

Francisco Contreras<sup>1,2</sup> 

Nury Gonzalez<sup>1</sup> 

Martín Vivero<sup>3</sup> 

Marco Guzman<sup>4</sup> 

# Cross-cultural adaptation of the Chilean Version of the Voice-Related Quality of Life (V-RQOL)

## *Equivalencia cultural de la Versión Chilena del Voice-Related Quality of Life (V-RQOL)*

### Keywords

Voice  
Self-assessment  
Cross-cultural  
Questionnaires  
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### Descriptores

Voz  
Autoevaluación  
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Calidad de Vida  
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V-RQOL

### ABSTRACT

**Purpose:** To achieve a cross-cultural equivalence of the Chilean version of the V-RQOL protocol, through its cultural and linguistic adaptation. **Methods:** First, two bilingual speech therapists made a translation of the V-RQOL into Spanish. Second, a back-translation to English was performed by a speech therapist who did not participate in the previous stages. Then, a comparison between the original and the back-translation versions of the test was conducted. The existing discrepancies were modified by a committee of five speech therapists, translating the name of the Voice-Related Quality of Life (V-RQOL) instrument into Spanish as *Medición de la Calidad de Vida en Relación a la Voz* (MCV-RV), with 10 questions and 5 possible answers for each. In order to analyze cultural equivalence, the protocol was applied to 15 individuals with voice disorders. For each question, a 'Not applicable' option was added to the possible answers to determine which questions were not clearly understood by the individuals being tested. Two of the assessed individuals had difficulties in answering a distinct question, though only one of these two questions was modified. The final version of MCV-RV protocol was applied to five individuals with voice disorders who had no difficulty understanding the questions properly. **Results:** The MCV-RV reflects the original English version, both in the number and types of questions (including physical functioning and the social-emotional aspects). **Conclusion:** A cross-cultural equivalence of the V-RQOL was achieved, thereby creating an adapted Chilean-Spanish version (MCV-RV). The validation of the MCV-RV protocol for Chilean Spanish is currently in progress.

### RESUMEN

**Objetivo:** Lograr la equivalencia cultural de la versión Chilena del Protocolo V-RQOL, a través de su adaptación cultural y lingüística. **Método:** Primero, dos Fonoaudiólogos bilingües realizaron una traducción de V-RQOL al español. En segundo lugar, una Fonoaudióloga que no participó en las etapas previas, realizó una retrotraducción al inglés. Luego, se efectuó una comparación entre la versión original y la versión retrotraducida. Las discrepancias fueron modificadas por un comité de cinco Fonoaudiólogos, traduciendo el nombre al español como "Medición de la Calidad de Vida en Relación a la Voz" (MCV-RV) " , con 10 preguntas y 5 opciones de respuesta. Para la equivalencia cultural, se aplicó el protocolo a 15 personas con trastornos de voz. Para cada pregunta, se agregó la opción "No aplicable" entre las alternativas de respuesta con el fin de identificar preguntas incomprendidas o inapropiadas por la población. Dos de los sujetos evaluados tuvieron dificultad para responder dos preguntas diferentes, así que fue modificada solo una de ellas. La versión final del protocolo MCV-RV se aplicó a cinco personas con patología vocal, sin dificultades para comprender las preguntas adecuadamente. **Resultados:** La MCV-RV refleja la versión original en inglés, tanto en número como en tipos de preguntas (incluido el funcionamiento físico y aspectos socioemocionales). **Conclusiones:** Existe adaptación cultural de V-RQOL para el español Chileno (MCV-RV). La validación del MCV-RV para el español de Chile está actualmente en curso.

### Correspondence address:

Francisco Contreras  
Camino La Troya, s/n esq. El  
Convento, San Felipe, Chile  
E-mail: francisco.contreras@uv.cl

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<sup>1</sup>Universidad de Valparaíso, San Felipe, Chile

<sup>2</sup>Universidad Santo Tomás, Santiago, Chile.

<sup>3</sup>Hospital del Salvador, Santiago, Chile

<sup>4</sup>Universidad de los Andes, Chile. Santiago, Chile.

