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THE MODIFIED SHORT PELVIC ORGAN PROLAPSE/URINARY INCONTINENCE SEXUAL QUESTIONNAIRE, THE PISQ-9, FOR USE IN A GENERAL FEMALE POPULATION

Hypothesis / aims of study

The Pelvic Organ Prolapse (POP) / Urinary Incontinence (UI) Sexual Questionnaire (PISQ) is a condition-specific sexual function questionnaire for women with POP and/or UI that is shown to be valid and reliable [1]. It consists of 31 questions that assess three domains: Behavioural/Emotive, Physical and Partner-related. It has been validated in heterosexual, sexually active women with POP and/or UI. Being condition-specific, it cannot be used in a general female population without POP and/or UI. A short version of the PISQ containing 12 selected questions from the long form questionnaire [2] was validated in a heterosexual, sexually active population with POP and /or UI and found to predict long-form scores. It has good validity, reliability and is responsive to change in sexually active women with POP and/or UI. In addition, the PISQ-12 is easy to understand and use, and is rapidly completed by the respondent. It has been used to assess the effect of non-surgical therapy, as well as pelvic floor reconstructive surgery on sexual function in women with POP/UI. However, similarly to the long form, the PISQ-12 is a condition-specific questionnaire; hence, it has only been used to reliably evaluate sexually active women with POP and/or UI and not to compare sexual function of women with and without UI/POP. Of the twelve questions, nine are general sexual-function question and three directly pertain to women with UI/POP. In view of the validity, reliability, ease of use and short time needed to complete the questionnaire, as well as the familiarity of the short PISQ-12 among physicians treating women with POP/UI, we aimed to test whether a modified version of the PISQ-12, the PISQ-9, that includes only the nine general sexual-function questions, could be used to compare sexual function in a general female population, in women with and without pelvic floor disorders.

The primary aim of this study is to test the validity and reliability of a modified version of the short-form Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-9) in a general female population and secondly, to determine mean, normative PISQ-12 and PISQ-9 total scores in a sexually-active cohort of women without bothersome pelvic organ prolapse and / or urinary incontinence.

Study design, materials and methods

A cross-sectional survey of sexually active women was completed by 557 twins at two twin-annual-gatherings held in 2005 and 2006. Participants provided demographic data and completed the PISQ-12, a sexual-function questionnaire specific for women with POP and/or UI, as well as a general female sexual-function questionnaire, the Index-of-Female–Sexual-Function (IFSF). Patients also completed the Pelvic-Floor-Distress-Inventory-20 (PFDI-20), the Beck-Depression-Inventory-II (BDI-II) and the Pelvic-Pain-and-Urgency/Frequency scale (PUF). PISQ-12 scores and a subset of nine questions, PISQ-9 scores, in sexually-active women with/without bothersome POP and/or UI symptoms were compared to IFSF, BDI-II (cut-off scores ≤13=minimal/no depression) and PUF scores (cut-off score for interstitial cystitis>15 with normal values ≤4). Cronbach's-alpha and Spearman-correlation coefficients were calculated for internal consistency and convergent-validity of the nine general sexual function questions of the PISQ-12 in a population without POP and/or UI.

Results

Total PISQ-12 and PISQ-9 scores correlated significantly with IFSF total scores (Spearman-coefficient, 0.65 and 0.66, respectively P<.0001, Table 1). Mean PISQ-12 and PISQ-9 total scores of sexually-active women without vs. with bothersome pelvic floor complaints were significantly better (40.0 +/- SD 4.2 vs. 36.2 +/- SD 5.6, p<.0001, Effect-Size 0.68). Similarly, PISQ-12 and PISQ-9 scores were worse in women with depressive symptoms compared to those without (34.2 +/-5.8 vs. 38.7+/-4.9, p<.0001, Effect-Size=0.87) and in those with high vs. low PUF scores (31.5 +/- 7.5 vs. 38.4 +/-5.0, p<.0001, Effect-Size=1.33). Internal consistency for PISQ-9 and PISQ-12 was similar as indicated by Cronbach's alpha scores in sexually-active women of 0.73 and 0.72 for total PISQ-12 and PISQ-9 scores, respectively.

Interpretation of results

Sexual function is an important aspect of quality-of-life in many women with pelvic floor disorders, which has been sparingly investigated, compared to other areas of quality-of-life. The PISQ-12 has proven to be a reliable and validated, condition-specific instrument in assessing sexual function in women with POP and/or incontinence. This study found that PISQ-12 total scores and more specifically, the PISQ-9 scores, strongly correlated with scores of a validated, general sexual function questionnaire, the IFSF. This is in agreement to the confirmation process performed in the original validation study of the PISQ questionnaire, where the authors conducted a comparison with a general sexual function questionnaire. Similarly, when looking at the 12 PISQ-12 individual questions, individual question scores significantly correlated with the IFSF total scores, with the exception of dyspareunia and the three questions relating to UI and/or POP. When we excluded the condition-specific questions relating to POP and/or UI, and created the shorter, generalized version, the PISQ-9, correlations with the general sexual function questionnaire were found to be even stronger. This indicates that first, the PISQ-12, by virtue of containing the 9 generalized sexual-function questions, may be reliably used for comparative studies in a general sexually-active population that does not have bothersome POP or UI. In addition, the PISQ-9 is valid for use to assess sexual-function in a general population that is not restricted by the presence of POP and/or UI. This greatly expands the utility of the PISQ-12 and PISQ-9.

Analyzing the effect of missing items on the correlation of PISQ-9 with IFSF and PISQ-12, we found that with 3 missing items, there was a greater than 10% reduction in the correlations with the PISQ-12 and IFSF. In order to maintain the high validity of the PISQ-9 scores we therefore suggest allowing no more than 2 missing items from the PISQ-9, similar to the recommendations for use of the PISQ-12 questionnaire.

Concluding message

PISQ-12 and PISQ-9 scores of sexually-active women without POP and/or UI strongly correlate with scores of a general sexual-function questionnaire, and were worse in women with depressive symptoms or pain-of-bladder origin, indicating that both may used for comparative studies that include a sexually-active female population without pelvic floor complaints. Normative, mean total PISQ-12 and PISQ-9 scores of 40±SD4.2, and 28.2 ±SD4.1, respectively, are suggested.

References
1. Am J Obstet Gynecol. 2001;184:552-558.
2. Int Urogyn J. 2003;14:164-168.

Table 1: Correlation of PISQ-12 and PISQ-9* with IFSF Total Scores.

Groups according to bothersome POP/UI and sexual activity	PISQ-12		PISQ-9*	
	Spearman Correlation Coefficient	P-value	Spearman Correlation Coefficient	P-value
Sexually active (N=206)**	0.67	<.0001	0.68	<.0001
Sexually active, neither UI nor POP (N=67, 33%)	0.65	<.0001	0.66	<.0001
Sexually active, UI and/or POP (N=139, 67%)	0.63	<.0001	0.63	<.0001

Legend: PISQ –12 represents the short form of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire. UI - urinary incontinence, POP - pelvic organ prolapse. PISQ-9* represents 9 general sexual function questions remaining after omitting those relating to symptoms of POP and / or UI from the original PISQ-12 (questions 6, 7 and 8). IFSF - The Index-of-Female-Sexual-Function, which is a general female sexual-function questionnaire. ** N=206, comprising the heterosexual, sexually-active women, who completed the IFSF questionnaires.

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Is this study registered in a public clinical trials registry?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Evanston Norhtwestern Healthcare Ethics Committee**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**