

Reviewer ID: Amy Kim, John Zhu, Jeremy Mak, Kyle Diab, Joanne Chi, Risa Fox			
Type of Outcome Measure: The Spinal Cord Independence Measure III			Total articles: 33
Author ID Year	Study Design	Setting	Population (sample size, age) and Group
Saberi et al. 2018	Cross-sectional psychometric study Persian version of SCIM III	Brain and Spinal Injury Research Center, Tehran, Iran	N=279 Mean age: 33.70±10.13 years Male/Female ratio: 4/1 AIS: C1-C4 (AIS A,B,C):16 C5-C8 (AIS A, B, C): 55 T1-S5 (AIS A, B, C): 193 Time since injury 4.23±4.54 years
Itzkovich et al. 2018	Interview/observation	Loewenstein Rehabilitation Hospital, Israel	N=35 (19M, 16F) Mean age: 62±15 years 4 traumatic, 31 non-traumatic 19 tetraplegic, 16 paraplegic AIS: 3A, 12C, 20D
Mulcahey et al 2018	Multi-center, repeated measures	Seven facilities in North America	N=127 69 Male, 58 Female Mean age: 10.8 years Age range: 2-17 years AIS: 46A, 11B, 18C, 17D, 35 Unknown Time since injury: 4.8 years (3months-17 years)
Ackerman et al. 2010	Prospective cohort	Shepherd Center, Atlanta, GA, USA	N=114 (92M, 22F) Individuals with SCI discharged from a day program (DP) between March 2007 and June 2008. The DP participants were included if they had an SCI, were within ≤12 months from the date of injury, American Spinal Injury association Impairment Scale (AIS) A or B and completed the recommended length of stay. AIS A: 91 AIS B: 23 <i>Level of impairment</i> C1-4: 13 C5: 16 C6: 18 C7-8: 12 T1-6: 38 T7-12: 17
Aguilar-Rodríguez et al. 2015	Cross-sectional validation study of the Spanish self-report version (eSCIM-SR)	Spinal Cord Unit at the Hospital Universitario y Politécnico la Fe de Valencia (Feb-Apr	N=100, 68 male Age>18, mean=55.4, SD=15.2 Complete = 33, incomplete = 67 Traumatic = 55, non-traumatic = 45

		2014)	
Alimohammad et al 2016	Translation to Farsi (WhOM-Farsi) and Test re-test	Imam Khomeini Hospital and the Iranian Spinal Cord Injury Association in Tehran, Iran	N=75 with SCI, Farsi speakers with wheelchair as primary means of mobility; experience with wheelchair for at least 6 months and score of 22+ on the MMSE Mean (SD) age 31.9 (9.5) Mean (SD) time since SCI = 59.8 (60.8) months
de Almeida et al 2016	Cross-sectional validation, using Brazilian SCIM-III & FIM	Neurology and Rehabilitation Clinics of the Ribeirão Preto Medical School of the University of São Paulo	N=30 (10M, 20F) nontraumatic SCI individuals N=17 ambulates without assistance, N=9 used mobility aids, N=2 cannot walk independently Etiologies: N=15 familial N=5 infectious disease N=6 under investigation N=4 other myelitis
Anderson et al. 2011	Multi-center, prospective, cohort study	Inpatient rehabilitation hospitals in the US	N= 390 (294M, 96F) Mean age at injury= 45.3 ± 17.9y SCI 270 Traumatic 120 Non-traumatic 187 Tetraplegia 203 Paraplegia AIS A = 135 AIS B = 54 AIS C = 80 AIS D = 121
Bluvshtein et al. 2011	Multi-center international prospective cohort study	13 spinal cord units in 6 countries from North America, Europe and the Middle-East	N= 261 M/F = 5:2 (no actual numbers given) Mean age=40.1±17.1y Traumatic SCL 55% Tetraplegia 45% Paraplegia AIS A = 49.2% AIS B = 13.5% AIS C = 19.6% AIS D = 17.7%
Bonavita et al. 2016	Cross-sectional validation study of Italian version of SCIM-Self Report	Two spinal cord injury (SCI) rehabilitation facilities in Italy	N=116, (80M, 36F) Mean (SD) age 45.5 (17.7) Mean (SD) time since SCI: 5.7 (3.0) years AIS-A/B/C/D: 33/16/13/54 66 paraplegia, 50 tetraplegia 71 traumatic, 45 nontraumatic SCI

	(SCIM-SR)		
Catz et al. 2007	Multi-center prospective cohort study to examine the validity, reliability, and usefulness of SCIM III using Rasch analysis	13 spinal cord units in 6 countries from North America, Europe, and the Middle-East	<p>N = 425 (309M, 116F)</p> <p>Mean age = 46.93</p> <p>Tetraplegia = 188 Paraplegia = 237</p> <p>Inclusion criteria included: age \geq 18 and no concomitant impairments that might influence everyday function.</p> <p>Traumatic SCL participants = 261</p> <p>Non-traumatic SCL participants = 164, including: Spinal stenosis = 23; benign tumor = 27, disc protrusion = 25; myelopathy unknown = 16; syringomyelia = 5; decompression sickness = 3; multiple sclerosis = 2; congenital anomaly = 2 spinal abscess = 2; metastatic disease = 2; other = 41.</p>
Fekete et al. 2013	Cross-sectional validation study of self-report version (SCIM-SR)	Two SCI rehabilitation facilities in Switzerland	<p>N= 99 (26F, 73M)</p> <p>Age, median (IQR): 48.0 (35.0-64.0)</p> <p>Median post-injury time = 0.7 yrs, IQR = 0.3-18.2</p> <p>Paraplegia = 53/99</p> <p>Complete lesion = 42/99</p>
Glass et al. 2009	Multi-centre cohort study	Four UK regional SCI centres	<p>N=86 (72M, 14F)</p> <p>Mean age: 43.2\pm16.5y (range: 18-82y)</p> <p>SCI</p> <p>Tetraplegia: 40 Paraplegia: 46</p> <p>AIS A: 41 AIS B: 13 AIS C: 19 AIS D: 13</p> <p>Traumatic: 69 Non-traumatic: 17</p>
Hwang et al. 2015	Repeated measures, validation of the QUEST 2.0 Korean Version		<p>N= 70 (15F, 55M)</p> <p>Mean age 40.9\pm11.2</p> <p>Mean post-SCI duration: 31.1\pm58.6 yrs</p> <p>AIS-A/B/C/D/E: 29/9/9/15/8</p> <p>Complete/Incomplete: 29/41</p> <p>Assistive devices per person: 1.3\pm0.6</p> <p>Individuals from the Korea Spinal Cord Injury Association</p>
Invernizzi et al. 2010	Prospective cohort; test-retest validation for the development of the Italian SCIM III (i-SCIM3)	Two different Italian SCI centers (Novara and Rome)	<p>N=103 (84M, 19F)</p> <p>Mean age: 50.33\pm15.35y</p> <p>Patients admitted for rehabilitative treatment in two different Italian SCI centers between January 2008 and March 2009.</p> <p>Inclusion criteria:</p> <ol style="list-style-type: none"> (1) SCL (AIS A, B, C, or D) (2) Age>18y (3) No concomitant impairments influencing everyday function, such as brain injury or mental disease.