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## INTRODUCTION

The World Health Organization posits that quality of life must be treated from a holistic approach<sup>(1)</sup>. This vision has led to the rise of numerous self-assessment mechanisms, some of which measure the impact of voice disorders on the quality of life<sup>(2,3)</sup>. Several studies have suggested that dysphonia, or hoarseness of voice, disrupts quality of life through the use of translated and cross-culturally adapted self-assessment instruments based on the guidelines of the Scientific Advisory Committee (SAC) of Medical Outcomes Trust<sup>(4,5)</sup>. A special emphasis has been placed on the importance of standardizing the development and validation of quality-of-life self-assessment protocols; initially in the original language associated with the population under study, and subsequently in other languages<sup>(6)</sup>.

In 1999, Hogikyan and Serhuraman created the Voice-Related Quality of Life (V-RQOL) questionnaire, which became the first instrument that acknowledged and measured the relationship between voice and quality of life<sup>(7)</sup>. V-RQOL is a statistically-robust, self-assessment voice protocol that provides valuable information<sup>(7)</sup>. At the same time, it is useful in clinical settings, due to the low number of questions and an estimated time of only five minutes for completion<sup>(1,3)</sup>. Thus, this protocol has had a highly successful application in several clinical studies examining a wide range of voice disorders and treatments<sup>(3,8)</sup>.

The original version of this instrument was created in English and applied to the English-speaking population<sup>(9)</sup>. Through international collaborations, this protocol has been adapted and validated for other languages<sup>(5,9)</sup>. The cross-cultural and linguistic adaptation is the first goal to achieve in the present study, leading to the creation of the cross-culturally equivalent Chilean version of the V-RQOL.

## METHODS

The study was approved by the Committee of Ethics in Research at the Santo Tomás University – CEC UST N° 49/2017 and N° 191.16. All the subjects signed the informed consent form.

The first step was the translation of the V-RQOL<sup>(7)</sup> protocol into Chilean Spanish by two bilingual Chilean speech therapists specializing in the voice field (T1 = English-to-Spanish translator number 1; T2 = English-to-Spanish translator number 2). Secondly, the two Spanish translations were analyzed by a committee of five speech therapists that are fluent in English and work in the voice field, obtaining a single version (SV = single version T1 + T2). Thirdly, this version was translated back to English by a third bilingual Chilean speech therapist who had no knowledge of the prior stages. Thereafter, the committee compared the original version along with the translated and back-translated versions. With no further modifications or discrepancies among the committee members, a protocol titled '*Medición de la Calidad de Vida en Relación a la Voz* (MCV-RV) was created.

Finally, the cross-culturally equivalent version was applied to 15 individuals over 18 years of age, with diverse voice disorders diagnosed by ENT doctors. The MCV-RV protocol contains 10 questions with the following answer options: 1 = *Ningún problema*/ None, not a problem, 2 = *Es un problema pequeño*/ A small amount, 3 = *Es un problema moderado (mediano)*/ A moderate (medium) amount, 4 = *Es un gran problema*/ A lot, 5 = *El problema es 'tan grande como podría ser'*/ (The problem is as 'bad as it can be'). In order to detect confusing or inappropriate questions for the Chilean population, a '*No aplicable*' (Not applicable) option was incorporated.

The applied exclusion criteria were: lack of understanding, illiteracy, and neurological, cognitive, and/or psychiatric disorders that could make the application of the protocol difficult.

## RESULTS

The number of questions is identical to the original version. The questions are organized into two categories: 1.- "Physical functioning" with 6 questions (numbers 1, 2, 3, 6, 7 and 9) i.e. 2- '*Se me acaba el aire y necesito respirar muchas veces cuando hablo*' (I run out of air and need to take frequent breaths when talking); and 4 questions on Social-emotional aspects (numbers 4, 5, 8 and 10) - i.e. 8 - '*Evito los eventos sociales (debido a mi problema de voz)*' (I avoid social events (because of my voice problem). Nevertheless, as a factor analysis is not performed, only the total score is examined and the category sub-scores are excluded.

