

NORMATIVE VALUES FOR THE SHORT FORMS OF THE UDI AND IIQ IN COMMUNITY DWELLING WOMEN

Hypothesis / aims of study

The short forms of the Urogenital Distress Inventory (UDI-6) and Incontinence Impact Questionnaire (IIQ-7) are widely utilized quality of life (QOL) measures; however, their validation was conducted in tertiary settings among severely incontinent subjects. To our knowledge, no normative values have been published for the UDI, and one study indicates that a cut-off score of 70 on the IIQ indicates a poor quality of life as determined by Neural Networks.(1) Our goal was to identify normative values within the general female population for the short forms of the UDI and IIQ.

Study design, materials and methods

UDI-6 and IIQ-7 surveys, as part of a 67-item urogynecology questionnaire, were anonymously completed by 374 women at the Twinsburg, Ohio twins' convention. Data from 181 randomly sampled unrelated females were used for the analysis. UDI and IIQ scores were scored according to the original articles. Descriptive statistics were applied to the full cohort, and subsets of continent and incontinent women. T-tests were used to compare mean QOL scores in incontinent vs. continent women. $p < 0.05$ was considered statistically significant.

Results

104 (57%) women indicated some degree of incontinence. Within the overall sample (n=181), UDI-6/IIQ-7 mean scores were 16.2/5.6, respectively. Continent women (n=77) reported mean scores of 6.1/2.6, and the incontinent subgroup (n=104) scored 23.7/7.9 ($p < 0.001$ and $p = 0.010$, respectively).

Normative IIQ/UDI scores for
181 Community-Dwelling
women

	IIQ	UDI
Mean	5.63	16.23
Standard Deviation	14.83	17.89
Minimum Observed Score	0.0	0.0
25 th Percentile	0.0	0.0
50 th Percentile (Median)	0.0	11.1
75 th Percentile	4.8	27.8
90 th Percentile	14.3	38.9
95 th Percentile	33.3	50.0
99 th Percentile	76.2	88.9
Maximum Observed Score	100.0	94.4

Normative IIQ/UDI scores for 77 Continent Subjects

	IIQ	UDI
Mean	2.60	6.13
Standard Deviation	9.87	8.09
Minimum Observed Score	0.0	0.0
25 th Percentile	0.0	0.0
50 th Percentile (Median)	0.0	0.0
75 th Percentile	0.0	11.1
90 th Percentile	4.8	16.7
95 th Percentile	19.0	22.2
99 th Percentile	57.1	33.3
Maximum Observed Score	57.1	33.3

Normative IIQ/UDI scores for 104 Incontinent Subjects

	IIQ	UDI
Mean	7.88	23.70
Standard Deviation	17.32	19.44
Minimum Observed Score	0.0	0.0
25 th Percentile	0.0	11.1
50 th Percentile (Median)	0.0	18.3
75 th Percentile	4.8	33.3
90 th Percentile	23.8	44.4
95 th Percentile	47.6	66.7
99 th Percentile	76.2	88.9
Maximum Observed Score	100.0	94.4

Interpretation of results

Ninety percent of patients in the total study sample scored < 38.9/14.3 on UDI-6/IIQ-7 respectively. Ninety percent of incontinent patients scored < 44.4/23.8. The highest scores in the continent population were 33.3/57.1. Thirty-eight (49%) of continent patients scored 0. In our study population with predominantly mild incontinence, 39-53% of patients with incontinence indicated that their symptoms were socially bothersome. In contrast, < 3% of patients scored > 70 on these questionnaires, indicating that for a community based sample, lower scores on these surveys may indicate a significant degree of bother and impact on quality of life.

Concluding message

We describe normative values for a general population, 10% of whom scored above 16.7 and 4.8 on the UDI-6 and IIQ-7 respectively. Values obtained from patients with severe incontinence indicate that a score > 70 on the IIQ signifies a poor QOL.(1) Our data indicates that lower scores on both the UDI-6 and IIQ-7 may identify more females who are bothered by urinary incontinence.

References

1. Identifying cut-off scores with neural networks for interpretation of the incontinence impact questionnaire. *Neurourology and Urodynamics* 2002;21:198-203.