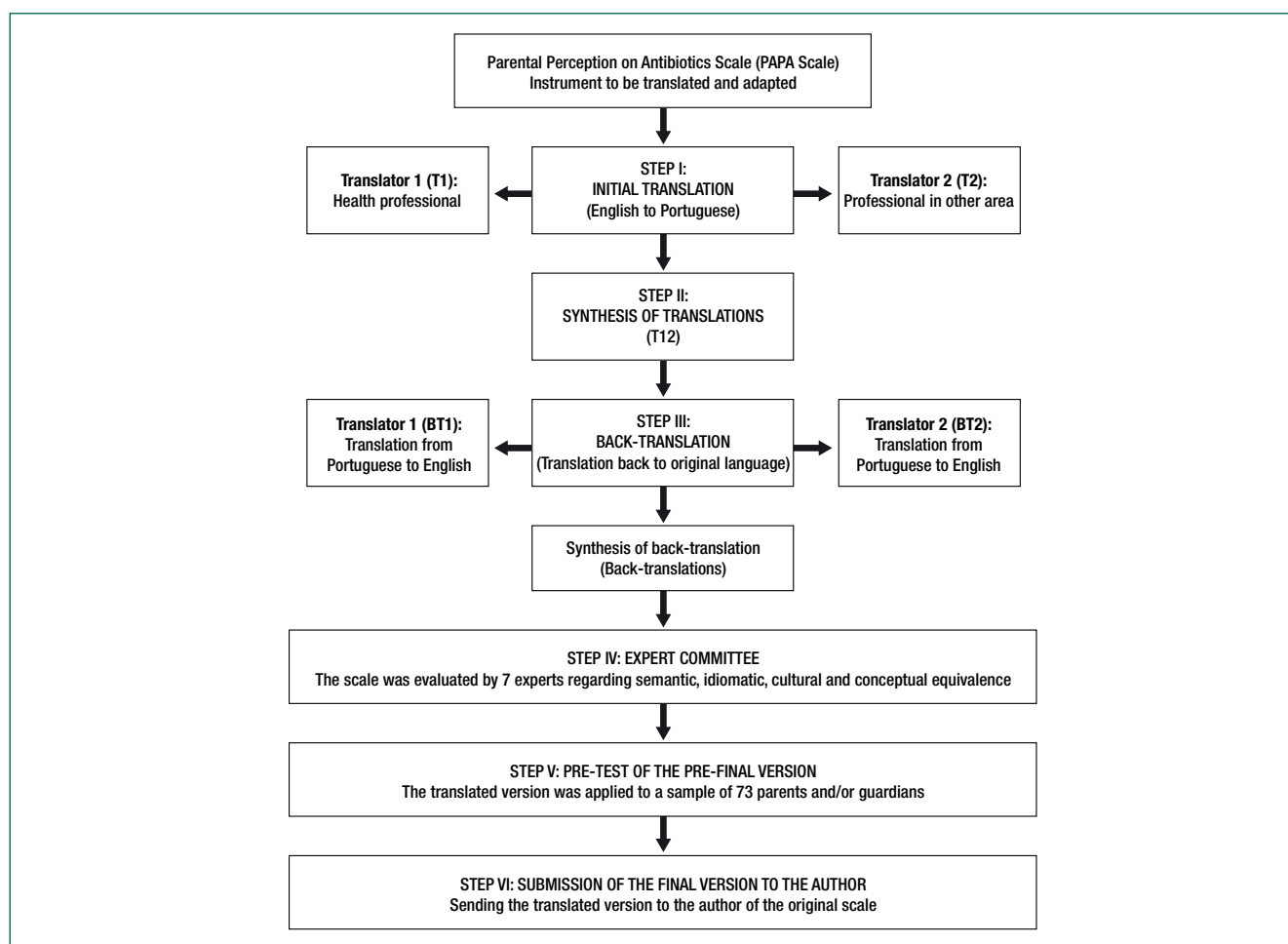
This study aimed to translate and cross-culturally adapt the PAPA Scale into Brazilian Portuguese and to assess the reliability of the Portuguese version.

