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Cross-cultural adaptation of the *Heart Disease Knowledge Questionnaire*: a methodological study

Adaptação transcultural do *Heart Disease Knowledge Questionnaire*: estudo metodológico

Adaptación transcultural del *Heart Disease Knowledge Questionnaire*: estudio metodológico

Fernanda Maria Alves Lima[1]
ORCID: 0000-0001-8409-1226

Milena Temer Jamas[1]
ORCID: 0000-0002-9548-7629

Silmara Meneguin[1]
ORCID: 0000-0003-3853-5134

Marla Andréia Garcia de Avila[1]
ORCID: 0000-0002-6652-4427

1 State University of São Paulo

Editor: Paula Vanessa Peclat Flores
ORCID: 0000-0002-9726-5229

Corresponding author:
Fernanda Maria Alves Lima
E-mail: fernandalimaenf@gmail.com

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ABSTRACT
Objective: to describe the process of cross-cultural adaptation to Brazilian Portuguese for the *Heart Disease Knowledge Questionnaire*. **Method:** a methodological cross-cultural adaptation study carried out between August and December 2019, in five stages: initial translation, synthesis of the translations, back-translation, evaluation by judges, and pre-test. The translated questionnaire was evaluated by a committee of nine judges regarding semantic, idiomatic, conceptual and cultural equivalences. The pre-test version was applied to 50 participants to verify understanding and clarity of the questionnaire. **Results:** the terms used in the different translations were reviewed, looking for those with similar meanings. Thirteen items presented an agreement percentage below 90% in the judges' assessment, with suggested changes being made. The participants in the pre-test version evaluated the questionnaire and suggested changes in eight items for better understanding. **Conclusion:** the Portuguese version of the *Heart Disease Knowledge Questionnaire* was culturally adapted for the population under study, without losing the objective of the original questionnaire.
DESCRIPTORS: Translation; Surveys and Questionnaires; Cardiovascular Diseases; Knowledge; Education in Health.

RESUMO
Objetivo: Descrever o processo de adaptação transcultural do *Heart Disease Knowledge Questionnaire* para o português do Brasil. **Método:** Estudo metodológico de adaptação transcultural realizado entre agosto e dezembro de 2019, em cinco etapas: tradução inicial, síntese das traduções, retrotradução, avaliação por juízes e pré-teste. O questionário traduzido foi avaliado por um comitê de nove juízes quanto às equivalências semântica, idiomática, conceitual e cultural. A versão pré-teste foi aplicada a 50 participantes para verificação da compreensão e clareza do questionário. **Resultados:** Termos utilizados nas diferentes traduções foram revisados, buscando-se aqueles com significados semelhantes. Treze itens apresentaram porcentagem de concordância abaixo de 90% na avaliação pelos juízes, sendo realizadas alterações sugeridas. Os participantes da versão pré-teste avaliaram o questionário e sugeriram alterações em oito itens para melhor compreensão. **Conclusão:** A versão em português do *Heart Disease Knowledge Questionnaire* foi culturalmente adaptada para a população estudada, sem perder o objetivo do questionário original.
DESCRITORES: Tradução; Inquéritos e Questionários; Doenças Cardiovasculares; Conhecimento; Educação em Saúde.

RESUMEN
Objetivo: Describir el proceso de adaptación transcultural del *Heart Disease Knowledge Questionnaire* al portugués brasileño. **Método:** Estudio metodológico de adaptación transcultural realizado entre agosto y diciembre de 2019, en cinco etapas: traducción inicial, síntesis de las traducciones, retrotraducción, evaluación por jueces y pretest. El cuestionario traducido fue evaluado por un comité de nueve jueces en cuanto a la equivalencia semántica, idiomática, conceptual y cultural. La versión pretest se aplicó a 50 participantes para verificar la comprensión y la claridad del cuestionario. **Resultados:** Los términos utilizados en diferentes traducciones fueron revisados, y se buscó aquellos con significados similares. Trece ítems presentaron un porcentaje de concordancia por debajo del 90% en la evaluación de los jueces, habiendose realizado los cambios sugeridos. Los participantes de la versión de pretest evaluaron el cuestionario y sugirieron cambios en ocho ítems para una mejor comprensión. **Conclusión:** La versión del *Heart Disease Knowledge Questionnaire* en português brasileño fue culturalmente adaptada a la población estudiada, sin perder el objetivo del cuestionario original.
DESCRIPTORES: Traducción; Encuestas y Cuestionários; Enfermedades Cardiovasculares; Conocimiento; Educación en Salud.

