

TRANSLATION AND CROSS-CULTURAL ADAPTATION OF UCLA LONELINESS SCALE – (VERSION 3) FOR THE ELDERLY IN BRAZIL

TRADUÇÃO E ADAPTAÇÃO TRANSCULTURAL DA UCLA LONELINESS SCALE – (VERSION 3) PARA IDOSOS NO BRASIL

TRADUCCIÓN Y ADAPTACIÓN TRANSCULTURAL DE LA ESCALA DE SOLEDAD – UCLA – (VERSIÓN 3) PARA ADULTOS MAYORES EN BRASIL

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ABSTRACT

Objective: to carry out the translation and cultural adaptation of a loneliness scale in a sample of elderly in Brazil. **Method:** This is a methodological study of translation and cultural adaptation of the UCLA Loneliness Scale (version 3) to the Portuguese of Brazil. The process of translation and cultural adaptation of the scale involved the following steps: initial translation, synthesis of translations, back translation, expert committee and pre-test. The data relating to pre-test were analyzed using SPSS, version 21.0. The analysis of reliability of the scale was calculated using Cronbach's alpha. The significance level adopted in this study was 5%. **Results:** the methodological framework used in this study has allowed to preserve the characteristics of the original instrument while also made it possible to obtain an instrument adapted to the Brazilian culture and, nevertheless, showing to be semantically, idiomatically, culturally and conceptually equivalent to the original version. **Conclusion:** the adapted version of *UCLA Loneliness Scale* (version 3) proved to be reliable, easy to use and to understand by the elderly

Keywords: Aged; Health of the Elderly; Loneliness; Translating; Scales.

RESUMO

Objetivo: realizar a tradução e adaptação cultural de uma escala de solidão em uma amostra de idosos no Brasil. **Método:** trata-se de estudo metodológico de tradução e adaptação cultural para a língua portuguesa do Brasil da *UCLA Loneliness Scale* (version 3). O processo de tradução e adaptação cultural da escala envolveu as seguintes etapas: tradução inicial, síntese das traduções, retrotradução, comitê de juizes e pré-teste. Os dados referentes ao pré-teste foram analisados utilizando-se o programa estatístico SPSS, versão 21.0. A análise da confiabilidade da escala foi calculada por meio do alfa de Cronbach. A significância adotada neste estudo foi de 5%. **Resultados:** o referencial metodológico utilizado nesta pesquisa permitiu preservar as características do instrumento original, ao mesmo tempo em que possibilitou a obtenção de um instrumento adaptado à realidade cultural brasileira, revelando-se semanticamente, idiomáticamente, culturalmente e conceitualmente equivalente à versão original. **Conclusão:** a versão adaptada da *UCLA Loneliness Scale* (version 3) mostrou-se confiável, de fácil aplicação e compreensão pelos idosos. **Palavras-chave:** Idoso; Saúde do Idoso; Solidão; Tradução; Escalas.

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RESUMEN

El objeto del presente estudio fue realizar la traducción y adaptación cultural de una escala de soledad en una muestra de adultos mayores en Brasil. Se trata de un estudio metodológico de traducción y adaptación cultural para el portugués de Brasil de la Escala de Soledad UCLA (versión 3), que incluye las siguientes etapas: traducción inicial, síntesis de las traducciones, traducción inversa, comité de jueces y preprueba. Los datos relativos a la preprueba fueron analizados con el programa SPSS, versión 21.0. El análisis de fiabilidad de la escala se calculó utilizando el alfa de Cronbach. La significancia adoptada en este estudio fue del 5%. El referente metodológico utilizado permitió preservar las características del instrumento original al mismo tiempo en que permitió obtener un instrumento adecuado a la realidad cultural brasileña, revelándose semánticamente, idiomáticamente, culturalmente y conceptualmente equivalente a la versión original. La versión adaptada de la Escala de Soledad UCLA (versión 3) demostró ser fiable, fácil de usar y de entender por parte de los adultos mayores.

Palabras clave: Anciano; Salud del Anciano; Soledad; Traducción; Escalas.