During the protocol application, 3 out of 15 subjects chose the '*No aplicable*' option in different questions: 3 - '*A veces no sé qué voz aparecerá cuando comienzo a hablar*' (Sometimes I don't know what kind of voice will appear when I start speaking); 6 - '*Tengo dificultades cuando hablo por teléfono (debido a mi problema de voz)*' (I experience difficulties when I talk on the phone (because of my voice problem)), and 8 - '*Evito los eventos sociales (debido a mi problema de voz)*' (I avoid social events (because of my voice problem). The committee decided that the only question which required changes was question 3 - '*A veces no sé cómo se escuchará mi voz cuando comienzo a hablar*' (Sometimes I don't know what how my voice will be heard when I start speaking), replacing the verb '*aparecer*' (seem) with '*escucharse*' (be heard). The latter was found to be more explicit and therefore easier to understand. With respect to the option: '*tan malo como podría ser*' (as bad as could be), one subject thought that '*malo*' (bad) was too subjective. Therefore, the committee replaced it by '*severo*' (severe). Three new additional subjects with voice disorders were selected to answer the modified version of the MCV-RV protocol after the final adjustments, with none of them presenting any difficulty.

A summary of the results obtained in the cross-cultural adaptation of the protocol can be found in Table 1. The modified version MCV-RV in Chilean Spanish is attached as Annex 1.

**Table 1.** Process of translation and cultural adaptation of Voice-Related Quality of Life (V-RQOL)<sup>®</sup> for Chilean Spanish

Questions	Original versión in English(6)	Chilean Spanish Translation	SV to English back translation	Speech-language pathologist committee: semantic and language equivalence	Speech-language pathologist committee: cultural and linguistic equivalence
1	<i>I have trouble speaking loudly or being heard in noisy situations.</i>	T1: Tengo dificultades para hablar fuerte o ser escuchado en ambientes ruidosos T2: Presento dificultad para hablar fuerte o para ser escuchado en situaciones de ruido ambiente	I experience difficulties to speak loudly or to be heard in noisy environments	Tengo dificultades para hablar fuerte o ser escuchado en ambientes ruidosos	Tengo dificultades para hablar fuerte o ser escuchado en ambientes ruidosos
2	<i>I run out of air and need to take frequent breaths when talking.</i>	T1: Se me acaba el aire y tengo que estar tomando aire a cada rato mientras hablo T2: Se me acaba el aire y necesito respirar muchas veces cuando hablo	I run out of air and I need to breathe many times when I speak	Se me acaba el aire y necesito respirar muchas veces cuando hablo	Se me acaba el aire y necesito respirar muchas veces cuando hablo
3	<i>I sometimes do not know what will come out when I begin speaking.</i>	T1: A veces no sé qué voz aparecerá cuando comienzo a hablar T2: En ocasiones siento que no sé qué voz saldrá cuando comienzo a hablar	Sometimes i don't know what kind of voice will appear when i start speaking	A veces no sé qué voz aparecerá cuando comienzo a hablar	A veces no sé cómo se escuchará mi voz cuando comienzo a hablar
4	<i>I am sometimes anxious or frustrated (because of my voice).</i>	T1: A veces me siento ansioso(a) o frustrado(a) (debido a mi voz) T2: En ocasiones me pongo ansioso o me frustro (debido a mi problema de voz) VC: A veces me siento ansioso(a) o frustrado(a) (debido a mi problema de voz)	Sometimes i feel anxious or frustrated (because of my voice problem)	A veces me siento ansioso(a) o frustrado(a) (debido a mi problema de voz)	A veces me siento ansioso(a) o frustrado(a) (debido a mi problema de voz)
5	<i>I sometimes get depressed (because of my voice).</i>	T1: A veces me deprimó (debido a mi voz) T2: En ocasiones me deprimó (debido a mi problema de voz) VC: A veces me deprimó (debido a mi problema de voz)	Sometimes i get depressed (because of my voice problem)	A veces me deprimó (debido a mi problema de voz)	A veces me deprimó (debido a mi problema de voz)
6	<i>I have trouble using the telephone (because of my voice).</i>	T1: Tengo dificultades hablando por teléfono (debido a mi voz) T2: Presento dificultad para usar el teléfono (debido a mi problema de voz) VC: Tengo dificultades hablando por teléfono (debido a mi problema de voz)	I experience difficulties when i talk on the phone (because of my voice problem)	Tengo dificultades hablando por teléfono (debido a mi problema de voz)	Tengo dificultades hablando por teléfono (debido a mi problema de voz)
7	<i>I have trouble doing my job or practicing my profession (because of my voice).</i>	T1: Tengo dificultades para hacer mi trabajo o ejercer mi profesión (debido a mi voz) T2: Presento dificultad para llevar a cabo mi trabajo o para practicar mi profesión (debido a mi problema de voz) VC: Tengo dificultades mientras realizo mi trabajo o ejerzo mi profesión (debido a mi problema de voz)	I experience difficulties while i do my job or exercise my profession (due to my voice problem)	Tengo dificultades mientras realizo mi trabajo o ejerzo mi profesión (debido a mi problema de voz)	Tengo dificultades mientras realizo mi trabajo o ejerzo mi profesión (debido a mi problema de voz)
8	<i>I avoid going out socially (because of my voice).</i>	T1: Evito los encuentros sociales (debido a mi voz) T2: Evito los eventos sociales (debido a mi problema de voz) VC: Evito los eventos sociales (debido a mi problema de voz)	I avoid social events (because of my voice problem)	Evito los eventos sociales (debido a mi problema de voz)	Evito los eventos sociales (debido a mi problema de voz)

