

Research Summary - Spinal Cord Injury Functional Ambulation Profile (SCI-FAP) - Lower Limb and Walking

Author Year Country Research Design Setting	Demographics and Injury Characteristics of Sample	Validity	Reliability	Responsiveness Interpretability
Kahn et al. 2020 USA	N=12, 11M and 1F. Age 55.41± 11.65 years with chronic motor SCI (2 AIS C, 10 AIS D. 7 cervical, 5 thoracic. 1.7 to 29.7 years post injury (7.8 ± 7.8 y)	Convergent Validity: High convergent validity of the SCI-FAP with the functional gait assessment (FGA) (Spearman's rho= -0.83; p=0.001).		
Shah et al. 2017 Prospective, cross-sectional study Laboratory, Canada	N= 26 community-dwelling individuals with chronic incomplete SCI (20M; 6F), Age 59.7 ±18.9 years, 5 AIS C, 21 AIS D. N= 26 age and sex matched non SCI individuals.	All SCI-FAP task scores showed moderate to excellent correlations with Activities-specific Balance Confidence (ABC) Scale scores (Spearman's rho: --0.67 to -0.76; p ≤ 0.001)		
Musselman & Yang 2014 Secondary analysis of data collected during a	N=20, 14 male Mean age 46.0(13.6) Mean postinjury time: 5.4(8.8) yrs AIS-C/D: 4/16, incomplete SCI Level of Injury: 10	Pearson's correlations (All insignificant, P>0.2) Change in SCI-FAP after precision		Responsiveness: Standardized response mean after 2 months of precision training: SCI-FAP Score: 0.5 (P>0.005)

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<p>randomized, single-blind, crossover trial</p> <p>Canada</p>	<p>cervical, 9 thoracic, 1 lumbar Incomplete SCI, independent ambulation with assistive devices WISCI-II score 9~20</p>	<p>training with change in: 10MWT (self-selected pace): -0.09 10MWT (fast pace): -0.24 6MWT: -0.29</p> <p>Change in SCI-FAP after endurance training (N=17) with change in: 10MWT (self-selected pace): 0.05 10MWT (fast pace): 0.07 6MWT: 0.17</p>		<p>SCI-FAP Time: 0.5 (P>0.005) SCI-FAP Tasks: 0.4 - 0.6 No correlation between SCI-FAP change scores and 10 Metre Walk Test or 6 Minute Walk Test changes</p> <p>Interpretability: Minimal Detectable Change at 95% CI: SCI-FAP score: 95.7 SCI-FAP time: 114.2</p>
<p>Musselman et al. 2011</p> <p>Development and validation of SCI-FAP</p>	<p>N=32 (24M) Mean age 47.6, SD=14.2, range = 20-81 At least 6 months postinjury; mean = 7.0(8.7) yrs AIS-C/D: 14/18, incomplete SCI Level of Injury: 19 cervical, 10 thoracic, 3</p>	<p>Discriminative validity: Incomplete SCI participants “scored significantly higher on the SCIFAP (total score P = .002; and task scores, .001 < P < .01) compared with</p>	<p>Test-retest ICC (N=22, 1-2 week interval): Total Score: 0.983 Total Time: 0.952 Total Assistance: 0.998 Tasks: 0.959-0.992</p>	

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cross-sectional sample Canada	lumbar WISCI-II score 8~20 In addition, N=60 able-bodied adults participated for comparison	their able-bodied counterparts. “There is a lot of variability among the participants with ISCI. In all, 5 participants achieved total scores on the SCI-FAP similar to those of able-bodied individuals, whereas the 3 participants who could not complete all SCI-FAP tasks scored >1000” Convergent Validity: Pearson’s correlations with: <u>10MWT:</u> Total Score: -0.59 (P=0.001) Total Time: -0.62 (P<0.007) Total Assistance: -0.78 (P<0.007) Tasks: -0.47~-0.63 (P<0.007)	Interrater ICC (all but 3 had 3 raters – rest had 5 raters): Total Score: 1.000 Total Time: 1.000 Total Assistance: 1.000 Tasks: 0.994-1.000	

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		<p><u>6MWT</u> :</p> <p>Total Score: -0.59 (P=0.001)</p> <p>Total Time: -0.63 (P<0.007)</p> <p>Total Assistance: -0.80 (P<0.007)</p> <p>Tasks: -0.47~-0.64 (P<0.007)</p> <p>Jaspens coefficient of multiserial correlations with:</p> <p><u>WISCI-II (self- selected)</u>:</p> <p>Total Score: -0.68 (P=0.001)</p> <p>Total Time: -0.67 (P<0.007)</p> <p>Total Assistance: -0.82 (P<0.007)</p> <p>Tasks: -0.54~-0.67 (P<0.007)</p>		

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		<u>WISCI-II (maximal):</u> Total Score: -0.70 (P=0.001) Total Time: -0.71 (P<0.007) Total Assistance: -0.86 (P<0.007) Tasks: -0.57~-0.69 (P<0.007)		