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Validation of the short form of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12) in a Turkish population

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ABSTRACT

Objective: To validate the Turkish translated version of short form of the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12).
Study design: After the test–retest reliability and internal consistency were established in a pilot study, 270 patients were enrolled and general and subscale scores of the questionnaire were calculated. All participants underwent the International Continence Society (ICS) prolapse score (POP-Q) and urodynamic assessment. Main scores and scores of Prolapse Quality of Life questionnaire (PQoL) and Incontinence Impact Questionnaire (IIQ-7) were compared between patients with incontinence ± prolapse and asymptomatic women.
Results: 62.24% of the participants showed urodynamic abnormality and/or leakage with or without prolapse. 28.91% had prolapse stage 3 or higher diagnosed by the POP-Q system. PISQ-12 showed a high internal consistency (Cronbach's alpha was 0.89). For test–retest reliability Spearman's rho was 0.72–0.79 for all domains. The mean scores of PISQ-12 were significantly better in asymptomatic women compared with the incontinence ± prolapse group. Sexual function was negatively affected by prolapse and/or incontinence as assessed with PQoL and IIQ-7 questionnaires.
Conclusion: The Turkish translated version of the PISQ-12 is a reliable, consistent and valid instrument to evaluate sexual functioning in women with urinary incontinence and/or pelvic organ prolapse. It is easy to understand that it may be easily administered and self-completed by the women.

1. Introduction

Sexual well-being is an important aspect of women's health, and dysfunction can lead to a decrease in quality of life and affect the marital relationship. Although female sexual dysfunction is a common problem among the general population, and especially in urogynecological patients, it is one of the least investigated domains of quality of life (QOL). Most of the studies that mention the impact of urinary incontinence (UI) or pelvic organ prolapse (POP) on sexual function focus mainly on dyspareunia or report it without using specific validated questionnaires.

Two types of questionnaire are in current use to evaluate sexual function. Generic questionnaires have been designed to screen large populations but may not detect fine changes within a specific population. Disease-specific questionnaires are used to evaluate patients suffering from specific medical conditions and are therefore more sensitive to specific aspects of the disease. Rogers introduced the first validated, self-administered and condition-specific questionnaire for women with UI or POP, the Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ) [1]. This survey includes 31 questions in behavioral/emotive, physical and partner-related domains. A short form (PISQ-12) of this questionnaire has recently been published [2].

In the Turkish language, there is no validated QOL instrument which measures the impact of UI and/or POP in sexual function in women. Therefore, the aim of our study was to validate the Turkish translated version of the PISQ-12 questionnaire for the use in Turkish-speaking patients.

2. Materials and methods

2.1. Questionnaires

The PISQ-12 is a validated, condition-specific, self-administered questionnaire that evaluates sexual function in women with POP and/or UI. The short form provides a single sexual function score. Behavioral–emotive factors are represented with items 1–4,

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physical factors with 5–9 and the partner-related factors with 10–12. Scores are calculated by totaling the scores for each question Responses are graded on a 5-point Likert scale from "never" to "always". Reverse scoring is used for items 1–4. The maximum total score is 48 and higher scores indicate better functioning.

Two professional English–Turkish translators, not familiar with PISQ-12, worked independently to produce the Turkish version of the questionnaire. After the first meeting, a common draft of the Turkish version was produced with a list of alternatives for the controversial items and response choices. Next, after the second meeting between the two translators and Turkish physicians with experience of "health and QOL terminology," some revisions were made and a second draft was produced. Ten symptomatic women were asked to self-complete the second draft and then they were interviewed for possible ambiguous questions. After the third meeting, the final Turkish version was completed.