			<p>Paraplegia: 74 Tetraplegia: 29</p> <p><i>AIS grades:</i> A: 74 B: 11 C: 8 D: 10</p> <p><i>Lesion etiology:</i> Traumatic: 79 Spinal stenosis: 5 Disc protrusion: 2 Myelopathy of unknown origin: 8 Vascular impairment: 3 MS: 1 Congenital anomaly: 5</p>
Iitzkovich et al. 2007	Multi-center prospective cohort study to examine the third version of the Spinal Cord Independence Measure for reliability and validity	13 spinal cord units in six countries from North America, Europe and the Middle East.	<p>N = 425 (309M, 116F)</p> <p>Mean age = 46.93</p> <p>Tetraplegia = 188 Paraplegia = 237</p> <p>Inclusion criteria included: age ≥ 18 and no concomitant impairments that might influence everyday function.</p> <p>Traumatic SCL participants = 261</p> <p>Non-traumatic SCL participants = 164, including: Spinal stenosis = 23; benign tumor = 27, disc protrusion = 25; myelopathy unknown = 16; syringomyelia = 5; decompression sickness = 3; multiple sclerosis = 2; congenital anomaly = 2 spinal abscess = 2; metastatic disease = 2; other = 41.</p>
Joseph et al. 2016	Qualitative mapping of SCIM-III items to ICF model	N/A	N=2 professionals (health professionals and academics)
Kalsi-Ryan et al. 2016	Multicenter, observational, longitudinal, cohort study	5 centers (7 sites) in Ontario, Canada	<p>N=53 (48M, 5F) Mean (SD) age 49.6 (15.6) All acute SCI, 0-10 days post-injury AIS-A/B/C/D: 11/5/16/21 51 cervical, 2 thoracic</p>
Marino et al. 2015	Repeated measures Studying the CUE-Test	Outpatient rehab center	<p>N=50, 36 male Mean age 48.1, SD=18.2, range 17~81 Neurological levels of injury: C2~T6 AIS-A/B = 20/50 AIS-C/D = 30/50</p>
Michailidou et al. 2016	Cross-sectional validation study of Greek	Study uses self-report, but unclear if it's referencing	<p>From Greece using GR-SCIM III: N=45, 23 male Mean age 61 yrs (SD=17) Mean time since injury 12 yrs (SD=11) 67% incomplete paraplegia</p>

	version (GR-SCIM III)	SCIM-SR	60% non-traumatic SCI From elsewhere using SCIM III: N=174, 64% male Mean age 35 yrs (SD=15) Mean time since injury 12 yrs (SD=7) 50% incomplete paraplegia, 50% incomplete tetraplegia 79% traumatic SCI
Ovechkin et al. 2013	Prospective cohort study	University of Louisville	N= 11 (3F, 8M) Age: 48 ± 19 AIS-A/C/D: 4/1/6
Prodinger et al. 2016	Rasch analysis	SwiSCI community survey; Switzerland; administration of SCIM-SR on paper, online or by telephone interview	N = 1530 (1093M, 437F) Mean (SD) age 52.33 (3.26) Mean (SD) time since SCI = 16.84 (12.7) years 310 Incomplete tetraplegia 156 Complete tetraplegia 569 Incomplete paraplegia 483 Complete paraplegia
Riberto et al. 2014	Cross-sectional validation study of Brazilian SCIM III		N=83, 68.7% male Mean age 36.1 (SD=15.4) 52/83 paraplegic, 31/83 tetraplegic 69.5% AIS-A
Rudhe et al. 2009	Cross-sectional analysis. Part of larger international multicenter GRASSP study.	2 German centers and 1 Swiss center.	N = 29 with traumatic or ischemic SCI Time since injury = 1-15 months (mean = 4.5 ± 3 months) Age= 19-81 years (mean = 50 ± 18 years) 16 males, 13 females ASIA-A/B/CD: 12/4/13
Saffari et al. 2015	Validation study for Iranian (Persian) version of SCL CSQ	Consecutive patients referred to major University neurology center with SCI	N=220, 164 male Mean age 58.18; s.d.=10.32 Time since injury: 50.96; s.d.= 35.05 months
Scivoletto et al. 2013	Retrospective chart review, distribution-based		N=255, 199 male Mean age 41.9, SD=18.4 Mean time from lesion 51.6days, SD=36.8 157 paraplegic, 171 traumatic 97 AIS-A, 40 AIS-B, 52 AIS-C, 66 AIS-D
Tramonti et al. 2014	Cross sectional	Italy	N= 40 (12F, 28M) Mean age 54.25, SD=12.96 Mean time since injury = 8.27yrs, SD=7.74 28/40 paraplegia, 18/40 traumatic AIS A-C: 27

			AIS D: 13
Unalan et al. 2015	multicenter, prospective validation study of the Turkish SCIM III	Rehabilitation centers of three hospitals in Turkey	All participants: N=204, 144 male Aged 18~80, mean 39.7, SD=13.7 Mean duration of injury 75.4 months, SD=85.2 165 traumatic, 66 tetraplegia, 104 complete, 104 AIS-A, 29 AIS-B, 35 AIS-3, 36 AIS-D Subgroup: N=49, 29 male Mean age 38.4, SD=14.3 Mean duration of injury 60.0 months, SD=55.3 45 traumatic, 18 tetraplegia, all complete, all AIS-A
Velstra et al. 2016	prospective longitudinal multicenter study	5 European SCI centers; Recruitment between 2009 ~ 2012	N = 61, 45 male Mean age 47, SD = 19 Acute (16-40 days after injury) tetraplegia at recruitment 58/61 traumatic SCI AIS at 1 month: A=16, B=10, C=7, D=28
Velstra et al. 2014	prospective longitudinal multicenter study	5 European SCI centers; Recruitment between Jan 2009 ~ May 2011	N = 61, 45 male Mean age 46, SD = 19 Acute (16-40 days after injury) tetraplegia 56/61 traumatic SCI AIS at 1 month: A=16, B=9, C=7, D=29
Velstra et al. 2015	prospective longitudinal multicenter study	5 European SCI centers; Recruitment between Jan 2009 ~ Jun 2011	N = 74, 51 male Mean age 49, SD=18 SCI patients <= 10 days post-injury at enrollment AIS classification at 1 month: A=18, B=12, C=10, D=34 69/74 traumatic SCI
Wannapakhe et al. 2016	Cross-sectional validation of Thai SCIM-III (Th-SCIM-III)	A tertiary rehabilitation center in Thailand	N=31, 20M 11F Mean age (SD): AIS-AB: 35.8(11.64) AIS-C: 51.63(18.49) AIS-D: 52.63(17.28) Mean time since injury: 42.32±53.58 months Patients with SCI (18+) with subacute/chronic complete/incomplete SCI caused by trauma or nonprogressive disease AIS-AB/C/D: 15/8/8 Complete/Incomplete: 15/16 Paraplegia/Tetraplegia: 15/16 Traumatic/Nontraumatic: 18/13 Chronic SCI: 61.3%
Zarco-Periñan et al. 2013	Cross-sectional validation study of Spanish version (eSCIM III)		Validity study group: N=64, 43 male Mean age 44.79±20.50 yrs 38 traumatic injury, 26 non-traumatic 27 tetraplegia, 37 paraplegia 26 AIS-A, 11 AIS-B, 9 AIS-C, 18 AIS-D

