

ORIGINAL ARTICLE

TRANSLATION AND TRANSCULTURAL ADAPTATION OF THE SELF-CARE INSTRUMENT OF HEART FAILURE INDEX 6.2 FOR USE IN URUGUAY*

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ABSTRACT

Objective: To translate and cross-culturally adapt the Self-Care of Heart Failure Index 6.2 instrument for use in Uruguay.

Method: A methodological study, performed at a multidisciplinary heart failure care clinic in Uruguay between November 2016 and September 2017. The following stages were developed: translation, synthesis of translated versions, back-translation, expert committee evaluation and pre-test. For the analysis, the content validity index (adequate > 0.9), agreement percentage (adequate ≥ 80%) and Cronbach's alpha in the pre-test (adequate ≥ 0.70) were used.

Result: In the first evaluation, six items displayed CVI < 0.9 and/or a total agreement lower than 70% and for this reason were changed and subsequently reevaluated, reaching CVI > 0.9 and/or an agreement percentage greater than 70%. The internal consistency of the scale was 0.78.

Conclusion: The translation and adaptation of this instrument enables the development of multi-center studies by providing the same outcome assessment measures.

DESCRIPTORS: Self-care; Reproducibility of the Tests; Translation; Heart Failure Methodology in Nursing.


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TRADUÇÃO E ADAPTAÇÃO TRANSCULTURAL DO INSTRUMENTO SELF CARE OF HEART FAILURE INDEX 6.2 PARA USO NO URUGUAI

RESUMO

Objetivo: traduzir e adaptar transculturalmente o instrumento Self-Care of Heart Failure Index 6.2 para uso no Uruguai.

Método: estudo metodológico, realizado em clínica de cuidados multidisciplinares em insuficiência cardíaca no Uruguai entre novembro de 2016 e setembro de 2017. Foram desenvolvidas as etapas: tradução, síntese das versões traduzidas, retrotradução, avaliação pelo comitê de experts e pré-teste. Para análise, utilizou-se o índice de validade de conteúdo (adequado > 0,9), percentual de concordância (adequado \geq 80%) e o alfa de Cronbach no pré-teste (adequado \geq 0,70).

Resultado: na primeira avaliação, seis itens apresentaram IVC < 0,9 e/ou concordância total menor que 70% e por este motivo foram alterados e posteriormente reavaliados, atingindo IVC > 0,9 e/ou percentual de concordâncias maior que 70%. A consistência interna da escala foi de 0,78.

Conclusão: a tradução e adaptação deste instrumento proporciona o desenvolvimento de estudos multicêntricos por proporcionar as mesmas medidas de avaliação de desfechos.

DESCRITORES: Autocuidado; Reprodutibilidade dos Testes; Tradução; Insuficiência Cardíaca; Pesquisa Metodológica em Enfermagem.

TRADUCCIÓN Y ADAPTACIÓN TRANSCULTURAL DEL INSTRUMENTO SELF CARE OF HEART FAILURE INDEX 6.2 PARA SU USO EN URUGUAY

RESUMEN

Objetivo: traducir y adaptar transculturalmente el instrumento Self-Care of Heart Failure Index 6.2 para su uso en Uruguay.

Método: estudio metodológico, realizado en una clínica de cuidados multidisciplinares para insuficiencias cardíacas de Uruguay entre noviembre de 2016 y septiembre de 2017. Se desarrollaron las siguientes etapas: síntesis de las versiones traducidas, retrotraducción, evaluación a cargo de un comité de expertos y prueba previa. Para el análisis, se utilizó el índice de validez del contenido (adequado > 0,9), el porcentaje de concordancia (adequado \geq 80%) y el coeficiente alfa de Cronbach en la prueba previa (adequado \geq 0,70).

Resultado: en la primera evaluación, seis puntos presentaron un valor de IVC < 0,9 y/o una concordancia inferior al 70% y, por este motivo, se los modificó y reevaluó posteriormente, con lo que se alcanzó un valor de IVC > 0,9 y/o un porcentaje de concordancias superior al 70%. La consistencia interna de la escala fue de 0,78.

