

Research Summary – Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-Participation) – Self-Care and Daily Living

Author Year Country Research Design Setting	Demographics and Injury Characteristics of Sample	Validity	Reliability	Responsiveness Interpretability				
Mader et al. 2016 Cross-sectional survey Swiss Spinal Cord Injury Cohort Study (SwiSCI)	N=1549 participants with SCI 1107M, 442F Mean (SD) age 52.4 (14.8) years Cause: Traumatic (n=1202), non- traumatic n=332), missing (n=15); Severity: Complete (n=646), incomplete (n=894), missing (n=9) Type of SCI: Paraplegia (n=1063), tetraplegia (n=474), missing (n=12) Mean (SD) time post injury 16.9 (12.7) years	Content Validity: The content validity of the USER- Participation may be affected by excluding domains related to work-related participation. “The anchor method was applied to appropriately account for items within the USER-Participation Restrictions and Satisfaction scales that are not applicable to some of the participants”.	Internal Consistency: <ul style="list-style-type: none">Excellent for Restrictions and Satisfaction scale (Cronbach’s alpha=0.9)Moderate for Frequency scale (Cronbach’s alpha=0.65)	Normative data: Score distributions of USER-Participation: See table 1. Floor/Ceiling Effects: <ul style="list-style-type: none">Floor effects:<ul style="list-style-type: none">Frequency: 0.0%Restrictions: 0.3%Satisfaction: 0.3%Ceiling effects:<ul style="list-style-type: none">Frequency: No ceiling effect (0.0%)Restrictions: 9.5%Satisfaction: 3.0%				
	Table 1. <table><tr><td></td><td>N</td><td>Mean (SD)</td><td>Median (IQR)</td></tr></table>					N	Mean (SD)	Median (IQR)
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	Frequency	1474	34.2 (12.2)	34.3 (26.1-42.5)		
	Restrictions	1491	70.0 (21.7)	72.7 (54.5-87.9)		
	Satisfaction	1459	69.3 (18.0)	72.5 (58.3-80.6)		
van der Zee et al. 2014 Validation study The community (De Hoogstraat Rehabilitation database and participants in the Active Lifestyle Rehabilitation Interventions in aging Spinal Cord injury study)	N=157 participants with SCI 62.2%M, 37.8%F Mean (SD) age 50.6 (10.5) years Mean time post injury 25.3 (26.8) years Severity: 69.4% complete SCI, 30.6% incomplete SCI		Concurrent Validity: The USER-Participation restrictions scale showed generally higher correlations with the IMPACT-S and the WHODAS II than the frequency and satisfaction scales: <ul style="list-style-type: none"> • USER-Participation, Frequency and total IMPACT-S: $r_s=0.32$ • USER-Participation, Restrictions and total IMPACT-S: $r_s=0.73$ • USER-Participation, Satisfaction and 	Internal Consistency: <ul style="list-style-type: none"> • Restrictions scale (Cronbach's $\alpha=0.89$) • Satisfaction scale (Cronbach's $\alpha=0.78$) • Frequency scale (Cronbach's $\alpha=0.51$) 	Normative data: Score distributions of USER-Participation: See table 1. Floor/Ceiling Effects: No floor or ceiling effects for any scales	

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		<p>total IMPACT-S: $r_s=0.38$</p> <ul style="list-style-type: none"> USER-Participation, Frequency and WHODAS II (total disability index): $r_s=-0.37$ USER-Participation, Restrictions and WHODAS II (total disability index): $r_s=-0.76$ USER-Participation, Satisfaction and WHODAS II (total disability index): $r_s=-0.52$ <p>Discriminant Validity: Significant ($p<0.05$) discriminant validity between paraplegia and tetraplegia was shown for all 3 scales using Mann-Whitney U Test scores (z):</p> <ul style="list-style-type: none"> Frequency: $z=-2.29$ 		

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		<ul style="list-style-type: none">Restrictions: z=-3.17Satisfaction: z=-1.99		
	Table 1.			
		N	Mean (SD)	Median (IQR)
	Frequency	157	34.8 (10.0)	361 (29.1-41.4)
	Restrictions	157	72.6 (19.3)	75.8 (60.3-87.9)
	Satisfaction	156	69.3 (14.3)	72.2 (60.0-79.5)
Post et al. 2012 Cross-sectional study to examine the validity of Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-Participation) Five rehabilitation	N=395 211M, 184F Mean (SD) age 52.8 (13.5) years Participants with MSK disease, TBI, Stroke, neuromuscular disease, chronic pain, and heart failure SCI fell under neuromuscular disease; however, n with SCI was not specified	Concurrent validity: The Frequency scale was most strongly associated with the FAI (r _s =0.59), the Restrictions scale was most strongly associated with the IMPACT-SP (r _s =0.75) and the Satisfaction scale was most strongly associated with the P-Scale (r _s =-0.73). However, the correlation between the Restrictions scale	Internal consistency of the USER-Participation scales: <ul style="list-style-type: none">Frequency: α=0.70Restrictions: α=0.91Satisfaction: α=0.88	Floor/Ceiling Effects: No floor effects were found and only the Restrictions scale showed a ceiling effect of 19.0.

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facilities in the Netherlands		and the P-Scale was also high ($r_s=-0.71$). See table 1. Discriminant validity: USER-Participation scores differed between participants with different functional ability and between participants with different health conditions.		
	Table 1.			
		USER-P Frequency	USER-P Restriction	USER-P Satisfaction
	FAI	0.59	0.51	0.42
	IMPACT-SP	0.48	0.75	0.64
P-Scale	-0.40	-0.71	-0.73	