

Reviewer ID: Jeff Tan, John Zhu, Jeremy Mak			
Type of Outcome Measure: Qualiveen Questionnaire			Total articles: 2
Author ID Year	Study Design	Setting	Population (sample size, age) and Group
Costa et al. 2001	Questionnaire	France	<p>Questionnaire development: n=9</p> <p>Item reduction: n=281 (218 male, 59 female, 4 missing data) Mean age: 41, range 17-87</p> <p>Reproducibility: n=46</p> <p>Questionnaire development: 4 paraplegic, 3 tetraplegic, 2 conus medullaris syndrome.</p> <p>Item reduction: 155 paraplegia, 90 tetraplegia, 24 conus medullaris syndrome, 12 missing data.</p>
Qualiveen MANUAL	N/A	France	<p>N=400 (290M, 104F, 6 missing data) Mean (sd) age: 41.2 (14.0) Mean (sd) DOI: 11.5 (9.6) years</p> <p>Type of injury: Paraplegia (N=209) Tetraplegia (N=109) Cauda equine (N=56) Missing data (N=26)</p> <p>Complete lesion: Yes (N=188) No (N=115) Doesn't know (N=74) Missing data (N=23)</p> <p>Method of urinating: Self-catheterization (N=165) Catheterized by someone else (N=22) Percussion (N=111) Abdom or manual pressure (N=90) Derivation (N=7) Indwelling catheter (N=10) Other (N=44)</p> <p>Family situation: Single (N=78) Has a partner (N=236) Other (N=70) Missing data (N=16)</p>
Nikfallah et al. 2015	cross-sectional prospective validation study of	A clinic	<p>N=154, 89M 65F Mean age 35.55±9.8 80 SCI, 74 Multiple Sclerosis</p>

	Persian Qualiveen-30	Iranian SCI & MS patients >=6 mth lower urinary tract symptoms Outpatient
1. RELIABILITY		
Author ID	Internal Consistency	Test-retest, Inter-rater, Intra-rater
Costa et al. 2001	$\alpha = 0.80$ Limitations: $\alpha = 0.85$ Constraints: $\alpha = 0.80$ Fears: $\alpha = 0.81$ Feelings: $\alpha = 0.83$ Item-total correlations:	15-day test-retest ICC ranged from 0.85 to 0.92 for the 4 subscales
Nikfallah et al. 2015	Cronbach's alpha: 0.95 (overall); 0.82~0.93 (subdomains)	3 week test-retest ICC = 0.97 (overall); 0.94~0.97 (subdomains)
2. VALIDITY		
Author ID	Validity	
Costa et al. 2001	<p>The final decision to reduce the number of items was made by the scientific committee, using their knowledge of the SCI population.</p> <p>Correlations between items in each domain and the domain: Limitations: $r = 0.52$ to 0.65 Constraints: $r = 0.43$ to 0.66 Fears: $r = 0.39$ to 0.60 Feelings: $r = 0.50$ to 0.77</p> <p>Correlations between items in each domain and non-corresponding domains: Limitations: $r = 0.29$ to 0.64 Constraints: $r = 0.18$ to 0.59 Fears: $r = 0.12$ to 0.40 Feelings: $r = 0.28$ to 0.57</p> <p>The criteria for acceptable discriminant validity is that the "item was more correlated with its own domain than with other domains"</p> <p><i>Clinical:</i> Scores from 4 Qualiveen Scales correlated with 3 items from Subjective Quality of Life Profile (SQLP) related to urination (correlation values are not provided): How well patients urinate: $P = .0001$ Patient Satisfaction with Urination: $P = .0001$ Time taken to urinate: $P < .05$</p>	
Nikfallah et al. 2015	<p>Pearson's r ($p < 0.05$): Qualiveen (Persian) total with Short Form-12 (SF-12) Health Survey - Physical Component Summary: -0.29 Qualiveen (Persian) total with SF-12 Mental Component Summary: -0.32</p> <p>Qualiveen and its domains had a moderate to high correlation with the International Consultation on Incontinence Questionnaire-Urinary Incontinence Short Form (ICIQ-UI SF) ($0.36 < r < 0.57$) and SF-12 MCS ($-0.51 < r < -0.11$) and SF-12 PCS ($-0.29 < r < -0.19$), indicating good convergent validity.</p> <p>Discriminant validity:</p>	

	<p>“patients with higher levels of education had significantly better urinary disorder specific quality of life (P<0.001)” “patients with good income had better urinary quality of life compared to low and moderate income patients (P<0.05)” “Participants with normal voiding had significantly lower values for Qualiveen and all its domains (P<0.05)” *lower Qualiveen scores = better quality of life</p>					
3. RESPONSIVENESS						
Author ID	Responsiveness					
Nikfallah et al. 2015	The non-overlap measure for overall Qualiveen score based on ICIQ-UI SF and SF-12 were 65.3 and 27.4%, respectively.					
4. FLOOR/CEILING EFFECT						
Author ID	Floor/ceiling effect					
Costa et al. 2001	Floor and ceiling effects were minimal, suggesting that the questionnaire adequately covered the range of patient experiences.					
Nikfallah et al. 2015	0% floor & ceiling for overall score 0.7~1.3% floor & 0.7~3.5% ceiling for “Bother with Limitations”, “Frequency of limitations”, “Fears” subdomains 8.5~10.5% floor & 2.0~2.8% ceiling for “Feelings” subdomain					
5. INTERPRETABILITY						
Author ID	Interpretability					
Qualiveen MANUAL	Mean (SD) Reference scores for Qualiveen domains and overall Index score for different groups:					
	Group:	Inconvenience domain (0-4):	Restrictions domain (0-4):	Fears domain (0-4):	Impact on daily life domain (0-4):	Overall index: (0-4)
	Men (N=290)	1.36 (0.91)	1.79 (0.87)	1.72 (0.96)	1.16 (1.01)	1.51 (0.77)
	Women (N=104)	1.50 (0.96)	1.79 (0.87)	1.54 (0.89)	1.42 (1.24)	1.64 (0.87)
	Age < 30 yrs (N=92)	1.42 (0.90)	1.58 (0.78)	1.61 (0.94)	1.17 (1.05)	1.44 (0.76)
	Age 30-39 yrs (N=96)	1.42 (0.93)	1.8 (0.8)	1.72 (1.03)	1.2 (1.01)	1.54 (0.77)
	Age 40-50 yrs (N=100)	1.41 (0.99)	1.58 (0.78)	1.72 (0.94)	1.19 (1.14)	1.55 (0.84)
	Age > 50 yrs (N=103)	1.32 (0.89)	2.10 (1.04)	1.62 (0.89)	1.35 (1.12)	1.62 (0.81)
	Paraplegia (N=208)	1.46 (0.89)	1.81 (0.85)	1.07 (0.85)	1.03 (1.31)	1.55 (0.76)
	Tetraplegia (N=107)	1.34 (0.95)	2.04 (0.90)	1.80 (0.88)	1.15 (0.97)	1.59 (0.73)
	Cauda equina syndrome (N=56)	1.51 (1.05)	1.81 (1.20)	1.62 (0.97)	1.56 (1.23)	1.60 (0.97)