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Type of Outcome Measure: Spinal Cord Injury Functional Ambulation Inventory (SCI-FAI) | **Total articles:** 4

Author ID Year	Study Design	Setting	Population (sample size, age) and Group
Datta et al. 2009	Observational cohort	The NeuroRecovery Network (NRN), a specialized network of treatment centers providing standardized, activity-based therapy for patients with SCI	N=97 (M=71; F=26) Mean Age: 38±17y Mean time since SCI = 11.9 months Incomplete SCI AIS C or D Mechanism of Injury: Motor Vehicle Accident = 34 Fall = 29 Sporting Accident = 16 Other nontrauma = 8 Medical/surgical = 6 Violence = 4
Field-Fote et al. 2001	Methodological study testing reliability, validity and sensitivity.	University of Miami	Reliability/Validity: N=22 (5 female, 17 male) Age: 32±13 Incomplete SCI 14 Cervical, 5 Thoracic, 3 Lumbar Ability to independently maintain stance on the weight-bearing limb and ability to take at least 8 steps. Sensitivity: N=19 (6 female, 13 male) Age:31.7±9.4 13 tetraplegia, 6 paraplegia
Lam et al. 2008	Systematic review		Data reported in the systematic review came only from one article – Field-Fote et al. 2001 (see population characteristics above)
Lemay & Nadeau 2010	Longitudinal study	An intensive rehabilitation center in Montreal, Canada (Institut de readaptation Gingras-Lindsay de Montreal)	32 SCI subjects (25 males, 7 females) mean age: 47.9± 12.8 yrs Neurological level: 15 paraplegic, 17 tetraplegic Level of injury: 17 cervical, 10 thoracic, 5 lumbar Type of injury: 21 traumatic, 11 non-traumatic Inclusion criteria: (1) Adults with SCI AIS D either of traumatic or nontraumatic etiology and (2) the ability to walk 10m independently with or without upper-extremity assistive devices.

1. RELIABILITY

Author ID	Internal Consistency	Test-retest, Inter-rater, Intra-rater
Field-Fote et	No data available	Inter-rater: Live Score(LS): ICC=0.703

al. 2001		Videotape 1(VS1): ICC=0.800 Videotape 2(VS2): ICC=0.840 Intra-rater: Comparing LS & VS1 Rater 1: ICC=0.903 Rater 2: ICC=0.956 Rater 3: ICC=0.942 Rater 4: ICC=0.850
2. VALIDITY		
Author ID	**Validity**	
Field-Fote et al. 2001	Correlation of the SCI-FAI with instruments measuring the same construct as the SCI-FAI: Gait Score & Walking Speed: VS1: r=-0.742 VS2: r=-0.700 Gait Score & Subject self report on walking mobility: VS1: r=0.697 There is a moderate correlation between % change in gait score and in change lower extremity motor scores (LEMS) (r=0.58)	
Datta et al. 2009	Correlation between the first principle component of change in Berg Balance Scale (BBS) items and changes in SCI-FAI subscales: **SCI-FAI Gait** Kendall τ = 0.22 Spearman p = 0.31 (P<.01) **SCI-FAI Assistive Device** Kendall τ = -0.07 (P=.42) Spearman p = -0.10 (P=.40) **SCI-FAI Walking Mobility** Kendall τ = 0.33 Spearman p = 0.44 (P<.01)	
Lemay & Nadeau 2010	Spearman's correlations with other walking scales: (all P<.01) <u>SCI-FAI parameter</u> BBS: 0.747 SCI-FAI assistive devices: 0.609 SCI-FAI mobility:0.716 2 Minute Walk Test (2MWT): 0.805 Walking Index for Spinal Cord Injury II (WISCI II): 0.761 10 Meter Walk Test (10MWT): 0.777 Timed Up and Go (TUG): -0.761 <u>SCI-FAI assistive devices</u> BBS: 0.714 SCI-FAI parameter: 0.609 SCI-FAI mobility: 0.690 2MWT: 0.740 WISCI II: 0.980 10MWT: 0.788	

	TUG: -0.802 <u>SCI-FAI mobility</u> BBS: 0.740 SCI-FAI parameter: 0.716 SCI-FAI assistive devices: 0.690 2MWT: 0.688 WISCI II: 0.630 10MWT: 0.756 TUG: -0.724

3. RESPONSIVENESS

Author ID	**Responsiveness**
Field-Fote et al. 2001	Subjects who participated in experimental walking rehabilitation intervention, showed a 44.7% increase in mean gait score following training. This change was statistically significant (t-test, P<.001). Prior to training: Gait Score & LEMS: r=0.74 Post training: Gait Score & LEMS: r=0.64

4. FLOOR/CEILING EFFECT

Author ID	**Floor/ceiling effect**
Lemay & Nadeau 2010	A ceiling effect was present on the different sections of the SCI-FAI (parameter, assistive devices and walking mobility: 68.8%, 34.4%, 34.4%, respectively, of subjects reaching maximal score on the scale).

5. INTERPRETABILITY

Author ID	**Interpretability**		
Lemay & Nadeau 2010	**Scale:**	**Mean (SD) score:**	**Range:**
	SCI-FAI Parameter (/20)	18.5 (3.3)	7-20
	Paraplegia	17.8 (4.5)	7-20
	Tetraplegia	19.0 (1.8)	14-20
	SCI-FAI Assistive Devices (/14)	11.4 (2.7)	7-14
	Paraplegia	11.1 (2.4)	7-14
	Tetraplegia	11.8 (3.0)	7-14
	SCI-FAI Mobility (/5)	3.7 (1.2)	2-5
	Paraplegia	3.4 (1.2)	2-5
	Tetraplegia	4 (1.1)	2-5
Lam et al. 2008	Lam et al. 2008 calculated SEM and SRD from data in Field-Fote et al. 2001 **SEM**: 0.7 points (gait parameter subscale, Lam et al. 2008) **MDC**: Smallest Real Difference (SRD) = 1.9 points (13%) (gait parameter subscale, Lam et al. 2008)		