CROSS-CULTURAL ADAPTATION OF THE FAMILY SATISFACTION WITH CARE IN THE INTENSIVE CARE UNIT FOR BRAZIL

Josiele de Lima Neves*  
Eda Schwartz**  
Maria Elena Echevarría-Guanilo***  
Ana Carolina Guidorizzi Zanetti****  
Daren Heyland*****  
Lilian Moura de Lima Spagnolo******

ABSTRACT
The present study aimed to describe the process of cross-cultural adaptation of Family Satisfaction with Care in the Intensive Care Unit (FS-ICU 24) to Brazilian Portuguese language. This is a methodological study of cross-cultural adaptation that covered the following stages: translation of the instrument into Brazilian Portuguese; by obtaining the first consensus of the Portuguese versions; evaluation of the consensus version by the committee of experts; back-translation; obtaining the consensus of the English versions and comparison with the original version; semantic equivalence of items; and pre-test. The results pointed to the adequate semantic, idiomatic and conceptual equivalences between the final version in Portuguese and the English version, as well as for the comprehension and easy application of the instrument that was translated and adapted for the Brazilian culture. It was concluded that the cross-cultural adaptation of FS-ICU (24) gave rise to a reliable version, which needs to be tested in the target population and approved for its validity and reliability.

Keywords: Family. Personal Satisfaction. Intensive Care Units. Validation Studies. Nursing.

INTRODUCTION
The Intensive Care Unit (ICU) is characterized by the complexity of care and organization of the work process, aiming to provide care to people in severe health conditions, through continuous monitoring and intensive treatment(1). This context of ICU care refers to the bio-medical model of health care, in which the individual is not seen as an integrated being and the attention is focused on hard technologies with a tendency to fragment care. In addition, the ICU is associated, by patients and their families, with an environment that is not welcoming, disharmonious, painful and suffering(2), due to the separation of the loved one and their families, with a rigid routine of schedules and treatments to be fulfilled.

In this situation, the family remains isolated from direct patient care, remaining out of the ICU environment, except at visiting times. Such a situation generates dissatisfaction/discontentment, and feelings of fear, anxiety and apprehension about the recovery of health status.

Given this, it is indispensable to think of a professional practice that considers the role of family members as supporters, with relevant opinions about care and decision making about the health status of the family member hospitalized in the ICU. It should be emphasized that in order to improve communication in the ICU, family members should be encouraged to participate actively in care and therapy situations to resolve doubts and to assist during the hospitalization process(3).

Therefore, it is considered that evaluating the satisfaction of the family regarding the care offered by the ICU team to the sick family allows identifying perceptions related to the care given by the professionals to the patient and about the reception of the hospital environment in front of their needs. For this, it is fundamental to have instruments that help to evaluate the intensive care units, enabling family members to identify what kind of interventions are necessary to improve the quality of care.

The Family Satisfaction with Care in the Intensive Care Unit (FS-ICU 24) is an ICU-directed instrument that covers assessment of satisfaction with care, environment, staff and/or participation in decision making. It was developed in Canada by Daren Heyland with the Canadian Researcher as the End of Life

DOI: 10.4025/ciencucuidsaude.v17i4.45069

Ciénica Cuidau Saúde 2018 Oct-Dec 17(4) e45069
Network (CARENET). FS-ICU 24 is widely used to measure family satisfaction, and its results can contribute, directly or indirectly, to improving care for ICU patients(4).

Its application can be useful in the identification of the quality of the attention of the professionals to the patients and their relatives, subsidizing the planning of institutional strategies for the adequacy of the assistance.

To evaluate the assistance provided, using an instrument, it is necessary to evaluate its quality, which is determined by the psychometric properties, and can only be performed after transcultural adaptation(5).

In the light of the above, the present study sought to describe the process of cross-cultural adaptation of Family Satisfaction with Care in the Intensive Care Unit (FS-ICU 24) to Brazilian Portuguese language.

**METHOD**

This is a methodological study based on the Transcultural Adaptation and Validation Method, according to the recommendations of the Guidelines for the Process of Cross-Cultural Adaptation of Self-Report Measures(6), and seven stages were followed(5), with the inclusion of alteration in the order of steps according to the proposal of previous Brazilian studies(8,9): 1) Translation of the instrument into Brazilian Portuguese; 2) Obtaining the first consensus of the Portuguese versions; 3) Evaluation of the consensus version by the committee of experts; 4) Back-translation; 5) Obtaining the consensus of the English versions and comparison with the original version; and, 6) Semantic evaluation of the items.