1. RELIABILITY		35/64 selected for reliability study group
Author ID	Internal Consistency	Test-retest, Inter-rater, Intra-rater
Saberi et al. 2018	Cronbach's alpha=0.86	<p>Intraclass correlation between raters 1 and 2 within P-SCIM III subscales and total scores (time frame not specified)</p> <p>Intraclass correlation (ICC, 95% CI)</p> <p>Self-care 0.968 (0.960–0.975) Respiration and sphincter management 0.924 (0.904–0.939) Mobility in the room and toilet 0.953 (0.941–0.963) Mobility indoors and outdoors 0.980 (0.974–0.984) Total scores 0.977 (0.971–0.98277767)</p>
Itzkovich et al. 2018		<p>Patients assessed during the last week before discharge</p> <p>Kappa Coefficient: 0.11-0.80</p> <p><i>Self Care:</i> Feeding = 0.489 Bathing upper body = 0.202 Bathing lower body = 0.599 Dressing upper body = 0.264 Dressing lower body = 0.272 Grooming = 0.431</p> <p><i>Respiration and sphincter management:</i> Sphincter management – bladder = 0.434 Sphincter management – bowel = 0.387 Use of toilet = 0.294</p> <p><i>Mobility</i> Mobility in bed and sore prevention = 0.111 Transfers bed/wheelchair = 0.800 Transfers wheelchair/toilet/tub = 0.489 Mobility indoors = 0.579 Mobility moderate distances = 0.535 Mobility outdoors = 0.142 Stair management = 0.540 Transfers wheelchair/car = 0.548 Transfers ground/wheelchair = 0.771</p> <p>ICC coefficient: Self care=0.845 Respiration/Sphincter=0.637 Mobility=0.916 Total SCIM=0.880</p>
Mulcahey et al 2018		<p>Time frame not specified</p> <p>ICC= >0.84 with majority > 0.90</p> <p>Strong correlation between SCIM and FIM Instrument total: r=0.92 (p<0.0001) Self-care subscale: r=0.92 (p<0.0001)</p>

		<p>Bladder/bowel subscale: $r=0.89$ ($p<0.0001$)</p> <p>Good correlation between SCIM in-room mobility and FIM transfer subscales: $r=0.81$ ($p<0.0001$) SCIM indoor/outdoor mobility and FIM walk/stairs subscales: $r=0.81$ ($p<0.0001$)</p>																		
<p>Iitzkovich et al. 2007</p>	<p>Values of Cronbach's alpha exceeding 0.7 support reasonable internal consistency:</p> <table border="1" data-bbox="212 512 672 890"> <thead> <tr> <th>Summary of Cronbach's alphas by 2 raters:</th> <th>1st rater</th> <th>2nd rater</th> </tr> </thead> <tbody> <tr> <td>Self care:</td> <td>0.906</td> <td>0.892</td> </tr> <tr> <td>Respiration and Sphincter mgmt:</td> <td>0.701</td> <td>0.704</td> </tr> <tr> <td>Mobility in the room and toilet:</td> <td>0.724</td> <td>0.739</td> </tr> <tr> <td>Mobility indoors and outdoors:</td> <td>0.887</td> <td>0.878</td> </tr> <tr> <td>SCIM III total:</td> <td>0.849</td> <td>0.847</td> </tr> </tbody> </table>	Summary of Cronbach's alphas by 2 raters:	1 st rater	2 nd rater	Self care:	0.906	0.892	Respiration and Sphincter mgmt:	0.701	0.704	Mobility in the room and toilet:	0.724	0.739	Mobility indoors and outdoors:	0.887	0.878	SCIM III total:	0.849	0.847	<p>Patients assessed upon admission to rehabilitation and before discharge</p> <p>Inter-rater kappa coefficients: Task: Feeding = 0.823 Bathing upper body = 0.671 Bathing lower body = 0.643 Dressing upper body = 0.668 Dressing lower body = 0.651 Grooming = 0.731 Respiration = 0.754 Sphincter management – bladder = 0.705 Sphincter management – bowel = 0.691 Use of toilet = 0.631 Mobility in bed = 0.682 Transfers bed/wheelchair = 0.782 Transfers wheelchair/toilet/tub = 0.768 Mobility indoors = 0.778 Mobility moderate distances = 0.755 Mobility outdoors = 0.705 Stair management = 0.679 Transfers wheelchair/car = 0.758 Transfers ground/wheelchair = 0.751 *All $P<.001$</p> <p>Pearson Correlation (r) between raters: SCIM subscales: Self care = 0.944 Respiration and sphincter = 0.902 Mobility in the room = 0.924 Mobility indoors/outdoors = 0.935 SCIM total = 0.955 *All $P<.001$</p> <p>Inter-rater intraclass correlation coefficients (ICC) Subscale: Self care = 0.971 Respiration and sphincter = 0.948 Mobility in the room = 0.961 Mobility indoors/outdoors = 0.967 SCIM total scores = 0.977</p>
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<p>Glass et al. 2009</p>	<p>The UK results show SCIM III total Cronbach's alpha scores of 0.770 and 0.780 for raters 1 and 2, respectively. However, the areas "respiration and sphincter management" ($\alpha=0.600$ and 0.645) and "mobility in the room and toilet" ($\alpha=0.652$ and 0.656)</p>	<p>Inter-rater ICC scores for the SCIM III total and the 4 sub-domain scores were 0.956 (SCIM total), 0.941 (self-care), 0.844 (respiratory and sphincter management), 0.945 (mobility "in") and 0.956 (mobility "out").</p> <p>The total agreement between raters is greater than 0.80 on 15 of the 19 SCIM III tasks. For single items, kappa coefficients range from 0.491 (stair</p>																		