Methods

This is a methodological study of PAPA scale translation and cross-cultural adaptation from English to Brazilian Portuguese, developed in six stages: initial translation, synthesis of translations, back-translation, review by an expert committee, application of a pre-test of the final version and submission for approval by the author of the original instrument,^(12,13) according to Figure 1.

In the initial translation, carried out by two Brazilian translators fluent in English, the original scale was translated into Portuguese, resulting in two versions, T1 and T2. The first translator, a nurse, was informed of the research purpose, while

the second translator, an electrical engineer, has no experience in the health area and was not informed of the study purpose. During synthesis of translations, a PhD researcher in nursing, expert in children's health, revised versions T1 and T2, considering the original version of the instrument, resulting in a T12 translation. In back-translation, the translation back to the original language occurred, whose purpose is to maintain the reliability of the original instrument after translation. The T12 version was back-translated into English, the instrument's original language, by two bilingual translators, with English as their mother tongue. A back-translator was born in Ghana, residing in Brazil, graduated in philosophy and theology, and



Source: Adapted from Beaton DE, Bombardier C, Guillemin F, Ferraz MB. Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine (Phila Pa 1976)*. 2000;25(24):3186-91. Review; Beaton D, Bombardier C, Guillemin F, Ferraz MB. Recommendations for the crosscultural adaptation of the DASH & QuickDASH outcome measures. *Institute for Work & Health*; 2007 [cited 2020 May 28]. Available from: https://dash.iwh.on.ca/sites/dash/files/downloads/cross_cultural_adaptation_2007.pdf.^(12,13)

Figure 1. Graphical representation of the steps in the process of translating and adapting the PAPA Scale into Brazilian Portuguese

studying for a master's degree in psychology. The other is from New Jersey, United States of America, has lived in Portugal for 10 years and has completed a degree in marketing at the *Universidade do Algarve* in Faro. They were not aware of the study purpose. The independent back-translated versions were called BT1 and BT2. In the review by a committee of seven experts, all instruments produced (the two T1 and T2 translations, the T12 translation and the two back-translation versions (BT1 and BT2), in addition to the original version) were assessed for semantic equivalence, idiomatic, cultural and conceptual. The committee was composed of two translators (translation), two back-translators (back-translation), a methodologist, a linguist and a nurse expert in child health. Each expert assessed the instruments in the following aspects: grammatical and vocabulary assessment (semantic equivalence); elaboration of expressions (idiomatic equivalence); use of terms consistent with the study population's cultural reality (cultural equivalence); and analysis of translated concepts, verifying whether they are known and explored by the Brazilian population (conceptual equivalence) of each translated item.⁽¹⁴⁾ Experts returned their assessments within 15 days. The suggestions were accepted, resulting in the pre-final version of the PAPA scale called PAPA-Br.

The PAPA-Br pre-test was applied to a population composed of 73 parents and/or guardians of children residing in Fortaleza, Ceará. For sample selection, the non-probabilistic method of convenience sampling was used. Parents and/or direct guardians of children under the age of 12 who have already used antibiotics at some point in their lives, with a smartphone with internet access, were included. Data collection took place in a single moment and took place through WhatsApp, with a link to the form created in Google Forms being sent, consisting of an Informed Consent Form to authorize their participation in the study; sociodemographic questionnaire to characterize parents and/or guardians; the pre-final version duly translated and adapted into Portuguese; and a questionnaire with questions related to doubts and suggestions for improving the scale. For internal consistency analysis, Cronbach's alpha was calculated, through the

answers obtained in the pre-test,^(15,16) whose value closer to 1.00 has stronger evidence of reliability, with values above 0.80 being satisfactory (POLIT; BECK, 2019). Thus, the final version was obtained. The final version was sent to the author of the original scale by e-mail, with the aim of authorizing the translated version to be approved.^(12,13)

The study was approved by the Research Ethics Committee, under Opinion 3.921.153 and CAAE (*Certificado de Apresentação para Apreciação Ética* - Certificate of Presentation for Ethical Consideration) 27690619.8.0000.5054.