Conclusión: la traducción y adaptación de este instrumento proporciona la capacidad para desarrollar estudios multicéntricos por ofrecer las mismas medidas de evaluación de resultados.

DESCRIPTORES: Autocuidado; Reproducibilidad de las pruebas; Traducción; Insuficiencia cardíaca; Investigación metodológica en Enfermería.

INTRODUCTION

Heart Failure (HF) is a major global health problem, which has high hospitalization and mortality rates worldwide.⁽¹⁾ With a population of 3.28 million,⁽²⁾ Uruguay had a 27% mortality rate from cardiovascular diseases in 2014, with HF being the third most hospitalized cardiovascular disease in 2013.⁽³⁾

HF treatment is divided into pharmacological and non-pharmacological⁽⁴⁻⁸⁾ and both depend on the patient's active participation, as their ability to follow the therapeutic plan and recognize signs and symptoms of worsening influences health status.⁽⁹⁾ Self-care is the behavior that patients need to follow to maintain their health (maintenance of self-care), as well as the decision-making process about the possible worsening of symptoms (self-care management),⁽⁷⁾ and these behaviors determine the prognosis.⁽¹⁰⁾

The encouragement of self-care is a key element in patient education and self-management,⁽¹¹⁾ since recognizing the way patients deal with self-care in relation to HF is a vital strategy for resizing the guidelines and conduct of the health team.

Having validated instruments to measure self-care offers health teams an effective and cost-effective strategy to guide their care, as well as optimizing multicenter studies. A systematic review identified 14 instruments that measure self-care and among them, the Self-Care of Heart Failure Index (SCHFI) has been subjected to rigorous psychometric tests⁽¹²⁾ and evaluates maintenance, management and confidence in self-care. Created in the United States in 2000 in American English, it was readjusted in 2009 to version SCHFI 6.2, adapted for Chinese/Hong Kong,⁽¹³⁾ Chinese/Taiwan,⁽¹⁴⁾ Italian,⁽¹⁵⁾ Portuguese/Brazil,⁽¹⁶⁾ Portuguese/Portugal,⁽¹⁷⁾ and Japanese,⁽¹⁸⁾ among others.

It is necessary that the instrument be appropriate to the language region varieties⁽¹⁹⁾ and SCHFI 6.2 has not yet been adapted for use in Uruguay. This study aimed to fill this gap, enabling the use of the SCHFI 6.2 instrument for use in patients with heart failure in outpatient care. This study aimed to translate and cross-culturally adapt the Self-Care of Heart Failure Index instrument for use in Uruguay.

METHOD

A methodological study,⁽²⁰⁾ intended for translation and cross-cultural adaptation⁽¹⁹⁾ of the Self-Care of Heart Failure Index 6.2 for use in Uruguay, developed between November 2016 and October 2017.

SCHFI 6.2 has 22 questions divided into three scales: Maintenance (10 items), Handling (6 items) and Confidence in self-care (6 items). The responses for the items range from "never/rarely" to "always/daily" to the Self-Care Maintenance scale; from "Unlikely" to "very likely" for the Self-Care Management scale and from "not confident" to "extremely confident" for the Self-Care Confidence scale.⁽¹⁶⁾

Maintenance of self-care is in session A of the instrument and its score varies between 10 and 40 points. To reach the final score, the following calculation is performed: (sum of items from session A-10)*3.333. For the management of self-care (session B), the score varies between 4 and 24 points, and the score is calculated by (sum of the items from session B-4)*5. In session C, confidence in self-care, the score varies between 6 and 24 and the score is calculated as the sum of the items from session C-6)*5.56. In all subscales, the higher the score, the better the result, and the maximum score after the calculation is 100 points on each of the scales separately.⁽¹⁶⁾

The first stage of data collect took place in November 2016 through email contact with the lead author requesting consent for the study, which was promptly authorized.

