How To Translate Cognitive Outcomes Measures? The Study Of The Parkinson’s Disease-Cognitive Rating Scale In 15 Languages

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The Methodological Question Being Addressed

This paper intends to address the methodological question of translating the subtests of the Parkinson’s Disease-Cognitive Rating Scale (PD-CRS). The main difficulty is to develop 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 (Aims)

The Parkinson’s Disease-Cognitive Rating Scale (PD-CRS) is a scoring battery designed to assess cognitive outcomes in patients with Parkinson’s disease (PD). It includes nine subdomains assessing posterior-cortical and frontal-subcortical deficits.

• Immediate verbal memory (recall about 12 written words, and count as many words as possible after 1 minute)
• Confrontation naming (name the images shown on 20 consecutive cards). There is no time limit for response, and only one trial is given. No semantic or phonemic cues are provided. If objects are not included in their context (e.g., bible, buckle, mane, hook, jingle bell, anchor), the examiner is allowed to indicate part of the line drawing to be named. For completion list of images see Table 2 (Scoring).
• No changes in the line drawings were required in nine languages, i.e., Hebrew and all Indo-European languages (n = 8).
• In total, nine changes raised a lot of discussion, i.e., bible, cherry, sand, trousers, anchor, buckle, mane, panel screen, hoof, and door bolt. See Table 3.

Table 1. List of languages into which the PD-CRS has been translated

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• The British English version was used as the source document. The standard linguistic validation process generally involved translation to the patient’s self-reported mother tongue 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 its linguistic and cultural context of their country, one back translation into English, - a review by another neurologist, a review by the developer, - 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 term in the patient’s native language, 2) if not culturally acceptable, replace it by a culturally equivalent term, making sure that the confrontation naming task is based on similar levels of difficulty independently on language used.

Table 2. Scoring, 1 point for each line drawing correctly named (0-20)

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• The languages most impacted were Chinese for Singapore and Tamil, with Singapore and Tamil for Singapore respectively.
• For more information, please contact Frédérique Boucher, Senior Project Manager, Language Services, Mapi (fboucher@mapigroup.com).

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Table 3. Line drawings modified in the Confrontation naming task

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