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Validation of the prolapse quality of life questionnaire (P-QOL) in a Turkish population

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Abstract

Objective: To validate the Turkish translated version of the prolapse quality of life questionnaire (P-QOL).
Study design: After establishing the test–retest reliability and internal consistency in a pilot study, 310 patients were enrolled in the study and general and subscale scores of the questionnaires were calculated. All participants underwent the International Continence Society (ICS) prolapse score (POP-Q).
Results: One hundred and forty-five (49.7%) women were symptomatic and 147 (50.3%) were asymptomatic. The level of missing data ranged from 0 to 2.2%. For the test–retest reliability, Spearman's rho was from 0.91 to 1.00 for all domains ($p < 0.001$). The severity of P-QOL was strongly correlated with the vaginal examination findings among the symptomatic group ($p < 0.001$). Items correlated with the objective vaginal examination findings. The total and domain scores for P-QOL of symptomatic and asymptomatic women were found to be statistically significant ($p < 0.001$).
Conclusion: The Turkish translated version of the P-QOL is reliable, consistent and valid instrument for assessing symptom severity, impact on quality of life in women with uterovaginal prolapse. It is easy to understand may be easily administered and self-completed by the women.

Keywords: Urogenital prolapse; Quality of life; Validation

1. Introduction

Urogenital prolapse is a common condition [1,2], affecting women's quality of life, causing physical, social, psychological, occupational, domestic and/or sexual limitations [3].

The validated prolapse quality of life (P-QOL) questionnaire is a simple, reliable and an easily comprehensible questionnaire able to characterize symptom severity, to assess its impact on the quality of life and to evaluate the treatment outcomes of women with uterovaginal prolapse [4]. Its Italian version has previously been validated and published [3].

The aim of our study was to validate the Turkish version of the P-QOL questionnaire for the use among Turkish-speaking patients.

2. Materials and methods

Questionnaires: The P-QOL questionnaire was first developed to measure the impact of urogenital prolapse on QOL in women. The first question describes the general health of the woman; the second question assesses the impact of the urogenital prolapse on the woman's quality of life; the third and the fourth questions evaluate the urogenital prolapse limitations on normal daily activities; the next four questions assess the physical and social limitations which the urogenital prolapse might cause. The ninth, tenth and

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eleventh questions assess the impact of the uterovaginal prolapse on the personal relationships of the woman. Questions 12–14 evaluate the impact of the urogenital prolapse on the emotional life of the women. Questions 15 and 16 assess the sleep/energy disturbances and the last four questions assess the severity of the symptoms [4].

Two professional English–Turkish translators, not familiar with the P-QOL 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.

2.1. 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 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, Istanbul, Turkey), before 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 an accompanist of her, 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 week's test–retest analysis' was used. Therefore, 30 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, 310 patients were enrolled in the study between January 2005 and October 2005. All women completed the P-QOL questionnaire at their hospital visit. Responses ranged from ''none/not at all'', through ''slightly/a little'' and ''moderately'' to ''a lot''. Therefore, a four-point scoring system for each item was used for the severity measurement of urogenital prolapse symptoms. Scores in each domain were transformed to a range between 0 and 100. A high total score indicates a greater impairment of quality of life, while a low total score indicates a good quality of life. Symptomatic women described symptoms of urogenital prolapse while asymptomatic women had not been referred for urogenital prolapse and did not complain of ''a bulge coming down the vagina''.

After completing both of the questionnaires, all the participants were examined using the pelvic organ prolapse quantitation (POP-Q) scores [5] by the principle investigator (CC) who was blinded for the questionnaire score of the particular patient. To describe the symptoms and signs associated with lower urinary tract dysfunction, the definitions of International Continence Society were used [6].

Mentally incapacitated patients were excluded from the study. The institutional research board approved the study and a written informed consent was obtained from all of the participants.

Analysis: The test–retest reliability was assessed using the Spearman's rho. A value of greater than 0.8 was considered as highly reliable [7]. 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, is assessed by an expert panel that included two urogynecologists and one psychometrician. Levels of missing data were also used.

Criterion validity, which describes how well the questionnaire correlates with an existing gold standard [7], was assessed by comparing the P-QOL scores with the POP-Q scores. Based on the symptomatology, participants were categorized into two groups as symptomatic women describing symptoms of urogenital prolapse and as asymptomatic women who had not been referred for urogenital prolapse and did not have the complaint of ''a bulge coming down the vagina''.