The study was developed in the following stages: translation (by two sworn Uruguayan translators), synthesis of the translated versions, back translation, expert committee evaluation and pre-test.⁽¹⁹⁾ The translation and back translation stages took place between December 2016 and May 2017.



Figure 1 – Flowchart of the transcultural adaptation procedure of the Self Care of Heart Failure Index 6.2 instrument. Rio de Janeiro, RJ, Brazil, 2019

The judging committee was composed of eight Uruguayan professionals with professional experience in an HF outpatient clinic (three doctors, two nutritionists, two nurses and a psychologist), and started in June 2017. An instrument was elaborated with all items of the synthesis version of the SCHFI 6.2 instrument (authorized by the original author), where the semantic, experimental and conceptual idiomatic equivalence was evaluated by a Likert scale from 1 to 4, considering 1 'strongly disagree', 2 'almost always disagree', 3 'agree' and 4 'strongly agree'.

After the judges' committee evaluation reached the final version, the pre-test began in August and September 2017. Fifty-two patients participated in this stage, that is, a number larger than the recommended by the Recommendations for the Cross-Cultural Adaptation of the DASH & Quick DASH Outcome Measures,⁽¹⁹⁾ which was 30 patients. Patients under follow-up at a multidisciplinary HF care clinic and older than 18 years old with a previous diagnosis of HF were included. The exclusion criterion was the following: report of cognitive deficit in medical records or clinical evaluation of the unit psychiatrist; however, none of the included patients displayed this condition.

The SCHFI 6.2 instrument in the Spanish/Uruguay version was applied by a research nurse in a private practice at a heart failure outpatient clinic in Uruguay, after patients' consent to participate in the study. The sociodemographic data were obtained from the electronic hospital chart.

Data were organized and analyzed by the Statistical Package for the Social Sciences-SPSS, version 20.0. The Content Validity Index (CVI) and the percentage of agreement between judges were used.⁽²¹⁾ An item with CVI > 0.9 and/or a percentage of total agreement (relevant or representative item - 4) equal to or greater than 80% was considered

adequate. The items with lower evaluation were altered, as suggested by the judges and a new evaluation was performed, following the same pattern as the first.⁽²²⁻²³⁾ The Cronbach's alpha test was used for internal consistency analysis and values above 0.70 were considered as high internal consistency.⁽²⁴⁻²⁵⁾

The continuous variables were expressed as mean/standard deviation or median and interquartile range. The categorical variables were expressed as absolute or relative frequencies (n and %).

The study is one of the stages of a doctoral dissertation and is in accordance with the principles of the Helsinki Declaration and the Uruguayan Decree 379V/008 of the Ministry of Public Health,⁽²⁶⁾ being approved by the Medical Ethics Committee of the Manuel Quintela Clinical Hospital/Uruguay (05/17/2017).

RESULTS

Translation, synthesis and back-translation

Initially, the original version of the instrument was translated by two independent sworn Uruguayan translators. Both translated versions were synthesized by two Uruguayan researchers, native speakers of the language. The synthesis version of the instrument was back-translated into English by a third translator and later sent to the lead author of SCHFI 6.2, who authorized the follow-up of the study.

Judging Committee

In the first evaluation, the judging panel evaluated the scale items and six items (14, 21, 22, 23, 24 and 25) displayed CVI < 0.9 and/or a percentage of total agreement lower than 70%, according to the data in Table 1.

Table 1 – Judges' first assessment: percentage of agreement and Content Validity Index (CVI). Rio de Janeiro, RJ, Brazil, 2019 (continues)

Nº	ITEM	Number of Representative Ratings (4) (n=32)	Percentage of agreement % (representative/4)	IVC
1	<i>Para contestar las siguientes preguntas piense como se ha sentido durante el último mes o desde la última vez que nos vimos.</i>	31	97	1
2	<i>SECCIÓN A: A continuación, se enumeran instrucciones comunes que se les da a las personas con insuficiencia cardíaca. ¿Con qué frecuencia usted hace lo siguiente?</i>	31	97	1
3	<i>Nunca o rara vez</i>	31	97	1
4	<i>Algunas veces</i>	31	97	1
5	<i>Frecuentemente</i>	31	97	1
6	<i>Siempre o diariamente</i>	32	100	1
7	<i>¿Pesarse?</i>	31	97	1
8	<i>¿Comprobar si tiene los tobillos hinchados?</i>	27	84	1