The FS-ICU (24) is organized in two parts. The first part consists of information related to demographic data and the second, of 24 items distributed in two subscales that evaluate satisfaction with general care (Part 1) and satisfaction with decision-making in the care provided to the patients treated in the ICU (Part 2)(4).

**Translation of the instrument into Brazilian Portuguese**

Two Brazilian translators with a broad knowledge of the English language participated of this stage(8,9). Thus, a doctor with proximity to the Canadian culture and a professor of languages, with master degree in translation took part of this moment. Prior to the translation, a document was sent informing them about the purpose of the study. It was requested a version with a justification that preserved the semantic equivalence of the items of the original instrument. As a result, there were two versions in Portuguese: FS-ICU-24 - Portuguese version 1 (FS-ICU-24-VP1) and FS-ICU-24.

**Obtaining the first consensus of the Portuguese versions**

It consisted of a meeting to evaluate the translated versions for the target language(8,9), involving the researchers and the translators of the first stage. The participants received information and clarification on the objectives of the meeting, and then copies of the translated versions were distributed; and finally, aloud and paused reading of the whole instrument for discussion and consensus of the items. With this meeting, the FS-ICU-24 - Portuguese Version Consensus 1 (FS-ICU-24-VPC1) was obtained.

**Evaluation of the consensus version by the committee of experts**

For this stage, a multidisciplinary committee was created that evaluated the understanding of the items (semantic analysis) and relevance to the construct they represent (analyzes of the items themselves)(8,10). A five-point Likert scale was used to evaluate the "Clarity of language", "Relevance" and "Theoretical relevance" of information related to the whole instrument. Thus, after obtaining a consensus between the translations of the Portuguese versions, a meeting was held for content analysis with four experts, and for this it is recommended the evaluation of at least three and a maximum of five experts on the relevance of each item, in relation to the thematic of the instrument (10). For the composition of the Committee, the following criteria were followed: a professional in the health area, having experience in the care of adult patients and/or family in the ICU(7,9).

The experts evaluated the items through a scale ranging from one to five points, and the higher the score, the better the clarity, pertinence and theoretical relevance of item(11), which favored obtaining a quantitative evaluation. Items that showed consensus with 80% or more approval among specialists were considered appropriate. In this way, the stage of semantic, idiomatic and conceptual equivalence was fulfilled. This meeting resulted in a second consensual version in the Portuguese language: FS-ICU-24 - Portuguese version Consensus 2 (FS-ICU-24-VPC2).

**Back-translation**
In order to detect mistakes in the translation of the target version and to filter difficult translation and/or adaptation words, this step aims to translate the consensus of the Brazilian experts into the source language of the instrument, in order to favor cultural and idiomatic equivalence, considering the adaptations that have arisen in the translation process to date, and to identify if the instrument would present changes when returning to the original language. Two American translators who live in Brazil, English language native speakers, with knowledge of the Brazilian language and culture, participated in this stage. Before the translations were carried out, the purpose of the study was informed to them and two independent translations were requested. At the end of this phase, two English versions were obtained: FS-ICU-24 - English version 1 (FS-ICU-24-VI1) and FS-ICU-24 -VI2).

**Obtaining the consensus of the English versions and comparison with the original version**

The main objective of this stage was to evaluate the equivalences between the original and the translated instrument. After obtaining the two back-translations, a meeting was held to compile a consensus among the translated versions for English, to be later compared with the original version. Before translators' analysis of the versions, two English-speaking nursing students who had recently returned from the United States (USA) were invited to a meeting. In this stage, the English versions of the back-translation stage were compared with the original version, and a preliminary consensus of the versions between the students and the researchers denominated: FS-ICU-24 - English Version Consensus Preliminary (FS-ICU-24-VICP). After obtaining the preliminary consensus, it was sent to the translators of the backward translated versions to English, accompanied by the original version and obtained the FS-ICU-24 - English version Consensus 1 (FS-ICU-24-VIC1).

