Reviewer ID: Tyra Chu, Carlos L. Cano Herrera, William Miller

Last updated: February 13th, 2024

Research Summary – Self-Reported Functional Measure (SRFM) – Self Care and Daily Living

Author Year Research Design Setting (country)	Demographics and Injury Characteristics of Sample	Validity	Reliability	Responsiveness Interpretability
Tyner et al. 2022 Cross-sectional study to evaluate the psychometric properties of the Spinal Cord Injury-Functional Index (SCI-FI) instruments in a community-dwelling sample Six SCI Model Systems sites: Craig Hospital, Kessler Foundation, Mount Sinai Medical Center, New England Regional SCI Center (Boston	N = 269 193M, 64F Mean (SD) age 43.8 (15.5) years Mean (SD) time since injury 6.8 (8.7) years Diagnosis: Paraplegia complete (n = 54), paraplegia incomplete (n = 72), tetraplegia complete (n = 30), tetraplegia incomplete (n = 89), unknown (n = 24)	**Convergent validity:** Pearson correlations between the SRFM scores and the SCI-FI scores were large (range, .69-.89), providing evidence of convergent validity of the SCI-FI measures with the SRFM instrument (table 1).		

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<tr><td>Medical Center and Gaylord Hospital), Shirley Ryan AbilityLab), and the University of Michigan.</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td colspan="4">Table 1. Pearson correlations (r) between SCI-FI instruments and clinical assessments
<table>
<tr><td></td><td></td><td colspan="2">SRFM</td><td colspan="2">FIM</td></tr>
<tr><td>SCI-FI Bank Domain</td><td>Mode</td><td>r</td><td>n</td><td>r</td><td>n</td></tr>
<tr><td rowspan="2">Ambulation/C</td><td>CAT</td><td>.69</td><td>91</td><td>.52</td><td>77</td></tr>
<tr><td>Short Form (11a)</td><td>.69</td><td>90</td><td>.44</td><td>75</td></tr>
<tr><td rowspan="2">Basic Mobility/C</td><td>CAT</td><td>.86</td><td>263</td><td>.59</td><td>203</td></tr>
<tr><td>Short Form (11a)</td><td>.89</td><td>198</td><td>.64</td><td>260</td></tr>
<tr><td rowspan="2">Fine Motor/C</td><td>CAT</td><td>.79</td><td>203</td><td>.57</td><td>263</td></tr>
<tr><td>Short Form (9a)</td><td>.81</td><td>202</td><td>.57</td><td>262</td></tr>
<tr><td rowspan="2">Self-Care/C</td><td>CAT</td><td>.86</td><td>203</td><td>.6</td><td>263</td></tr>
<tr><td>Short Form (11a)</td><td>.88</td><td>203</td><td>.61</td><td>263</td></tr>
<tr><td>Wheelchair Mobility/AT</td><td>CAT</td><td>.83</td><td>163</td><td>.61</td><td>212</td></tr>
<tr><td>Manual Wheelchair/AT</td><td>Short Form (10a)</td><td>.73</td><td>102</td><td>.56</td><td>135</td></tr>
<tr><td>Powered Wheelchair/AT</td><td>Short Form (9a)</td><td>.81</td><td>80</td><td>.44</td><td>107</td></tr>
</table>
Note. All correlations were significant. P <0.01</td></tr>
</table>

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Hoenig et al. 2001 Prospective cohort study Veterans Health Administration hospitals and outpatient clinics	Total N=8150 (3.7% female) Mean age: 52.9 years Mean duration of diagnosis: 20 years N=6361 veterans with SCI (2.4% female) Mean age: 52.5 years Mean duration of diagnosis: 20 years N=1789 veterans with Multiple Sclerosis (MS) (8.5% female) Mean age: 54.5 years Mean duration of diagnosis: 20 years			Odds Ratios for Health Care Utilization of Lowest SRFM Quartile Patients (SRFM 13-22) vs. Highest SRFM Quartile Patients (SRFM 43-52): (95% CI) Hospitalized: 1.91 (1.71-2.13) Died in hospital (of those hospitalized): 2.41 (1.62-3.58) Hospital length of stay >7 days (of those hospitalized): 2.18 (1.85-2.57) Discharged to institution (of those hospitalized): 2.86 (2.00-4.08)
Hoenig et al. 1999	N=6361 from the SCD National Veterans Survey	"The Cochran-Mantel-Haenszel X^2 test for trend was used to examine the		**Responsiveness:** Due to potential bias from self-reported data, the SRFM may