Results

The scale in its original version is titled Parental Perception on Antibiotics Scale (PAPA Scale), being translated for this study as "*Escala da Percepção Parental sobre Antibióticos*", having a total of 36 items arranged in six factors, namely: Factor 1: Knowledge and beliefs; Factor 2: Behaviors; Factor 3: Sources of information; Factor 4: Compliance; Factor 5: Awareness about antibiotic resistance; and Factor 6: Parents' perception of physicians' prescribing behavior. The answers of this instrument are based on a Likert-type scale, in which it is possible to grade the agreement or not for each disposed item, whose terms used in this scale were: 1- totally disagree, 2- disagree, 3- neither agree nor disagree, 4- agree and 5- totally agree. Thus, content translation was validated with an expert committee, who requested the modification of some scale items in order to make the language more understandable for the target audience and consistent with the Brazilian context, as shown by Chart 1.

Some committee experts suggested changes to item A3 related to scale response and items 1, 2, 4, 29, 32 and factor 6 (F6), as shown in Chart 1. However, they were not accepted, as after analysis careful attention to the original version, initial translations and back-translation, it was decided not to change an item. When assessing the scale item responses, experts requested the replacement of expressions A2 and A4 "*discordo muito*" and "*concordo muito*", respectively, justifying that although the translation is equivalent

Chart 1. Suggestions by members of the expert committee for changes in the PAPA-Br, translated