INTRODUCTION

Issues related to human aging increasingly raise the interest of society as a result of the process of population aging. This accelerated growth causes difficulties in the execution of adjustments and expansion of social systems for the elderly.¹

The elderly represent a significant population in Brazilian society, imposing the need for a number of new requirements in public health policies and the active insertion of the elderly in social life.²

Old age must be understood in its entirety, insofar as it is a universal biological phenomenon with varied psychological and social implications, having an existential dimension that transforms the person's relationship with time, causing changes in the person's relations with the world and with the person's own history.³

Among the experiences in old age, experiences of loss are common and can lead to feelings of loneliness. In turn, loneliness represents an emotional reaction of dissatisfaction generated by the absence or deficiency of meaningful relationships.⁴

When the elderly person associates aging to decline, helplessness, loneliness, this puts limitations to the establishment of new significant bonds, what, in turn, may increase the level of loneliness and lead to most significant physical losses.⁵

Loneliness is expressed by strong feelings of emptiness and abandonment, and the insufficient quantity or quality of a network of social relations of the individual is intensely linked to the origin of loneliness. Feelings of loneliness have serious consequences on the health of older people because they are related to depression, they predict the decline in mental and cognitive health, are detrimental to physical health and quality of life, and are associated with increased mortality and suicidal ideation.⁶

In the elderly, situations such as the worsening of disability and death are influenced not only by biomedical factors but also psychosocial distress, and loneliness can be a risk factor for adverse outcomes related to the health of these people.⁷

Loneliness can be a common risk factor for pain, depression and fatigue. People who feel socially disconnected are less

likely to tolerate physical pain than those who feel socially connected, what makes lonely people more sensitive to pain.⁸

Because loneliness may cause damage to the health of the elderly, it is necessary to develop strategies to lessen this condition. Knowledge and measurement of the level of loneliness experienced are necessary to develop strategies to attempt to minimize suffering in old age.

One manner of measuring loneliness is through the use of scales. Many scales have been developed to measure loneliness, as for example *The NYU Loneliness Scale*, the *Social and Emotional Loneliness Scale for Adults*, the *Loneliness Rating Scale* and the *Differential Loneliness Scale*. Among these measures is the *UCLA Loneliness Scale* which was developed in the United States of America by Russell.⁹ This scale is, at present, in its third version and is the measure of feelings of loneliness more widely used in various populations.¹⁰ Translation and validation have been carried out in several countries such as Portugal,¹⁰ Italy¹¹ and Turkey.¹² The choice of *UCLA Loneliness Scale* was motivated by its frequent use in international research, its confirmed psychometric quality observed in several studies, its ease of application and because it is an instrument that has been culturally adapted in different countries.¹⁰⁻¹²

Importantly, the cultural adaptation of a questionnaire, an instrument or a scale for their use in different realities from which they were built must occur systematically, because besides linguistic variations, differences in values, culture, among others, may also occur.¹³ In other words, the whole process seeks to obtain the equivalence between the source and the target language. Thus, this research had the objective to carry out the translation and cultural adaptation of *UCLA Loneliness Scale* (version 3) in a sample of elderly in Brazil.

METHOD

This is a methodological study of translation and cultural adaptation of the instrument for evaluation of loneliness called *UCLA Loneliness Scale* (version 3) to *Brazilian Portuguese* in a sample of elderly assisted by 17 Family Health Strategies in a county in Minas Gerais, Brazil.

The UCLA Loneliness Scale (version 3) is the third version of the scale and is designed to evaluate the subjective feelings of loneliness, consisting of 20 items (nine positively worded and 11 negatively formulated). The score ranges from 20 to 80 points. Score of 60 points or more than this is associated with elevated levels of loneliness and scores between 50 and 59 with moderately high level of loneliness.⁹

The process of cultural adaptation of *UCLA Loneliness Scale* (version 3) followed the framework adopted by Epstein, Santo and Guillemin¹⁴ and comprised the following steps:

STEP I: INITIAL TRANSLATION

According to recommendation of literature¹⁴, two translations (T1 and T2) by two independent, Brazilian, bilingual translators – a nurse with knowledge of the objectives of the study and a professor of English without prior knowledge of the objectives of the research – were carried out. Thus, the instrument that was originally written in English received two versions in Brazilian Portuguese.

STEP II: SYNTHESIS OF THE TRANSLATIONS

Based on the original version and the first two translations (T1 and T2), a synthesis version (T12) was created. This version was obtained from the consensus between the researcher and the two translators responsible for the initial translation of the instrument.