The consensus version in English was sent by e-mail to one of the authors of the instrument and the FS-ICU-24 was obtained. The corrected version was evaluated in order to preserve the meaning of the instrument's items and a new consensus was obtained in English called FS-ICU-24 - English Final Consensus (FS-ICU-24-VICF). Also, after analyzing the previous consensus with the original version, one of the translators that participated in the first stage of the adaptation process translated it into Portuguese to be applied in the semantic evaluation.

**Semantic evaluation of the items**

For the development of this stage, three relatives of patients who were hospitalized in an ICU in the city of Pelotas-RS were intentionally invited. The instructions and items were read slowly by the researcher and for each sentence it was questioned the understanding or difficulty in understanding. The semantic equivalence evaluation aimed to identify the inconsistencies, discrepancies and difficulties in the translation process in which changes in the instrument could still be performed. At the end of the semantic evaluation the FS-ICU-24 - Portuguese Version Final Consensus (FS-ICU-24-VPCF) was obtained.

It is noteworthy that the translation process of FS-ICU (24) began after the permission of one of the authors of the scale: Dr. Daren Heyland, professor of Queen's University in Kingston, Canada. The research respected the ethical aspects advocated by Resolution No. 466/2012 of the National Health Council, and it was approved by the Research Ethics Committee (CEP) under opinion No. 1,104,124 on June 15, 2015, with Certificate of Presentation for Ethical Appreciation (CAAE) under No. 43592615.2.0000.5316.

**Pre-test**

For it, there was a convenience sample of 46 relatives, from July to September of 2015 in two ICUs of a city in the south of Brazil. It was chosen to conduct interviews that present among its main advantages, to enable a higher rate of responses, as well as to allow the interviewer to observe/evaluate possible comprehension difficulties and to allow the registration of items that may not be understood by the interviewees. The interviewers were trained for the proposal of this research and received a manual with information about the correct application.

The data were organized and analyzed in the Statistical Package for Social Science (SPSS), version 22.0. For the data typing, the coding suggestion of the authors of the FS-ICU (24) instrument was used.

**RESULTS**

**Evaluation of the consensus version by the committee of experts**
The experts evaluated FS-ICU-24-VPC1 in relation to "Language clarity", "Relevance" and "Theoretical relevance" of information related to the instrument as a whole.

In the evaluation of the demographic data, in relation to "Relevance" and "Theoretical Relevance", there was total agreement of the experts with the items. However, in relation to "Clarity of language", three items showed problems of comprehension in the translation: Item 3 - degree of kinship with family member (patient); Item 4 - experience of having accompanied a relative in the ICU; and Item 6 - Place of residence had 75, 85 and 95%, respectively, which signaled the need to revise the translation of these items.

Item 3 stands out with the question: "Your degree of kinship to the patient: wife, husband, partner, mother, father, sibling, child, other (specify)." After discussions among the experts, it was decided to keep "companion" in parentheses next to "partner".

Of the 14 items analyzed that evaluate "Satisfaction with the service in general" (Part 1), it is highlighted that in relation to "Relevance" and "Theoretical relevance", these presented more than 85% approval by the specialists. In the item "Clarity of language", items 5 - need of family members; 12 - Atmosphere (environment) in the ICU; and 13 - Atmosphere (space) in the waiting room, had greater disagreement. They presented 65, 50 and 50% of approval, respectively, being necessary a new joint reading and accomplishment of adjustments.

Item 5: "Considering your needs, the ICU team demonstrated interest in your needs: excellent, very good, good, fair, unsatisfactory and not applicable (N/A)" had to be modified to: "Considering your needs: How was the ICU team's interest in your needs?" Regarding items 12 and 13: "How was the atmosphere (space) of the ICU?" And "The atmosphere (space) in the waiting room of the ICU?", respectively, in consensus, experts chose to replace "atmosphere (space) ", since space would influence the relative to think of size of the place (physical structure). In this way, we have chosen to add the word "environment", thus "atmosphere (atmosphere)".

Regarding the items that evaluate "Satisfaction with decision-making around critical patient care" - Part 2, the evaluation in relation to "Language Clarity" presented less agreement on three items: Item 1 - frequency of communication with patients medical team; Item 3 - understanding of information; Item 9 - control in relation to the care received by the relative (patient), presenting 75, 65 and 75% of approval, respectively.