1 st version	Committee suggestions	Actions	Pre-final version
TT - Escala da Percepção Parental sobre Antibióticos	-----	Maintained	Escala da Percepção Parental sobre Antibióticos
A.C - Subtitle	(E6): replace by "legenda"	Modified	Legenda
A1 - Discordo totalmente	-----	Maintained	Discordo totalmente
A2 - Discordo muito	(E2) and (E4): <i>Discordo</i>	Modified	Discordo
A3 - Nem concordo e nem discordo	(E2): <i>Concordo</i>	Maintained	Nem concordo e nem discordo
A4 - Concordo muito	(E2) and (E4): <i>Concordo</i>	Modified	Concordo
A5 - Concordo totalmente	-----	Maintained	Concordo totalmente
F1 - Conhecimentos e Crenças	-----	Maintained	Conhecimentos e Crenças
1 - Antibióticos são necessários para o resfriado comum	(E2): remove the word "comum"	Maintained	Antibióticos são necessários para o resfriado comum
2 - Antibióticos são necessários para inflamações da garganta	(E7): replace "são necessários" by "podem ser utilizados"	Maintained	Antibióticos são necessários para inflamações da garganta
3 - Antibióticos tratam infecções virais	-----	Maintained	Antibióticos tratam infecções virais
4 - Antibióticos podem curar TODOS os tipos de infecções (virais, bacterianas e fúngicas)	(E2): cite examples for each viral, bacterial, and fungal infection	Maintained	Antibióticos podem curar TODOS os tipos de infecções (virais, bacterianas e fúngicas)
5 - Quando procuro um médico devido ao resfriado comum do meu filho, eu espero uma prescrição de medicamentos, incluindo antibióticos	(E2): remove the term "comum" and replace "prescrição" by "receita" and "filho" by "criança" (E4): replace "Quando procuro um médico" by "Quando busco atendimento médico"	Modified	Quando busco atendimento médico para minha criança com resfriado comum, eu espero uma receita de medicamentos, incluindo antibióticos
6 - Antibióticos são úteis no tratamento de resfriados comuns em crianças	-----	Maintained	Antibióticos são úteis no tratamento de resfriados comuns em crianças
7 - Crianças com resfriados comuns melhoram mais rapidamente quando tomam antibióticos	(E2): remove "comuns" and replace "mais rapidamente" by "mais rápido".	Modified	Crianças com resfriados comuns melhoram mais rápido quando tomam antibióticos
8 - No passado, antibióticos curaram os sintomas de resfriado do meu filho	(E2): replace the term "filho" by "criança".	Modified	No passado, antibióticos curaram os sintomas de resfriado da minha criança
9 - Meu filho ficará doente por mais tempo se ele não tomar antibióticos para tosse, resfriado ou sintomas da gripe	(E2): replace "meu filho" by "minha criança".	Modified	Minha criança ficará doente por mais tempo se ela não tomar antibióticos para tosse, resfriado ou sintomas da gripe
10 - Se meu filho estiver resfriado ou tossindo é melhor tomar um antibiótico para se curar	(E1): add the pronoun "ele" before the word "tomar". (E2): replace the term "meu filho" by "minha criança".	Modified	Se minha criança estiver resfriada ou tossindo é melhor ela tomar um antibiótico para se curar
F2 - Comportamentos	-----	Maintained	Comportamentos
11 - Antibióticos deveriam ser vendidos sem prescrição médica	(E2) and (E4): replace the term "prescrição" by "receita".	Modified	Antibióticos deveriam ser vendidos sem receita médica
12 - No passado, eu parei de dar antibióticos ao meu filho por causa de conselhos dos meus amigos e/ou familiares	(E2): rearrange writing of item "No passado, eu parei de dar antibióticos à minha criança porque meus amigos e/ou familiares me aconselharam".	Modified	No passado, eu parei de dar antibióticos à minha criança porque meus amigos e/ou familiares me aconselharam
13 - Eu compro antibióticos para meu filho na farmácia sem prescrição médica	(E2): replace the term "meu filho" by "minha criança". (E2) and (E4): replace the word "prescrição" by "receita"	Modified	Eu compro antibióticos para minha criança na farmácia sem receita médica
14 - Geralmente, eu guardo antibióticos em casa para usá-los quando forem necessários	-----	Maintained	Geralmente, eu guardo antibióticos em casa para usá-los quando forem necessários
15 - No passado, eu dei ao meu filho um antibiótico sem prescrição médica quando ele estava com febre alta por alguns dias	(E2): replace the term "meu filho" by "minha criança". (E2) and (E4): modify the word "prescrição" by "receita"	Modified	No passado, eu dei à minha criança um antibiótico sem receita médica quando ela estava com febre alta por alguns dias
16 - No passado, eu mudei de médico quando ele não prescreveu antibióticos para o meu filho	-----	Maintained	No passado, eu mudei de médico quando ele não prescreveu antibióticos para minha criança
F3 - Fontes de informação	-----	Maintained	Fontes de informação
17 - Eu obtenho minhas informações relacionadas à saúde com o farmacêutico	(E2): replace the verb "obtenho" by "recebo".	Modified	Eu recebo minhas informações relacionadas à saúde com o farmacêutico(a)
18 - Eu obtenho minhas informações relacionadas à saúde com enfermeiros (as) e/ou outros profissionais da saúde	(E2): replace the verb "obtenho" by "recebo".	Modified	Eu recebo minhas informações relacionadas à saúde com enfermeiros(as) e/ou outros profissionais da saúde
19 - Eu obtenho minhas informações relacionadas à saúde a partir de livros e/ou literatura científica	(E2): replace the verb "obtenho" by "recebo"	Modified	Eu recebo minhas informações relacionadas à saúde a partir de livros e/ou literatura científica
20 - Eu obtenho minhas informações relacionadas à saúde com família e/ou amigos	(E2): replace the verb "obtenho" by "recebo" and "família" by "familiares".	Modified	Eu recebo minhas informações relacionadas à saúde com familiares e/ou amigos
21 - Eu obtenho minhas informações relacionadas à saúde na internet	(E2): replace the verb "obtenho" by "recebo".	Modified	Eu recebo minhas informações relacionadas à saúde na internet
22 - Eu obtenho minhas informações relacionadas à saúde na mídia: TV, rádio e jornais	(E2): replace the verb "obtenho" by "recebo".	Modified	Eu recebo minhas informações relacionadas à saúde na mídia: TV, rádio ou jornais
23 - Eu obtenho minhas informações relacionadas à saúde de minha própria experiência anterior	(E2): replace the verb "obtenho" by "recebo" and the word "de" by "da"	Modified	Eu recebo minhas informações relacionadas à saúde da minha própria experiência anterior
F4 - Adesão	-----	Maintained	Adesão
24 - Não é importante seguir estritamente doses e horários dos antibióticos	(E1), (E6) and (E7): replace the term "estritamente" by "rigorosamente".	Modified	Não é importante seguir rigorosamente doses e horários de antibióticos
25 - Não tomar uma ou duas doses de antibióticos não faz muita diferença	-----	Modified	Deixar de tomar uma ou duas doses de antibióticos não faz muita diferença