	both show an unsatisfactory alpha level.	management) to 0.835 (mobility outdoors) and are all statistically significant (P<.001).
Invernizzi et al. 2010	Cronbach's α for the overall i-SCIM III = 0.91 for both raters For all subscales, Cronbach's α values were always >0.90, except for the subscale "Respiration and sphincter management" (α <0.70).	Inter-rater ICC for Total i-SCIM III score: Admission=0.99 Discharge=1 For all items, total agreement was >89%. The k values were always >0.85, with the exception of the items "Stair management" and "Use of toilet," which had k values of 0.79 and 0.84, respectively. Pearson correlation coefficient for all subscales and the total score was 0.99 (P<.01).
Anderson et al. 2011	Self-care Admission a-values: Rater 1 = 0.945, Rater 2 = 0.950 Discharge a-values: Rater 1 = 0.930, Rater 2 = 0.930 Respiration and sphincter management Admission a-values: Rater 1 = 0.617, Rater 2 = 0.615 Discharge a-values: Rater 1 = 0.740, Rater 2 = 0.730 Mobility in room and toilet Admission a-values: Rater 1 = 0.868, Rater 2 = 0.960 Discharge a-values: Rater 1 = 0.900, Rater 2 = 0.850 Mobility indoors and outdoors Admissions a-values: Rater 1 = 0.949, Rater 2 = 0.950 Discharge a-values: Rater 1 = 0.890, Rater 2 = 0.900 SCIM III Total Admissions a-values: Rater 1 = 0.850, Rater 2 = 0.850 Discharge a-values: Rater 1 = 0.890, Rater 2 = 0.880	At admission: Total agreement between raters = 65-99% Cohen's k-coefficients= 0.56-0.85 (P<.001) SCIM total r=0.91 (P<.001) At discharge: Total agreement between raters = 67-94% Cohen's k-coefficients= 0.60-0.81 (P<.001) SCIM total r=0.96 (P<.001)
Bluvshstein et al. 2011	Cronbach's coefficient α Self-care Rater 1 (n=256) = 0.883 Rater 2 (n=251) = 0.878 Respiration and sphincter management Rater 1 (n=256) = 0.657 Rater 2 (n=251) = 0.679 Mobility in room and toilet Rater 1 (n=256) = 0.700	Total agreement between the paired raters ranged between 79.1-98.7% k coefficients ranged between 0.649 – 0.858 (P<.001 for all tasks)

	<p>Rater 2 (n=251) = 0.732</p> <p>Mobility indoors and outdoors Rater 1 (n=233) = 0.873 Rater 2 (n=230) = 0.860</p> <p>SCIM III Total Rater 1 (n=256) = 0.835 Rater 2 (n=251) = 0.833</p>	
Zarco-Periñan et al. 2013	<p>Cronbach's alpha at admission: Overall = 0.93 Self-care subscale = 0.87 Respiration/sphincter management subscale = 0.63 Mobility in room subscale = 0.93 Mobility indoors/outdoors subscale = 0.93</p> <p>Cronbach's alpha at admission: Overall = 0.93 Self-care subscale = 0.92 Respiration/sphincter management subscale = 0.79 Mobility in room subscale = 0.79 Mobility indoors/outdoors subscale = 0.91</p>	<p>Interrater reliability values:</p> <p>K-coefficient: $K > 0.90$, $p = 0.0001$ for all items – high agreement</p> <p>ICC between 2 raters at admission: Overall: 0.97 Self-care subscale: 0.91 Respiration/sphincter subscale: 0.99 Mobility in room: 0.97 Mobility indoors/outdoors: 0.70</p> <p>ICC between 2 raters at discharge: Overall: 0.96 Self-care subscale: 0.95 Respiration/sphincter subscale: 0.94 Mobility in room: 0.96 Mobility indoors/outdoors: 0.96</p>
Michailidou et al. 2016	<p>Cronbach's alpha for GR-SCIM III by self-report: Overall = 0.78 Self-care subscale = 0.90 Respiration/sphincter management subscale = 0.59 Mobility in room and toilet subscale = 0.83 Mobility indoors/outdoors subscale = 0.91</p> <p>Cronbach's alpha for SCIM III by self-report: Overall = 0.79 Self-care subscale = 0.92 Respiration/sphincter management subscale = 0.40 Mobility in room and toilet subscale = 0.77 Mobility indoors/outdoors subscale = 0.87</p>	
Riberto et al. 2014		<p>Test-retest: ICC = 0.991 Interrater: ICC = 0.918</p>
Unalan et al. 2015	<p>Cronbach's alpha: Total score = 0.828(rater1), 0.832(rater2) Self-care subscale = 0.916, 0.911</p>	<p>Test-retest values: N=49 (AIS-A, SCI duration > 1yr) Paired t-test: Total score: $t = -0.115$ ($P = 0.909$, n.s.)</p>

	<p>Respiration/sphincter management subscale = 0.574,0.584 Mobility in room and toilet subscale = 0.774,0.754 Mobility indoors/outdoors subscale = 0.898,0.899</p>	<p>Self-care subscale: t = 0.562 (P=0.577, n.s.) Respiration and sphincter subscale: t = -0.797 (P=0.429, n.s.) Mobility in the room subscale: t = -0.358 (P=0.722, n.s.) Mobility in/outdoors subscale: t = 1.429 (P=0.159, n.s.)</p> <p>Interrater values: N=204 For all items: Percent agreement 75.9%~100% Kappa 0.683~1 For total score: Pearson's r: 0.972 Paired t-test: t = 1.347</p>
Wannapakhe et al. 2016	<p>Cronbach's alpha (by 3 raters): All items: 0.88-0.89 Self-care: 0.90-0.94 Respiration & sphincter: 0.50-0.59 Mobility (room & toilet): 0.69-0.72 Mobility (indoor & outdoor): 0.90 (3 identical values)</p>	<p>Interrater values - ICC(95%CI):</p> <p>For motor complete SCI (N=15): Overall: 0.994(0.985-0.998) Self-care: 0.988(0.971-0.996) Respiration & Sphincter: 0.952(0.887-0.983) Mobility (room & toilet): 0.977(0.945-0.992) Mobility (indoor & outdoor): 0.983(0.960-0.994)</p> <p>For motor incomplete SCI (N=16): Overall: 0.994(0.986-0.998) Self-care: 0.975(0.943-0.991) Respiration & Sphincter: 0.981(0.956-0.993) Mobility (room & toilet): 0.920(0.815-0.970) Mobility (indoor & outdoor): 0.996(0.992-0.999)</p>
de Almeida et al. 2016		<p>Interrater ICC: 0.9 (2 raters) Test-retest ICC: 0.9 (7-14 day interval)</p>
2. VALIDITY		
Author ID	Validity	
Saberi et al. 2018	Pearson correlation values, r, between SCIM III and FIM scores were calculated for each of the 2 raters and were 0.905 (P<.01) and 0.900 (P<.01), respectively.	
Mulcahey et al 2018	Moderate-strong correlation between SCIM-III and FIM r=0.77-0.92	
Itzkovich et al. 2007	Pearson correlation w/ Functional Independence Measure (FIM): 1 st rater: r = 0.790 P<.01 2 nd rater: r = 0.779	