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INTRODUCTION

In Brazil, cardiovascular diseases (CVDs) have stood out due to their growth and socioeconomic impact in recent years. The costs of hospital admissions due to CVDs are the highest in the country, and a significant increase in these values is estimated due to population aging, with a consequent increase in the prevalence of cardiovascular risk factors[1-2].

Controlling risk factors for CVDs is fundamental when seeking to reduce their impact on the population, as well as the unfavorable outcomes. The approach to modifiable risk factors is related to the need for changes in behavior and lifestyle, such as smoking cessation, physical activity and healthy eating. These changes involve the patients' prior knowledge about risk factors, as well as their consequences for their health[3]. Such information is relevant for the health professionals, as it can guide educational activities in the search for better coping with the disease and inclusion of the patients as agents of their own care[4].

When evaluating knowledge, especially in the health area, not only the information provided in health education activities must be considered, but also the previous experiences of those involved in this process. The greater the patient's knowledge about their disease (its signs and symptoms, the implications for lifestyle habits, associated risk factors and the treatment proposed), the better the confrontation and understanding of the entire health-disease process will be[5].

The *Heart Disease Knowledge Questionnaire* (HDKQ) was originally developed in English to assess adults' knowledge about heart diseases. The authors sought to develop a questionnaire that was easy to apply and with solid psychometric measures. The HDKQ elaboration process was carried out in two phases, starting with 82 items and ending with 30 items. The 'True-False' format was chosen and the 'Don't know' option was included to increase the instrument's reliability and reduce the lack of answers[6]. The incorrect and 'Don't know' answers were coded as '0' and the correct answers, as '1'. Higher scores indicate greater knowledge about the CVDs. The final questionnaire presented a test-retest reliability of 0.59 and an internal consistency of 0.73[6].

The HDKQ was also used in some studies in English, with the intention of verifying knowledge about CVDs in certain populations and to indicate the main focus areas of health education actions[7-9]. However, no specific studies on the cross-cultural adaptation of the HDKQ to other languages were found.

The systematized process of cross-cultural adaptation of questionnaires has been widely used when the intention is to use certain instrument in a country or context different from the one in which it was developed. In addition to this adaptation, the process seeks the quality of the new version of the instrument and allows, in many cases, comparisons between different contexts[10].

In Brazil, some instruments have been developed and/or validated to assess different specific aspects of heart diseases. However, no instruments were found in the country to assess knowledge about CVDs in the general adult population.

The relevance of CVDs in the country and the need for increasingly earlier action in the control of the risk factors highlights the importance of knowledge in the general population. Access to quality information that is adequate to their needs allows individuals to develop self-awareness, which is necessary for the health education process. This scenario revealed the need for an instrument capable of assessing knowledge about CVDs in Brazil to assist health professionals in planning educational actions. Thus, the objective of this study was to describe the process of cross-cultural adaptation to Brazilian Portuguese for the *Heart Disease Knowledge Questionnaire*.

METHOD

This is a methodological study regarding the cross-cultural adaptation of the HDKQ to Brazilian Portuguese. Therefore, the stages proposed by Beaton, Bombardier, Guillemin and Ferraz[11] were used as framework, namely: 1) Initial translation; 2) Synthesis of the translations; 3) Back-translation; 4) Review and evaluation by judges; and 5) Pre-test. All the research stages were carried out between August and December 2019, in a tertiary-level university hospital from the inland of the state of São Paulo.