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Author Year Research Design Setting (country)	**Demographics and Injury Characteristics of Sample**	**Validity**	**Reliability**	**Responsiveness Interpretability**
Cross-sectional survey Spinal Cord Dysfunction National Veterans Survey	Traumatic SCI	proportion of people in the categories of affected limbs, motor impairment, and limb-motor impairment according to SRFM tertiles." (p.541) "There were statistically significant correlations (no values reported) between SRFM score and the number of affected limbs (P<.001), the amount of movement (P<.001), and the amount of motor dysfunction (P<.001)." (p.542) "The relationship between motor impairment and SRFM score remained statistically significant after stratifying on self-reported visual (P<.001), sensory (P<.001), or memory		have floor and ceiling effects that still require further investigation. **Interpretability:** See table 1.

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		impairment (P<.001)." (P.542) The Cochran-Mantel-Haenszel X^2 test for trend was used to examine the proportion of people in the categories of need for personal assistance according to SRFM tertiles. The self-reported hours of personal assistance required per day was used as the measure of concurrent validity. A statistically significant (P<.001) monotonic correlation was found between SRFM scores and hours of personal assistance.		
	Table 1. Relation between hours of personal assistance and SRFM score:			

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<tr><td></td><td>
<table>
<tr><td>Hours of personal assistance per day:</td><td>Total [% (n)]</td><td>Lowest SRFM Tertile [% of tertile (n)]</td><td>Middle SRFM Tertile [% of tertile (n)]</td><td>Highest SRFM Tertile [% of tertile (n)]</td></tr>
<tr><td>No help</td><td>40.6 (2580)</td><td>7.5</td><td>26.3</td><td>66.2</td></tr>
<tr><td>≤ 2 hrs/day</td><td>15.9 (1010)</td><td>14.0</td><td>55.9</td><td>30.1</td></tr>
<tr><td>2 – 4 hrs/day</td><td>19.4 (1234)</td><td>47.8</td><td>42.4</td><td>9.8</td></tr>
<tr><td>> 4 hrs/ day</td><td>21.1 (1340)</td><td>83.6</td><td>14.1</td><td>2.3</td></tr>
<tr><td>Total [% overall (n)]</td><td>100 (6361)</td><td>32.1 (2045)</td><td>30.7 (1956)</td><td>34.0 (2163)</td></tr>
</table>
</td><td></td><td></td><td></td></tr>
<tr><td>Hoenig et al. 1998

Test-retest using a convenience sample (Cross-sectional survey)

VA Health Administration Medical Centers, USA</td><td>N=725 (dual respondants)
Cause of Spinal cord dysfunction: (p=0.001)
48.14% Trauma only; 26.90% Disease only
23.86% Disease and Trauma

Inclusion criteria:
• Individual was a veteran
• Discharged from a VA</td><td></td><td>Test-retest, inter-rater, intra-rater: Kappa coefficients:
≥0.65 for all but one item
• Mobility at Home = 0.052 (p=0.003)

ICC (95% CI):
Answered every SRFM item = 0.90 (0.88)
Traumatic injury = 0.92 (0.91)</td><td></td></tr>
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	medical center ≤5 years • Discharge diagnosis might affect the spinal cord Or • Included on lists from the Paralyzed Veterans of America		Disease = 0.87 (0.84) Trauma & disease = 0.92 (0.89) Memory deficits = 0.86 (0.80) Memory intact = 0.91 (0.89) History of head injury = 0.85 (0.80) No head injury = 0.91 (0.89)	