

Translation, adaptation, and validation of the *Calidad de la relación con su persona cercana Scale**

Tradução, adaptação e validação da Escala *Calidad de la relación con su persona cercana*

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ABSTRACT

Objective: to translate, culturally adapt, and validate the *Calidad de la relación con su persona cercana Scale* into Brazilian Portuguese. **Methods:** a methodological study, whose steps were: initial translation; translation synthesis; back-translation; pre-final version development by a panel of nine experts; pre-final version content validity, with 14 judges; pre-test with 30 pregnant women; reliability analysis; sending the translated version to the two authors of the original instrument. **Results:** outliers were reviewed and adjusted during translation and adaptation. The scale achieved conceptual and idiomatic equivalence. Content validity index was 0.92 and Cronbach's Alpha was 0.869. The general score in the application ranged from 59 to 124, with an average of 94.4. **Conclusion:** after translation and adaptation, the scale was entitled *Qualidade da Relação com a Pessoa Próxima*, achieving semantic and idiomatic equivalence.

Descriptors: Validation Study; Prenatal Care; Family Relations; Interpersonal Relations; Primary Health Care.

RESUMO

Objetivo: traduzir, adaptar culturalmente e validar a Escala *Calidad de la relación con su persona cercana* para o português brasileiro. **Métodos:** estudo metodológico, cujas etapas foram: tradução inicial; síntese das traduções; retrotradução; elaboração da versão pré-final, por comitê de nove especialistas; validação do conteúdo da versão pré-final, com 14 juízes; pré-teste, com 30 gestantes; análise da confiabilidade; e envio da versão traduzida para as duas autoras do instrumento original. **Resultados:** os termos discrepantes foram revistos e ajustados durante o processo de tradução e adaptação. A escala alcançou equivalência conceitual e idiomática. O índice de validade de conteúdo foi de 0,92 e o Alfa de Cronbach 0,869. O escore geral na aplicação variou de 59 a 124, com média de 94,4. **Conclusão:** após tradução e adaptação, a escala foi denominada *Qualidade da Relação com a Pessoa Próxima*, alcançando equivalência semântica e idiomática.

Descritores: Estudo de Validação; Cuidado Pré-Natal; Relações Familiares; Relações Interpessoais; Atenção Primária à Saúde.

Introduction

Women need family, social and professional support to deal with the challenges of and during pregnancy. A systematic review found that health programs that promote additional social support during pregnancy can be useful in reducing the likelihood of cesarean delivery and prenatal hospitalization⁽¹⁾. Family tends to become the main support and support network during this period, and can be considered a risk or protection factor in the postpartum period⁽²⁾.

Positive social relationships and psychological care in prenatal care are considered protective factors against postpartum depression⁽³⁾. A study states that the active participation of the spouse can be the main protective factor and that the way the family relationship is structured, before the moment of pregnancy, can influence during the pregnancy-postpartum cycle. Risk and protection factors, experienced during pregnancy, are perpetuated throughout the postpartum period⁽⁴⁾.

Therefore, it is of utmost importance that health professionals assess the quality of the relationships of pregnant women with close people (partner and/or family, friends), in order to detect situations that may negatively impact pregnancy, childbirth, and the postpartum period. childbirth. Some instruments are used to measure family, social support and support from other significant people, in coping with stressful life situations⁽⁵⁻⁶⁾. However, instruments that assess the quality of the interpersonal relationship between dyads are scarce in Brazilian Portuguese-language literature.

The *Calidad de la Relación con su Persona Cercana* Scale (ARI-S) was translated and validated into Spanish, from the original scale, in English, the Autonomy and Relatedness Inventory (ARI)⁽⁷⁾. The ARI was created in the 1980s to measure the quality of the relationship between any dyad, such as partner, mother, male-father or friend, or the most important person with whom interviewees have a close and significant

relationship.

The ARI was composed of items belonging to the Marital Autonomy and Relatedness Inventory (MARI). The MARI assesses the quality of marital relationships, in which eight items were added to assess support and listening; this measure was based on early definitions of social support and conceptualizations of interpersonal relationships as well as the recognition of the need to assess the unfavorable side of close relationships⁽⁷⁾.