	P<.01
Catz et al. 2007	<p>Real person reliability index : Self-care subscale = 0.88 Respiration and sphincter management subscale = 0.76 Mobility subscale = 0.91</p> <p>Separation Index: Self care = 2.77 Respiration and sphincter management = 1.77 Mobility = 3.15</p> <p>These reflect the statistical degree of which the measurements differ: The 'real reliability index' adopted in this study is conservative and has an ideal maximum value of 1. The 'separability index' and the number of 'discernible strata' are related concepts. They reflect the degree to which measurements (levels of ability in this study) differ not only in absolute but also in statistical terms. Measurements within the same 'statistical' stratum do not differ significantly (in this study, at P<.05). The higher the reliability, the higher the number of strata. If the index is >0.7 at least two strata are discernible and the hypothesis that all differences in ability measurements reflect only randomness can be rejected.</p> <p>At P<0.05, the measurement process distinguished 4 strata of person abilities for self-care, 3 for respiration and sphincter mgmt, and 4 for mobility.</p> <p>In all the three subscales, there is a satisfactory match between the location of the mean difficulty of the whole set of thresholds, their distribution below the y-axis, and the distribution of patient ability levels above the x-axis. This supports the validity of the SCIM III.</p> <p>"The three scales represent a valid profile of patient's functional status. This has been shown through: a) the reliability and fit estimates, the nearly ordered category structure, and the substantive absence of differential item functioning (DIF) across clinically relevant sub-groups of patients; b) the substantive match between the distribution of difficulty levels and patient abilities, which supports the practical usefulness of the instrument when applied to the SCL patients; c) the analysis of DIF between the difficulty of items in each country and the aggregated values across countries, which displays a substantive metric equivalence of the instrument across the 6 countries participating to the study." (pp.284-5)</p>
Glass et al. 2009	Pearson correlation values, r, between SCIM III and FIM scores were calculated for each of the 2 raters and were 0.798 (P<.01) and 0.782 (P<.01), respectively.
Invernizzi et al. 2010	<p>Pearson's r between i-SCIM III and FIM total scores: Admission: r=0.96, P<.01 Discharge: r=0.91, P<.01</p> <p>Pearson's r between i-SCIM III and FIM subscales scores: Admission: r≥0.80, P<.01 Discharge: r≥0.82, P<.01</p> <p>For i-SCIM III subscales: Self-care: No significant difference in sensitivity* between i-SCIM III and FIM Respiration and sphincter management: FIM more sensitive than i-SCIM III Mobility in the room and toilet: FIM more sensitive than i-SCIM III Mobility indoors/outdoors: i-SCIM III more sensitive than FIM *likelihood of detecting change</p>
Anderson et al. 2011	Pearson correlation between SCIM III & FIM (2 raters): 0.80 (P<0.001)
Bluvshstei	A significant correlation as found between SCIM III and FIM scores.

n et al. 2011	Pearson's coefficients for the two raters, whose SCIM scores were examined for correlation with the FIM scores, were 0.839 (P<.001, n=231) and 0.835 (P<.001, n=228), respectively.
Zarco-Periñan et al. 2013	<p>Spearman's rho with FIM at admission (p<0.0001): Overall: 0.87 Self-care subscale: 0.89 Respiration and sphincter management subscale: 0.86 Mobility in the rooms subscale: 0.87 Mobility indoors/outdoors subscale: 0.81</p> <p>Spearman's rho with FIM at discharge (p<0.0001): Overall: 0.94 Self-care subscale: 0.90 Respiration and sphincter management subscale: 0.87 Mobility in the rooms subscale: 0.90 Mobility indoors/outdoors subscale: 0.85</p> <p>"eSCIM III showed sensitivity to functional changes of the patients with spinal cord injury (p<0.0001)" (p.1647)</p>
Riberto et al. 2014	<p>Pearson's r with FIM (p<0.05): 0.91 for paraplegia 0.94 for tetraplegia "indicating that the gains observed by one instrument were found in the same proportion by the other" (p.442)</p>
Unalan et al. 2015	<p>Pearson's r with SF-36: 0.339, p<0.005</p> <p>"Excluding self-care, all the subscales were found to have significant differences compared with the AIS grades" using one-way ANOVA. (p.458)</p> <p>"A parallel increase in all the subscales and the total score for the AIS grade* and the SCIM-III scores were observed" (p.458) *ASIA Impairment Scale A-E</p> <p>Incomplete SCI patients performed significantly better on SCIM III than complete SCI patients</p>
Aguilar-Rodriguez et al. 2015	<p>Lin's concordance correlation coefficient between SCIM-III & Spanish self-report SCIM (eSCIM-SR): Overall: 0.998 (95%CI: 0.997-0.998) Self-care subscale: 0.988 (0.982-0.992) Respiration and sphincter management subscale: 0.992(0.988-0.995) Mobility subscale: 0.997(0.995-0.998)</p> <p>Bland-Altman bias between SCIM-III & eSCIM-SR: Overall: -0.32(95% Limits of Agreement: -3.01~2.37) Self-care subscale: -0.22(-2.12~1.68) Respiration and sphincter management subscale: -0.10(-2.02~1.82) Mobility subscale: -0.03(-1.69~1.63)</p>
Fekete et al. 2013	<p>Self-report SCIM (SCIM-SR) Pearson's r with SCIM-III: Overall: 0.87(95%CI 0.82-0.91) Self-care subscale: 0.87(0.81-0.91) Respiration and sphincter management subscale: 0.81(0.73-0.87) Mobility subscale: 0.83(0.76-0.89)</p> <p>SCIM-SR ICC with SCIM-III: Overall: 0.90(95%CI 0.85-0.93) Self-care subscale: 0.86(0.79-0.90) Respiration and sphincter management subscale: 0.80(0.71-0.86) Mobility subscale: 0.83(0.76-0.89)</p>

