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Research Article

Self-Efficacy for Appropriate Medication Use Scale (SEAMS): Translation and Cultural Adaptation in Greece

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Abstract

Recently, there is a huge interest in the use of the Self-Efficacy for Appropriate Medication Use Scale (SEAMS) to evaluate perceived medication adherence across cultures. The aim of the present study was the translation as well as the cultural adaptation of the Greek version of the SEAMS. In this study, 10 patients diagnosed with end-stage kidney disease (ESKD) undergoing hemodialysis participated. The whole process included the steps of translation - back translation and semantic evaluation. The scale indicated very satisfactory acceptance of the translated version of the instrument, which participants considered easy to understand. After completing the process of the translation as well as the cultural adaptation in Greece, the SEAMS will be available to Greek researchers in order to measure self-efficacy for appropriate medication use as well as to compare results from Greece to those coming from other cultures, where the tool has already been validated.

Keywords: translation, cultural adaptation, medication, self-efficacy, adherence, hemodialysis

Abbreviations: SEAMS: Self-Efficacy for Appropriate Medication Use Scale, ESKD: end-stage kidney disease

1. Introduction

Adherence is defined as “the degree to which a person's behavior regarding medications, diet, or required lifestyle changes coincides with the medical instructions". The rate of successful adherence in pharmacotherapy ranges from 15–93% [1]. The rate of adherence is a function of the subject's personality, condition, medication, patient-doctor relationship, and other socioeconomic parameters. For the therapeutic to have the desired benefits of treatment, it is essential that the patients follow the instructions given to them faithfully. Otherwise, even the best drug and treatment may not produce the expected results [1].

Patient adherence, as can be easily seen, is the cornerstone of any successful treatment. But in reality, the rates of adherence with the treatment extracted by the surveys are very low. This has resulted in a need for more interventions by experts at all levels of the health system. The negative effects don't stop there, but they also have to do with the patient himself, as adherence increases the risk of mortality. Studies show that there is room for improvement in adherence through education, the use of innovative technologies, plus decision, avoidance of polypharmacy, etc. Of course, the above interventions are not all suitable for any disease or environment, but they should be personalized so that they are successful [2].

Globally, 60% of deaths are caused by chronic disease. The WHO typically states that non-adherence in chronic diseases such as diabetes mellitus and hypertension is very common. It also emphasizes the negative consequences, which are reduction of the therapeutic effect of the drugs, relapse or worsening of the disease, the loss of resources such as time and money, and burnout of health professionals and caregivers [3].

The main adherence factors are age, educational level, understanding the advantage of a perfect treatment, its complexity medication, the cost of the treatment but also his possible biases patient about the disease and/or treatment. Another crucial adherence factor is the quality of the relationship with the medical staff. A potential miscommunication between doctor and patient affects extremely negatively its adherence. Finally, some side effects that may occur during treatment, such as weight gain, episodes of hypoglycaemia, or hypotension affect in turn the degree of adherence [4, 5].

Lately, there is a huge interest in the use of the Self-Efficacy for Appropriate Medication Use Scale (SEAMS) to evaluate perceived medication adherence across cultures [6]. The development of the SEAMS was based on Bandura's social cognitive theory. Risser et al. [6] developed this instrument for patients with chronic disease. In particular, a multidisciplinary team of specialists in medication adherence developed the SEAMS and tested its psychometric properties (validity and reliability) in 436 patients with coronary artery disease and other comorbidities. Patients were asked about the level of confidence they had that they could take their medications correctly (unconfident = 1, fairly confident = 2, and extremely confident = 3). The lowest possible score of the 16-item questionnaire is 16 and the highest possible score is 48. The high scores indicate that the patients are highly confident about taking medication accurately. Internal consistency was tested with Cronbach's alpha (0.89), and the test-retest showed correlations ranging from 0.7–0.9. Validity was assessed by factor analysis [6].

The present research aimed to translate and culturally adapt the SEAMS into the Greek language in a sample of patients diagnosed with end-stage kidney disease (ESKD) undergoing hemodialysis. ESKD is a serious chronic disease that may affect several dimensions of individuals' quality of life, such as physical health, psychological health, social relations as well as the environment [7]. Further, there is little evidence with regard to medication adherence among these patients in Greece.

2. Methods

The present methodological study is related to the translation and cultural adaptation of a medication adherence instrument for chronic disease patients in Greece.