STEP III: BACK TRANSLATION

The synthesis version gave rise to two back-translations (BT1 and BT2) generated by independent translators and who did not know the original instrument. Both translators have English as their mother tongue and work in Brazil as English teachers. The analysis of the two versions was carried out by the researcher and discrepancies between the original and the two back-translations were not observed.

STEP IV: EXPERT COMMITTEE

The committee was composed of six health professionals, namely, two nurses, two psychologists, one doctor and one biologist with knowledge of the subject or the translation and adaptation process of instruments, all with English language skills.

At first, the committee members received all versions of the instrument in process of adaptation, that is, the original version, the first two translations (T1 and T2), the synthesis of the translations (T12), the two versions of back-translation (BT1

and BT2) and a form developed by the authors to evaluate the semantic, idiomatic, cultural and conceptual equivalence of the instrument. The committee should point in the form -1 when considered that the item was not equivalent with the original instrument; 0, when the person was indecisive regarding the response; and 1, when the person thought the item was equivalent to the original version.

After the individual evaluation of the versions, the judges sent their evaluations to the researcher, who compiled all information in a single print. The evaluation of each judge was compared to the others and the items that showed agreement less than 90%¹⁵ in any equivalence were re-evaluated by the committee members, until reaching agreement over 90% in all equivalences.

Following this examination, a face to face meeting was held between the members of the committee, and a document with the original version of the instrument and the percentages of agreement between the judges concerning equivalence in all items. The researcher read each item of the instrument and all were discussed by judges, until reaching consensus. Thus, together, the members of the committee defined the pre-final version that was used in the step V, the pre-test.

STEP V: PRE-TEST

The pre-final version of the instrument was applied in 34 elderly patients from 17 FHS in the county of Divinópolis, two elderly by FHS, following guidance of the authors on the process of translation and cultural adaptation, which recommend a number of 30 to 40 individuals in the pre-test.¹⁴

After applying the pre-final version, the elderly were asked about the understandability and ease of choice of items, to attest the understanding by those elderly concerning the content approached in the scale. As the elderly participants had difficulty in the understanding of one item of the pre-final version of the *UCLA Loneliness Scale* (version 3), this item returned to the committee and, after discussion and consensus by the members, the final version of the instrument was formulated.

ETHICAL ASPECTS OF THE RESEARCH

This project was approved by the Research Ethics Committee of UFMG under Opinion n° 648,357, following normalization of the Resolution n° 466/12 of the National Health Council on research involving human beings. The judges and elderly invited to participate in the study were informed about the objectives and importance of the study and those who agreed to participate signed the Informed Consent. All information about the elderly were treated secretly and confidentially, assuring anonymity.

DATA ANALYSIS

Data relating to the pre-test were analyzed using SPSS, version 21.0. Descriptive analyses were performed. Categorical variables were subjected to simple frequency analysis, while continuous variables were analyzed according to the measures of central tendency (mean) and dispersion (standard deviation).

The analysis of reliability of the *UCLA Loneliness Scale* (version 3) was calculated using Cronbach’s alpha, considering acceptable values above 0.80¹⁶ and 5% level of significance.

RESULTS

Among the 34 elderly participants in the pre-test, 19 (55.9%) are female. Most of them are married (18-52.9%), retired (17-50%), catholic (27-79.4%), white (19-55.9%) and average age of 70 years (SD = 7.71), mean duration of formal study of 3.56 years, ranging from zero to 10 years of study.

Initially, two versions were created at the first step of cultural adaptation of *UCLA Loneliness Scale* (version 3) (T1 and T2), and there were no major discrepancies between translations. Thus, together, the two translators, along with the researcher, analyzed each item of the instrument, checking the two translations, choosing the translation considered more relevant. There was no difficulty in this process, as many of the differences between the two translations were only on the use

of synonyms or some additional words to facilitate the understanding of the instrument by the elderly. As an example, the translator 1 made the following translation of the item 1 of the instrument: “how often do you feel ‘in tune’ with the people around you?” And the translator 2 translated as follows: “how often do you feel that you are ‘in tune’ with the people around you? In this case, there was only the addition of the words “that you are” in one translation, which was the translation chosen for the synthesis version.

The synthesis version (T12) was generated from the detailed analysis of each item of the instrument, observing always the meaning of each item with its correspondence with the original version.