2.2. Study population and data collection

Initially, a pilot study was carried out in order to evaluate the internal consistency and the test–retest reliability of the Turkish version. Thirty-one women completed the final version at the beginning of their visit in the urogynecology outpatient clinic of Zeynep Kamil Women's Hospital (a tertiary referral teaching institution in Istanbul, Turkey), before being seen by a physician. Questionnaires were printed in large fonts (minimum 16 points) so that women with poor eyesight could read and self-complete them. If a particular woman could not read or write, a relative or her accompanying person helped her to complete the questionnaire, when available. If not, support personnel, not familiar with the concepts of urogynecology and QOL, provided non-directive assistance to those patients.

To measure the test–retest reliability of the final version, a 'two weeks' test–retest analysis' was used. Thus 31 women were asked to complete the questionnaire at their initial visit and repeat the procedure two weeks later in the same clinic. The responses of the two completed questionnaires were then analyzed using the Spearman's correlation.

After the pilot study, 249 patients were enrolled in the study between February and September 2008. Women with a prior history of any gynecologic or urogynecologic operation and mentally incapacitated patients were excluded from the study. No woman was taking hormonal replacement therapy for the menopause. The inclusion criteria included women over the age of 21 in a heterosexual relationship who could read Turkish. The participants completed the questionnaires as described above. General scores were calculated for the PISQ-12 and additional subscale scores were calculated for the three subscales of the PISQ-12, as explained above.

After completing both questionnaires, all participants were examined using the pelvic organ prolapse quantitation (POP-Q) scores by an investigator (PS) who was blinded for the questionnaire score of the particular patient. Women with initial complaints of urinary incontinence underwent urodynamic assessment. Urodynamic assessment was performed by an investigator (CC) who was blinded to the questionnaire score of the particular patient. Urodynamic studies consisted primarily of filling cystometry, and uroflowmetric and pressure/flow studies were added when clinically indicated. In women with irritative complaints but no positive findings on initial urodynamics, the investigations were repeated on the next day.

To describe the symptoms, signs, urodynamic observations and conditions associated with lower urinary tract dysfunction, the definitions of International Continence Society were used [3]. The institutional research board approved the study and written informed consent was obtained from all the patients.

2.3. Analysis

The test–retest reliability was assessed using the Spearman's rho. A value of greater than 0.8 was considered as highly reliable [4]. To assess the internal consistency, which evaluates the overall correlation between the items within a scale, the Cronbach's alpha was used.

The content/face validity, which indicates whether the questionnaire makes sense to the patients and experts and whether all the important and relevant domains are included, was assessed by an expert panel that included two urogynecologists and one psychometrician. Levels of missing data were used as an indicator of inappropriate questions [4].

Criterion validity, which describes how well the questionnaire correlates with existing standards [4], was assessed by comparing the total scores with the scores of validated Turkish versions of the short form of the Incontinence Impact Questionnaire (IIQ-7) [5] and Prolapse Quality of Life questionnaires (PQoL) [6]. Based on the POP-Q scores and urodynamic investigations, participants were categorized in two groups as "incontinence ± prolapse" and "women with no abnormality". Prolapse was defined as a POP-Q stage 3 or higher.

Data were collected and analyzed using SPSS (Statistical Package for Social Sciences) for Windows 15.0 program. Descriptive statistics were used to compare the demographics of the two groups. Data were evaluated for significance using the Chi-square, Mann–Whitney *U*-test and Student's *t*-test when appropriate.

The PISQ-12 scores are expressed as median and quartiles. Non-parametric tests were used since the data did not follow normal distribution. Spearman's correlation was used for evaluating the correlation between the PISQ-12 and the PQoL scores among the incontinence with or without prolapse group. The PISQ-12 scores of the incontinence ± prolapse group and the group with no abnormality were compared by using Student's *t*-test. A p value less than 0.05 was accepted as the level of statistical significance.

The Turkish version of the full questionnaire is available from the first author on request.

3. Results

Among 270 participants, a total of 249 women were available to validate the questionnaire. Seventeen patients in the incontinence ± prolapse group and four with no abnormality declined to answer the questions and were excluded from the study. 62.24% of the participants showed urodynamic abnormality and/or leakage with or

Table 1
Characteristics of the participants.