9	¿Prevenir enfermedades (p. ej. vacunarse contra la gripe o evitar contacto con personas enfermas)?	30	94	1
10	¿Hacer alguna actividad física?	28	88	1
11	¿Acudir a consultas con un médico o enfermero/a?	30	94	1
12	¿Consumir una dieta con bajo contenido de sal?	24	75	1
13	¿Hacer 30 minutos de ejercicio físico?	27	84	1
14	¿Recordar tomar alguno de sus medicamentos?	7	22	0,34
15	¿Pedir alimentos con bajo contenido de sal cuando sale a comer o visita a otras personas?	32	100	1
16	¿Usar un sistema (pastillero, recordatorios) que lo ayude a recordar tomar su medicación?	27	84	1
17	SECCIÓN B: Muchos pacientes tienen síntomas debido a su insuficiencia cardíaca. La dificultad para respirar y los tobillos hinchados son síntomas comunes de la insuficiencia cardíaca.	32	100	1
18	En el pasado mes, ¿ha tenido dificultad para respirar o tobillos hinchados? Marque una opción: SI, No	27	84	0,97
19	Si ha tenido dificultad para respirar o tobillos hinchados en el último mes ... (marque un número con un círculo)	29	91	1
20	No tuve esto	27	84	1
21	No lo reconocí	16	50	0,97
22	No muy rápido	11	34	0,53
23	Un poco rápido	8	25	0,59
24	Rápido	9	28	0,53
25	Muy rápido	17	53	0,53
26	¿Qué tan rápido reconoció esto como un síntoma de insuficiencia cardíaca?	31	97	1
27	En la continuación se enumeran medidas que utilizan las personas con insuficiencia cardíaca. Si usted tiene dificultad para respirar o tobillos hinchados, ¿qué probabilidad hay de que pruebe una de estas medidas? (marque un número con un círculo por cada medida)	30	94	1
28	No es probable	32	100	1
28	Poco probable	32	100	1
30	Probable	32	100	1
31	Muy probable	31	97	1
32	Disminuir la sal en su dieta	32	100	1
33	Disminuir la ingesta de líquidos	30	94	1
34	Tomar un diurético extra	31	97	1
35	Llamar a su médico o enfermero/a para pedir ayuda	25	78	1
36	Piense cual medida tomó la última vez que tuvo dificultad para respirar o tobillos hinchados (marque un número con un círculo)	30	94	1
37	No intenté nada	25	78	1
38	No estaba seguro/a	26	81	1
39	Algo seguro/a	28	88	1
40	Seguro/a	32	100	1

41	Muy seguro/a	32	100	1
42	¿Qué tan seguro/a estaba de que la medida ayudaba o no ayudaba?	29	91	0,94
43	SECCIÓN C: En general, ¿qué tan confiado está de poder hacer lo siguiente?	27	84	1
44	Nada confiado	32	100	1
45	Algo confiado	32	100	1
46	Muy confiado	32	100	1
47	Extremadamente Confiado	32	100	1
48	¿Mantenerse sin síntomas de insuficiencia cardíaca?	32	100	1
49	¿Seguir las recomendaciones de tratamiento que le han dado?	32	100	1
50	¿Evaluar la importancia de sus síntomas?	32	100	1
51	¿Reconocer cambios en su salud si estos ocurren?	31	97	1
52	¿Hacer algo para aliviar sus síntomas?	32	100	1
53	¿Evaluar qué tan bien funciona una medida?	31	97	1

In section A, the question ¿Recordar tomar alguno de sus medicamentos? displayed CVI = 0.34 and an agreement percentage of 22% and received three alteration suggestions that were considered in the new evaluation. In section B, five answer items (no lo reconocí, no muy rápido, un poco rápido, rápido, muy rápido) received a CVI and percentage of agreement that was not recommended; however, the experts' suggestions would be inconsistent with the question "¿Qué tan rápido reconoció esto como un síntoma de insuficiencia cardíaca?". In this sense, two options for questions were elaborated.