With regard to the back-translations (BT1 and BT2) produced from synthesis version (T12) of the instrument, the two versions showed similarity with the original version of the instrument.

Regarding the expert committee, evaluations of semantic, idiomatic, cultural and conceptual equivalence in each item of the scale were made. Twenty items were evaluated in the instrument, as well as the headlines and the instructions for responding the scale. Items that obtained value lower than 90% of agreement between judges in any equivalence, returned to the committee and this, after consensus, established the pre-final version, as shown in Table 1:

Table 1 - Pre-final version of the *UCLA Loneliness Scale* (version 3) in Brazilian Portuguese after consensus among the expert committee, Belo Horizonte – 2015

Item in the Original Version	Version T12 (Portuguese) (Step II)	Pre-Final Version (Step V)
<i>UCLA Loneliness Scale</i> (version 3)	Escala de Solidão da UCLA (Versão 3)	Escala de Solidão da *UCLA (Versão 3) BR *Universidade da Califórnia, Los Angeles.
Instructions: The following statements describe how people sometimes feel. For each statement, please indicate how often you feel the way described by writing a number in the space provided. Here is an example:	Instruções: As frases a seguir descrevem como as pessoas se sentem às vezes. Para cada uma delas, por favor, indique com que frequência você se sente da maneira descrita, completando com um número o espaço disponível. Segue um exemplo:	As frases a seguir descrevem como as pessoas às vezes se sentem. Para cada frase, indique com que frequência você se sente da maneira descrita, completando com um número no espaço disponível. Segue um exemplo:
How often do you feel happy?	Com que frequência você se sente feliz?	Com que frequência você se sente feliz?
If you never felt happy, you would respond “never”; if you always feel happy, you would respond “always”.	Se você nunca se sentiu feliz responda “nunca”; se você sempre se sente feliz, responda “sempre”.	Se você nunca se sentiu feliz responda “nunca”; se você sempre se sente feliz, responda “sempre”.
Never (1) Rarely (2) Sometimes (3) Always (4)	Nunca (1) Às Vezes (3) Raramente (2) Sempre (4)	Nunca (1) Às Vezes (3) Raramente (2) Sempre (4)
*1. How often do you feel that you are “in tune” with the people around you?	*1. Com que frequência você sente que está “em sintonia” com as pessoas ao seu redor?	*1. Com que frequência você sente que está “em sintonia” com as pessoas ao seu redor?
2. How often do you feel that you lack companionship?	2. Com que frequência você sente que lhe falta companhia?	2. Com que frequência você sente que lhe falta companhia?
3. How often do you feel that there is no one you can turn to?	3. Com que frequência você sente que não há alguém com quem possa contar?	3. Com que frequência você sente que não existe alguém com quem possa contar?
4. How often do you feel alone?	4. Com que frequência você se sente só?	4. Com que frequência você se sente sozinho?
*5. How often do you feel part of a group of friends?	*5. Com que frequência você se sente como parte de um grupo de amigos?	*5. Com que frequência você se sente fazendo parte de um grupo de amigos?

Continue...

... continuation

Table 1 - Pre-final version of the *UCLA Loneliness Scale* (version 3) in Brazilian Portuguese after consensus among the expert committee, Belo Horizonte – 2015