	Incontinence ± prolapse (n = 155)	No abnormality (n = 94)	p
Age[a]			
Mean ± SD	46.50 ± 8.42	44.44 ± 10.68	>0.05
BMI[a]			
Mean ± SD	30.89 ± 5.22	28.30 ± 5.00	<0.01
Parity[b]			
Mean ± SD (median)	3.73 ± 2.03 (3)	2.11 ± 0.88 (2)	<0.01
Education[c]			
Illiterate n (%)	130 (84%)	75 (80.0%)	
Primary school n (%)	12 (7.7%)	7 (7.4%)	>0.05
High school n (%)	9 (5.8%)	12 (12.6%)	
University n (%)	4 (2.5%)	0 (0%)	
Postmenopausal	36 (23.2%)	21 (22.3%)	

[a] Student's *t*-test.
[b] Mann–Whitney *U*-test.
[c] Chi-square test.

Table 2
The Cronbach's alpha for the PISQ-12.

	Internal consistency (r)
PISQ-12 total	0.898
Behavioral–emotive	0.922
Physical	0.898
Partner-related	0.671

Table 3
PISQ-12 scores.

	Incontinence ± prolapse (n = 155)	No abnormality (n = 94)	p
PISQ12 total[a]			
Mean ± SD	23.67 ± 8.40	34.88 ± 6.00	<0.01**
Behavioral–emotive mean ± SD	5.87 ± 3.05	8.36 ± 3.32	<0.01**
Physical mean ± SD	10.58 ± 5.35	18.31 ± 1.76	<0.01**
Partner-related mean ± SD	7.22 ± 2.08	8.21 ± 2.10	<0.01**

** $p < 0.01$.
[a] Student's t-test.

Table 4
Comparing the mean scores of PQoL and PISQ12 questionnaire between two groups.

	Incontinence ± prolapse (n = 155)	No abnormality (n = 94)	p
PQoL[a]			
Mean ± SD (median)	43.23 ± 18.90 (46)	4.44 ± 4.42 (2)	<0.01
PISQ12 total[b]			
Mean ± SD	23.67 ± 8.40	34.88 ± 6.00	<0.01

[a] Mann–Whitney U-test.
[b] Student's t-test.

without prolapse. 38.55% had urodynamic stress incontinence (USI). 13.25% had detrusor overactivity (DOA). 10.44% had mixed urinary incontinence (MUI). 28.91% had prolapse stage 3 or higher.

The characteristics of both groups are shown in Table 1. The groups were similar with respect to age and education but body mass index (BMI) and parity were significantly higher in women with incontinence ± prolapse.

The number of missing items was nil (0%). For the test–retest reliability, Spearman rho was 0.78 ($p < 0.001$). The Cronbach's alpha for the PISQ-12 was 0.89, showing a good high degree of internal consistency (Table 2).

The total and subgroup (behavioral–emotive, physical, and partner-related) scores of both groups are shown in Table 3. These scores were significantly higher in the women without abnormality compared with women with incontinence ± prolapse.

Comparison of the mean scores with PQoL between two groups is shown in Table 4. Sexual function scores were negatively correlated with scores of PQoL (Table 5) and a similar correlation was found with the scores of IIQ-7 (Table 6 and Figs. 1 and 2).

Table 5
Correlation between mean scores of PQoL and PISQ-12.

Incontinence ± prolapse (n = 155)	PQoL
PISQ12 total	r = 0.558

r: Pearson correlation test.

Table 6
Correlation between mean scores of IIQ-7 and PISQ12.

Incontinence ± prolapse (n = 155)	IIQ-7
PISQ12 total	r = 0.693

r: Pearson correlation test.