In Item 1, "Frequency of communication with ICU medical staff: How often did the medical staff tell you about your relative's condition: excellent, very good, good, fair, unsatisfactory and not applicable (N/A)", it was decided that there was no coherence between the question and the alternatives, so we opted for "Frequency of communication with the ICU medical staff: The frequency that the medical staff communicated to you about the condition of your relative was":

Regarding Item 3 "Understanding Information: Did the ICU staff provide explanations in a way that you understood?" Only the word "provided" was replaced with "gave."

Item 9 needed to have two appropriate response options. In option 2, "I felt somehow out of control and the health care system dictated the care my family member received" was replaced by "I felt a bit out of control and that the health system took over and spoke the care my family received."

About the three criteria used for evaluation of the expert committee, language clarity presented less agreement when compared to "Relevance" and "Theoretical relevance". In order to preserve the characteristics of FS-ICU-24-VPC1, some modifications were made to the FS-ICU-24-VPC2 consensus.

**Back-translation**

In this stage, the translators developed two versions: FS-ICU-24-VI1 and FS-ICU-24-VI2, independently. Thus, the items that presented better understanding were kept, without prejudicing the meaning of the original version.

**Obtaining the consensus of the English versions and comparison with the original version**

In the preliminary analysis of the back-translation performed by the nursing students and the researchers, the items with divergences were identified, what facilitated the analysis of both versions, a result of the Back-translation stage.

Among the divergences identified by the students to get at FS-ICU-24-VICP, the items that contemplated the word atmosphere were highlighted, since while one translator maintained only atmosphere, the other maintained only environment. Thus, in consensus with the students, we chose to keep the two terms: atmosphere (environment). FS-ICU-24-VICP was sent
to the translators of the English versions, with the two versions translated into English and the original version. After the evaluation of the material, they agreed with most of the suggestions for FS-ICU-24-VIC1. Some corrections were made regarding the alternatives of response of some items: the alternative in English “fair” was translated into Portuguese for “regular” and back-translated for “average” by one translator and “regular” by the other, it was chosen to maintain “regular”. In the response scale, the alternative “poor” (from the original version) was translated into Portuguese as “unsatisfactory” and the translators kept “unsatisfactory”.

The submission of the FS-ICU-24-VIC1 to the author of the scale was accompanied by a letter of request for evaluation that resulted in suggestions for a few more changes, originating FS-ICU-24-VICAI. In this version it is highlighted that in the alternatives of items responses, the Likert scale, the word “fair” (translated from the original instrument) was translated in consensus into “regular” in English, but according to the author the word “regular” would not be adequate in English, and requested to keep “fair” or replace it for “average”: and the item “poor”, that was translated in the Portuguese translation as unsatisfactory and in the English version as “unsatisfactory”, was also asked to remain “poor”.

In the part 2 of the instrument, in item 6, FS-ICU-24-VIC1 remained in the statement Consistency, and in the question, it was changed for coherence. In this case, the author of the scale requested to keep only Consistency in both the statement and the question, with this, the FS-ICU-24-VICF was obtained.

In order to complete the cross-cultural adaptation process, FS-ICU-24-VICF was translated into Portuguese and compared to FS-ICU-24-VPC2, FS-ICU-24-VICAI and FS-ICU-24. The study researchers and one of the translators who took part in the first stage of the adaptation process participated in this stage. The translation into Portuguese prioritized the maintenance of comprehensible and coherent items to facilitate the understanding in Brazilian Portuguese.

Regarding the alternative answers corresponding to most of the items in the instrument (1 to 13, Part 1, and 1 to 6, Part 2), two changes were required in the author’s suggestions: 1) In the fourth alternative: to maintain “fair” and/or “average”, but in Portuguese the translation it would be “médio”, thus it remained “fair”.

2) In the fifth alternative: to keep “poor”, but in Portuguese its translation would be “pobre”, so the “unsatisfactory” translation was chosen.

The consensus to carry out the changes was fundamental to make coherent the instrument’s response alternative, resulting in the following response options: 1º) Excellent; 2º) Very Good; 3º) Good; 4º) Fair; 5) Unsatisfactory; 6) N/A. After the necessary changes, the Portuguese Consensus Version 3 (FS-ICU-24-VPC3) was completed.

