

# DESIGN OF A METHODOLOGY FOR CULTURAL TRANSLATION AND ADAPTATION OF THE ADHERENCE TO REFILLS AND MEDICATIONS SCALE (ARMS)

J. González-Bueno <sup>1</sup>, E. Calvo-Cidoncha <sup>2</sup>, A. Rodríguez-Pérez <sup>3</sup>, M. D. Toscano-Guzmán <sup>3</sup>, R. Cantudo-Cuenca <sup>4</sup>, B. Santos-Ramos <sup>4</sup>.

<sup>1</sup> Pharmacy. Hospital General de Vic (Barcelona). <sup>2</sup> Pharmacy. Hospital Clinic I Provincial de Barcelona (Barcelona).

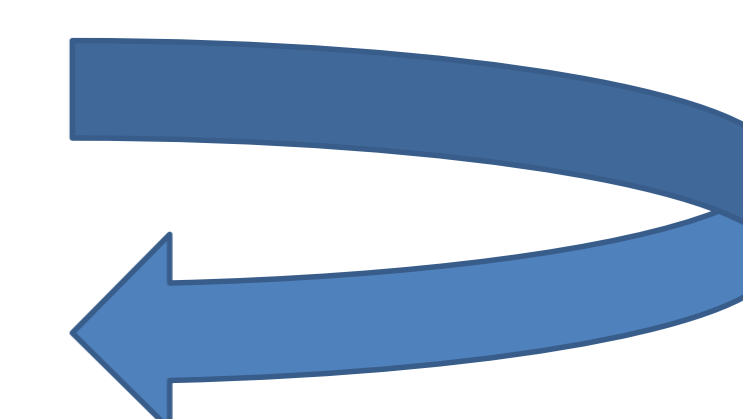
<sup>3</sup> Pharmacy. Hospital Virgen del Rocío (Sevilla). <sup>4</sup> Pharmacy. Área de Gestión Sanitaria Sur de Sevilla (Sevilla).

## Background

### Development and Evaluation of the Adherence to Refills and Medications Scale (ARMS) among Low-Literacy Patients with Chronic Disease

Sunil Kripalani, MD, MSc,<sup>1</sup> Jessica Risser, MD, MPH,<sup>2</sup> Margaret E. Gatti, MPH,<sup>3</sup> Terry A. Jacobson, MD<sup>4</sup>

The Adherence to Refill and Medications Scale (ARMS) is a tool for the measure of adherence validated in an English-speaking setting. The application of this scale into a different clinical practice setting requires a cross-culturally translation and adaptation process.



## Objective

To design a methodology to translate and adapt the ARMS scale to a non English-speaking culture ensuring cross-cultural equivalence

## Material and Methods

❖ A symmetrical translation approach was selected for ensuring a semantic, conceptual and content equivalence between the source language (SL) and the target language (TL).

❖ This approach was structured on three steps:

1) Forward translation

2) Blind-back translation

3) Synthesis-adaptation

Translators involved in step 1 and 2 had to rate (0-10 scale) the difficulty they had found assuring cross-culturally equivalence of every translated item. Difficulty rating is expressed as mean and standard deviation. Correlation analysis between the scores of each translator was performed using the Pearson's correlation coefficient.

## Results

### 1) Forward translation

The 12-item ARMS scale (SL) was forward translated to the TL by an independent bilingual and bicultural translator whose mother language was the TL.

### 2) Blind-back translation

The preliminary translated version was back translated into the SL in a blinded fashion by other independent bilingual and bicultural translator whose mother language was the SL.

Both translators were health-care professionals knowledgeable about compliance terminology. The score for translation difficulty was 2.7 (SD: 1.5) in both cases. A non-significant correlation between translators was observed: 0,475 showing a specific difficulty for each language and translator.

### 3) Synthesis-adaptation

Items of the back-translation were compared with the original scale regarding format, wording, grammatical structure, similarity in meaning, and relevance. This step was performed by a third independent bilingual and bicultural translator whose mother language was the TL and by a methodologist & health-care professional. The translated scale was modified by consensus in case of discrepancies between the original and the back-translated scale.

## Conclusion

The proposed methodology might be robust enough to provide reliable and cross-culturally translated tools able to be applied into clinical practice.

