

Research Summary – Frenchay Activities Index (FAI) – Self Care and Daily Living

Author Year Research Design Setting (country)	Demographics and Injury Characteristics of Sample	Validity	Reliability	Responsiveness Interpretability																				
<p>Hsieh et al. 2007</p> <p>Prospective interview; convenience sample</p> <p>Taiwan, community setting</p>	<p>N = 233 (193M, 40F) Mean (SD) age = 41.1 (12.6) Mean (SD) years post-injury = 9.4 (9.2)</p> <p>Complete tetraplegia = 33 Incomplete tetraplegia = 57 Complete paraplegia = 151 Incomplete paraplegia = 48</p>	<p>Rasch analysis was used to determine whether items of the FAI measure a unidimensional construct.</p> <p>2 (reading books, and going outside) of the 15 items were found to be poorly fitting. After removal of these items, the 13 remaining items fit the model's expectations.</p> <p>The original 4 category response of the FAI was not appropriate because the items exhibited disordering of the step difficulties. After reorganizing the</p>	<p>Test-retest, Inter-rater, Intra-rater: Rasch analysis reliability coefficient = 0.78</p>	<p>Floor/ceiling effect: Floor = 9.9% Ceiling = 0%</p> <p>Interpretability: FAI score: mean (SD), range 15-item FAI raw score: 15.4 (10.2), range: 0-44 Revised 13-item FAI raw score: 8.0 (5.0), range: 0-22 Standard Error (SE) of the items: Item: SE Logit:</p> <table border="1" data-bbox="1558 1060 1885 1427"> <thead> <tr> <th>Item</th> <th>SE logit</th> </tr> </thead> <tbody> <tr><td>1</td><td>0.17</td></tr> <tr><td>2</td><td>0.13</td></tr> <tr><td>3</td><td>0.17</td></tr> <tr><td>4</td><td>0.17</td></tr> <tr><td>5</td><td>0.11</td></tr> <tr><td>6</td><td>0.12</td></tr> <tr><td>7</td><td>0.11</td></tr> <tr><td>8</td><td>0.13</td></tr> <tr><td>9</td><td>0.12</td></tr> </tbody> </table>	Item	SE logit	1	0.17	2	0.13	3	0.17	4	0.17	5	0.11	6	0.12	7	0.11	8	0.13	9	0.12
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		<p>response categories with 4 items using a dichotomous scale and 9 using a trichotomous scale, there was no disordering and therefore appropriate.</p> <p>After making revisions, the 13-item FAI constituted a unidimensional construct</p>		<table border="1"> <tr> <td>10</td> <td>0.16</td> </tr> <tr> <td>11</td> <td>0.15</td> </tr> <tr> <td>12</td> <td>0.15</td> </tr> <tr> <td>13</td> <td>0.15</td> </tr> </table>	10	0.16	11	0.15	12	0.15	13	0.15				
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<p>Chern et al. 2013</p> <p>Secondary data analysis; purpose to examine the properties of FAI (including score distribution, internal consistency, construct validity,</p>	<p>N = 342 (3 months post injury); 213 male Age (SD) = 43.7 (18.5)</p> <p>N = 1,010 (6 months post injury); 630 male Age (SD) = 45.3 (18.6)</p> <p>N = 987 (12 months post injury); 611 male Age (SD) = 45.7 (18.5)</p>	<p>Pearson's r Relationships between the R-FAI administered at 3, 6, and 12 months after injury and the 4 domains of the WHOQOL- BREF administered at 12 months after injury: See table 1.</p>	<p>Internal Consistency: High level of internal consistency ($\alpha > 0.90$).</p>	<p>Responsiveness: See table 2.</p> <p>Floor/ceiling effect:</p> <table border="1"> <thead> <tr> <th># months post injury</th> <th>% Ceiling</th> <th>% Floor</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>0.3</td> <td>7.3</td> </tr> <tr> <td>6</td> <td>3.5</td> <td>4.3</td> </tr> <tr> <td>12</td> <td>2.5</td> <td>2.4</td> </tr> </tbody> </table>	# months post injury	% Ceiling	% Floor	3	0.3	7.3	6	3.5	4.3	12	2.5	2.4
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predictive validity, and responsiveness) Teaching hospital in southern Taiwan	Traumatic limb injuries All musculoskeletal or neurovascular injuries involving upper or lower extremities.			Interpretability: R-FAI: revised Frenchay Activities Index (travel outings, gardening, household/car maintenance, reading books, and gainful work) were deleted because of low Hi values (<0.30) See table 3.
Table 1.				
WHOQOL-BREF 12 months post injury		FAI 3 months post injury	FAI 6 months post injury	FAI 12 months post injury
Physical		0.39	0.41	0.50
Psychology		0.38	0.28	0.37
Social relations		0.20	0.28	0.35
Environment		0.39	0.31	0.37
Table 2.				
Item		Effect size	Standardized Response Mean	
3 months post injury		0.10	0.20	
6 months post injury		0.35	0.52	

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	12 months post injury	0.15	0.23	
NOTE: all paired-t values (p) were <0.001				
Table 3. Mean values associated with each item in R-FAI:				
Item:	3 months post injury	6 months post injury	12 months post injury	
1	1.9	2.1	2.2	
2	2.0	2.2	2.4	
3	2.0	2.3	2.5	
4	2.2	2.5	2.6	
5	2.1	2.4	2.6	
6	2.5	2.8	2.8	
7	2.6	2.8	2.9	
8	2.6	2.8	2.9	
9	2.5	2.8	3.0	
10	2.7	3.0	3.2	