

Research Summary – ICF – Measure of Participation and Activities Screener – Community Reintegration

Author Year Country Research Design Setting	Demographics and Injury Characteristics of Sample	Validity	Reliability	Responsiveness Interpretability
<p>Van der Zee et al. 2014</p> <p>Validation study, cross-sectional</p> <p>Community</p>	<p>n=157 with chronic SCI 66.2% men Mean (SD) age: 50.6 (10.5) Mean time since injury (SD): 25.3 (26.8) years 59.2% paraplegia 69.4 % motor complete</p> <p>Cause of SCI: Road traffic=46.5; Sports/leisure=18.5; Fall=12.1; Work related=7.0; Violence=1.3; Nontraumatic=14.6</p>	<p>Correlations between IMPACT-S Total and: Utrecht Scale for Evaluation of Rehabilitation- Participation (USER- Participation) Frequency Score = .32 USER-Participation Restrictions score = .73 USER-Participation Satisfaction score = .38 World Health Organization Disability Assessment Schedule II (WHODAS II) total disability index scores = - .78</p> <p>Correlations between IMPACT-S Activities sub- total score and: USER-Participation Frequency Score = .30 USER-Participation Restrictions score = .67</p>	<p>Internal consistency: Cronbach's alpha:</p> <p>IMPACT-S Total=.92 Activities sub-total score =.84 Participation sub-total score =.88</p> <p># of items with a item- rest correlation >.30: IMPACT-S Total= 29/30 Activities sub-total score = 12/18 Participation sub-total score = 14/14</p>	<p>Floor/Ceiling effects: Excellent: No floor and ceiling effects (0.0% and 0.0% respectively)</p> <p>Interpretability: Mean (SD) score:</p> <p>IMPACT-S Total= 69.6 (13.0); range = 31.3-96.9 Activities domain= 66.1 (12.7); range = 33.3-94.4 Participation domain = 73.9 (15.1); range = 23.8- 100.0</p>

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		<p>USER-Participation Satisfaction score = .28 WHODAS II total disability index scores = -.70</p> <p>Correlations between IMPACT-S Participation sub-total score and: USER-Participation Frequency Score = .34 USER-Participation Restrictions score = .74 USER-Participation Satisfaction score = .47 WHODAS II total disability index scores = -.77</p> <p>All $p < .01$</p> <p>Discriminant Validity: IMPACT-S Total and sub-total scores showed significant differences between groups (paraplegia vs. tetraplegia):</p>		

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		Total: Para = 73.8; Tetra = 63.3; Mann-Whitney U Test (z) = -5.23, p<.000 Activities: Para = 70.7; Tetra = 59.3; Mann-Whitney U Test (z) = -5.62, p<.000 Participation: Para = 77.5; Tetra = 68.5; Mann-Whitney U Test (z) = -4.23, p<.000		
<p>Van der Zee et al. 2010</p> <p>Repeated administration of a postal questionnaire with a 2-week Interval</p> <p>Two rehabilitation centers and a university hospital in The Netherlands</p>	<p>N=47 outpatients (15M, 32F) Mean age 50.6(11.8) NON-SCI Participants with MSK disease, TBI, Stroke, neuromuscular disease, chronic pain, and heart failure</p>		<p>Test-retest, Inter-rater, Intra-rater: Test-retest (2 measurements, 2 week interval): ICC(95%CI): Total Score: 0.88(0.80-0.93)</p> <p>Activities Subscale: 0.92 (0.86-0.93)</p> <p>Participation Subscale: 0.74 (0.58-0.92)</p> <p>Domains: 0.54-0.90</p>	<p>Floor/Ceiling Effect: All but the Mobility subscale showed ceiling effects (15.2%-55.3%) Total score, Activities domain, and Participation domain did not show floor nor ceiling effects</p> <p>Interpretability: Minimal Detectable Change (MDC) of total score for individual participants: 12.1 Standard Error of Measurement (SEM) of total score for individual participants: 4.4</p>

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			<p>Top 3 domains:</p> <p>Mobility: 0.90(0.84-0.95)</p> <p>Communication: 0.85(0.74-0.91)</p> <p>Domestic Life: 0.80(0.68-0.89)</p> <p>Bottom 3 domains:</p> <p>Major Life Areas: 0.54(0.30-0.71)</p> <p>Self-care: 0.58(0.36-0.74)</p> <p>Community: 0.59(0.37-0.75)</p> <p>More subscale values available in article (Table II)</p> <p>Percentage of exact agreement between individual items:</p>	<p>Breakdown of MDC and SEM by subscales available in article (Table II)</p>

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			Mean = 73.1% Range = 56.5%~89.1% Weighted kappa for individual items: Range = 0.22-0.82 Fair (0.21-0.40): 3 items Moderate (0.41-0.60): 7 items Substantial (0.61-0.80): 19 items Almost perfect (0.81-1.00): 3 items	
Van der Zee et al. 2011 Longitudinal with repeated measurements at the start (t1) and at the end (t2) of a multidisciplinary out- patient	N=395 211M, 184F Mean (SD) age: 52.1 (13.6) Participants with MSK disease, TBI, Stroke, neuromuscular disease, chronic pain, and heart failure			Responsiveness: IMPACT-S Participation domain between t1-t2: All participants: diff (SD) = 4.9 (12.3) Effect size = 0.32

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<p>rehabilitation programme, and at 4 months follow- up (t3).</p> <p>5 rehabilitation centers in The Netherlands</p>	<p>SCI fell under neuromuscular disease, however n with SCI was not specified</p>			<p>Standard response mean = 0.40</p> <p>Neuromuscular conditions sub-group (N=87):</p> <p>Effect size = 0.29</p> <p>Standard response mean = 0.37</p> <p>IMPACT-S Participation domain between t2-t3:</p> <p>All participants: diff (SD) = -2.1 (10.3)</p> <p>Effect size = -0.14</p> <p>Standard response mean = -0.21</p> <p>*see above for time between each data point</p> <p>Interpretability: Mean (SD) scores on the IMPACT-S participation domain (different diagnoses):</p>

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				t1 = 80.2 (15.2) t2 = 85.1 (14.4) t3 = 83.0 (16.0) *see above for time between each data point
Post et al. 2008 Repeated administration of postal questionnaire Several Dutch hospitals and rehabilitation centers	N=275 (13% SCI) Mean (SD) age: 40.4 (15.8) years 65.9% male 58.8% employed or in full-time education Mean (SD) duration: 2.2 (0.9) years	Correlation with total WHODAS II score: $r = -0.88$	Internal Consistency: Cronbach's alpha: 0.96 Test-retest, Inter-rater, Intra-rater: Test-retest reliability: ICC: $r = 0.94$	
Post et al. 2012 Cross-sectional study to examine the validity of Utrecht Scale for Evaluation of Rehabilitation-Participation	N=395 211M, 184F Mean (SD) age: 52.8 (13.5) Participants with MSK disease, TBI, Stroke, neuromuscular disease, chronic pain, and heart failure	Correlations between IMPACT-S Participation domain and: USER-Participation Frequency Score = .48 USER-Participation Restrictions score = .75 USER-Participation Satisfaction score = .64		Floor/Ceiling Effect: Ceiling effect shown in IMPACT-S Participation domain (15%) No floor effect detected Interpretability: Mean (SD) scores on the IMPACT-S participation domain (different

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(USER- Participation) Five rehabilitation facilities in the Netherlands	SCI fell under neuromuscular disease, however n with SCI was not specified	*p values not reported		diagnoses) = 83.0 (16.1); range = 14.3-100