

The Spinal Cord Injury Spasticity Evaluation Tool (SCI-SET)

Assessment Overview

Assessment Area

ICF Domain:

Body Function

Subcategory:

Neuromusculoskeletal & Movement-related Functions and Structures

You Will Need

Length:

35 items

Scoring:

Total score (-3 to +3) is generated by summing all the responses from the applicable items then dividing the sum by the number of applicable items

Summary

The Spinal Cord Injury Spasticity Evaluation Tool (SCI-SET) is a self-report questionnaire that assesses the impact of spasticity on daily life in people with SCI. It requires participants to recall their past 7 days when rating spasticity on a scale ranging from -3 (extremely problematic) to +3 (extremely helpful).

Availability

Available for free here: http://www.scireproject.com/wp-content/uploads/worksheet_sci-set.docx

Languages: English

Assessment Interpretability

Minimal Clinically Important Difference

Not established in SCI

Statistical Error

Standard Error of Measurement:

0.17-0.30

Minimal Detectable Change:

0.47-0.82

(Adams et al. 2007; N=61, 45 males, mixed injury types, community living, mean (SD) time since injury = 10.2 (8.6) years)

(Ansari et al. 2017; N=100, 58M; mean age = 39.0±11.0; duration since SCI = 14.4±11.5; mixed injury types)

Typical Values

Mean (SD) Scores:

Across groups: -0.65 (0.56)

Patients with Paraplegia = -0.62 (0.57)

Patients with Tetraplegia = -0.67 (0.57)

Range: -2.35 to 0.00

(Adams et al. 2007; N=61, 45 males, mixed injury types, community living, mean (SD) time since injury = 10.2 (8.6) years)

Measurement Properties

Validity – **Low** to **High**

High correlation between SCI-SET scores and:

Self-assessment of Spasticity Impact

$r = -0.61$

Quality of Life Index health and functioning subscale

$r = 0.68$

Penn Spasm Frequency Scale

$r = -0.66$

Moderate correlation between SCI-SET scores and:

Self-assessment of spasticity severity ($P < 0.05$)

$r = -0.41$

Self-assessment of spasticity impact ($P < 0.05$)

$r = -0.47$

Self-assessment of Spasticity Severity

$r = -0.48$

Low correlation between SCI-SET scores and:

Functional Independence Measure motor score

$r = 0.14-0.21$

PFIM-Cognitive Subscale

$r = 0.13$

(Adams et al. 2007; N=61, 45 males, mixed injury types, community living, mean (SD) time since injury = 10.2 (8.6) years)

(Akpinar et al. 2017; N=66, 40M; mean age 44.06±11.0 years; type: 45 paraplegic, 21 tetraplegic)

(Ansari et al. 2017; N=100, 58M; mean age = 39.0±11.0; duration since SCI = 14.4±11.5; mixed injury types)

Number of studies reporting validity data: 3

Reliability – **Moderate** to **High**

High Test-retest Reliability:

ICC = 0.80-0.91

High Internal Consistency:

$\alpha = 0.862-0.95$

(Adams et al. 2007; N=61, 45 males, mixed injury types, community living, mean (SD) time since injury = 10.2 (8.6) years)

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Moderate to High test-retest reliability for transfer-related variables:

Spasm duration: $\rho = 0.846$

Spasm magnitude: $\rho = 0.705$

Percent of transfer: $\rho = 0.807$

Transfer duration: $\rho = 0.656$

(Tibbett et al. 2019; N=19, 17M; mean age 39.5±10.2; mean time since injury 15.6±11.0, mixed injury types)

Number of studies reporting reliability data: 4

Responsiveness

Floor/Ceiling Effect:

Not observed in SCI

(Ansari et al. 2017; N=100, 58M; mean age = 39.0±11.0; duration since SCI = 14.4±11.5; mixed injury types)

Effect Size:

Not established in SCI

Number of studies reporting

responsiveness data: 0