Initially, the main author of the instrument was asked for authorization to carry out the cross-cultural adaptation process. All versions originating from the cross-cultural adaptation process were sent and analyzed by the main author of the instrument.

The HDKQ has 30 items, divided into five domains: dietary knowledge (items 01, 06, 09, 12, 25 and 30), epidemiology knowledge (items 02, 13, 24 and 29), medical knowledge (items 05, 14, 16, 18, 19, 20 and 23), risk factors knowledge (items 03, 04, 07, 08, 10, 11, 22, 26 and 28) and symptoms knowledge (items 15, 17, 21 and 27)[6].

In stage 1, that corresponding to the initial translation, the questionnaire was translated by two independent translators, one bilingual and one native of an English-speaking country. One of them was not informed about the objectives of the HDKQ and the other, with experience in translating materials related to the health area, was duly informed about the objectives of the instrument. Therefore, two translations were obtained (T1 and T2), which were used in stage 2. In this stage, T1 and T2 were analyzed seeking the best terms, and a synthesis of the translations was produced (T1-2).

In stage 3, T1-2 was back-translated to the original language of the questionnaire by another two independent and bilingual translators, both without information about the objectives of the questionnaire, giving rise to two back-translations: BT1 and BT2. This stage allowed verifying the quality between the version produced in Portuguese and the original version of the questionnaire.

Stage 4 consisted of the evaluation of the versions obtained in the previous stages by a committee of judges. The committee was determined through a search in the Lattes Platform, using the following criteria: knowledge in the area of cardiology, command of the English language, and experience in the processes of cross-cultural adaptation and validation of instruments, verified by the productions related to the topic. The search resulted in 60 health professionals who were

invited by electronic means (e-mail). Assessments were requested regarding the semantic, idiomatic, conceptual and cultural equivalences of all versions of the questionnaire, and information was obtained for the sociodemographic characterization of each judge. Each item of the questionnaire in each of the versions was evaluated regarding the four equivalences and compared to the original instrument. This assessment resulted in the Pre-Test Version (PTV), used in stage 5.

Stage 5 (Pre-test) included adult participants, companions of patients treated in the general outpatient clinic of the institution and professionals in the administrative area. The PTV was applied to a sample of 50 participants, as recommended by the framework[11]. It was requested that the questionnaire was answered and evaluated regarding understanding and clarity. Thus, it was sought to ensure that the terms or phrases were properly understood by this population. In this stage, data was also collected for the participants' sociodemographic characterization.

All the data were compiled in Microsoft Excel® 2016. For the sociodemographic characterization data of the judges and of the participants, a descriptive simple frequency analysis was performed, as well as central tendency and dispersion analyses. In the evaluation by the judges, values of +1 (equivalent), 0 (undecided) and -1 (not equivalent) were assigned to each of the items. When the evaluation of the item was 0 or -1, the judge was asked to issue mandatory suggestions as for the amendments deemed pertinent. Minimum agreement of 0.90[12] was considered as acceptable. After all the considerations, the Brazilian Portuguese version of the HDKQ (HDKQ-BR) was obtained.

The study was approved by the institution's Research Ethics Committee (Opinion: 2,532,687; CAAE: 83485318.4.0000.5411). All the participants who agreed to take part in the study signed the Free and Informed Consent Form (FICF), either electronically (stage 4) or in person (stage 5).

RESULTS

Versions T1 and T2 obtained in stage 1 presented differences related to terms with similar meanings used in Brazil (for instance: *ataques do coração* and *ataque cardíaco*, *enfrentar sintomas* and *apresentar sintomas*, *reduz o risco* and *diminui o risco*). There were no differences in relation to the translations of the instrument domains. In stage 2, all the terms that presented differences between T1 and T2 were properly analyzed and, after consensus, the synthesis (T1-2) was elaborated using the terms considered most common in Brazil. In stage 3, the back-translations (BT1 and BT2) obtained from T1-2 revealed few differences between each other and with the original instrument.