Item na Versão Original		Versão T12 (Português) (Etapa II)		Versão Pré-Final (Etapa V)	
UCLA <i>Loneliness Scale</i> (version 3)		Escala de Solidão da UCLA (Versão 3)		Escala de Solidão da *UCLA (Versão 3) BR *Universidade da Califórnia, Los Angeles.	
Never (1) Sometimes (3)	Rarely (2) Always (4)	Nunca (1) Raramente (2)	Às Vezes (3) Sempre (4)	Nunca (1) Raramente (2)	Às Vezes (3) Sempre (4)
*6. How often do you feel that you have a lot in common with the people around you?		*6. Com que frequência você sente que tem muito em comum com as pessoas ao seu redor?		*6. Com que frequência você sente que tem muito em comum com as pessoas ao seu redor?	
7. How often do you feel that you are no longer close to anyone?		7. Com que frequência você sente que não está mais próximo de alguém?		7. Com que frequência você sente que ninguém está próximo de você?	
8. How often do you feel that your interests and ideas are not shared by those around you?		8. Com que frequência você sente que seus interesses e ideias não são compartilhados pelas pessoas ao seu redor?		8. Com que frequência você sente que seus interesses e ideias não são compartilhados pelas pessoas ao seu redor?	
*9. How often do you feel outgoing and friendly?		*9. Com que frequência você se sente sociável e amigável?		*9. Com que frequência você se sente sociável e amigável?	
*10. How often do you feel close to people?		*10. Com que frequência você se sente próximo das pessoas?		*10. Com que frequência você se sente próximo das pessoas?	
11. How often do you feel left out?		11. Com que frequência você se sente deixado de lado?		11. Com que frequência você se sente deixado de lado?	
12. How often do you feel that your relationships with others are not meaningful?		12. Com que frequência você sente que suas relações com os outros não são significativas?		12. Com que frequência você sente que suas relações com os outros não têm importância?	
13. How often do you feel that no one really knows you well?		13. Com que frequência você sente que ninguém conhece você de verdade?		13. Com que frequência você sente que ninguém conhece você de verdade?	
14. How often do you feel isolated from others?		14. Com que frequência você se sente isolado de outras pessoas?		14. Com que frequência você se sente isolado das outras pessoas?	
*15. How often do you feel you can find companionship when you want it?		*15. Com que frequência você sente que pode encontrar companheirismo quando você quiser?		*15. Com que frequência você sente que pode encontrar companhia quando você quer?	
*16. How often do you feel that there are people who really understand you?		*16. Com que frequência você sente que existem pessoas que realmente entendem você?		*16. Com que frequência você sente que existem pessoas que realmente compreendem você?	
17. How often do you feel shy?		17. Com que frequência você se sente tímido?		17. Com que frequência você se sente tímido?	
18. How often do you feel that people are around you but not with you?		18. Com que frequência você sente que as pessoas estão ao seu redor, mas não com você?		18. Com que frequência você sente que as pessoas estão ao seu redor, mas não estão com você?	
*19. How often do you feel that there are people you can talk to?		*19. Com que frequência você sente que existem pessoas com quem você possa conversar?		*19. Com que frequência você sente que existem pessoas com quem você possa conversar?	
*20. How often do you feel that there are people you can turn to?		*20. Com que frequência você sente que há pessoas a quem você possa recorrer?		*20. Com que frequência você sente que há pessoas com quem você possa contar?	
Scoring: Items that are asterisked should be reversed (i.e., 1 = 4, 2 = 3, 3 = 2, 4 = 1), and the scores for each item then summed together. Higher scores indicate greater degrees of loneliness.		Pontuação: Os itens que possuem o asterisco devem ter os valores das pontuações revertidos (ex., 1 = 4, 2 = 3, 3 = 2, 4 = 1), e os pontos de cada item devem ser somados depois. Pontuações maiores indicam alto grau de solidão.		Pontuação: Os itens que possuem o asterisco devem ter os valores das pontuações invertidos (ex., 1 = 4, 2 = 3, 3 = 2, 4 = 1), e os pontos de cada item devem ser somados depois. Quanto maior a pontuação, maior o grau de solidão.	
Note. Copyright 1994 by Daniel W. Russell. Reprinted with permission.		Nota. Direitos autorais por Daniel W. Russell 1994. Reimpresso com permissão.		Nota. Direitos autorais por Daniel W. Russell 1994. Reimpresso com permissão.	

In the last step (pre-test), the pre-final version of *UCLA Loneliness Scale* (version 3) was applied to 34 subjects. After applying the pre-final version of the scale, it was observed that five elderly (14.7%) did not understand the meaning of the word “shy” of item 17 of the instrument (how often do you feel shy?). Thus, after returning to the committee, by consensus, the item was modified to: “how often do you feel shy (inhibited, embarrassed)?”, and, at this moment, the final version of the scale was formulated.

The results obtained by the *UCLA Loneliness Scale* (version 3) indicated the overall average loneliness of 41.00 (SD = 8.787), varying between 25 and 61, and 29 (85.3%) had scores below 50 points, four (11.8%) between 50 and 59 points and one elderly (2.9%) had score higher 60.

