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Original Research Article

Translation and validation of Marathi version of questionnaire for urinary incontinence diagnosis

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ABSTRACT

Background: Urinary incontinence is a common health problem among women, which affects the quality of life. knowledge about the risk factors of urinary incontinence in this population will help us to take measures to reduce the burden of the condition. Questionnaire for urinary incontinence diagnosis (QUID) helps to distinguish type of incontinence.
Methods: It was a community based cross-sectional study involving women living in the rural areas. A total of 25 women were taken for this study to find out reliability and validity of Marathi version of this questionnaire. Data was analysed with statistical package for the social sciences (SPSS) 20.0.
Results: The internal consistency (homogeneity) was evaluated by Cronbach's α coefficient, which was 0.795. validation was obtained from expert panel and the pilot testing showed that the questionnaire is acceptable.
Conclusions: QUID Marathi version has been proven a reliable and valid tool for assessing urinary incontinence in women. It can be used as a quick screening tool for urinary incontinence in women of rural population.

Keywords: Urinary incontinence, Women's health, Marathi version QUID

INTRODUCTION

Urinary incontinence is a condition resulting into involuntary loss of urine which is objectively demonstrable and is social plus hygiene problem. It is a common health problem among women, with the prevalence varying from 8-45% in different studies. Urinary incontinence is a severe debilitating condition affecting all women causing significant impact on the physical, psychological and socio-economical aspects of life.[1] The two main types of incontinence are stress incontinence, and urge incontinence, while women experiencing both symptoms are considered as having mixed urinary incontinence.[2] Stress incontinence is characterized with urine loss due to increased intra-abdominal pressure, which results in an increase in intravesical pressure that is exceeding the maximal urethral closure pressure, as like during coughing, sneezing, or jumping activities. In urgency incontinence, loss of urine occurs with sudden, strong urge which is inadequate for degree of bladder filling.[3]

Urinary incontinence is a common problem with widespread human and social implications causing discomfort, shame, and loss of self-confidence. It not only affects the quality of life but also has significant cost implications.[4] Also, women's working lives are negatively impacted by incontinence in many ways such as absenteeism, decreased productivity, and slower work pace.[5] Women neither come forward seeking medical consultation nor do they discuss about their incontinence openly, and the condition remains underestimated in the

society. There are many unreported cases in the population as per several hospital-based studies done in India before.[6]

Age, body mass index, parity, recurrent UTI, menopause, hysterectomy, abortions, and comorbidities have all been found as significant risk factors for incontinence. The knowledge about the risk factors of urinary incontinence in this population will help us to take measures to reduce the burden of the condition.[7] Urinary incontinence has an impact on a variety of areas in a patient's life, including sexual function, relationships with family and co-workers, and overall quality of life. Due to its detrimental effects on a person's sexuality and privacy, it is frequently difficult for those who experience it to accept.[8] Very little attention is paid to gynaecological problems such as incontinence, it is never considered as a health issue. Thus, it is essential to focus on the quality of life affected by urinary incontinence as it is preventive in nature.[9]

Before beginning basic treatment or organising sophisticated testing that would necessitate specialist referral, a thorough examination is needed. Additionally, using data gathered from patients or healthcare professionals, it assists in determining the degree of improvement following any intervention.[10]

Further distinguishing between the types of urinary incontinence is important in clinical practice and for research purposes.[11] An easy-to-administer questionnaire for urinary incontinence diagnosis (QUID) was developed which classify women into groups of stress and/or urge urinary incontinence.[12] This scale is available in different language however, to be used in Maharashtra rural population it needs to be converted into Marathi language.

Hence, aim of this study was to translate QUID in Marathi and adapt in Indian rural population, to assess reliability and validity of translated QUID.

METHODS

Study type

It was an observational type of study.

Study place

The study was conducted in the rural areas of Ahmednagar district, Maharashtra.

Study period

The duration of the study was from February 2023 to April 2023.

Selection criteria of the patients

Women between the age group of 20 to 65 years of age having symptoms of urinary incontinence and willing to participate were recruited using purposive sampling technique.

Ethical approval

Ethical approval was obtained from the institutional ethical committee and the translation procedure initiated after obtaining permission from developer of the QUID via E-mail.

Procedure

The study was carried out in two main phases.