In stage 4, after sending the versions to be evaluated via electronic means, a period of 30 days was stipulated for receiving the answers from the professionals who were invited. Answers were received from nine professionals, who made up the evaluating committee. This committee was made up of women, with a mean age of 39.2 years old and a mean training time of 16.5 years. Four professionals were PhDs (44.4%), two were post-PhDs (22.2%), two had some master's

degree and one had a *latu sensu* specialization. All the judges had authored at least one production related to the cross-cultural adaptation and validation of instruments.

The items with agreement percentages below 90% in at least one of the equivalences are described in Table 1.

Table 1 - Agreement percentage of the evaluating committee regarding the synthesis equivalences (n=9). Botucatu, São Paulo, Brazil, 2019.

Synthesis	Semantic	Idiomatic	Conceptual	Cultural
Questionário de conhecimento sobre doença cardíaca	88.9%	88.9%	88.9%	88.9%
Instruções: nas páginas seguintes você deverá responder Verdadeiro/Falso para algumas questões direcionadas às suas crenças e seu conhecimento sobre diversos aspectos da doença cardíaca.	100%	88.9%	100%	100%
Por favor, responda cada uma circulando "V" para Verdadeiro e "F" para Falso.	88.9%	88.9%	100%	100%
Exemplo: Pressão sanguínea alta aumenta o risco de desenvolver doença cardíaca	100%	88.9%	100%	100%
5. A maioria das pessoas pode dizer se tem ou não pressão alta	88.9%	100%	100%	88.9%
7. A causa mais importante de ataques do coração é o stress	88.9%	100%	88.9%	88.9%
8. Caminhada e jardinagem são consideradas tipos de exercício que podem diminuir o risco de doença cardíaca	88.9%	100%	100%	66.7%
12. Fibra alimentar abaixa o colesterol no sangue	77.8%	100%	100%	100%
13. A doença cardíaca é a principal causa de morte nos Estados Unidos	88.9%	100%	100%	66.7%
14. O exercício mais saudável para o coração envolve respiração acelerada por um período de tempo prolongado	88.9%	100%	100%	100%
15. Ficar pálido é um sintoma de estar tendo um ataque cardíaco.	88.9%	77.8%	88.9%	77.8%
17. A dificuldade súbita para enxergar em um dos olhos é um sintoma comum de estar tendo um ataque cardíaco	100%	77.8%	88.9%	88.9%
19. HDL refere-se a "bom" colesterol, e LDL se refere ao colesterol "ruim"	100%	88.9%	100%	100%
21. Sensações de fraqueza, tonturas ou desmaios são sintomas comuns de um ataque cardíaco	100%	100%	88.9%	88.9%

25. A margarina com óleo de cártamo líquido é mais saudável do que a margarina com óleo de soja hidrogenado	100%	100%	88.9%	77.8%
27. Homens e mulheres apresentam muitos dos mesmos sintomas de um ataque cardíaco	100%	77.8%	77.8%	77.8%
29. A doença cardíaca é melhor definida como doença de curto prazo do que doença crônica de longa duração	88.9%	88.9%	100%	88.9%

Key: HDL - High Density Lipoproteins; LDL - Low Density Lipoproteins.
Source: Elaborated by the author, 2019.

The evaluating committee made considerations in relation to the title, to part of the instructions, and to items 05, 07, 08, 12, 13, 14, 15, 17, 19, 21, 25, 27 and 29. The item with the lowest percentage of semantic agreement was item 12 (77.8%). As for idiomatic equivalence, the lowest agreement percentages were found in items 15, 17 and 27 (77.8%). The lowest agreement regarding conceptual equivalence was found in item 27 (77.8%). The lowest agreement in cultural equivalence was that of items 8 and 13 (66.7%). All the items were reviewed, with their changes described in Figure 1.

