

## A Gentle Introduction to Cross-Cultural Adapting of Questionnaires in Medical Research

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#### Dear Editor,

Currently, there are various methods available for conducting research work, one of which involves using questionnaires. Designing a questionnaire is a challenging and time-consuming task. In addition to being knowledgeable in the relevant field, the questionnaire designer must also be familiar with principles of statistics, research methods, validation methods, and validation itself. The questionnaire can either be designed by the researcher or employ pre-existing questionnaires. In cases where a standardized questionnaire is used, it must be translated to ensure that the translated version retains the intended meaning, concept, and purpose of the original questionnaire. This translation process requires the implementation of a series of scientific steps.

Failure to do so may result in an inefficiency of the translated questionnaire compared to the original and impact its overall quality. Many questionnaires are used without proper consideration for correct translation processes and cultural adaptation. The initial step in translating the original questionnaire involves culturally aligning the meanings of sentences, ensuring that the psychometric qualities of the main questionnaire are maintained (1).

As a result, there is a strong emphasis on using standardized and validated research tools to evaluate the feedback (2). Moreover, culturally adjusting an instrument offers several benefits when compared to creating a new one, including cost and time reduction (3). Following the Guidelines for the Process of Cross-Cultural Adaptation of Self-Report Measures, we adhere to the following steps (4).

#### Cross cultural adaptation process

##### *Step 1: Prepare the questionnaire and get permission*

In order to use the questionnaire's external version, one must obtain permission from the original designer. To do this, one of the individuals responsible for the article must seek permission to utilize the questionnaire. Failing to obtain permission may lead to legal consequences for copyright infringement. Once the researcher has received permission from the original owner, they can proceed with preparing the scale for translation.

##### *Step 2: Translate the source language into target language (Forward step).*

To ensure the cultural adaptation of a questionnaire, the first step involves translating it with the assistance of a native speaker of the primary language of the target culture who also has

experience in questionnaire translation. Translators should have sufficient knowledge of the specific research terminology and tools used. There are different opinions on the number of translators required. According to Benumi et al. in 1996, two translators are necessary, while others suggest involving more than two translators in the initial stage (5). It is crucial for translators to have fluency in their native language and a thorough understanding of the terminology and purpose of the questionnaire. They should strive to accurately convey the core meaning, leaving minimal room for misinterpretation.

***Step 3: Check the compatibility of all translated versions and build a single version,***

In this step, the translated questionnaire undergoes a thorough review by a panel of bilingual experts. This process continues until a final version of the translated scale, free from any defects or ambiguity, is prepared. It is important to highlight that the translators, who are responsible for translating the questionnaires from the original language to the target language, do not have any involvement in this stage (5).

***Step 4: Translation from the target language to the English language (Backward step)***

At this stage, the questionnaire, which has already been translated into the target language, undergoes another round of translation by two bilingual translators. These translators are different from the ones who conducted the initial translation. During this stage, the wording should be kept simple, easily comprehensible, and devoid of any ambiguity. This ensures that the meaning and concept align with the main sentence (6).

***Step 5: Check the translation and fix its shortcomings and problems by Expert Panel***

At this stage, the questionnaire that has been translated from the source language to the target language is reviewed again so that the translated version can be compared with the original version in terms of meaning and concept; this work is used by 3 or 4 translators, each of whom has experience in a specific field. In order to review and compare, a series of forms are used in front of which the

main and translated key phrases are written. Each translator has his or her own views and must have a compelling reason to do so. Finally, the principal translator or group leader corrects all suggestions if he or she sees fit.

***Step 6: Compare the original version with the translated version***

To ensure accuracy, a review committee ought to be established to compare the original version with its translated counterpart. The committee members should possess fluency in both languages, allowing them to thoroughly scrutinize and revise any vague or incomprehensible words, ensuring that the intended meaning and significance are conveyed effectively (7). Additionally, the review committee should assess the phrases in both the original and translated questionnaires, aiming to achieve a more precise alignment between them. Phrases that receive lower ratings should undergo re-evaluation.

***Step 7: Test the tool on small groups (pilot study)***

In order to evaluate the clarity and accurate understanding of the terms used; it needs conduct a trial of the new questionnaire on a small group of patients or individuals from the target group. Following the guidelines, this phase necessitates the involvement of at least five individuals for each items of questionnaire (8). During this stage, participants will be asked to identify any unfamiliar phrases or terms and provide feedback on the writing style. All comments received will be thoroughly reviewed, and once approved; the suggested revisions will be incorporated (8).

***Some Notes:***

- Verifying the words and their understandability in both primary and translated questionnaires is crucial to ensure that the words are identical in terms of perception, terminology, and meaning. The words in both versions should possess the same meanings and convey a consistent understanding.
- Translators are required to thoroughly review

and correct any spelling and grammar errors in all words and terms. The translators must have proficiency in the target language to ensure effective communication of the intended meaning (6).

- The completed translated version should be forwarded to the original questionnaire designer, along with a detailed report of the steps taken for translation and cultural adaptation. Once approved by the designer, it can be tested on actual samples.

In a nutshell, Based on the unique cultural characteristics of each geographical area, it is essential to incorporate the culture of that area into the localization of health tools. This research provides a comprehensive explanation of the stages involved in localizing and culturally adapting scales or questionnaires for medical research. Overall, the process of cultural adaptation of questionnaires holds great significance. When this process is conducted correctly, as described in this study, the adapted tool becomes a valid means of measuring the desired attribute. Otherwise, the

questions may lead to misunderstandings, offensive responses, or irrelevant answers. It is hoped that medical researchers will improve the quality of their work by localizing existing tools using the ten steps outlined in this paper.

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