In the Spanish validation process, the ARI-S was tested for psychometric properties, in a longitudinal study, in relation to pregnancy. The ARI-S assessed the factors that influenced exclusive breastfeeding in 100 Hispanic pregnant women who received prenatal care at an outpatient clinic in Kentucky, in southeastern United States. The ARI-S Cronbach's Alpha, in total, was 0.92. Factor analysis produced a factor structure similar to that reported in the ARI⁽⁷⁾.

The 32 scale items are categorized into eight subscales: Acceptance, Relationship, Support, Listening, Autonomy, Control, Hostile Control and Detachment/Rejection, with four items for each subscale and grouped in two dimensions: Support/Positive Attitude, with 20 items, considered positive; and Domain/Control, with 12 items, considered negative. In the first subscale, respondents were asked to identify the most important person in their life, at the current moment, to whom they feel closest (e.g., partner, mother, male-father, another family member or friend). Then, participants are asked to mark the response items that most closely match their relationship with that intimate partner, in each dimension⁽⁷⁾.

Total score is calculated by adding the ratings for all items, after reversing the negative items; 32 are subtracted from the sum to create a cumulative score ranging from zero to 128. Higher scores indicate more positive perception of the relationship⁽⁷⁾.

The ARI-S was adopted by the present study instead of the ARI, because this study integrates Latin American and Caribbean countries, in addition to

Brazil, the only one in the continent with Portuguese language to enable data comparison later in the multicenter project. It was necessary to translate and validate all seven data collection instruments that compose the research, as they were in Spanish⁽⁸⁻⁹⁾. In this article, this process is presented in relation to the ARI.

Thus, the present study aimed to translate, culturally adapt, and validate the ARI-S into Brazilian Portuguese.

Methods

This is a methodological study of scale translation, adaptation, and validation into Brazilian Portuguese, whose stages were: initial translation; translation synthesis; back-translation; review of translated versions; content validation (expert panel); pre-test; and sending the final version of the instrument to the original authors⁽¹⁰⁻¹¹⁾.

The first stage (initial translation) was carried out by two bilingual translators, Spanish native speakers, knowledgeable of the Brazilian Portuguese-speaking and culture. The translators were fluent in Spanish and Brazilian Portuguese in relation to the colloquiality of both languages. Translator one had a degree in Linguistics and Languages, with a specialization in Spanish. Translator two taught Spanish at a state school. Translator one was informed about the research objectives, and translator two did not receive information about the study. They did not know who was doing the other translation and did not maintain contact between them. This first stage resulted in independent translations T1 and T2.

The second stage (translation synthesis) was carried out by a panel composed of two translators and three researchers who are members of the research group in which the study was developed, based on the original scale, in versions T1 and T2 and in the respective translation reports. The main researcher monitored and recorded the T12 elaboration process

in a report. The panel met at the research institution to verify the concordances and divergences that occurred between the two translations, which were resolved by reaching a consensus, originating the Brazilian Portuguese version T12.

The third stage was blind back-translation to Spanish by two translators from Spanish-speaking and bilingual countries; they were selected by curriculum analysis and invited by invitation letter via email. The translators of this stage did not know the content of the scale and did not participate in the initial translation.

The fourth stage was pre-final version development, in which an expert panel was formed, composed of all translators of stages one, two and three, three nurse researchers and two authors of the study, totaling nine members. The panel consolidated all versions of the scale and the original version, creating the pre-final version. Discrepancies were resolved by consensus in a one-to-one meeting at the research institution. Expert panel consensus was built by assessing semantic, idiomatic, cultural, and conceptual equivalences.

After developing the pre-final version and before applying pre-test, the fifth stage was held, in which Content Validity Index (CVI) was calculated. Minimum CVI of 0.78 was considered acceptable, for assessment of each item individually; and 0.90, for general assessment of the instrument⁽¹¹⁾.

For this stage, an intentional sample of 64 professionals was selected through *Curriculum Lattes* Platform search, considering researchers or health professionals working in the maternal and child area. Contact was made by e-mail, through an invitation letter, which clarified the study proposal. Professionals were sent the informed consent forms, translated versions, original scale and an instrument containing questions regarding clarity, understanding and relevance of each item. Of the 64 possible evaluators, 14 participated in the research, being nine nurses, two

physicians, a nutritionist, a psychologist and a pharmacist. The instruments must be sent back within 15 days.

