

**Research Summary Wheelchair User’s Shoulder Pain Index (WUSPI) – Other**

Author Year Country Research Design Setting	Demographics and Injury Characteristics of Sample	Validity	Reliability	Responsiveness Interpretability
<a href="#">Salisbury et al. (2006)</a>  Longitudinal Study  Spinal Injuries Unit, Australia	N=27 with tetraplegia (20M, 7F) Mean age = 42.5 +/- 10.0 Between 2 and 4 years post-injury	<b>Convergent Validity:</b>  WUSPI scores were positively correlated with Numerical Rating Scale 101 (NRS-101) pain intensity on a numeric rating scale ( $r = 0.723, p = 0.000$ )		
<a href="#">Samuelsson et al. (2004)</a>  Cross-sectional  Two spinal cord injury (SCI) centres in Sweden	N=56 (44M, 12F) Mean age 48.9 All paraplegia >1 year post-SCI Mean (SD) wheelchair experience: 13.9 (10.8) years	Spearman’s correlation between: WUSPI & Klein-Bell ADL Scale: 0.10 (Not significant; $p>0.05$ )		
<a href="#">Curtis et al. (1995b)</a> (Reliability and validity of...)	Reliability: N=16 (15M, 1F) Mean age=38 years (range 21-59) Average time of wheelchair use is 15 years.	Correlation of total score with various range of motion measures:  Abduction: $r = -0.49$ ( $P=0.0001$ )	Test-retest reliability ICCs: see table 1 below	<b>Interpretability:</b> WUSPI index item scores and SEM and MDC values (calculated from data in Curtis et al. 1995b): see table 2 below

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Test-retest (same day)	<p>69% were SCI with remaining subjects reporting polio, lower extremity amputation, spina bifida, and other neurological disorders.</p> <p>Validity: N=64 (62M, 2F) Mean age=43 years (range 23-68) Average time of wheelchair use 14 years.</p> <p>90% were SCI with remaining subjects reporting polio, amputation, cerebrovascular accidents, and multiple sclerosis.</p>	<p>Flexion: <math>r = -0.48</math> (P=0.0001) Extension: <math>r = -0.30</math> (P=0.0147) External rotation: <math>r = -0.24</math> (P=0.0616) Internal rotation: <math>r = -0.20</math> (P=0.1064)</p>										
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	Load wheelchair in car <i>Wheelchair mobility</i> >10-min duration Ramp/uneven <i>Self-care</i> Lift object from overhead Put on pants Put on T-shirt Put on button-down shirt Wash back <i>General activities</i> Work/school activities Driving Household chores Sleeping <b>Total score</b>	1.46 (2.04) --- 0.90 (1.33) 1.14 (1.32) --- 1.71 (2.65) 0.38 (0.72) 0.88 (1.32) 0.67 (1.53) 1.02 (1.12) --- 1.09 (1.28) 0.57 (1.54) 0.63 (1.35) 1.49 (2.35) 14.17 (18.4)	1.34 (1.76) --- 0.79 (1.13) 0.93 (1.16) --- 1.40 (2.13) 0.439 (0.81) 0.84 (1.68) 0.59 (1.382) 1.00 (1.37) --- 1.17 (1.49) 0.58 (1.66) 0.42 (0.76) 1.47 (2.39) 13.51 (17.85)	0.20 -- 0.48 0.53 -- 0.59 0.16 0.37 0.15 0.37 -- 0.18 0.15 0.47 0.24 1.84	0.57 -- 1.33 1.46 -- 1.64 0.45 1.03 0.42 1.03 -- 0.50 0.43 1.30 0.65 5.10		
<a href="#">Curtis et al. (1995a)</a> (Development of...) Cross-sectional	N=64 (62M, 2F) Mean age 42.9±11yrs (range 23-68yrs). 89% had SCI as primary disability (of which 23% were cervical, 67% were thoracic, and 10% were lumbar). Others reported poliomyelitis,			<b>Internal Consistency</b> Cronbach's Alpha for each of the 19-item pain and difficulty dimensions and for the complete 38-item questionnaire.	<b>Interpretability:</b> See table 3 below		

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	amputation, CV accidents and MS. Average wheelchair use 14.3±8.5yrs (range 1.5-45yrs)		Pain $\alpha=0.98$ , complete $\alpha=0.97$ .  Pearson's correlation coefficient for inter-item correlations.  High correlations between several of the pain and difficulty items ( $r=0.633$ to $0.891$ ). All correlations were significant at $P<.0001$ .																			
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	<i>Wheelchair mobility</i>	---	---		
	>10-min duration	1.23 (1.82)	1.59 (2.06)		
	Ramp/uneven	1.93 (2.28)	2.30 (2.48)		
	<i>Self-care</i>	---	---		
	Lift object from overhead	2.48 (2.65)	2.32 (2.55)		
	Put on pants	1.37 (1.99)	1.19 (1.80)		
	Put on T-shirt	1.25 (1.77)	1.51 (1.96)		
	Put on button-down shirt	1.22 (1.91)	1.24 (1.72)		
	Wash back	2.76 (2.91)	2.09 (2.57)		
	<i>General activities</i>	---	---		
	Work/school activities	1.47 (1.90)	1.64 (1.96)		
	Driving	0.99 (1.57)	1.40 (1.82)		
	Household chores	1.58 (1.89)	1.60 (1.94)		
	Sleeping	2.02 (2.32)	2.31 (2.64)		
	<b>Total score</b>	33.94 (28.65)	36.12 (31.50)		