2.1 Data collection

A sample of 10 patients diagnosed with ESKD undergoing hemodialysis was recruited from a General Hospital in the broader area of Athens. Selection criteria included:

1. > 18 years of age
2. Ability to communicate in Greek
3. Diagnosed with ESKD undergoing hemodialysis
4. Satisfying level of perceived ability and cooperation

The rate of response reached 100%. Consequently, the total sample included all patients with a mean age of 65.2 years ± 8.31. Participants were Greek adults having signed a consent form for participation. All subjects had been informed of their rights to refuse or discontinue participation in the study according to the ethical standards of the Helsinki Declaration. Ethical permission for the study was obtained from the scientific committee of the participating hospital **(Table 1)**.

	ESKD patients N = 10
Age (M ± SD)	**(65.2 ± 8.31)**
Gender	
Male	7
Female	3
Total	10
Marital status	
Single	0
Married	7
Divorced	0
Widowed	3
Total	10
Education	
Elementary	1
Secondary	6
University	3
Total	10
Length of hemodialysis in years (M ± SD)	**(6.31 ± 5.37)**

Table 1: Characteristics of the sample.

2.2 Translation and back translation of the SEAMS

The SEAMS version was translated from the source language (English) to the target language (Greek). The translation was completed as stated by the guidelines for adapting instruments in multiple languages and cultures [8]. Translators who were conversant with both the source and target languages, and had skills in cross-cultural adaptation of instruments, made two independent forward translations and two independent backward translations. The final version was independently reviewed and translated by a bilingual health

psychologist without previously seeing the original SEAMS. The back-translated version had very close concordance with the original SEAMS, as verified by a professional linguist fluent in both the English and Greek languages. A health scientist conversant with both languages carried out the final step of smoothing out the language. This involved editing the target language version of the instrument in a consistent writing style. This helped to ensure that patients could easily understand the modified version of the SEAMS. A social expert reviewed the final instrument to check for omissions.

2.3 Semantic validation of the SEAMS

Following, semantic validation took place, which assists to verify the understanding of existing SEAMS items by interviewing the participants. This stage aimed to recognize problems that are related to the research subjects' acceptance and understanding of the terms. For this stage of the cultural adaptation process, all 10 ESKD patients answered the SEAMS as well as the General Impression Instrument.

3. Results

As already mentioned, 10 ESKD patients participated in the semantic validation stage without any refusals. The aim of this study phase was to recognize potential difficulties to comprehend the instrument's phrases and answer categories, with a view to adjusting terms for adaptation to the Greek culture if necessary. Consequently, an interview took place in which patients, who agreed to participate in the study after receiving information, signed two copies of the Informed Consent Term (ICT) and answered the above-mentioned forms. The analysis of responses to the General Impression instrument [9] indicated that, in general, the patients accepted satisfactorily the SEAMS and found it easy to understand. In total, 95.0% of the patients evaluated the tool as very good, and items were found relevant, easy to understand, and with appropriate alternative answer categories for the chronic condition under analysis. The results are displayed in **Table 2**.

Items from the General Impression Instrument	Alternative answers	Answer % ESKD patients (N = 10)
What did you think about our questionnaire in general?	Very good	95.0
	Good	5.0
Are questions understandable?	Easy to understand	95.0
	Sometimes difficult	5.0
About the answer categories? Did you have any difficulties?	No difficulty	100.0
	Some difficulties	0.0
Are the questions important for your health condition?	Very relevant	100.0
	Sometimes relevant	0.0

Table 2: Assessment results for the General Impression part of the semantic validation phase of the SEAMS questionnaire.

4. Discussion

ESKD is a chronic disease that can have serious effects on the quality of life (QoL) of the patients, and in particular on their social, economic, and psychological well-being. Consequently, for these patients, there is an increased interest in QoL and medication adherence issues in the context of their treatment [10].

There are few medication adherence instruments, and currently, there is no specific instrument for use in Greece. Therefore, in the present study, internationally adopted procedures were followed for the cultural adaptation and validation of the SEAMS to measure subjective constructs.

In the context of the cultural adaptation process of the SEAMS, ESKD patients participated answering the items of the instrument. As a result, 95.0% of them considered the questions easy to understand and the answer categories adequate, giving answers without any problems.

The current study allowed multidisciplinary cooperation involving psychologists, statisticians, physicians, and nurses. Their role was essential for the cultural adaptation process of this instrument which serves to assess a subjective health-related construct, such as medication adherence. As this instrument is related to chronic patients as well, diverse professionals' contributions permitted better knowledge of the several features involved.

A very significant limitation of the present paper is associated with the fact that the sample which was selected is very small due to the aim of the present study, which was to translate and culturally adapt the SEAMS. The next phase is the validation of the specific instrument, including larger populations, and the assessment, in this way, of its psychometric properties.

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