	<p>SCIM-SR Bland-Altman bias with SCIM-III: Overall: -5.14 (Limits of Agreement: -16.87~27.16) (95%CI: 2.95~7.34) Self-care subscale: 0.89 (-6.10~7.87) (0.19~1.59) Respiration and sphincter management subscale: -1.05 (-11.26~13.36) (0.18~2.28) Mobility subscale: 3.49 (-7.07~14.05) (2.44~4.54) "patients rated their functioning higher than professionals, in particular for mobility" (p.40)</p>
Tramonti et al. 2014	<p>SF-36 physical functioning positively correlates with SCIM-III: Spearman's $\rho = 0.72$ ($P < 0.01$, $1-\beta = 0.99$)</p>
Velstra et al. 2014	<p>Spearman ρ (all $p < 0.001$): Between GRASSP-MMT* subtest & SCIM-self care subscale: At 6 month: $r = 0.821$ At 12 month: $r = 0.820$ Between GRASSP-SWM subtest & SCIM-self care subscale: At 6 month: $r = 0.781$ At 12 month: $r = 0.643$ *GRASSP-MMT is based on Daniels and Worthington's (1995) Manual Muscle Testing (MMT)</p>
Marino et al. 2015	<p>Spearman's correlation between CUE-T total score: And SCIM total: 0.617 And SCIM self-care: 0.695 And SCIM mobility: 0.550</p>
Velstra et al. 2015	<p>Spearman Correlations (all $p < 0.0001$): At 1 month postinjury: GRASSP-MMT* subscale & SCIM self care (SCIM-SS) = 0.78 GRASSP-SWM subscale & SCIM-SS = 0.63 GRASSP-QtG subscale & SCIM-SS = 0.85 At 3 month postinjury: GRASSP-MMT* subscale & SCIM-SS = 0.85 GRASSP-SWM subscale & SCIM-SS = 0.68 GRASSP-QtG subscale & SCIM-SS = 0.90 At 6 month postinjury: GRASSP-MMT* subscale & SCIM-SS = 0.83 GRASSP-SWM subscale & SCIM-SS = 0.63 GRASSP-QtG subscale & SCIM-SS = 0.86 At 12 month postinjury: GRASSP-MMT* subscale & SCIM-SS = 0.82 GRASSP-SWM subscale & SCIM-SS = 0.56 GRASSP-QtG subscale & SCIM-SS = 0.82 ROC analysis (Area Under Curve & 95% Confidence Interval): Between 1-3 month postinjury: Improvement in SCIM-SS: 0.80 (0.70~0.90) ($p < 0.001$) Between 3-6 month postinjury: Improvement in SCIM-SS: 0.75 (0.60~0.90) ($p < 0.01$) Between 6-12 month postinjury: Improvement in SCIM-SS: 0.72 (0.59~0.86) ($p < 0.01$) *GRASSP-MMT is based on Daniels and Worthington's (1995) Manual Muscle Testing (MMT)</p>
Hwang et al. 2015	<p>Pearson's correlation of SCIM-III with: QUEST-K total: -0.075 ($p > 0.01$) Modified BI: 0.905 ($p < 0.01$)</p>
Wannapakhe et al. 2016	<p>Th-SCIM-III scores ≥ 50 can "discriminate between subjects with motor complete and incomplete SCI". Sensitivity = 68.75%</p>

	Specificity = 66.67% AUC = 0.78(95%CI: 0.62~0.95)																																																																										
Ovechkin et al. 2013	SCIM Total with ASIA Impairment Scale (AIS): $r = 0.72$ ($p < 0.01$) SCIM mobility with AIS: $r = 0.76$ ($p < 0.05$) SCIM total with FIM motor score: $r = 0.88$ ($p < 0.01$) SCIM selfcare with FIM motor score: $r = 0.88$ ($p < 0.01$) SCIM mobility with FIM motor score: $r = 0.86$ ($p < 0.01$) SCIM total with Walking Index for SCI (WISCI): $r = 0.74$ ($p < 0.01$) SCIM mobility with WISCI: $r = 0.84$ ($p < 0.01$)																																																																										
Rudhe et al. 2009	SCIM III scores correlated well with ASIA Upper Extremity Muscle Score (UEMS), Manual Muscle Testing (MMT) and hand capacity tests total scores ($P < 0.001$): <table border="1" data-bbox="212 548 1102 961"> <thead> <tr> <th colspan="4">Spearman's correlations between SCIM-III and other measures</th> </tr> <tr> <th>SCIM III</th> <th>UEMS</th> <th>MMT</th> <th>Hand Capacity Tests</th> </tr> </thead> <tbody> <tr><td>Feeding</td><td>0.73</td><td>0.75</td><td>0.67</td></tr> <tr><td>Bathing upper body</td><td>0.80</td><td>0.77</td><td>0.77</td></tr> <tr><td>Bathing lower body</td><td>0.72</td><td>0.76</td><td>0.71</td></tr> <tr><td>Dressing upper body</td><td>0.73</td><td>0.76</td><td>0.76</td></tr> <tr><td>Dressing lower body</td><td>0.64</td><td>0.70</td><td>0.60</td></tr> <tr><td>Grooming</td><td>0.88</td><td>0.89</td><td>0.80</td></tr> <tr><td>Self-care Total</td><td>0.82</td><td>0.84</td><td>0.80</td></tr> <tr><td>Respiration & Bladder Total</td><td>0.63</td><td>0.68</td><td>0.65</td></tr> <tr><td>Mobility Total</td><td>0.65</td><td>0.71</td><td>0.72</td></tr> <tr><td>Total Score</td><td>0.78</td><td>0.78</td><td>0.76</td></tr> </tbody> </table> <table border="1" data-bbox="212 995 1102 1444"> <thead> <tr> <th colspan="2">Spearman's correlations between MMT and SCIM-III Self Care items</th> </tr> <tr> <th>MMT Items</th> <th>SCIM-Self Care Items</th> </tr> </thead> <tbody> <tr><td>Shoulder Abduction</td><td>0.34-0.66</td></tr> <tr><td>Elbow Extension</td><td>0.62-0.78</td></tr> <tr><td>Elbow Flexion</td><td>0.08-0.40</td></tr> <tr><td>Wrist Extension</td><td>0.24-0.56</td></tr> <tr><td>Finger Extension</td><td>0.67-0.82</td></tr> <tr><td>Finger Flexion</td><td>0.69-0.84</td></tr> <tr><td>Thumb Flexion</td><td>0.63-0.82</td></tr> <tr><td>Finger Abduction</td><td>0.65-0.83</td></tr> <tr><td>Interosseus Muscle I</td><td>0.64-0.77</td></tr> <tr><td>Thumb Adduction</td><td>0.56-0.74</td></tr> <tr><td>Thumb Opposition</td><td>0.55-0.72</td></tr> </tbody> </table> <p>Estimation of SCIM-III Self care score using ASIA UEMS: $R^2_{\text{adjusted}} = 0.69$ Estimation of SCIM-III Self care score using MMT: $R^2_{\text{adjusted}} = 0.73$</p>	Spearman's correlations between SCIM-III and other measures				SCIM III	UEMS	MMT	Hand Capacity Tests	Feeding	0.73	0.75	0.67	Bathing upper body	0.80	0.77	0.77	Bathing lower body	0.72	0.76	0.71	Dressing upper body	0.73	0.76	0.76	Dressing lower body	0.64	0.70	0.60	Grooming	0.88	0.89	0.80	Self-care Total	0.82	0.84	0.80	Respiration & Bladder Total	0.63	0.68	0.65	Mobility Total	0.65	0.71	0.72	Total Score	0.78	0.78	0.76	Spearman's correlations between MMT and SCIM-III Self Care items		MMT Items	SCIM-Self Care Items	Shoulder Abduction	0.34-0.66	Elbow Extension	0.62-0.78	Elbow Flexion	0.08-0.40	Wrist Extension	0.24-0.56	Finger Extension	0.67-0.82	Finger Flexion	0.69-0.84	Thumb Flexion	0.63-0.82	Finger Abduction	0.65-0.83	Interosseus Muscle I	0.64-0.77	Thumb Adduction	0.56-0.74	Thumb Opposition	0.55-0.72
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Alimohammadi et al. 2016	Spearman's rho with WhOM-Farsi: WhOM Mean Satisfaction: Home Activities (N=50) = 0.493** Community Activities (N=72) = 0.313** Total (N=75) = 0.338** WhOM Mean Satisfaction x Importance: Home Activities (N=50) = 0.507** Community Activities (N=72) = 0.308* Total (N=75) = 0.382** ** $P \leq 0.01$; * $P \leq 0.05$																																																																										
Saffari et al. 2015	Pearson correlation coefficients: Between SCIM-III physical functioning scores and SCL-CSQ subscale of:																																																																										