Figure 1 - Changes made in the *Heart Disease Knowledge Questionnaire* after the evaluation by the evaluating committee. Botucatu, São Paulo, Brazil, 2019.

Synthesis	**Evaluating committee version**
Questionário de conhecimento sobre doença cardíaca	**Heart Disease Knowledge Questionnaire** (*Questionário de conhecimento sobre doença cardíaca*)
*Instruções: nas páginas seguintes você deverá responder Verdadeiro/Falso para algumas questões **direcionadas às** suas crenças e seu conhecimento sobre **diversos** aspectos da doença cardíaca.*	*Instruções: nas páginas seguintes você deverá responder Verdadeiro/Falso para algumas questões **sobre as suas** crenças e seu conhecimento sobre **vários** aspectos da doença cardíaca.*
*Por favor, **responda cada uma circulando** "V" para Verdadeiro e "F" para Falso.*	*Por favor, **circule** "V" para Verdadeiro e "F" para Falso.*
*Exemplo: **Pressão sanguínea alta** aumenta o risco de desenvolver doença cardíaca*	*Exemplo: **Pressão alta** aumenta o risco de desenvolver doença cardíaca*
*5. A maioria das pessoas **pode dizer** se tem ou não pressão alta*	*5. A maioria das pessoas **pode afirmar** se tem ou não pressão alta*
*7. A causa mais importante de **ataques do coração** é o **stress***	*7. A causa mais importante de **infarto** é o **estresse***

*8. Caminhada e **jardinagem são consideradas** tipos de exercício que podem diminuir o risco de doença cardíaca*	*8. Caminhada é considerada um tipo de exercício que pode diminuir o risco de doença cardíaca*
*12. **Fibra alimentar reduz** o colesterol no sangue*	*12. **Alimentação rica em fibras diminui** o colesterol no sangue*
*13. A doença cardíaca é a principal causa de morte nos **Estados Unidos***	*13. A doença cardíaca é a principal causa de morte no **Brasil***
*14. O exercício mais saudável para o coração envolve **respiração acelerada** por um **período de tempo prolongado***	*14. O exercício mais saudável para o coração envolve **respiração rápida** por um **determinado período de tempo***
*15. Ficar pálido ou cinza é um sintoma de estar tendo um **ataque cardíaco***	*15. Ficar pálido ou cinza é um sintoma de um **infarto***
*17. A dificuldade súbita para enxergar em um dos olhos é um sintoma comum de estar tendo um **ataque cardíaco***	*17. A dificuldade súbita para enxergar de um olho é um sintoma comum de estar tendo um **infarto***
*19. HDL refere-se ao **"bom" colesterol**, e LDL se refere ao colesterol "ruim"*	*19. HDL refere-se ao **colesterol "bom"** e LDL se refere ao colesterol "ruim"*
*21. Sensações de fraqueza, tonturas ou desmaios são sintomas comuns de um **ataque cardíaco***	*21. Sensações de fraqueza, tonturas ou desmaios são sintomas comuns de um **infarto***
*25. A **margarina com óleo de cártamo líquido** é mais saudável do que a **margarina com óleo de soja hidrogenado***	*25. A **manteiga** é mais saudável do que a **margarina***
*27. Homens e mulheres **apresentam** muitos dos mesmos sintomas de um **ataque cardíaco***	*27. Homens e mulheres **vivenciam** muitos dos mesmos sintomas de um **infarto***
*29. A doença cardíaca é melhor definida como **doença de curto prazo** do que doença crônica de longa duração*	*29. A doença cardíaca é melhor definida como **doença aguda** do que doença crônica, de longa duração*

Source: Elaborated by the author, 2019.

After the amendments suggested by the judges, the PTV was applied to 50 participants who answered the questionnaire and assessed understanding and clarity of the items, indicating suggestions or doubts. As for the sociodemographic characteristics, 36 participants were female (72%), with a mean age of 42.5 years old and a mean of 12.3 years of study.