The following is the final version of *UCLA Loneliness Scale* (version 3) in Portuguese translated and adapted for Brazil:

Table 2 - Final version in Brazilian Portuguese of *UCLA Loneliness Scale* (version 3) – Belo Horizonte, Brazil, 2015

**UCLA LONELINESS SCALE (VERSION 3) BR					
As frases a seguir descrevem como as pessoas às vezes se sentem. Para cada frase, indique com que frequência você se sente da maneira descrita. Segue um exemplo: Com que frequência você se sente feliz? Se você nunca se sentiu feliz responda “nunca”; se você sempre se sente feliz, responda “sempre”.					
		Nunca	Raramente	Às Vezes	Sempre
*1	Com que frequência você sente que está “em sintonia” com as pessoas ao seu redor?	1	2	3	4
2	Com que frequência você sente que lhe falta companhia?	1	2	3	4
3	Com que frequência você sente que não existe alguém com quem possa contar?	1	2	3	4
4	Com que frequência você se sente sozinho?	1	2	3	4
*5	Com que frequência você se sente fazendo parte de um grupo de amigos?	1	2	3	4
*6	Com que frequência você sente que tem muito em comum com as pessoas ao seu redor?	1	2	3	4
7	Com que frequência você sente que ninguém está próximo de você?	1	2	3	4
8	Com que frequência você sente que seus interesses e ideias não são compartilhados pelas pessoas ao seu redor?	1	2	3	4
*9	Com que frequência você se sente sociável e amigável?	1	2	3	4
*10	Com que frequência você se sente próximo das pessoas?	1	2	3	4
11	Com que frequência você se sente deixado de lado?	1	2	3	4
12	Com que frequência você sente que suas relações com os outros não têm importância?	1	2	3	4
13	Com que frequência você sente que ninguém te conhece de verdade?	1	2	3	4
14	Com que frequência você se sente isolado das outras pessoas?	1	2	3	4
*15	Com que frequência você sente que pode encontrar companhia quando você quer?	1	2	3	4
*16	Com que frequência você sente que existem pessoas que realmente compreendem você?	1	2	3	4
17	Com que frequência você se sente tímido? (inibido/envergonhado)	1	2	3	4
18	Com que frequência você sente que as pessoas estão ao seu redor, mas não estão com você?	1	2	3	4
*19	Com que frequência você sente que existem pessoas com quem você possa conversar?	1	2	3	4
*20	Com que frequência você sente que há pessoas com quem você possa contar?	1	2	3	4

Score:

Items that have an asterisk should have the values of the inverted scores (eg., 1 = 4, 2 = 3, 3 = 2, 4 = 1) and the points of each item must be added later. The higher the score, the greater the degree of loneliness.

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DISCUSSION

In recent decades, the number of self-report questionnaires used in various fields of science has increased exponentially. The construction of instruments is costly, primarily because of the need to develop the instrument itself and the choice of domains and items that will further explore the construct of interest, but also because of the need for validation of this instrument. When an instrument to assess the same phenomenon exists in another language, it is recommended that the cultural adaptation and validation be performed for the targeted reality.¹⁶

Moreover, the translation and cultural adaptation have a considerable advantage, since, when carrying out the adaptation of an instrument, the researcher is able to compare the data from different samples and different contexts. Thus, this allows more equity in the evaluation, because it is one measure

that evaluates the construct from the same theoretical and methodological perspective.¹⁷

That is, after completion of the adaptation process of an instrument, research in different populations may be conducted to compare characteristics of individuals inserted in different cultural contexts.¹⁸

There is no consensus on the best method to be used in the translation and cultural adaptation of instruments. Thus, there may be adjustments and variation according to the model adopted.^{14,19}

The methodology used in the present study was selected for being the most commonly used in Brazil when it comes to this theme, by its scientific and methodological rigor in maintaining the content and psychometric characteristics and because it discloses, clearly and concisely, all the steps to be followed.

The cultural adaptation of an instrument for use in a new country, culture and/or language requires a unique methodology

in order to achieve equivalence between the original and targeted languages. For the measures to be used in all cultures, the items need to be linguistically and culturally well translated in order to maintain the validity of the content of the instrument in different cultures.²⁰ Methodological studies seeking to perform the cultural adaptation of instruments need to preserve the semantic, idiomatic, cultural and conceptual equivalence between adapted and original versions. Thus, the process of translation and cultural adaptation of the *UCLA Loneliness Scale (version 3)* was carried out in a systematic manner according to the steps proposed by literature. It was observed that all these steps were relevant and important to make cultural adaptation to Brazilian Portuguese possible.