Continue...

Continuation.

1 st version	Committee suggestions	Actions	Pre-final version
26 - Se meu filho melhorar, eu posso diminuir a dose de antibióticos	(E1): replace the word "de" by "dos" (E2): replace the term "meu filho" by "minha criança"	Modified	Se minha criança melhorar, eu posso diminuir a dose dos antibióticos
27 - Se a condição de saúde do meu filho não é séria, eu administraria o antibiótico de acordo com o que acho adequado para a condição dele	(E2): replace the expression "condição de saúde" by "estado de saúde", the term "meu filho" by "minha criança", the expression "não é séria" by "não for séria" and the word "administraria" by "daria".	Modified	Se a condição de saúde da minha criança não for séria, eu dou o antibiótico de acordo com o que acho adequado para a condição dela
28 - No passado, eu parei de dar antibiótico ao meu filho porque ele se sentia melhor	(E2): replace the term "meu filho" by "minha criança".	Modified	No passado, eu parei de dar antibiótico à minha criança porque ela se sentia melhor
F5 - Consciência sobre resistência aos antibióticos	-----	Maintained	Consciência sobre resistência aos antibióticos
29 - Antibióticos tratam infecções bacterianas	(E1): Add the article "as" before "infecções".	Maintained	Antibióticos tratam infecções bacterianas
30 - Geralmente, os antibióticos são seguros	-----	Maintained	Geralmente, os antibióticos são seguros
31 - Antibióticos podem ser prejudiciais à saúde	-----	Maintained	Antibióticos podem ser prejudiciais à saúde
32 - Alguns microorganismos estão se tornando mais difíceis de tratar com antibióticos	(E2): replace "microorganismos" by "germes" or cite examples of microorganisms.	Maintained	Alguns microorganismos estão se tornando mais difíceis de tratar com antibióticos
33 - Alguns microorganismos podem se tornar resistentes a antibióticos se tomados em doses inadequadas	(E2): Add the word "forem" before "tomados" and replace the word "inadequadas" by "erradas".	Modified	Alguns microorganismos podem se tornar resistentes aos antibióticos se forem tomados em doses erradas
F6 - Percepção dos pais sobre o comportamento de prescrição dos médicos	(E1): Percepção dos pais sobre o comportamento dos médicos para a prescrição de medicamentos (E2): Percepção dos pais sobre os comportamentos das receitas dos médicos	Maintained	Percepção dos pais sobre o comportamento de prescrição dos médicos
34 - Eu acho que os médicos prescrevem muitos antibióticos	(E2): replace the word "prescrevem" by "receitam"	Modified	Eu acho que os médicos receitam muitos antibióticos
35 - Médicos não informam bem os pais sobre o estado de saúde de seus filhos	(E2): replace the term "de seus filhos" by "de suas crianças".	Modified	Médicos não informam bem os pais sobre a condição de saúde de suas crianças
36 - Médicos não são bem informados sobre o uso criterioso de antibióticos	(E1): replace the expression "de antibióticos" by "dos antibióticos".	Modified	Médicos não são bem informados sobre o uso criterioso dos antibióticos