Content was assessed for writing clarity and comprehension (if items were written in such a way that the concept was understandable and adequately expressed what one wanted to measure) and representativeness (whether items reflected the concepts involved, whether they were relevant and appropriate for achieve the proposed objectives). Each item on the scale was analyzed by all judges. Pre-test was carried out after validating the pre-final version content⁽¹¹⁾.

Pre-test (verification of the understanding of the scale items as to the meaning of words and interpretation of statements) of the translated version of the ARI-S was carried out with 30 pregnant women (sample for convenience) over 18 years old, aged 30-37 weeks pregnancy, with habitual risk pregnancy and under prenatal care.

Pregnant women with psychiatric problems and/or neurological problems and/or hearing impairment have been excluded due to limitations related to communication, since no member of the research team mastered Brazilian Sign Language, in addition to pregnant women who had clinical complications on the day of collection of data. Participants were selected at a family clinic in the city of Rio de Janeiro, Brazil, from January to March 2019, and performed the instruments' self-completion in a private room that was available at the time.

After applying pre-test, the scale had its internal consistency assessed by calculating Cronbach's alpha. The ideal range of alpha values is considered to be between 0.7 and 0.9⁽¹²⁾. The total item correlation and Cronbach's alpha were analyzed if each item on the scale was removed. Data were entered, organized and analyzed in the IBM Statistical Package for the Social Sciences.

Authorization for translation was granted by the

authors of ARI and ARI-S. The ethical and legal aspects of the research were fulfilled at all stages. The research was approved by an expert panel, according to Opinion 3,002,732/2018 and (*Certificado de Apresentação para Apreciação Ética* - Certificate of Presentation for Ethical Consideration) 85045318.0.3001.5279, according to Resolution 466/2012 of the Brazilian National Health Council (*Conselho Nacional de Saúde*).

Results

The ARI translation process into Brazilian Portuguese followed all formal procedures for translating foreign instruments, and the pre-final version was similar to the original instrument. The Brazilian version was entitled *Qualidade da relação com a pessoa próxima*. Figure 1 shows the writing of items that have undergone modifications at the translation review stage, after consensus among judges.

The ARI-S content reached a total CVI of 0.91. Only item 30 obtained IVC 0.71 due to a typo in the instrument, which was corrected. The other items obtained CVI between 0.78 and 1. Do not suggest other changes. The total Cronbach's alpha of the scale was 0.869, indicating high internal consistency (Table 1). The item-total correlation for most items was > 0.3. Items 2, 6, 10, 12, 14, 17, 18, 20, 28, and 30 were below 0.3; however, there was no increase in Cronbach's alpha greater than 0.1 if an item was removed.

Participants had no difficulty in filling out the instrument and took around 15 minutes to complete the information. It is noteworthy that 49.7% of pregnant women identified the partner as the person closest to the relationship and 40.0%, the mother. Other closest people mentioned were father, daughter and ex-father-in-law. The ARI score in this group ranged from 59-124 points, with an average of 94.4 and standard deviation of 28.2.

| Translation synthesis (Second stage) | Back-translation (Third stage) | Final writing after translation review and consensus among judges (Fourth stage)* |
|---|--|---|
| 5) <i>Está quando necessito dele(a)</i> | 5) <i>Está presente cuando lo(a) necesito(a)</i> | 5) Is there when I need him/her |
| 12) <i>Ele se diverte comigo</i> | 12) <i>Él(Ella) se ríe de mi</i> | 12) Makes fun of me |
| 22) <i>Aguarda que eu faça todas as coisas do seu jeito</i> | 22) <i>Espera que haga todas las cosas de la forma que Él(Ella) quiere</i> | 22) Expects me to do everything his/her way |
| 30) <i>Age como se me conhecesse quando está aborrecido</i> | 30) <i>Actúa como si no me conociera cuando está enojado</i> | 30) Acts as if he/she doesn't know me when he/she is angry |

Figure 1 – Modified items in the translation review stage. Rio de Janeiro, RJ, Brazil, 2019

