

VALIDATION OF THE QUESTIONNAIRE FOR URINARY INCONTINENCE DIAGNOSIS-THAI VERSION (QUID-THAI VERSION)

Aims of Study

The Questionnaire for Urinary Incontinence Diagnosis¹ (QUID), an instrument used for diagnosis of stress urinary incontinence (SUI) and/or urge urinary incontinence (UUI), is an easy-to-answer questionnaire for patients. English is not the first language for most Asians; therefore, translation and validation of the QUID is essential. This is the first study aimed to translate the QUID to Thai with the goal of generating a valid Thai version of the QUID.

Study Design, Materials and Methods

The QUID was translated from English to Thai with permission from the principle investigator, from the United States, who developed the QUID. Translation back to English was performed to ensure that the meaning of all items in the Thai version corresponded to those in the English version. The QUID-Thai version was approved by seven experts consisting of a urogynecologist, a urologist, four gynecologists, and a nurse. The content of the QUID-Thai version was verified using the index of Item Objective Congruence (IOC). To assess participants' understanding of the translated questions, a trial version was tested in focus groups (20 Thai patients). The reliability of QUID-Thai version was assessed using test-retest reliability method determined by Cronbach's α coefficient. The QUID-Thai version was administered to patients seen in the urogynecology clinics during 6-month period. After completing the questionnaire, patients were screened for the clinical criteria of stress urinary incontinence, urge urinary incontinence or both. The validity of QUID-Thai version was demonstrated in sensitivity, specificity, positive predictive value and negative predictive value. The accuracy was assessed using the Receiver Operating Characteristic (ROC) curve.

Results

The average of IOCs and Cronbach's α coefficients of the QUID-Thai version were 0.83 and 0.90, respectively (Table 1). A total of 121 patients completed the QUID-Thai version; the median age was 62 with the range of 35 to 89. The most frequently reported highest level of education was primary school and nearly 80% of patients were postmenopausal. Other demographic data are listed in Table 2. Questions 1-3 were used to evaluate for SUI, while questions 4-6 were used to evaluate for UUI. The sensitivity and specificity for SUI are 73% and 82%. The sensitivity and specificity for UUI are 69% and 87% (Table 3).

Table 1 The content validity and the test-retest reliability of the QUID-Thai version

Question	IOC	Cronbach's α coefficient
Do you leak urine (even small drops), wet yourself, or wet your pads or undergarments...	0.85	
1. When you cough or sneeze?	1	0.88
2. When you bend down or lift something up?	1	0.62
3. When you walk quickly, jog or exercise?	0.85	0.68
4. While you are undressing in order to use the toilet?	1	0.92
5. Do you get such a strong and uncomfortable need to urinate that you leak urine (even small drops) or wet yourself before reaching the toilet?	0.57	0.63
6. Do you have to rush to the bathroom because you get a sudden, strong need to urinate?	0.71	0.68

Table 2 Study group characteristics (N=121)

Characteristic	Measurement	
	Median (range)	N (%)
Age (yrs)	62 (35-89)	
Body mass index (kg/m ²)	23.7 (14.0-32.6)	
Parity (n)	2 (0-9)	
Educational background: (n)		
None		14 (11.6%)
Primary school		59 (48.8%)
Secondary school		22 (18.2%)
University		26 (21.5%)
Postmenopausal status (n)		96 (79.3%)
Hysterectomy (n)		21 (17.4%)
Duration of urinary incontinence symptoms: (n)		
<=1y		29 (24.0%)
2-5 y		28 (23.1%)
>5y		7 (5.8%)
Pelvic organ prolapse (Stage >=3) (n)		66 (54.5%)
Pessary use (n)		54 (44.6%)
Previous anti-incontinence surgery (n)		11 (0.09%)

Table 3 The QUID-Thai version compared with clinical diagnosis

	Stress urinary incontinence	Urge urinary incontinence
Sensitivity	0.73 (0.60-0.84)	0.69 (0.52-0.82)
Specificity	0.82 (0.71-0.91)	0.87 (0.77-0.93)
Positive predictive value	0.79 (0.68-0.86)	0.72 (0.59-0.83)
Negative predictive value	0.77 (0.69-0.84)	0.85 (0.78-0.90)
Accuracy	0.78 (0.70-0.84)	0.81 (0.73-0.87)
Area under the curve	0.86 (0.79-0.93)	0.86 (0.79-0.93)

Interpretation of Results

The back translation of the QUID-Thai version was correlated with the original version. It demonstrated a diagnostic value in determining the type of UI similar to that of the original version.

Conclusion

The Questionnaire for Urinary Incontinence Diagnosis (QUID)-Thai version has satisfied validity and reliability similar to the original version. The QUID-Thai version is beneficial for the evaluation and diagnosis of female urinary incontinence in urology/gynecology clinical practices, primary health care settings and epidemiological trials in Thailand.

References

- Bradley CS, Rovner ES, Morgan MA, Berlin M, Novi JM, Shea JA, et al. A new questionnaire for urinary incontinence diagnosis in women: development and testing. *American journal of obstetrics and gynecology*. 2005;192(1):66-73.

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