

Evaluating the Performance of a New Slovak Version of the Incontinence-Specific Quality of Life Measure (I-QOL)

Bushnell DM¹, Martin ML¹, and Svihra J²

¹Health Research Associates, Seattle, WA, USA; ²Dept. of Urology, Jessenius School of Medicine, Martin, Slovakia



ABSTRACT

International clinical trials of treatment for urinary incontinence (UI) have been increasing in both frequency and global scope. This has increased the demand for incontinence-specific quality of life measures for application in regions not previously active in clinical trials, including Eastern Europe. Standard translation criteria were followed to develop a Slovak language version of the I-QOL. This new translation was then administered to 100 women reporting symptoms of incontinence as a part of a local epidemiologic study. The mean age of the sample was 59 years, with 29% reporting moderate to severe symptoms, and 50% reporting symptoms of both stress and urge incontinence. Psychometric evaluation of the I-QOL in this population showed good internal consistency (alpha=0.97), and the ability of the I-QOL to discriminate between degrees of self-reported severity, length of time with UI, and clinical indicators such as number of pads used and amounts of urine leakage. Mean I-QOL scores (Avoidance & Limiting Behavior (ALB), Social Embarrassment (SE), Psychosocial Impacts (PI)) were compared to those in previous validation studies in other European countries. We conclude the new Slovak version of the I-QOL demonstrates performance characteristics and mean scores in line with those found in other European countries. As clinical trials for UI expand into Eastern Europe, this version of the I-QOL will be both useful and appropriate.

I-QOL mean (SD)	France n=62	Spain n=65	Sweden n=64	Germany n=68	Slovakia n=100
Total Score	62 (22)	42 (21)	66 (22)	51 (24)	64 (25)
ALB	59 (23)	42 (22)	63 (23)	44 (23)	64 (24)
SE	54 (26)	25 (22)	56 (27)	41 (27)	58 (27)
PI	70 (23)	51 (26)	75 (23)	62 (27)	68 (26)

OBJECTIVES

- To translate the existing US English I-QOL into a Slovak version using standard translation criteria.
- To assess the psychometric properties of this new version and compare to existing European data.

METHODS

This validation was completed as part of a pivotal epidemiologic study concerning urinary incontinence (UI) in the female population in Slovakia. Selection of participants were generated from a random pool of 100 general practice physicians working in Slovakia. They were asked to supply a mailing address for every 200th female from the list of residents (i.e. an average of 10 females from each physician). 79 physicians replied, supplying addresses of 673 females. All females were sent a questionnaire for anonymous completion by mail. The surveys included UI-specific items (type and severity), quality-of-life items (the newly translated I-QOL), and demographic characteristics. Analyses included parity, body mass index, education, marital status, computed prevalence of UI, degree of UI, type of UI and I-QOL scores. As this was designed as a population study, test-retest reproducibility was not a feasible addition and the inclusion of additional convergent measures was limited.

This study was conducted by the Departments of Urology and Epidemiology at the Jessenius School of Medicine in Martin, Slovakia.

RESULTS

Table 1. Baseline Characteristics (n=100)

Descriptive Variables	Category Labels	N	Percent
Age (years)	30-39	5	5
	40-49	21	21
	50-59	30	30
	60-69	24	24
	70-89	20	20
Marital Status	Married or living as married	64	64
	Widowed	26	26
	Divorced	7	7
	Never married/Single	3	3
Education Level	None	2	2
	Basic	33	33
	Completed high school	53	53
	University	12	12
Childbirth	None	4	4
	1 Child	9	9
	2 Children	43	43
	3 Children	30	30
	4+ Children	13	13
Type of visit due to UI	None	50	50
	General Practitioner	10	10
	OB/GYN	22	22
	Urologist	18	18

Table 2. Patient Clinical Descriptors (n=100)

Descriptive Variables	Category Labels	N	Percent
Self-Rated Severity	Mild	67	67
	Moderate	24	24
	Severe	9	9
Length of time with UI	Less than 2 years	22	22
	2-4 years	38	38
	5+ years	40	40
Medical Appointments for UI	1 and over	63	63
	Yes	37	37
Surgery for UI	No	16	16
	Yes	84	84
UI type	Stress	49	49
	Urge	1	1
	Mixed	50	50

Internal consistency reliability (Cronbach's alpha) for the Slovak language version is 0.97.

From the 673 randomly chosen females, 356 (52.9%) responded to the questionnaire. Out of the 117 females who reported UI, 100 returned fully completed questionnaires. Severity of UI was identified as mild, moderate, and severe in 67%, 24%, and 9%, respectively. The signs of stress-related incontinence occurred in 49% of the sample. As demonstrated by other language versions, the I-QOL and its subscale scores were able to discriminate between levels of self-reported severity, number of medical appointments in the past year, and reported length of time having UI. In addition, this study showed that the I-QOL was sensitive to differences in the number of pads used and amount of leakage reported as well as nocturia episodes and constipation.

