Spinal Cord Injury Secondary Conditions Scale (SCI-SCS)

Assessment Overview

Assessment Area

ICF Domain:
Body Function
Subcategory:
General Functions

You Will Need

Length:
16 items
Scoring:
Items rated 0-3. Total score (0-48) is sum of items. Higher scores indicate greater problems with secondary conditions

Summary

The Spinal Cord Injury Secondary Conditions Scale (SCI-SCS) is a self-report questionnaire specifically targeting physiological secondary conditions associated with SCI that directly and indirectly impact health and physical functioning.

The SCI-SCS covers skin, musculoskeletal, pain, bowel/bladder, sexual dysfunction, respiratory, and cardiovascular conditions.

Availability

Worksheet: Can be found here.

Languages: English, Italian, and Swedish/Norwegian

Assessment Interpretability

Minimal Clinically Important Difference

Not established in SCI

Statistical Error

Not established in SCI

Typical Values

Not established in SCI

Measurement Properties

Validity – Low to High

Moderate to High correlation with Short Form 12 (SF-12) Subscales:

ρ = 0.317-0.644

(Kalpakjian et al. 2007; n=65, 46 males; paraplegia and tetraplegia; complete and incomplete injuries; mean (SD) years since injury: 13.7 (11.0) years)

Low correlation with Modified Barthel Index (MBI)

r = 0.20

Moderate correlation with SF-8 Physical component (PCS)

r = 0.36

Low correlation with SF-8 Mental component summary (MCS)

r = 0.21

Moderate correlation with Patient Health Questionnaire (PHQ-9)

r = 0.43

(Conti et al. 2019; n=156; 126 males, 30 females; mean age: 50.17 years; 55 tetraplegia; 97 ASIA B-D; Italian version)

Number of studies reporting validity data: 4

Reliability – Moderate to High

Moderate to High Test-retest Reliability:

Correlation = 0.569-0.805

(Intervals at 5 time points between baseline and 2-year follow-up; Kalpakjian et al. 2007; n=65, 46 males; paraplegia and tetraplegia; complete and incomplete injuries; mean (SD) years since injury: 13.7 (11.0) years)

ICC = 0.91-0.96

(Conti et al. 2019; n=156; 126 males, 30 females; mean age: 50.17 years; 55 tetraplegia; 97 ASIA B-D; Italian version)

(4-6 day interval; Arora at al. 2015; n=40, 32 males, 8 females; level of injury: C2-T12; ASIA A-C; median (IQR) time since injury: 28 (14-35) years)

Moderate to High Internal Consistency:

α = 0.65-0.87

(Conti et al. 2019; n=156; 126 males, 30 females; mean age: 50.17 years; 55 tetraplegia; 97 ASIA B-D; Italian version)

(Jorgensen et al. 2021; n=224; 173 males, 51 females; mean (SD) age: 49.6 (14.9) years; median (IQR) duration of injury: 15.0 (6.0 – 25.0) years; injury level: cervical – lumbar; ASIA A-D; Norwegian/Swedish version)

(Kalpakjian et al. 2007; n=65, 46 males; paraplegia and tetraplegia; complete and incomplete injuries; mean (SD) years since injury: 13.7 (11.0) years)

Number of studies reporting reliability data: 3

Responsiveness

Floor/Ceiling Effect:

Floor: Apparent in all 16 items
(29.2%~89.2% at floor)

Ceiling: Apparent in 3 items:
Sexual Function (26.2%)
Chronic Pain (32.3%)
Joint & Muscle Pain (29.2%)

(Kalpakjian et al. 2007; n=65, 46 males; paraplegia and tetraplegia; complete and incomplete injuries; mean (SD) years since injury: 13.7 (11.0) years)

Effect Size:

Not established in SCI

Number of studies reporting responsiveness data: 3