TT: Title; A.C: Assessment criteria; A1: Answer 1; A2: Answer 2; A3: Answer 3; A4: Answer 4; A5: Answer 5; F1: Factor 1; F2: Factor 2; F3: Factor 3; F4: Factor 4; F5: Factor 5; F6: Factor 6; E1: Expert 1; E2: Expert 2; E3: Expert 3; E4: Expert 4; E6: Expert 6; E7: Expert 7; No suggestions (-----)

to the original version, using only the terms “*discordo*” and “*concordo*” is more understandable for the Brazilian population. Items 5,7,8,9,10,11,12,13 and 15 related to factors 1 and 2 also underwent modifications, highlighting the replacement of the word “*prescrição*” by “*receita*” and the term “*meu filho*” by “*minha criança*”, emphasizing that this substitution also happened in items 26,27,28,34 and 35 in which the terms were present. As for factor 3, experts suggested that the verb “*obtenho*” should be replaced by “*recebo*” or “*consigo*” in all factor items. The request was accepted and the term “*recebo*” was used in the final version. In item 24, belonging to factor 4, the term “*estritamente*” was replaced by “*rigorosamente*”, according to experts’ guidance. Item 25 was changed, even without judges’ suggestion, as the affirmative item is clearer for the respondent to fill in; thus, it was modified from “*Não tomar uma ou duas doses de antibióticos não faz muita diferença*” to “*Deixar de tomar uma ou duas doses de antibióticos não faz muita diferença*”. Experts asked to add the word “*forem*” before taken and replace the word “*inadequadas*” by “*erradas*” in item 33 and replace the expression “*de antibióticos*” by “*dos antibióticos*” in item 36. Based on modifications suggested by experts, the pre-final ver-

sion of PAPA-Br was created. The scale’s Cronbach’s alpha with its 36 items was 0.86, which demonstrated a high internal consistency, maintaining the scale as a reliable instrument in its final version. Upon obtaining the scale, translated and cross-culturally adapted, a pre-test was carried out with 73 parents and/or guardians of children who had already used antibiotics at home, which predominantly had the following characteristics: female; age group between 20 and 40 years; brown color; married; with complete higher education; own home; and with family income between 1 and 2 minimum wages. Children had a mean age of 5 years. When completing the pre-final version of PAPA-Br scale, 71 participants stated that they did not have difficulties in answering the instrument, consequently they did not make suggestions. Regarding the difficulties pointed out by parents, one stated that it would make it clearer to have the answer options with the alternatives yes, no, maybe or never, while the other expressed the need for a space to report the experiences lived in consultations. In view of these results, the final version of PAPA-Br scale translated and cross-culturally adapted into Brazilian Portuguese was obtained, which was sent to the author of the original scale.

Discussion

In addition to translating, it is necessary to adapt the instrument considering the population's cultural, idiomatic, linguistic and contextual contexts, to which it will be applied, following the steps of the selected protocol.⁽¹⁷⁾

The participation of a translator trained in the health area and mastery of the subject addressed by the scale is crucial to have a contextualized version for the Brazilian scenario.⁽¹⁸⁾ There are expressions normally used in Brazil, however, a sworn translator would not use them in their translation, as they tend to be as faithful as possible to the original term.⁽¹⁹⁾ In view of this, this study had a nurse translator, due to the importance that a translator from the health area has in the process of cross-cultural adaptation.

When there are discrepancies between the initial translations, with the different terms being considered synonyms, priority is given to familiar terms and expressions for the target population.⁽²⁰⁾ In the initial stage of this study, few differences were observed in the translated versions of T1 and T2, which did not change the original meaning of the scale. The existence of different terms, but with the same meaning or meaning, in most cases does not affect the final quality of the instrument that will be used in a new scenario.⁽²¹⁾

The reduction of possible failures in the initial stage and the closeness of the translation to the Brazilian context directly contributes to expert committee's analysis.⁽²²⁾ In order to make the translation coherent and as close as possible to the Brazilian reality, we chose to use terms that are easier for the population to understand.