	<p>Acceptance & Fighting Spirit: $r=0.19-0.33, P<0.01$ Social Reliance: $r=(-0.16-0.25), P<0.01$</p> <p>Regression analysis: Fighting spirit subscale, age, and SCIM-III predicts PCS-12 (part of SF-12); $R^2 = 0.32$</p>
Bonavita et al. 2016	<p>Between SCIM-Self Report and SCIM-III: Pearson correlation coefficients (95%CI): Self-care: 0.918 (0.884-0.943) Respiration & Sphincter: 0.806 (0.731-0.862) Mobility: 0.906 (0.867-0.934) Total: 0.934 (0.906-0.954)</p> <p>Intraclass coefficients (95%CI): Self-care: 0.918 (0.884-0.943) Respiration & Sphincter: 0.803 (0.727-0.859) Mobility: 0.906 (0.867-0.934) Total: 0.933 (0.905-0.953)</p> <p>Bland-Altman analysis (mean difference; std error; limits of agreement (LOA); % observed differences included in LOA): Self-care: 0.918; 2.61; -5.25-4.98; 92% Respiration & Sphincter: -0.09; 4.95; -9.78-9.61; 93% Mobility: 0.22; 4.63; -8.86-9.29; 94% Total: -0.01; 8.33; -16.34-16.32; 95%</p>
de Almeida et al. 2016	<p>Spearman's rho between: SCIM-III and motor FIM: 0.6, $p<0.01$ SCIM-III Grooming and FIM self-care: 0.8, $p=0.001$ SCIM-III respiration & sphincter and FIM sphincter: 0.6, $p=0.0005$ SCIM-III mobility indoor & outdoors and FIM locomotion: 0.6, $p=0.0006$</p>
Joseph et al. 2016	<p>Mapping all 19 questions to ICF categories resulted in matches to 20 2nd level ICF categories and 32 3rd level categories. 16/20 2nd level categories and 25/32 3rd level categories were in "Activity and Participation" domain.</p> <p>The SCIM-III covered 3/11 impairments and 9/9 "Activity and Participation" categories in the Brief ICF Core Set for SCI.</p>
Prodinge r et al. 2016	<p>"The SCIM-SR violates certain assumptions of the Rasch measurement model, as shown by the local dependency and differential item functioning. However, an intermediate solution to achieve fit in 3 out of 4 spinal cord injury sub-groups was found. For the time being, therefore, it advisable to use this approach to compute Rasch-transformed SCIM-SR scores." (p149)</p>
Velstra et al. 2016	<p>Backward multiple binary logistic regression reveals that combinations of select predictors have similar predictive accuracy as that of 10 predictors:</p> <p>Combination of ElbowFlex, WristExt, EDC & FPL predicting SCIM-Self-care at 6 months: Sensitivity = 81.8% (61.5-92.7%), Specificity = 89.2% (75.7-97.2%) All 10* bilateral muscle predictors predicting SCIM-Self-care at 6 months: Sensitivity = 86.4% (66.7-95.3%), Specificity = 89.2% (75.3-95.7%)</p> <p>Combination of WristExt, FDP, Delto & FPL predicting SCIM-Mobility at 6 months: Sensitivity = 96% (80.5-99.3%), Specificity = 91.2% (77.0-96.7%) All 10* bilateral strength predictors predicting SCIM-Mobility at 6 months: Sensitivity = 92% (75.0-97.8%), Specificity = 91.2% (77.0-96.7%)</p> <p>UEMS = Upper extremity motor score GRASSP-MMT = GRASSP Manual muscle testing *Predictors included: ElbowFlex = Elbow flexors (UEMS) WristExt = Wrist extensors (UEMS) Triceps = Elbow extensors (UEMS)</p>

	<p>FDP = Long finger flexors (UEMS) AbdDigV = Small finger abductors (UEMS) Delto = M. anterior deltoid (GRASSP-MMT) EDC = M. extensor digitorum communis (GRASSP-MMT) OPP = M. opponens pollicis (GRASSP-MMT) FPL = M. flexor pollicis longus (GRASSP-MMT) DI1 = M. first dorsal interosseus (GRASSP-MMT)</p>
3. RESPONSIVENESS	
Author ID	Responsiveness
Iitzkovich et al. 2007	<p>McNemar test comparing SCIM III subscale scores to FIM tasks that match those subscales: The responsiveness of the SCIM III was better than that of the FIM in the Respiration and sphincter mgmt and Mobility indoors and outdoors subscales. In the Self care and Mobility in the room and toilet subscales, differences between the two scales were statistically non significant:</p> <p>Self care: 1st rater: P<.360 2nd rater: P<.533</p> <p>Respiration and sphincter mgmt: 1st rater: P<.001 2nd rater: P<.001</p> <p>Mobility in the room and toilet: 1st rater: P<.341 2nd rater: P<.784</p> <p>Mobility indoors and outdoors: 1st rater: P<.001 2nd rater: P<.001</p>
Glass et al. 2009	<p>The ability to identify a 1-point change (admission to discharge) within the 4 areas of SCIM-III in comparison with the total FIM™ score were compared using the McNemar test. SCIM-III detected more numerous changes than FIM™ in 3 of the 4 areas; <i>self-care, respiration and sphincter management, and mobility indoors and outdoors</i>, but not <i>mobility in the room and toilet</i>. The differences between the 2 scales' responsiveness to changes are not statistically significant.</p>
Anderson et al. 2011	<p>SCIM III Total at Admission: Rater 1 = 29.8 ±17.7 Rater 2 = 29.6 ±16.9 r=0.91, P<.0001</p> <p>SCIM III Total at Discharge: Rater 1 = 50.6 ±21.7 Rater 2 = 50.5 ±22.1 r=0.96, P<.0001</p> <p>McNemar's test for measuring subscale responsiveness: Self-care: $\chi^2 = 17.86-22.35$ (P<0.0001) Respiration and sphincter: $\chi^2 = 76.5-81.8$ (P<0.0001) Mobility in the room: $\chi^2 = 57.36-58.91$ (P<0.0001) Mobility indoors/outdoors: $\chi^2 = 13.68-19.93$ (P<0.0001)</p>