Throughout the process of semantic equivalence, changes were made in the writing of some items of the translated version to adapt them to a more colloquial language that would allow a better understanding and approximation of the instrument to the Brazilian reality. In this way, terms such as “How well...”, “How often...” have been replaced by terms more clearly. Thus, the words were adapted to the “good Portuguese”, so as not to be misinterpreted by family members. In this context, extra words were also added in brackets to improve clarification, and terms used in Brazil were used as “nursing staff” rather than just “nursing”, “medical staff” rather than “doctors.

### Semantic evaluation of the items

The semantic evaluation of the items with FS-ICU-24-VPC3 was performed and corresponded to the last stage of the cross-cultural adaptation process, allowing evaluation of the comprehensibility of the instruments as a whole (instructions and evaluation items).

The three family members who participated in this phase stated that the translated instrument was clear and objective, only one family member (with six years of study) said that had difficulty in answering the item 10 of the second part, which asks about the time to make decisions, containing only two variables: I could have had more time; I’ve had enough time. According to the relative, this item should have the inclusion of a third option for those who, like him, did not participate in the decision making. However, the authors chose to maintain both response options and observe whether in the pre-test the participants would highlight this need. After the steps developed, the Portuguese Final Consensus Version (FS-ICU-24-VPCF) was obtained.

### Pre-test

In the application of the pre-test, the participants did not report difficulties regarding the understanding of the questions and the response options.

### DISCUSSION

...
Transcultural adaptation is a critical process that needs to follow rigorous methods to achieve the semantic equivalence between the original instrument and the target version\(^{10}\). Therefore, when performing cross-cultural adaptation of an instrument developed in another culture, it is necessary to delimit criteria and follow steps to minimize possible misunderstandings with the culture of origin and to achieve equivalence between the original instrument and the target version\(^{(11)}\). It is considered that the order of steps ensures the identification of inconsistencies in the translation process preserving equivalence between the content of the instructions and item of the original scale and the Brazilian version\(^{(10)}\).

In this context, the cross-cultural adaptation of FS-ICU (24) to Brazilian Portuguese was carried out using methodological standards, following the recommendations of the literature\(^{(6,9)}\). The translation of the instrument was the first stage of the process, carried out by two people independently after being informed of the objectives and concepts of the instrument\(^{(12)}\). In the translations of the original Brazilian Portuguese version it was identified that both preserved the meaning of the items, however a translator made one version preserving the formality of the words, while the other made a literal translation with a more colloquial language. In this way, the translated instrument must preserve the same meaning in each item when compared with the original version\(^{(12)}\).

It should be noted that the rigors of content validity (expert assessment) and face validity (semantic equivalence) were followed. The validity of an instrument indicates whether what is being measured is actually what is intended to measure, that is, it refers to assessing whether the aspect of the measure is congruent with the object and not necessarily with the accuracy with which the measurement is made\(^{(12)}\).

In this way, a test has content validity if it constitutes a representative sample of several behaviors (domains)\(^{(6,10,12)}\). The analysis of the experts contributed to the content validation process, since it indicated the items that could generate confusion when applied in the target population. With this, it is emphasized that the contribution of the multi-professional committee assists that the translation be evaluated with greater criticality. The experts' suggestions were accepted and incorporated into the items, so the scale was adjusted and later applied more reliably.

For the semantic equivalence, three family members were chosen who had their loved ones hospitalized in the ICU, that is, people who knew/experienced the subject in question. This type of validity is related to people's perception of what is being measured. Although one of the participants stated that they did not feel able to register, the fact that they did not participate in the family therapy decisions, the others did not point out this need. Thus, in this first stage, it was not considered a reason for change.

In the pre-test stage, the adapted version of the FS-ICU (24) showed good acceptance of the items, with no need for intervention in the instrument. According to the literature\(^{(6)}\), the pre-test phase ensures that the original version was maintained, as well as being a fundamental step to improve understanding and to find problems in the application of the instrument.

It is worth noting the interest in carrying out the process of cross-cultural adaptation of a scale that assesses family members' satisfaction with ICU patients, since it allows the identification of the family's perception regarding the care offered.

In this context, it is necessary to evaluate the interventions of the professionals of the ICU with the relatives, through reception practices, qualified listening and measures that help during the first visit and the period of hospitalization in this unit of high complexity\(^{(13)}\). It should be noted that these educational and welcoming actions help to minimize negative perceptions and bring peace of mind for the family to evaluate the service and to participate in decision-making with the multi-professional team.