Table 1 – Internal consistency of the translated and adapted version of the *Calidad de la Relación con su Persona Cercana* Scale into Brazilian Portuguese (n=30). Rio de Janeiro, RJ, Brazil, 2019

| Items* | Average if an item is removed | Variance if an item is removed | Corrected item/total correlation | Cronbach's alpha if an item is eliminated | †CVI |
|---|-------------------------------|--------------------------------|----------------------------------|---|------|
| 1) Talks over his/her problems with me | 127.0 | 245.1 | 0.307 | 0.867 | 0.92 |
| 2) Is always trying to change me | 127.4 | 242.3 | 0.271 | 0.869 | 0.78 |
| 3) Respects my opinions | 126.9 | 240.5 | 0.493 | 0.863 | 1 |
| 4) Acts as though I am in the way | 126.0 | 244.7 | 0.355 | 0.866 | 0.92 |
| 5) Is there when I need him/her | 126.0 | 249.1 | 0.412 | 0.867 | 1 |
| 6) Won't take no for an answer when he/she wants something | 126.8 | 250.5 | 0.083 | 0.875 | 0.78 |
| 7) Tries to understand how I see things | 126.7 | 232.7 | 0.681 | 0.859 | 0.92 |
| 8) Gives me as much freedom as I want | 126.5 | 229.7 | 0.601 | 0.859 | 0.92 |
| 9) Is always thinking of things that would please me | 126.3 | 234.7 | 0.678 | 0.859 | 0.85 |
| 10) Argues back no matter what I say | 126.7 | 248.1 | 0.174 | 0.871 | 1 |
| 11) Is happy to go along with my decisions | 126.4 | 229.8 | 0.806 | 0.856 | 0.92 |
| 12) Makes fun of me | 127.1 | 248.2 | 0.121 | 0.874 | 0.85 |
| 13) Is very willing to help when I need it | 126.0 | 242.0 | 0.665 | 0.862 | 1 |
| 14) Wants to have the last word on how we spend our time | 126.8 | 251.9 | 0.068 | 0.874 | 0.92 |
| 15) Thinks I am worth listening to | 126.8 | 232.8 | 0.580 | 0.860 | 1 |
| 16) Let's me make up my own mind | 126.6 | 239.6 | 0.511 | 0.863 | 0.92 |
| 17) Has a good time with me | 126.7 | 249.1 | 0.200 | 0.869 | 0.92 |
| 18) Wants to control everything I do | 126.2 | 250.0 | 0.193 | 0.869 | 1 |
| 19) Encourages me to follow my own interests | 126.6 | 238.9 | 0.556 | 0.862 | 1 |
| 20) Says I'm a big problem | 125.8 | 254.0 | 0.163 | 0.869 | 1 |
| 21) Does what he/she can to make things easier for me | 126.3 | 242.1 | 0.482 | 0.864 | 1 |
| 22) Expects me to do everything his/her way | 126.7 | 242.4 | 0.322 | 0.867 | 0.92 |
| 23) Makes me feel I can tell him/her anything | 126.7 | 229.3 | 0.520 | 0.871 | 0.85 |
| 24) Thinks it's okay if I disagree with him/her | 127.5 | 237.0 | 0.473 | 0.863 | 0.92 |
| 25) Asks me to share things he/she enjoys | 126.6 | 238.1 | 0.569 | 0.862 | 0.85 |
| 26) Finds fault with me | 126.2 | 244.7 | 0.425 | 0.865 | 0.92 |
| 27) Considers my point of view | 126.6 | 233.8 | 0.666 | 0.859 | 1 |
| 28) Doesn't think about me very much | 126.6 | 247.6 | 0.127 | 0.875 | 0.92 |
| 29) Tries to comfort me when things go wrong | 126.3 | 235.1 | 0.612 | 0.860 | 1 |
| 30) Acts as if he/she doesn't know me when he/she is angry | 126.6 | 256.1 | -0.38 | 0.877 | 0.71 |
| 31) Wants me to tell him/her about things that are bothering me | 126.6 | 240.9 | 0.392 | 0.865 | 0.92 |
| 32) Let's me do anything I want to do | 126.9 | 228.8 | 0.624 | 0.859 | 0.85 |

*Items translated from Brazilian Portuguese according to the English version of the Autonomy and Relatedness Inventory; †CVI: Content Validity Index

Discussion

This study has limitations, such as the sample size, which may have influenced the Cronbach's alpha coefficient, overestimating internal consistency. Furthermore, applying pre-test in pregnant women from the same unit is not representative of other population groups.