**Caption:** T1 = English-Spanish translator number 1; T2 = English-Spanish translator number 2; SV = Spanish version of the compilation of translations of T1 + T2

**Table 1.** Continued...

Questions	Original versión in English(6)	Chilean Spanish Translation	SV to English back translation	Speech-language pathologist committee: semantic and language equivalence	Speech-language pathologist committee: cultural and linguistic equivalence
9	<i>I have to repeat myself to be understood.</i>	T1: Necesito repetir lo que digo para que me entiendan T2: Tengo que repetir lo que digo para que las personas me entiendan	I have to repeat what I say so that people can understand me	Tengo que repetir lo que digo para que las personas me entiendan	Tengo que repetir lo que digo para que las personas me entiendan
10	<i>I have become less outgoing (because of my voice).</i>	T1: Me he vuelto menos sociable (debido a mi voz) T2: Me he vuelto menos extrovertido (debido a mi problema de voz) VC: Me he vuelto menos sociable (debido a mi problema de voz)	I have become less sociable (because of my voice problem)	Me he vuelto menos sociable (debido a mi problema de voz)	Me he vuelto menos sociable (debido a mi problema de voz)

**Caption:** T1 = English-Spanish translator number 1; T2 = English-Spanish translator number 2; SV = Spanish version of the compilation of translations of T1 + T2

## DISCUSSION

According to the World Health Organization (WHO), the care of the quality of life must be based on a multidimensional perspective in order to include physical, mental, and social wellbeing, not just the absence of disease<sup>(10)</sup>. Thus, measurements of health and the effects of medical assistance have been generated to study not only the prevalence and severity of disease, but also to consider the perception of wellbeing by using tools created and validated to provide information about the quality of life related to health such as self-assessment protocols<sup>(10)</sup>. Until the last decade, quality of life was a concern of medicine and psychology, therefore, a large number of the protocols and scientific evidence were from these disciplines. However, the study of quality of life in people with voice disorders had not been fully considered<sup>(11)</sup>.

The inclusion of self-assessment protocols in voice related to quality of life in people with voice disorders started in the 1990s<sup>(2,7)</sup>. Its validation and expansion to other languages and cultures became accessible to everyone during the following decade, with Brazil, where the validation of the Voice-Related Quality of Life (V-RQOL) was translated into Portuguese, as an example of this<sup>(12)</sup>. However, the same process in Spanish-speaking countries is still under development. One example is the ‘Escala de Sintomas Vocales – ESV’ (Voice Symptom Scale) protocol, adapted to Chilean Spanish. This protocol related to vocal symptoms and quality of life. Another case is the cross-cultural adaptation of the Chilean Spanish version of the Modern Singing Handicap Index: MSHI<sup>(13,14)</sup>. In turn, V-RQOL is associated with the quality of life and the use of the voice in different contexts<sup>(1,7)</sup>. V-RQOL adaptation and validation have been performed in several countries, making it one of the most validated self-assessment voice protocols for clinical use<sup>(8)</sup>.