The P-QOL scores are expressed as median and quartiles. Non-parametric tests were used since the data did not follow a normal distribution. Spearman's correlation was used for evaluating the correlation between the POP-Q and the P-QOL scores among the symptomatic patients. The P-QOL scores of asymptomatic and the symptomatic participants were compared by using Mann–Whitney U 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

A total of 292 of 310 women (94.2%) were enrolled into the study and 18 (5.8%) were excluded because of incomplete or incorrect completion of the questionnaire. One hundred and forty-five (49.7%) women were symptomatic and 147 (50.3%) were asymptomatic. Basic characteristics and vaginal examination findings of symptomatic

Table 1
Basic characteristics and vaginal examination findings of symptomatic and asymptomatic participants

	Symptomatic ($n = 145$)	Asymptomatic ($n = 147$)
Age (years)		
Mean ± S.D.	44.2 ± 9.8	37.0 ± 9.8
(Median)	(44)	(35)
Educational status, *n* (%)		
Illiterate	6 (4.1)	5 (3.4)
Primary school graduate	120 (82.8)	119 (81.0)
High school graduate	16 (11.0)	18 (12.2)
College graduate	3 (2.1)	5 (3.4)
Body mass index		
Mean ± S.D.	27.3 ± 4.6	26.8 ± 5.1
(Median)	(26.7)	(26.2)
Parity		
0	0	2 (1.4)
1	2 (1.4)	18 (12.2)
2	34 (23.4)	62 (42.2)
3 and more	109 (75.2)	65 (44.2)
POP-Q findings, *n* (%)		
Stage 0	0	9 (6.1)
Stage 1	8 (5.5)	128 (87.1)
Stage 2	87 (60.0)	10 (6.8)
Stage 3	42 (29.0)	0
Stage 4	8 (5.5)	0

Table 2
Test–retest reliability scores for the prolapse quality of life questionnaire (P-QOL)

Prolapse quality of life domain scores	SCC	*p*-value
General health perceptions	0.95	<0.001
Prolapse impact	0.97	<0.001
Role limitations	0.91	<0.001
Physical limitations	0.96	<0.001
Social limitations	0.96	<0.001
Personal relationships	0.96	<0.001
Emotions	0.99	<0.001
Sleep/energy	1.00	<0.001
Severity measures	1.00	<0.001

Table 3
Spearman's correlation coefficient (SCC) between total, domain scores for P-QOL and vaginal examination findings among the symptomatic group

Prolapse quality of life domain scores	SCC	*p*-value
General health perceptions	0.55	<0.001
Prolapse impact	0.44	<0.001
Role limitations	0.55	<0.001
Physical limitations	0.52	<0.001
Social limitations	0.53	<0.001
Personal relationships	0.50	<0.001
Emotions	0.46	<0.001
Sleep/energy	0.53	<0.001
Severity measures	0.62	<0.001
Total	0.61	<0.001

and asymptomatic participants are shown on Table 1. The level of missing data ranged from 0 to 2.2% and the majority of items were easily understood. For the test–retest reliability, Spearman's rho ranged from 0.91 to 1.00 for all the domains ($p < 0.001$) (Table 2). The severity of P-QOL was strongly correlated with the vaginal examination findings among the symptomatic group. Spearman's rank correlation analysis confirmed that the questionnaire items correlated with the objective vaginal examination findings (Table 3). The total and the domain scores for P-QOL of asymptomatic women were found to be significantly higher compared to asymptomatic women (Table 4).

4. Discussion

PQO-L is a validated quality of life instrument measuring the severity and the impact of urogenital prolapse on the quality of life of the women. It has been stated that the P-QOL questionnaire should be routinely adopted in the clinical practice to better identify those women who need treatment and to more accurately evaluate the surgical outcomes through a comparison of pre- and post-treatment P-QOL scores [3]. Unfortunately its use is limited to English speaking countries. To allow its utilization in different countries, translation and validation of the translated version is needed.

Table 4
Total and domain scores for P-QOL of symptomatic and asymptomatic participants

Prolapse quality of life domain scores	Symptomatic median (25th–75th percentile)	Asymptomatic median (25th–75th percentile)	*p*-value
General health perceptions	75 (50–75)	25 (0–50)	<0.001
Prolapse impact	67 (33–100)	0 (0–0)	<0.001
Role limitations	67 (33–92)	0 (0–17)	<0.001
Physical limitations	50 (17–83)	0 (0–0)	<0.001
Social limitations	33 (0–67)	0 (0–0)	<0.001
Personal relationships	50 (33–75)	0 (0–33)	<0.001
Emotions	67 (33–100)	0 (0–22)	<0.001
Sleep/energy	33 (33–83)	17 (0–33)	<0.001
Severity measures	33 (17–67)	0 (0–8)	<0.001
Total	55 (33–74)	5 (2–17)	<0.001

Our study reveals that the Turkish version of the PQO-L correlates well with the POP-Q findings among Turkish women. Furthermore, the total and domain scores were found to be significantly higher in symptomatic women compared to asymptomatic participants.

Assessing the responsiveness is considered as the final step in validating of 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 responsiveness are lacking because of the limited number of women who had returned to complete the questionnaire after their medical or surgical treatments.

5. Conclusion

Like the original English questionnaire, the Turkish translated version of the P-QOL is a reliable, consistent and a valid instrument for assessing the symptom severity, impact on quality of life among women with uterovaginal prolapse. It is easily understood, administered and self-completed by the women.

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