Although the ARI-S, the Infant Feeding Intentions Scale and the Knowledge Breastfeeding Scale have not been originally translated and adapted, all achieved satisfactory semantic, idiomatic, cultural, and conceptual equivalences in the translation and cultural adaptation processes⁽⁸⁻⁹⁾. Data collection instruments on gender construction in childhood, translated and adapted from Spanish into Brazilian Portuguese, achieved similar equivalences⁽¹³⁾.

The literature points out that different criteria are used to state that an instrument is valid, one of which is content validity⁽¹⁴⁾. The ARI-S, a version translated and adapted into Brazilian Portuguese, was considered valid in terms of content, obtaining a high CVI both in the individual items and in the overall assessment, i.e., it was considered understandable and relevant.

Several perspectives are used to define content validity. However, it is understood that content validity reflects the degree of relevance of an item of an instrument, in representing the theoretical content of an investigated phenomenon⁽¹⁵⁾. Therefore, according to judges, the ARI-S content is valid to express the quality of the relationship between two close people. Similar results were found in the content validation of the Infant Feeding Intentions Scale items that reached CVI between 0.78 and 0.89 and an overall average of 0.85⁽⁸⁾.

The quality of cultural adaptation determines the validity of an instrument. Therefore, instruments chosen to carry out cultural adaptation must be validated comprehensively and obtain satisfactory psychometric properties⁽¹²⁾. The Brazilian version of the ARI-S achieved a high rate of internal consistency,

results compatible with the English and Spanish versions, which obtained the total values of Cronbach's alpha 0.90 and 0.92, respectively⁽⁸⁾.

Generally, researchers present results together with the alpha calculation, if one of the items is removed, assessing whether the total value of the coefficient increases or decreases⁽¹⁶⁾ with the removal of that item. Thus, if the total Cronbach's alpha significantly increases (>0.1) when an item is removed, there is an indication that it is not consistent with the others, impairing internal consistency⁽¹⁷⁾. It is noteworthy that the low item-total correlation (<0.3)⁽¹⁷⁾ observed in items 2, 6, 10, 12, 14, 17, 18, 20, 28, and 30 did not result in an increase in the general Cronbach's alpha if they were removed. Thus, due to item relevance, it was decided to keep them on the scale to analyze other psychometric properties in later studies.

A validation study⁽¹⁸⁾ of the Dyadic Relationship Scale for caregivers of elderly people reached an internal consistency in the two subscales between 0.81 and 0.77, values close to the internal consistency of the ARI-S' Brazilian version.

Concerning the ARI-S score, the results of this study were similar to a survey carried out in the United States with 100 women, in which the ARI-S score varied between 59 and 128. As for the closest people, 57.0% of Hispanic women elected their partner; 32.0%, their mother; 11.0%, their father, sister, brother, or mother-in-law⁽⁸⁾, showing the complexity of affective relationships at a time of extreme vulnerability for women.

Using tools that assist in assessing the quality of the pregnant woman-close person relationship can contribute to determine the conditions of well-being in pregnant women as well as develop support and reception strategies by nurses and a multidisciplinary team.

Although the ARI has been used in research that assessed the influence of the quality of the relationship between pregnant women and close people in breastfeeding practice, smoking during pregnancy and coping with perinatal grief^(6-7,19), studies on the

ARI use, in English and Spanish versions, are still scarce in the literature. Therefore, the Brazilian version of ARI-S can be used in primary care and in other care contexts, contributing to comprehensive nursing care and health.

Conclusion

Translation and cultural adaptation of the ARI-S have been completed, originating the Brazilian version of the ARI, called *Qualidade da Relação com a Pessoa Próxima*. The results of pre-test in pregnant women showed that the instrument was considered valid, with high internal consistency, also found in the English and Spanish versions. Studies are recommended to assess other psychometric properties, in larger samples of pregnant women, as well as in dyads composed of members of the general population.

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Collaborations

Christoffel MM, Rodrigues EC, Araújo LSC and Linares AM contributed to conception, design, analysis, interpretation of data, writing of the article, critical review of intellectual content, and approval of the final version to be published. Gomes ALM, Machado MED and Toso BRGO collaborated with data analysis and interpretation, critical review of intellectual content, and approval of the final version to be published.

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