Figure 1. Cross-cultural Comparison of the I-QOL and its subscales

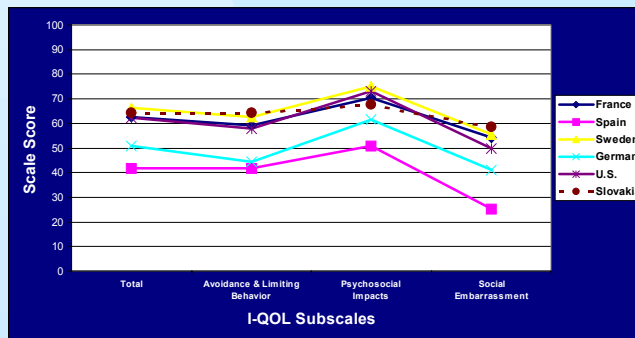


Table 3. Discriminant Validity (Univariate analysis of variance)

	I-QOL Total Score	I-QOL Avoidance and Limiting Behaviors	I-QOL Psychosocial Impacts	I-QOL Social Embarrassment
Self-Perceived Severity				
Mild (n=67)	76.5 (17.7)	76.2 (16.8)	80.0 (18.6)	70.5 (22.0)
Moderate (n=24)	44.6 (17.6)	45.1 (16.7)	48.1 (19.7)	37.5 (22.6)
Severe (n=9)	27.0 (10.0)	27.1 (11.5)	26.9 (12.7)	27.2 (15.4)
F-stat	53.6***	57.2***	50.1***	30.9***
Length of time with UI				
Less than 2 years (n=22)	75.1 (21.7)	74.3 (23.3)	79.3 (20.4)	68.9 (24.6)
2 - 4 years (n=38)	65.3 (25.3)	65.0 (24.3)	68.1 (27.5)	61.0 (26.9)
5+ years (n=40)	57.5 (23.9)	58.2 (22.7)	60.6 (25.7)	50.9 (27.8)
F-stat	3.8*	3.4*	3.9*	3.4*
Medical appointments to treat UI during the last year				
0 (n=63)	71.4 (21.6)	70.7 (21.3)	75.3 (22.5)	65.7 (24.8)
1 or more (n=37)	52.3 (25.2)	53.4 (24.7)	54.4 (26.8)	46.8 (28.0)
F-stat	16.1***	13.8***	17.3***	12.4**
Nocturia episodes				
0-1 / Night (n=47)	77.9 (17.1)	79.5 (15.9)	81.1 (17.9)	69.6 (21.9)
2 / Night (n=36)	54.8 (24.6)	53.5 (21.2)	57.7 (27.8)	51.8 (28.9)
3+ / Night (n=17)	47.1 (23.6)	45.2 (22.8)	50.8 (23.4)	43.2 (27.1)
F-stat	19.0***	28.9***	16.3***	8.9***
Constipation				
None (n=41)	70.5 (20.8)	70.1 (20.0)	73.1 (23.1)	66.5 (24.0)
Sometimes (n=39)	69.2 (23.1)	68.8 (23.8)	73.3 (23.0)	62.7 (25.1)
Mostly-Always (n=20)	42.2 (23.6)	43.6 (21.5)	45.0 (26.4)	35.0 (26.4)
F-stat	12.4***	11.3***	11.3***	11.5***
Number of pads/pants				
None (n=30)	81.8 (16.4)	79.6 (18.0)	86.2 (16.9)	77.3 (17.3)
1 - 3 / week (n=30)	66.6 (21.5)	68.8 (20.1)	68.8 (22.5)	59.2 (26.5)
4 - 6 / week (n=16)	60.2 (21.8)	61.1 (20.3)	63.0 (24.7)	54.3 (27.4)
1 - 4 / day (n=19)	46.5 (21.8)	45.6 (20.7)	49.7 (23.2)	42.4 (24.5)
5+ / day (n=5)	27.7 (17.4)	27.5 (14.6)	30.6 (21.4)	23.0 (17.5)
F-stat	13.9***	14.1***	12.9***	10.1***
Amount of urinary leakage				
Drops (n=28)	75.3 (20.3)	77.3 (17.6)	77.6 (22.2)	68.0 (26.4)
Small (n=47)	71.3 (19.7)	70.2 (19.2)	75.0 (20.8)	66.6 (23.0)
Moderate-Large (n=25)	39.0 (19.9)	38.6 (19.2)	42.3 (23.3)	33.4 (20.7)
F-stat	27.4***	32.5***	22.4***	19.5***
Straining during urination				
No (n=86)	65.8 (24.2)	65.9 (23.3)	68.8 (25.8)	60.2 (27.1)
Yes (n=14)	55.6 (27.1)	54.7 (26.7)	59.9 (27.5)	49.3 (26.5)
F-stat	2.1	2.7	1.4	1.9

* Significant at p<0.05 level; ** Significant at p<0.01 level; *** Significant at p<0.001 level

CONCLUSIONS

- The new Slovak language version of the I-QOL demonstrates acceptable psychometric characteristics for an incontinent population in Slovakia.
- When compared to the I-QOL data from other European countries, the total and subscale scores of the Slovak I-QOL were found to demonstrate similar patterns.
- While further studies are needed to confirm reproducibility and convergent validity against previously published data from other language versions, these data suggest that the Slovak I-QOL can be expected to perform well in clinical settings.