

RELIABILITY AND VALIDITY OF THE CHINESE VERSION OF WOMEN'S TOILETING BEHAVIOR SCALE IN COMMUNITY-DWELLING WOMEN WITH URINARY INCONTINENCE

Hypothesis / aims of study

Several risk factors for developing urinary incontinence in women have been identified as the result of intensive epidemiologic research. These factors can be classified as: constitutional, urogynecologic, neurologic, and behavioral. Toileting behaviors have been implicated in affecting women's bladder health. However, the effects of toileting behaviors on bladder health have undergone little investigation, especially in China. A validated instrument to explore variations in toileting behaviors among Chinese women was needed. The aims of this study were to translate and revise the English version of the Women's Toileting Behavior Scale (TB-English) into Chinese (TB-Chinese), and to explore its reliability and validity in Chinese community-dwelling women with urinary incontinence.

Study design, materials and methods

The TB-English was first translated into Chinese by 3 graduate students who were bilingual in both Chinese and English. The initial translation of the TB-Chinese was subsequently reviewed by the original TB-English author who is a bilingual native Chinese speaker. A cross-sectional survey was conducted to test the psychometric properties of the TB-Chinese. A total of 254 community women with urinary incontinence were enrolled through convenience sampling method. The retained items were determined by t-test, Cronbach's α and, exploratory factor analysis. The internal reliability and construct validity of the revised TB-Chinese were also assessed.

Results

Two items were added to reflect Chinese cultural background. After item selection and factor analysis, six items were deleted, leaving 14 items in four subscales that explained 79% of the variance. The four subscales were: straining voiding, premature voiding, delayed voiding, and place preference for voiding. Cronbach's α of these subscales was: 0.95, 0.92, 0.80, and 0.75, respectively.

Interpretation of results

The involvement of an author who developed the TB-English in the translation ensured that the cultural and linguistic integrity of the TB-Chinese was conveyed and that not just literal translation occurred. The results of factor analysis identified four factors in the TB-Chinese, which was one less than the original TB-English but it explained a higher percent of the total variance: 79% versus 67%[1]. Concordance was observed in the results of the factor analysis between the original TB-English and its Chinese version. Internal consistency satisfied the minimum recommended level for reliability of Cronbach's coefficient alpha (>0.70)[2], with Cronbach's alpha values between 0.75 and 0.95. Thus the reliability of the instrument was supported by acceptable internal consistency.

Concluding message

The TB-Chinese shows good reliability and validity and meets the needs of psychometric properties. It can be applicable to assessing women's toileting behavior. As yet, there is no grading system to differentiate clearly between behaviors that may be helpful or harmful to women's bladder health. Further exploration using the TB-English and the TB-Chinese instruments in therapeutic interventions to measure behavioral changes is also needed.

References

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2. Polit DF, Beck CT. *Nursing research: principle and methods*. New York: Lippincott William&Wilkins, 2004:418.

Disclosures

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