Table 2 describes the second evaluation of the judges, and the items with the highest CVI and percentage of agreement were chosen. In section A, option 3 "¿Ha olvidado tomar alguno de sus medicamentos?", was better evaluated, presenting maximum CVI values and percentage of agreement. In section B, option 2 had better CVI and percent agreement rates, and will be included in SCHFI 6.2 for Spanish/Uruguay.

Table 2 – Judges' second assessment: percentage of agreement and Content Validity Index (CVI). Rio de Janeiro, RJ, Brazil, 2019 (continues)

ITEM	Number of Representative Ratings (4) (n=32)	Percentage of agreement % (representative/4)	IVC
SEÇÃO A			
OPCIÓN 1.: ¿Recuerda tomar los medicamentos como se lo indicó el médico?	28	88	0,88
OPCIÓN 2.: ¿Olvida tomar alguno de sus medicamentos?	24	88	1
OPCIÓN 3.: ¿Ha olvidado tomar alguno de sus medicamentos?	32	100	1
SEÇÃO B			

OPÇÃO 1			
<i>¿Cuánto demoró en darse cuenta que eso era un síntoma de insuficiencia cardíaca?</i>	28	88	1
<i>No me di cuenta</i>	29	91	1
<i>Demoré mucho</i>	27	84	1
<i>Demoré bastante</i>	24	75	0,94
<i>Demore un poco</i>	20	63	0,84
<i>Nada</i>	27	84	0,97
Médias da opção 1	155	81	0,96
OPÇÃO 2			
<i>¿Qué tan rápido se dio cuenta que eso era un síntoma de insuficiencia cardíaca?</i>	32	100	1
<i>No me di cuenta</i>	32	100	1
<i>Bastante tarde</i>	24	75	0,91
<i>Un poco tarde</i>	27	84	0,97
<i>Enseguida</i>	31	97	1
<i>De inmediato</i>	32	100	1
Média do IVC da opção 2	178	93	0,98

Pre-test

For the pre-test, 52 patients answered the self-care questionnaire version 6.2 for Spanish/Uruguay, as displayed in Table 3. It is noteworthy that self-care management is only evaluated in the patients who presented shortness of breath and/or lower limb edema in the last 30 days, thus, in this item the sample was restricted to 21 patients.

Table 3 – Sociodemographic, clinical and self-care characterization (n=52). Rio de Janeiro, RJ, Brazil, 2019 (continues)

Variables	n=52
Age, years old*	64±13
Male gender†	30(57.7)
Weight, kg*	87.7±23.4
Living with the family†	31(59.6)
New York Heart Association Functional Class†	
I	18(34.6)
II	20(38.4)
III	7(13.5)
No functional class rating	7(13.5)
Self-care	

Maintenance*	63.13±15.15
Handling*	44.52±23.01
Confidence*	72.27±24.29

*Mean/Standard Deviation; †Simple Frequency (percentage)

Internal consistency

The Cronbach's alpha test values from other translation/cross-cultural adaptation studies conducted with SCHFI were used to analyze the results obtained in this study, as shown in Table 4.

Table 4 – Comparison between the internal consistency analyses of several languages of the SCHFI 6.2 scale, using the Cronbach's alpha test values. Rio de Janeiro, RJ, Brazil, 2019

Country	Maintenance	Handling	Trust	Total
Uruguay	0.55	0.93	0.91	0.78
English (6.2/2009) ⁽²⁷⁾	0.55	0.59	0.82	_*
English (2004) ⁽²⁹⁾	0.56	0.70	0.82	_*
Brazil ⁽¹⁶⁾	0.43	0.76	0.94	0.77
China ⁽¹³⁾	_*	_*	_*	0.73
Taiwan ⁽¹⁴⁾	0.63	0.71	0.86	-
Italian ⁽¹⁵⁾	0.56	0.70	0.82	0.76
Portugal ⁽¹⁷⁾	0.64	0.57	0.84	_*
Japan ⁽¹⁸⁾	0.68	0.58	0.87	_*

*Values not identified in the published studies.

