

HOW TO TRANSLATE COGNITIVE OUTCOMES MEASURES? THE CASE STUDY OF THE PARKINSON'S DISEASE-COGNITIVE RATING SCALE IN 15 LANGUAGES

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The Methodological Question Being Addressed. This abstract intends to address the methodological question of translating the subtests of the Parkinson's Disease-Cognitive Rating Scale (PD-CRS). The main difficulty was in developing the best methodology to create translations using words, numbers, letters, and images culturally and linguistically acceptable and capturing the same concept as the original measure.

Introduction. The Parkinson's Disease-Cognitive Rating Scale (PD-CRS)¹ is a screening battery designed to assess cognitive alterations associated with Parkinson's disease (PD). It includes nine subtests assessing posterior-cortical and frontal-subcortical defects, i.e., immediate verbal memory (read aloud 12 written words, and recall as many words as possible after 3 trials); confrontation naming (name the line drawings shown on 20 consecutive cards), sustained attention (report number of letters in a sequence of numbers and letters), working memory (repeat the numbers first, and then the letters), clock drawing, clock copying, delayed free recall verbal memory, alternating verbal fluency (to alternately generate as many different words as possible beginning with the letter 'S' and words describing clothing articles), and action verbal fluency (to say as many actions as possible). The PD-CRS was originally developed in Castilian Spanish. The objectives of this study are to present the methodology used to translate the PD-CRS into 15 languages (representing six language families), and to display the outcomes of the translations.

Methods. The British English version was used as the source document. The standard linguistic validation process² generally used to translate patients' self-reported measures had to be adapted to face the challenges of adapting to another culture the list of words, letters, numbers and drawings presented to the patients. In each country, the process was as follows: one forward translation by a medical translator, a meeting with a speech therapist and a neuropsychologist to review the translation and discuss the suitability of the words and the drawings in the linguistic and cultural context of their country, one back-translation into English, a review by another neurologist, a review by the developer, and a final

proofreading step. In addition, the adaptation of each subtest had to follow specific rules. For instance, the rules for adapting each drawing were: 1) if culturally acceptable, use the most frequent word to describe it, and 2) if not culturally acceptable, replace it by a suitable equivalent, making sure that the confrontation naming task is based on similar levels of difficulty independently on language used.

Results. No changes in the line drawings were required in Hebrew and all Indo-European languages (n=8). In total, nine drawings raised a lot of discussion, i.e., bib, cherry, stool, anchor, buckle, mane, panel screen, hoof, and door bolt. The languages the most impacted were Chinese and Tamil for Singapore with respectively six and three drawings changed. For instance, hoof was replaced by chicken feet (Chinese), and bib by cradle (Tamil). Regarding the alternating verbal fluency, all Indo-European languages and Malay for Singapore kept the letter “S” word generation system. The other languages, used other letters or characters, e.g., in Japanese, the character か (ka) was used; in Chinese, the character 中; in Arabic, the letter ك (equivalent to l); in Tamil, the compound form க (ka); and in Hebrew, the letter ק (qoph - :/k/)

Conclusions. The specificities of the PD-CRS prompted the translation team to modify the standard linguistic validation process to develop culturally appropriate translations.

References

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