

Cross-Cultural Validated Adaptation of Dysfunctional Voiding Symptom Score (DVSS) to Japanese Language and Cognitive Linguistic Issues

Introduction and Objective: In evaluation of pediatric lower urinary tract symptoms (LUTS), validated questionnaire for subjective symptoms of the patients is required. However, it is often unclear whether children understand and respond to a questionnaire correctly. We performed cross-cultural validated adaptation of Dysfunctional Voiding Symptom Score (DVSS, Farhat W et al. J Urol 2000) to Japanese language, and evaluated cognitive linguistic issues through the process.

Materials and Methods: We translated DVSS into two Japanese versions according to a standard validation methodology: translation, synthesis, back-translation, expert review, and pre-testing. One version was written in adult language for parents (pDVSS), and the other was written in child language for children (cDVSS). Pre-testing was done with 5 to 15-year-old patients visiting us, with exclusion of spinal cord disorder, severe intelligence disorder, and incomplete writing. A specialist in cognitive linguistics observed the response procedure to DVSS by children and parents as an interviewer. When a child could not understand a question without adding or changing phrases of the question by the parents, it was defined as 'misidentification'.

Results: Pre-testing was done for 32 patients and their parents: 9 cases 5 to 7 years old, 11 cases 8 to 10 years old, and 12 cases 11 to 15 years old. Male to female ratio was 19:13. In cDVSS, a similar pattern of misidentification was observed for representation of time or frequency. The actual rate of misidentification was 15.6% in the opening sentence of "over the last month", 41.0% in the question 5, "I only go to the bathroom one or two times each day", and 43.8% in the response choice related with frequency, for example "Less than half the month". We completed the validated translation by amending the issues raised in the pre-testing.

Conclusion: The cross-cultural validated adaptation of DVSS to child and adult Japanese was completed. Since temporal sense is not fully developed in children, caution should be taken for using the terms related with time or frequency in the questionnaires for children.