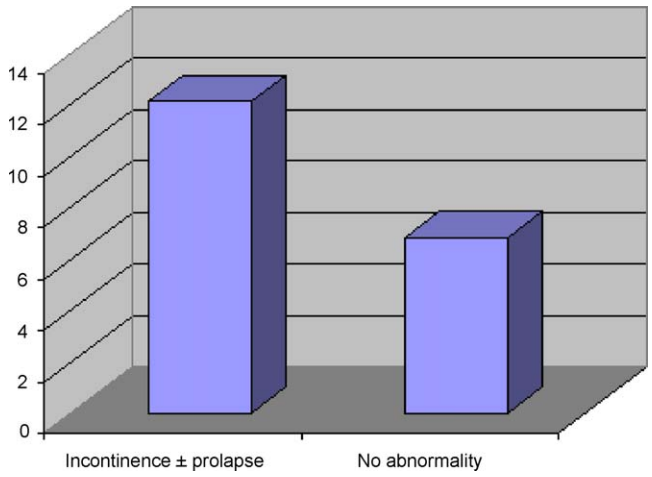

Fig. 1. Comparison of IIQ-7 mean scores of both groups.

4. Discussion

Our study shows that the Turkish version of PISQ-12 correlates well with validated instruments for prolapse and incontinence. Sexual well-being in women is an important measure of quality of life [4]. PISQ-12 is a validated quality of life instrument measuring the severity and the impact of incontinence/urogenital prolapse on the quality of life of women. It has been stated that the PISQ-12 questionnaire should be routinely adopted in clinical practice to better identify those women and evaluate the surgical outcomes through a comparison of pre- and post-treatment of PISQ-12 scores. To allow its utilization globally, translation and validation of the translated version is needed.

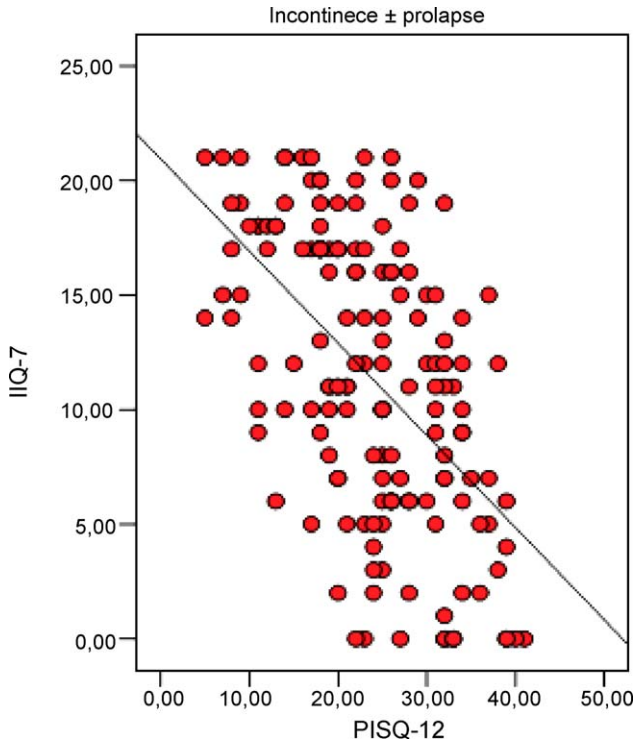

Fig. 2. Correlation between PISQ-12 and IIQ-7 mean scores.

Assessing the response to treatment is considered as the final step in validating a questionnaire. This step is considered somewhat controversial because there is no agreement about the best method of determining whether a questionnaire has the optimum measurement of change. This is best accomplished through a study comparing an intervention and a control group [7]. In this study, results on response are lacking because of the limited number of women who returned to complete the questionnaire after their medical or surgical treatments.

5. Conclusion

Like the original English questionnaire, the Turkish translated version of the PISQ-12 is a reliable, consistent and a valid instrument for assessing symptom severity and impact on quality of life among women with incontinence/prolapse. The scores correlate well with validated instruments for prolapse and incontinence. It seems to be a reliable, consistent and valid instrument for assessing sexual dysfunction in Turkish-speaking women with incontinence and/or prolapse.

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