The replacement of the term "*meu filho*" by "*minha criança*" is consistent with a study on the social networks of family members and companions during hospitalization of children, which demonstrated that other family members, such as grandparents and aunts, are responsible for child care.⁽²³⁾ Moreover, the transfer of child care to third parties, individuals who are not relatives, has become an increasingly common practice.⁽²⁴⁾

The modification of the word "*prescrição*" by "*receita*" was adopted because it is more used in

the Brazilian context, as observed in the study on the profile of prescription errors in antibiotic therapy, in which the authors refer to the word "*prescrição*".⁽²⁵⁾ Another research about pharmaceutical assistance in health care in Primary Care also found that the term prescription is more often used, both by the general population and by health professionals.⁽²⁶⁾

After making all the adjustments requested by the expert committee, the pre-final version of PAPA-Br scale was applied to the target population, and when analyzing participants' responses, it was noticed that most (97%) denied difficulties in filling in. In view of this, the instrument was presented as easy to apply and understand. A similar result was found in the cross-cultural adaptation study of WHODAS 2.0, a health and disability assessment instrument at the population or clinical level that shows functionality level of life domains (cognition, mobility, self-care, interpersonal relationships, life activities and participation), applying the pre-test with a sample of 14 participants, of which 11 said it was a very easy or easy instrument to answer, and only two of them considered it difficult.⁽²⁷⁾

The translation of PAPA to the Brazilian context can promote a safer and more rational use of antibiotics in children, in addition to directing guidelines given by health professionals regarding using antibiotics in this public, since parents/caregivers must deal with adverse effects, timing and indication of each drug, mode of administration and proper storage. Therefore, exercising good communication between nursing professionals and the people responsible for child care is essential to avoid errors during treatment, making care more effective.⁽²⁸⁾

Thus, the scale aimed at those who take care of children, in addition to bringing their perception of the subject, helps the professional to identify knowledge, behaviors, compliance and sources of information from parents and/or guardians, aiming to direct the guidelines during hospital discharge and/or care at the BHU to the points that need improvement or greater understanding.

It is also noteworthy that implementing measures that can improve the medication system, such as the PAPA scale, Brazilian version, is essential to

improve the safety and quality of care provided to pediatric patients.⁽²⁹⁾

Therefore, the Perception on Antibiotics Scale, Brazilian version, can be considered the first reliable Portuguese version of the original version, since using Cronbach's alpha it presented high reliability (0.866), keeping within the acceptable parameter. Results similar to the original version of the scale, which presented a general Cronbach's alpha = 0.87 and the individual subscales' Cronbach's alpha ranging from 0.77 to 0.79.⁽¹¹⁾

The limitation of this study was the failure to carry out the content validity process. Although the original version of the scale has already gone through the validity process, it is also necessary to submit the translated and adapted version for the Brazilian context to this process. The PAPA-Br scale content, criterion and construct validity process, in order to assess the robustness of its psychometric properties, is already being developed by the authors. Another limitation found is related to the COVID-19 pandemic, as the pre-test cannot be applied in person, as was the initial study purpose, and the link with the scale was sent for participants to self-answer, making it impossible to account for the time taken to fill the instrument in by each participant. As a way to minimize this limitation, the researcher's telephone number and e-mail were made available so that the participants could contact them in case of doubts.

Conclusion

From the study, the first specific instrument was obtained to assess parents' and/or guardians' perception regarding using antibiotics by their children, duly translated and adapted for the Brazilian context. It is an instrument that presents significant reliability and has great potential for use in clinical practice. The instrument's content validity study is already in progress, since, according to the expert committee's analysis, the translated and adapted version of the scale maintained semantic, idiomatic, cultural and conceptual equivalence.

Collaborations

Lima GA, Lima FET, Florencio SSG, Fontenele MGM, Ventura MWS, Barbosa LP, Silva LA, Lima CNA declare that they contributed to study design, data analysis and interpretation, article writing, relevant critical review of the intellectual content and approval of the final version to be published.

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