	<p>Changes detected by SCIM III (yes/no) agree with FIM (yes/no) in all subscales in responding to functional change (P<.0001).</p> <p>For the respiration and sphincter management subscale, the SCIM III was more responsive to change than the FIM (P<.0001). Other subscales were not discussed in the study.</p>
Bluvshstein et al. 2011	<p>Responsiveness of SCIM III to changes in function between admission to rehabilitation and discharge was better than that of FIM.</p> <p>In all subscales, SCIM III identified more changes in function than FIM.</p> <p>The difference in responsiveness between SCIM III and FIM was statistically significant (P<.001) for both raters in:</p> <ul style="list-style-type: none"> - respiration and sphincter management - mobility indoors and outdoors <p>The difference in responsiveness between SCIM III and FIM was significant only for one of the raters (P<.02) in:</p> <ul style="list-style-type: none"> - self-care <p>The differences between the two scales was not statistically significant in:</p> <ul style="list-style-type: none"> - mobility in the room and toilet
Velstra et al. 2015	<p>SCIM self-care subscale SRMs for select periods in first year of injury:</p> <p>In all patients: 0.42-1.28 In AIS-A/B patients: 0.55-1.26 In AIS-C/D patients: 0.31-1.33</p> <p>Breakdown by motor completeness and other time intervals available in article</p>
Scivoletto et al. 2013	<p>ES - based estimate of small change in total score: 3.9 ES – based estimate of substantial change in total score: 9.75 *Subscale breakdown available in article</p>
Kalsi-Ryan et al. 2016	<p>Mean Difference, Std Error, Std Response Mean and Effect Sizes (Mean diff; SE; SRM; ES) at different post-injury intervals:</p> <p>SCIM Self Care:</p> <p>1 month -> 3 month: 3.52; 0.40; 1.28; 0.59 1 month -> 6 month: 5.91; 0.55; 1.63; 0.99 1 month -> 12 month: 6.50; 0.39; 2.71; 1.10</p> <p>Breakdown by motor completeness and other time intervals available in article</p>
4. FLOOR/CEILING EFFECT	
Author ID	Floor/ceiling effect
Mulcahey et al 2018	<p>Ceiling effects were present in the <i>SC subscale</i> for:</p> <p>the oldest age group (16-17yrs) (24%) neurological level (NL) L1-S4/5 (35.5%)</p> <p><i>In-room mobility subscale:</i></p> <p>Age 6–12 years (45.7%) Age 13–15 years (30.43%) Age 16–17 years (60%) paraplegia (42.4%) tetraplegia (37.1%) Incomplete injuries (50%) T2-T12 (38%) NL L1-S4/5 (100%)</p>
Ackerman et al. 2010	<p>Ceiling effects (≥50% of participants scoring maximum at admission) were observed in:</p> <ul style="list-style-type: none"> - Feeding & grooming (T1-12) - Respiration (C5-8, T1-12) - Bed mobility (T7-12)

	Floor effects ($\geq 50\%$ of participants scoring minimum at discharge) were observed in: <ul style="list-style-type: none"> - Feeding & grooming (C1-4) - Bathing upper & lower body (C1-5) - Dressing upper body (C1-4) - Dressing lower body (C1-5) - Use of toilet (C1-6) - Bed mobility (C1-5) - Transfer Bed-Wheelchair (C1-5) - Transfer Wheelchair-Toilet-Tub (C1-5) - Stair Management (All subgroups except T7-12) - Transfer Wheelchair-Car (C1-5) - Transfer Wheelchair-Ground (All subgroups) 					
Glass et al. 2009	Floor effect was evident in the item "transfer ground/wheelchair", which was scored zero for 53 patients by both raters.					
Anderson et al. 2011	A recent study evaluating the sensitivity of the SCIM III to measure functional change noted some floor/ceiling effects dependent upon injury level, in particular, with the respiration task and some mobility tasks.					
Riberto et al. 2014	Brazilian SCIM III exhibits less floor & ceiling effect than FIM motor					
Proding et al. 2016	No floor or ceiling effects observed. No participant received minimum score. 11.4% of incomplete paraplegic participants received maximum score (<15% threshold) 12.3% of incomplete tetraplegic participants received maximum score (<15% threshold)					
5. INTERPRETABILITY						
Author ID	Interpretability					
Itzkovich et al. 2007	SCIM subscale mean (SD) scores					
	Subscale:			Mean (SD) score:		
	Self-care – 1 st rater			8.73 (6.11)		
	Self-care – 2 nd rater			8.61 (5.88)		
	Respiration and sphincter- 1 st rater			19.88 (10.77)		
	Respiration and sphincter – 2 nd rater			19.65 (10.54)		
	Mobility in the room – 1 st rater			3.73 (3.73)		
	Mobility in the room – 2 nd rater			3.72 (3.67)		
	Mobility indoors/outdoors-1 st rater			5.14 (6.36)		
	Mobility indoors/outdoors- 2 nd rater			5.20 (6.33)		
	SCIM total – 1 st rater			37.47 (23.90)		
SCIM total – 2 nd rater			37.18 (23.44)			
Ackerman et al. 2010	SCIM-III median total scores and change by AIS motor neurological level from admission to discharge from an outpatient day program					
	Lowest motor neurological level	n	Length of stay (days)	Admission total SCIM-III	Discharge total SCIM-III	SCIM-III change
	C1-4	13	11	19.0	19.0	0.0
	C5	16	18.5	21.5	23.5	3.0
	C6	18	25	25.5	34.5	9.0
	C7-8	12	23	39.5	50.0	7.0
	T1-6	38	15	53.5	63.0	5.5
	T7-12	17	13	61.0	66.0	6.0
	All subgroups	114	17	42.0	50.0	5.0

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Respiration and sphincter management subscale:

MID = 1.82

SEM = 2.19

SRD95/MDC95 = 6.07

2 points for small significant improvement

5 for substantial improvement

Mobility (room and toilet) subscale:

MID = 0.61

SEM = 0.57

SRD95/MDC95 = 1.59

1 points for small significant improvement

2 for substantial improvement

Mobility (indoors and outdoors on even surface) subscale:

MID = 1.21

SEM = 0.71

SRD95/MDC95 = 1.96

1 points for small significant improvement

2 for substantial improvement