

PSYCHOMETRIC TESTING OF THE SEXUAL FUNCTION AND INFLUENCE OF URINARY INCONTINENCE QUESTIONNAIRE (SF-IUIQ) IN WOMEN.

Hypothesis / aims of study

While Urinary Incontinence (UI) is not a condition associated with high morbidity and mortality, the impact on patients' Quality of Life (QoL) is severe. The concept of QoL embodies a combination of patient assessed measures of health, including physical, role and social function, emotional state, burden of symptoms and sense of well being. Sexual Function (SF) is an aspect of QoL. It is likely to be impaired in women with urinary incontinence. Recent questionnaires that address SF have been developed, but no locally validated questionnaire is available. Furthermore, at the time there is no condition specific validated measure that addresses the influence of UI on SF(1). We sought to locally develop and psychometrically test a questionnaire that measures SF of urinary incontinent women and the influence of UI on SF.

Study design, materials and methods

Development: Two existing questionnaires: i) the Sexual Self-Rating Scale (SSRS)(2) and ii) a questionnaire that measures influence of UI on SF (IUISF)(3) were revised and combined, forming the SF-IUIQ. Questions regarding severity and type of incontinence and demographics were added.

Administration: The SF-IUIQ was piloted on 30 patients and then administered to 90 consecutive incontinent women, attending the female incontinence or gynecology outpatients' clinic. Exclusion criteria were: patients unwilling to participate in the trial, pregnant women or women younger than 18 years.

Psychometric testing: Standard criteria recommended in psychometric testing of instruments were used. Questions on the SSRS and IUISF part of the SF-IUIQ included a five or two point response scale respectively. Responses on both parts were summed. Total scores were translated into 0-100 scores with a higher SSRS score representing a better SF and a higher IUISF score representing a greater influence of UI on SF. Reliability was evaluated using Cronbach's alpha coefficient. Convergent validity was evaluated by correlating the SF-IUIQ total scores with questions that address SF and influence of UI from a different angle. Discriminant validity was tested by evaluating the measure's ability to discriminate between patients with different levels of self-perceived incontinence severity.

Results

The mean age was 52.3 years (range 25-87). Self-perceived incontinence severity was as following: minimal 26 (29%), moderate 26 (29%) and severe 38 (42%). Type of incontinence was stress in 15 (16.7%), urge in 13 (14.4%), mixed in 52 (56.7%) and other (ie post void dribbling) in 10 (11.1%) women.

Sixty women (66.6%) were sexually active, 25% of them were satisfied with their sex-life. Thirty-four women (37.7%) had a considerably large influence of UI on SF. The most common complaints were "having to empty the bladder before and/or after intercourse" (n=13, 38.2%) and "avoiding sexual intercourse" (n=11, 31.1%). Urge incontinent women had lowest sexual function (mean SSRS score: 27) and highest influence of UI on SF (mean IUISF score: 88). Leakage during penetration occurred more often in pure stress incontinent women, 32% versus 7.8% in the urge incontinent group. Leakage during orgasm occurred more often in the urge incontinent group, 15.4% versus 6.6% in the stress incontinent group.

Psychometric testing: Cronbach's alpha coefficient for reliability was 0.82 for the SSRS part of the SF-IUIQ and 0.92 for the IUISF part. Considering convergent validity, correlations between SF-IUIQ scores and questions that address SF and influence of UI from a different angle, ranged between 0.49 and 0.72 with $p < 0.001$. The ability of the SF-IUIQ to discriminate between different levels of self-perceived incontinence severity was strong (Pearson correlation: 0.86, $p < 0.001$). Incontinence severity explained 36% of variance in SSRS score and 73% of variance in IUISF score on the SF-IUIQ.

Interpretation of results

The results of this study indicate that there is a great influence of UI on SF, although other mechanisms are involved as well. Previous studies suggest that UI occurs during sexual activity in 10% to 60% of women. The finding of 32% in this study is well within this range. However, it should be noted that amongst patients that were presently not sexually active there was a high percentage (67%) with a history of UI during sexual activity. Earlier findings, that UI occurs more often during penetration in women with stress UI and more often during orgasm in urge incontinent women, are supported by this study.

Cronbach's alpha was above 0.7 which demonstrates that the items perform well enough together to be a composite score. Discriminant validity was strong. Convergent validity should be further evaluated using established measures of health, anxiety and depression.

Concluding message

The SF-IUIQ is a reliable and valid measure of SF of urinary incontinent women and of the influence of UI on SF in our local community.

Reference:

1. Qual of life Res Dec 2004; 13(10):1643-1658.
2. Br J Obst Gyn 1995; 102:311-316
3. J of Repr Med Sept 93; 38(9):679-638.

FUNDING: J.C. de Kock Stichting, Buwalda Stichting

DISCLOSURES: NONE

HUMAN SUBJECTS: This study was approved by the The Ethics Committee of Human Research of the University of Stellenbosch and followed the Declaration of Helsinki Informed consent was obtained from the patients.