As for the evaluation of the questionnaire, the participants also made suggestions regarding items 02, 06, 10, 15, 17, 18, 24 and 29. As they were pertinent suggestions, it was decided to implement such adaptations. The participants reported the need for examples of the different types of fats and had difficulty in understanding some terms ("*propensos*", "*obstruídos*" and "*vivenciam*"). It was also

suggested that the terms "*doença aguda*" and "*doença crônica*" were detailed. After this evaluation, the translated and culturally adapted version of the HDKQ (HDKQ-BR) to Brazilian Portuguese was produced. The items that were changed are shown in Figure 2.

Figure 2 - Items that were changed after applying the *Heart Disease Knowledge Questionnaire* to the population in the Pre-Test. Botucatu, São Paulo, Brazil, 2019.

Pre-Test	Changes
1. Gorduras poli-insaturadas são mais saudáveis para o seu coração do que as gorduras saturadas	*1. Gorduras poli-insaturadas (ex: óleo de soja, óleo de milho) são mais saudáveis para o seu coração do que as gorduras saturadas (ex: carne vermelha, pele de frango)*
2. As mulheres são menos propensas a ter doenças cardíacas após a menopausa do que antes	*2. As mulheres têm menos chance de ter doenças cardíacas após a menopausa do que antes*
6. As gorduras trans são mais saudáveis para o coração do que a maioria dos outros tipos de gorduras	*6. As gorduras trans (ex: margarina, sorvete) são mais saudáveis para o coração do que a maioria dos outros tipos de gorduras*
10. Fumantes são mais propensos a morrer de câncer de pulmão do que de doença cardíaca	*10. Fumantes tem mais chance de morrer de câncer de pulmão do que de doença cardíaca*
15. Ficar pálido ou cinza é um sintoma de um infarto	*15. Ficar pálido é um sintoma de um infarto*
17. A dificuldade súbita para enxergar de um olho é um sintoma comum de estar tendo um infarto	*17. A dificuldade súbita para enxergar de um olho é um sintoma comum de um infarto*
18. A Ressuscitação cardiopulmonar (RCP) ajuda a limpar os vasos sanguíneos obstruídos	*18. A Ressuscitação cardiopulmonar (RCP) ajuda a limpar os vasos sanguíneos entupidos*
24. A maioria das mulheres é mais propensa a morrer de câncer de mama do que de doença cardíaca	*24. A maioria das mulheres tem mais chance de morrer de câncer de mama do que de doença cardíaca*
27. Homens e mulheres vivenciam muitos dos mesmos sintomas de um infarto	*27. Homens e mulheres apresentam muitos dos mesmos sintomas de um infarto*
29. A doença cardíaca é melhor definida como doença aguda do que doença crônica, de longa duração	*29. A doença cardíaca é melhor definida como doença aguda (de curta duração) do que doença crônica (de longa duração)*

Source: Elaborated by the author, 2019.

DISCUSSION

This study showed the cross-cultural adaptation process to Brazilian Portuguese for the *Heart Disease Knowledge Questionnaire*. The evaluation by the committee of judges and by the study population allowed for a careful cross-cultural adaptation of the questionnaire, maintaining its initial objective. Availing instruments properly adapted to a particular culture allows for reliability of the data collected. The intention is to obtain a questionnaire that preserves its validity and reliability after the entire adaptation process[13].

There is no consensus on the stages of the process of translation and cultural adaptation of instruments in Brazil. However, many studies indicate the importance of the entire process being carried out systematically to ensure a translated version that is clear and easily understood by the population[14-15]. To perform the cross-cultural adaptation of the HDKQ, the most used framework in Brazil was chosen[11]. The intention was to ensure a questionnaire that was adequate to the study population, with necessary adjustments being made during all stages of the process without altering the meaning of each sentence.