DISCUSSION

This was the first study developed for the translation and adaptation of a scale to assess self-care in patients with heart failure for use in Uruguay. The patients included in the pre-test had similar sociodemographic characteristics from other studies of elaboration, translation and adaptation of SCHFI 6.2.^(13-18,27,28)

The study showed a high degree of agreement among the experts, expressively indicating which six items needed restructuring. In one case, these items were linked to the act of 'remembering' or 'not remembering' and in the other item, it was related to an assessment of a subjective act such as the perception of symptoms. In this sense, we believe that the experience of the judges in the management of patients with HF was of great influence, besides the knowledge of the linguistic way that patients use to refer to symptoms and self-care habits.

Specifically in the answer items in section B, it is noted that the judges' suggestions led to the modification of responses, which would imply a concept of agility (*no muy rápido*,

um poco rápido, rápido, muy rápido) in relation to the response that allows the patient to manage self-care with a tangible temporal conception (*bastante tarde, um poco tarde, enseguida, de inmediato*).

Regarding medication intake,⁽¹⁰⁾ an idiosyncratic issue of the Uruguayan population is likely to give more weight to the negative 'forget' event than to the positive 'remember' one; however, this information is difficult to verify in this study. In any case, the important thing was the high level of agreement among the judges about the need to modify this item, as well as the acceptance of its reformulation.

Adherence to drug treatment, participation in consultations and low-salt diet consumption,^(4-8,10) were the items with the best score among the patients. Adherence to the hyposodium diet is usually a measure of low adherence self-care;⁽⁷⁾ however, the Uruguayan Ministry of Health has a program to encourage the reduction of salt consumption, which is strongly advocated and applied in the heart failure clinic in which this study was conducted, and with that already has positive results.

Self-care management is directly related to autonomous actions, in direct relation to the previous orientation of the health team; it begins with symptom interpretation (measured by Item 11), reducing dietary salt (Item 12) and reducing fluid intake.⁽¹⁵⁾

There is controversy in the literature about the reference values for Cronbach's alpha test, but it is possible to question why all studies did not have higher coefficients. SCHFI is not a one-dimensional scale, a clear example of this is that on the self-care maintenance scale, we have more than one self-care dimension represented, such as following a proper diet, performing physical activities, taking medications correctly. Items are homogeneous within each care measure (diet, medication, attendance at appointments); however, on the scale as a whole, they may be heterogeneously.⁽²⁹⁾

It is noticed that in the self-care maintenance scale, the Cronbach's alpha test was similar in all studies cited.^(13-18,27-28) In the management scale, this study displayed rates higher than other studies, which may be related to the little divergence among the answers found. This may be related to the style of the service and the way they conduct disease management guidelines.

The study is limited by the fact that it was conducted in a single center which, although being the reference center in HF of the country, receiving patients from different regions, does not represent the population as a whole.

FINAL CONSIDERATIONS

This study translated and adapted SCHFI 6.2 for self-care assessment of patients with heart failure in Uruguay, adopting the name "Heart Failure Self-Care Index (Uruguay)". The translated and adapted version displayed satisfactory internal consistency, similar to other cross-cultural translation/adaptation studies carried out in several countries.

The translation and adaptation of this instrument for use in Uruguay is essential from the clinical and academic points of view, since the presence of adapted scales provides more accurate patient evaluation and favors the development of multi-center studies, thus allowing the same evaluation measures of outcomes to be used. This instrument is available for free for download in: <http://self-care-measures.com/project/patient-version-schfi-uruguay/>.

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