The *UCLA Loneliness Scale (version 3)* proved to be reliable, with reliability, as calculated through Cronbach's alpha, had the value $\alpha = 0.83$ in this study. This value was close to the reported by the author of the original instrument, $\alpha = 0.89$. Other studies have found similar values for Cronbach's alpha, which ranged from $\alpha = 0.83$ to $\alpha = 0.89$.²¹⁻²³

Cronbach's alpha values can range from zero to one and the acceptable values are above 0.70, with the excellent equal to or greater than 0.80.¹⁶

However, since the accuracy of Cronbach's alpha values is related to the number of subjects in the sample, the values in the pre-test, despite following the pre-established by the adopted reference, may be underestimated here, because in this phase of the study, a limited number of subjects in relation to that recommended for analysis of reliability was used.²⁴

Thus, the final adapted version of the *UCLA Loneliness Scale (version 3)* will be submitted to analysis of validity and reliability in a representative sample of the elderly, to assess the psychometric properties of the instrument.

The expert committee made suggestions, individually, and after this first analysis, the judges met and reached consensus. The meeting of the multidisciplinary expert committee allowed a rich discussion on the instrument itself, with different and complementary views, in order to consolidate the versions of the instrument and ensure that all content has equivalence between the adapted and the original instrument.

The 20 questions that were adapted for semantic, idiomatic, cultural and conceptual equivalence by the committee allowed a clear scale, easy to understand for the elderly and suitable for use in the pre-test step. During the interviews, it was observed that the adapted version of *UCLA Loneliness Scale (version 3)* proved to be easy to use and to understand by the elderly.

In the pre-test conducted with 34 elderly participants of the research, it was observed that 11.8% of the elderly exhibited moderately high level of loneliness and 2.9%, high level of loneliness. This result was also found by the author of the original instrument, who states that few individuals receive high scores in the measure of loneliness, especially the elderly, who report-

ed lower levels of loneliness when compared to other groups, such as, for example, college students.⁹ In a research conducted in China, 20.3% of the elderly showed moderately high level of loneliness and 0.7%, high level of loneliness.²⁵ The methodological framework used in the present study has allowed to preserve the characteristics of the original instrument while also made it possible to obtain an instrument adapted to the Brazilian culture and, nevertheless, showing to be semantically, idiomatically, culturally and conceptually equivalent to the original version.

Among the limitations of this study is the realization of translation and cultural adaptation of *UCLA Loneliness Scale (version 3)* restricted to the elderly population. In order that loneliness may be evaluated in other age groups, we suggest to carry out further studies in different populations, such as children, teenagers, students and adults.

One difficulty in this study was the lack of researches demonstrating the steps of the process of translation and cultural adaptation of *UCLA Loneliness Scale (version 3)* in other countries. Few authors compare the approaches relating to the process of cultural adaptation. They often cite that the process of translation and cultural adaptation of the scale was carried out, emphasizing and describing only the validation process, what does not allow the comparison between the adaptation of data of the present research with other studies.

CONCLUSIONS

This research, which conducted the translation and cultural adaptation of *UCLA Loneliness Scale (version 3)*, made it possible to obtain semantic, idiomatic, cultural and conceptual equivalence between the original and the adapted versions of the scale. The adapted version of *UCLA Loneliness Scale (version 3)* showed good reliability, indicating the power to properly assess loneliness in the elderly.

However, it is important to note that the process of validation of the *UCLA Loneliness Scale (version 3)* to Brazilian elderly is still in progress and that after this phase, the analysis of reliability will be performed again. Subsequently, the adapted version of *UCLA Loneliness Scale (version 3)* will be validated and evaluated for psychometric properties of the scale, with the possibility to compare results obtained in this study with other studies conducted around the world. Furthermore, this tool can be applied in researches to assess the loneliness of Brazilian elderly, allowing thus to learn the level of loneliness experienced by them.

It is expected that after these proceedings, an instrument adapted and validated for the Brazilian population may be available and may contribute to better evaluation of loneliness in the elderly as well as to interventions. It is expected that this also may stimulate the interest of health professionals and researchers in the theme.

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