At this juncture, this study made it possible to adapt FS-ICU (24) to the family's reality and could be used by Brazilian health professionals in order to identify the need for improvements in the care of the critically ill patient. For this, the instrument, which is from the English language, will need to be tested in the target population and approved for its validity and reliability.

As a limitation of the study, it is highlighted that the time for data collection was more than expected, this was due to the low turnover of patients, which warns to include another ICU for the validation of the FS-ICU (24) instrument. It is also worth mentioning the difficulty in finding two Canadians who has lived in Brazil to perform the back-translation stage, so we chose to invite two Americans, what did not prejudice the translation of the instrument, since it obtained approval from the author of the original instrument.

**CONCLUSION**

With the conclusion of the process of cross-cultural adaptation, it is concluded that the Family Satisfaction
with Care in the Intensive Care Unit (FS-ICU 24) for Brazilian Portuguese is feasible for use in Brazilian reality, obtaining appropriate semantic, idiomatic and conceptual equivalence to be tested for psychometric properties. The family member satisfaction assessment tool can provide relevant information about the relative's view of the structure of the intensive unit and allow adjustments in the care of the professionals. In addition, it is a useful tool for the evaluation of health services in the area of health care in Intensive Care Units.

ADAPTAÇÃO TRANSCULTURAL DO FAMILY SATISFACTION WITH CARE IN THE INTENSIVE CARE UNIT PARA O BRASIL

RESUMO

O presente estudo objetivou descrever o processo de adaptação transcultural do Family Satisfaction with Care in the Intensive Care Unit (FS-ICU 24) para o português do Brasil. Trata-se de um estudo metodológico de adaptação transcultural que percorreu as seguintes etapas: tradução do instrumento para o português do Brasil; obtenção do primeiro consenso das versões em português; avaliação da versão consenso pelo comitê de especialistas; back-translation (retrotradução); obtenção do consenso das versões em inglês e comparação com a versão original; equivalência semântica dos itens e; pré-teste. Os resultados apontaram para as equivalências semântica, idiomática e conceitual adequadas entre a versão final em português e a original em inglês, bem como para a compreensão e fácil aplicação do instrumento traduzido e adaptado para a cultura brasileira. Concluiu-se que a adaptação transcultural do FS-ICU (24) originou uma versão confiável, a qual precisará ser testada na população alvo e aprovada quanto à sua validade e confiabilidade.

Palavras-chave: Família, Satisfação Pessoal, Unidades de Terapia Intensiva, Estudos de Validação, Enfermagem.

ADAPTACIÓN TRANSCULTURAL DEL FAMILY SATISFACTION WITH CARE IN THE INTENSIVE CARE UNIT PARA BRASIL

RESUMEN

El presente estudio tuvo el objetivo de describir el proceso de adaptación transcultural del Family Satisfaction with Care in the Intensive Care Unit (FS-ICU 24) para el portugués de Brasil. Se trata de un estudio metodológico de adaptación transcultural que pasó por las siguientes etapas: traducción del instrumento para el portugués de Brasil; obtención del primer consenso de las versiones en portugués; evaluación de la versión consenso por el comité de expertos; back-translation (retrotraducción); obtención del consenso de las versiones en inglés y comparación con la versión original; equivalencia semántica de los items y; pre test. Los resultados señalaron para las equivalencias semántica, idiomática y conceptual adecuadas entre la versión final en portugués y la original en inglés, así como para la comprensión y fácil aplicación del instrumento traducido y adaptado para la cultura brasileña. Se concluyó que la adaptación transcultural del FS-ICU (24) originó una versión confiable, que necesitará ser probada en la población blanca y aprobada en cuanto a su validez y confiabilidad.

Palabras clave: Familia, Satisfacción Personal, Unidades de Cuidados Intensivos, Estudios de Validación, Enfermería.

REFERENCES


**Corresponding author:** Josiele de Lima Neves. Rua Maestro Mendanha, nº 550. Bloco 06-403. 96020760 – Centro – Pelotas, RS, Brasil, E-mail: josiele_neves@hotmail.com

**Submitted:** 23/08/2018
**Accepted:** 11/12/2018