Phase 1

The first stage involved translating QUID into Marathi. One translator translated the questionnaire into Marathi, while a second translator—who was unaware of the original English questionnaire—translated it back into English. It was also submitted to a subject-matter expert who is proficient in Marathi and English. The translated versions were evaluated by a panel of medical experts in urology, gynaecology, and physiotherapy. This panel resolved any ambiguous issues or language-related challenges. After integrating the components and reaching an agreement on each item in the Marathi scale, a single version was finally approved. The translation was then revised by two English-speaking medical professionals. The prior translation was unknown to these two translators. The panel went over both translated versions one more before comparing them to the original survey. The committee addressed any specific words that did not match in both versions, and the correct word was then put in the questionnaire. A pilot group of 20 people with urine incontinence were then given the Marathi-translated version to score and pre-validate the questions.

A few changes were made after receiving the questionnaire from them with their specific feedback on how each question should be structured. This was the last pre-validated iteration of the survey.

Phase 2

Prior to starting this step, approval from the institutional ethics committee was sought and obtained. Following thorough selection of study participants based on inclusion criteria, women with urine incontinence living in rural areas of Ahmednagar district were given this pre-validated questionnaire. For test-retest reliability, they were given a questionnaire once more seven days later.

Reliability

The test–retest reliability of scale was assessed by women who were asked to complete Marathi version twice with the same rater at the time and after 7 days of the time interval. Validation was obtained from expert panel.

Statistical analysis

All the statistical analysis was done by the statistical package for the social sciences (SPSS) software. Data was statistically presented using mean SD and frequencies.

RESULTS

For pilot testing of questionnaire total 25 participants were recruited in the study. Mean age was 38.8±19.3 and body mass index (BMI) was 22.94±2.22 respectively. QUID was taken on day 1 and day 7. Baseline characteristics of participants is presented in Table 1.

After obtaining the responses for questionnaire, we categorized it into three types of urinary incontinence. Number of participants present in each of those categories are presented in Table 2.

Table 1: Baseline characteristics.

Variables	Mean±SD
Age	38.8±19.3
BMI	22.94±2.22
Socioeconomic status (n)	
Lower	4
Lower middle class	17
Middle class	3
Upper middle class	1
Comorbidities (n)	
Diabetes	3
Hypertension	5

Table 2: Distribution of participants according to types of incontinence.

Type of urinary incontinence	N (%)
Stress incontinence	09 (36)
Urge incontinence	14 (56)
Mixed incontinence	02 (8)

DISCUSSION

According to findings of our study this Marathi version of QUID was culturally acceptable and understandable by Marathi speaking population. The internal consistency (homogeneity) was evaluated by Cronbach's α coefficient, which was 0.795, showing acceptable range. Test retested reliability was found to be 0.743. Also, the validity of this scale was found to be good. In case of original QUID scale, its internal consistency and test-retest reliability estimates were good. Sensitivity and specificity were 85%, 71% respectively, for stress urinary incontinence 79% and 79% respectively, for urge urinary incontinence.[12] Brandt et al stated that the Cronbach's alpha was 0.75 for the German language version questionnaire for urinary incontinence.[13] For Brazilian and Portuguese version of QUID, the Cronbach's α was found to be 0.77, reflecting adequate internal consistency.[14] In the study of Malay language QUID by Kaur, the Cronbach's alpha was 0.80 indicating a scale of high reliability.[15]

Although incontinence affects many individuals, even for those with severe symptoms, it doesn't always seem bothersome. To assess the presence of incontinence and categorize accordingly, it is therefore necessary to measure both the level of an individual's symptoms and type of incontinence and thus measure an extent to which they impair their life. QUID has been developed to provide a simple, brief and robust questionnaire to assess the severity of symptoms and type of incontinence. Marathi version of questionnaire was developed to be used in Maharashtra rural population, which could be incorporated into routine clinical practice and research. As a result of its publication here, the questionnaire is now in the public domain and is open for use by researchers and medical professionals. Limitation of this study was the small sample size. Secondly this study was conducted in rural area of specific area of Maharashtra, generalizability of result is uncertain. So future studies incorporating this scale in different population, culture and with large samples can be conducted.

CONCLUSION

QUID Marathi version has been proven a reliable and valid tool for assessing urinary incontinence in women. It can be used as a quick screening tool for urinary incontinence in women of rural population.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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