As of yet, this evaluation instrument has not been adapted nor validated into Spanish.

The MCV-RV adaptation process into Chilean Spanish was guided by the international principles of the Scientific Advisory Committee of Medical Outcome Trust, in order to obtain reliable empirical results to develop self-assessment instruments for the voice<sup>(5)</sup>. Self-assessment protocols help to evidence the adherence to voice disorders treatment<sup>(13,15)</sup>. Validation of this kind of protocol is required to achieve scientific rigor, especially with the MCV-RV protocol, a reliable and easy-to-apply tool in clinical settings<sup>(1,6)</sup>.

## CONCLUSION

Based on international criteria by the SAC and recommendations for the creation and validation of instruments in several studies, a cross-cultural and linguistic adaptation and validation<sup>(5)</sup>. The protocol titled: *Medición de la Calidad de Vida en Relación a la Voz - MCV-RV* from its original English version: *Voice-Related Quality of Life – V-RQOL* has been achieved. Psychometric properties involved in MCV-RV validation are currently in progress.

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### Author contributions

*FC* was responsible for conducting research, data collecting, tabulating data analysis and drafting the text; *NG* was responsible for conducting research, data analysis and review of text; *MV* was responsible for data collection and drafting of the text; *MG* was responsible for conducting research, data collecting and drafting the text.



**Annex A.** Translated and culturally adapted version of the Voice-Related Quality of Life (V-RQOL)<sup>(7)</sup>, called Medición de la Calidad de Vida en Relación a la voz (MCV-RV)

**MEDICIÓN DE LA CALIDAD DE VIDA EN RELACIÓN A LA VOZ (MCV-RV)**

Nombre: \_\_\_\_\_ Fecha \_\_\_\_\_  
Edad \_\_\_\_\_ Ocupación \_\_\_\_\_ Diag. ORL \_\_\_\_\_

Estamos intentando aprender más sobre cómo un problema de voz puede interferir en sus actividades de la vida diaria. En este documento, usted encontrará un listado de problemas relacionados con la voz. Por favor, responda todas las preguntas basándose en cómo ha sido su voz durante las últimas dos semanas. No existen respuestas correctas o incorrectas.

Considerando qué tan grave es el problema cuando se presenta, y con cuánta frecuencia ocurre, por favor califique qué tan “mala” es cada una de las situaciones mencionadas a continuación (es decir, cuál es la magnitud del problema que usted tiene). Utilice la siguiente escala para calificar la magnitud del problema.

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**Opciones de respuesta**

- 1 = Ningún problema
  - 2 = Es un problema pequeño
  - 3 = Es un problema moderado (mediano)
  - 4 = Es un gran problema
  - 5 = El problema es “tan severo como podría ser”
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<b>Debido a mi voz:</b>	<b>¿Debido a esto es un problema?</b>
1- Tengo dificultades para hablar fuerte o ser escuchado en ambientes ruidosos	1 2 3 4 5
2- Se me acaba el aire y necesito respirar muchas veces cuando hablo	1 2 3 4 5
3- A veces no sé cómo se escuchará mi voz cuando comienzo a hablar	1 2 3 4 5
4- A veces me siento ansioso(a) o frustrado(a) (debido a mi problema de voz)	1 2 3 4 5
5- A veces me deprimó (debido a mi problema de voz)	1 2 3 4 5
6- Tengo dificultades cuando hablo por teléfono (debido a mi problema de voz)	1 2 3 4 5
7- Tengo dificultades mientras realizo mi trabajo o ejerzo mi profesión (debido a mi problema de voz)	1 2 3 4 5
8- Evito los eventos sociales (debido a mi problema de voz)	1 2 3 4 5
9- Tengo que repetir lo que digo para que las personas me entiendan	1 2 3 4 5
10- Me he vuelto menos sociable (debido a mi problema de voz)	1 2 3 4 5

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