In the translation and back-translation stages, there was a need to review the term "margarine with liquid safflower oil" with the main author of the instrument. The translation of this term into Portuguese was established by the translators as "*margarina com óleo de cártamo*". However, as in Brazil the most common options are butter and margarine, it was decided to substitute rather than to translation the term, with no change in the sense of the phrase. This change was analyzed and accepted by the main author. In a study to evaluate the psychometric properties of the HDKQ in Malaysia, although not conducting the cross-cultural adaptation process in a systematic manner, it was necessary to change this item[16].

During stage 4, the judges suggested removing the term '*jardinagem*' from item 08, for this activity (gardening) is not usual in Brazil, and replacing the term '*ataque cardíaco*' for '*infarto*', also due to cultural readjustment. Similarly, item 13 was changed because it is a country-specific term. In this stage, the main challenge was to obtain answers from the judges. Although it is an easy-to-perform method, electronic submission predisposes the availability and commitment of the professional invited.

In the implementation of the Pre-Test Version (PTV), the participants suggested that examples were included in items 01 and 06, which deal with different types of fats. This question was also verified with the author, who consented to the inclusion of the examples proposed. The application of the PTV to the population was an extremely valuable stage for the questionnaire to be reconfigured. This stage allowed verifying how the participants interpreted each item and making changes that would improve this understanding.

Another aspect to be considered was in relation to the number of items in the questionnaire and the population profile. Although the format is 'True', 'False' and 'Don't know', some participants of the PTV stage indicated that the questionnaire with 30 items was very extensive, in addition to presenting slightly long phrases. In the construction of instruments, the use of long and negative phrases must be avoided[17]. However, as this is a cross-cultural adaptation, the translation from English to Portuguese resulted in some long phrases. The readjustments proposed by the participants themselves also influenced this aspect of the questionnaire. In relation to the population, it is emphasized that the mean of 12.3 years of study may have facilitated the understanding of terms in some of the items, which might not be the case in populations with lower schooling levels.

Both the evaluation by the judges and the

application of the PTV sought to ensure an adequate instrument for the population under study. After all the stages were completed, all versions obtained were sent to the author of the original instrument for due approval. To be used properly, it is necessary to assess the psychometric properties of the questionnaire, including evaluation of its reliability and validity[18]. The version obtained may be used for the evaluation of knowledge about CVDs in adult populations.

Identifying knowledge gaps is important to guide health education strategies and the planning of the care to be provided by the health team in search for better coping with the disease, better adherence to the treatment proposed, and establishment of educational strategies to control risk factors[19-20].

Some of the study limitations are related to the non-existence of other studies of cross-cultural adaptation of the HDKQ, which hinders comparison of results, as well as to the population to which the PTV was applied. Applying the PTV in populations with lower schooling levels can influence understanding of the questionnaire items.

CONCLUSION

The HDKQ was cross-culturally adapted to Brazilian Portuguese. This process sought to adapt the instrument to the population under study, and maintained the semantic, idiomatic, conceptual and cultural equivalences. The contributions made by the evaluating committee and by the participants allowed for due adaptation of the instrument, which can be used by professionals working in the multidisciplinary health team. The substitution of terms that are specific to the Brazilian context and the inclusion of examples of types of fats eased understanding by the population under study and did not alter the meaning of the item, without changing the objective of the original instrument. Availing an instrument to assess knowledge about cardiovascular diseases can contribute to more effective and individualized assistance, aimed at the control of risk factors and at disease prevention.

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AUTHORS' PARTICIPATION

Project design: Lima FMA, Avila MAG de.

Data collection: Lima FMA, Avila MAG de.

Data analysis and interpretation: Lima FMA, Jamas MT, Meneguin S, Avila MAG de.

Textual writing and/or critical review of the intellectual content: Lima FMA, Avila MAG de.

Final approval of the text to be published: Lima FMA, Jamas MT, Meneguin S, Avila MAG de.

Responsibility for the text in ensuring the accuracy and completeness of any part of the paper: Lima FMA, Avila MAG de.