

Short Form 36 (SF-36)

Assessment Overview

Assessment Area

ICF Domain:
Quality of Life

You Will Need

Length:

36 items

Scoring:

- Raw score is transformed to 0-100 scoring system (Algorithm available in the manual, which must be purchased)
- Score is norm-based; the mean score for the general population is 50 with a standard deviation of 10
- Higher score indicates better health status
- The SF-36 can also be scored using two norm-based summary scores, a physical and a mental component score (PCS & MCS).

Summary

The Medical Outcomes Study Short Form 36 (SF-36) is a generic health status measure that was introduced in 1992, and has been translated into various languages. The SF-36 assesses health-related quality of life using 8 domains, regarding either physical or mental functioning, both of which can also be summarized into a composite score: the physical (PCS) and mental (MCS) component summary.

The SF-36 can be administered by interviewer or self-administered.

Availability

Available for free here: https://www.rand.org/health-care/surveys_tools/mos/36-item-short-form/survey-instrument.html
Languages: 50+ languages

Assessment Interpretability

Minimal Clinically Important Difference

Not established in SCI
For a sample of patients with osteoarthritis:

Worsening:

Physical functioning = 5.3

Bodily pain = 7.2

PCS = 2.0

Improving:

Physical functioning = 3.3

Bodily pain = 7.8

PCS = 2.0

(Angst et al., 2001; N=122, 71% female, mean age 65)

Statistical Error

Minimal Detectable Change:

Physical functioning=21.4

Role physical=14.7

Bodily pain=7.4

General health=7.9

Vitality=4.6

Social functioning=5.9

Role emotional=4.1

Mental health=7.4

(Lin 2007; N=187, 151 male, traumatic SCI; mixed injury types, mean time since injury = 7.4 years)

Typical Values

Mean (SD) Scores:

Physical functioning: 61.2(39.8)

Role physical: 62.7(44.4)

Bodily pain: 67.5(20.6)

General health: 52.5(20.3)

Vitality: 57.0(17.3)

Social functioning: 71.8(22.2)

Role emotional: 71.8(40.9)

Mental health: 63.5(15.5)

(Lin 2007; N=187, 151 male, traumatic SCI; mixed injury types, mean time since injury = 7.4 years)

Threshold Values:

Not established in SCI. But in the general population:

Mental health (MH) score of ≤ 52

is “indicative of emotional problems probably of any psychiatric disorder”.
MCS of ≤ 42 is “indicative of clinical depression”.

(Ware et al 1994)

(Silveira et al 2005; N=545-555; Swedish women, aged 70-84; MH cut-off: sensitivity=58%, specificity=92%; MCS cut-off: sensitivity=71%, specificity=82%)

Measurement Properties

Validity – **Low** to **High**

Moderate correlation with Life Satisfaction Questionnaire 9 (LISAT-9):

$\rho = 0.531$

Low correlation with Functional Independence Measure (FIM):

$\rho = 0.094$

(van Leeuwen et al. 2012; N=145, 104 male, mixed injury types, 5 years post-discharge from inpatient rehabilitation)

Low to **High** correlation with WHO Quality of Life – BREF (WHOQOL-BREF):

$\rho = 0.24-0.78$

(Lin 2007; N=187, 151 male, traumatic SCI; mixed injury types, mean time since injury = 7.4 years)

Moderate correlation with Spinal Cord Independence Measure (SCIM):

$r = 0.339$

(SCIM Turkish ver.; Unalan et al. 2015; N=204, 144 male, mixed injury types, mean time since injury = 75.4 months)

Low to **Moderate** correlation with Beck Depression Inventory (BDI):

$r = 0.229-0.329$

(Ataoglu et al. 2013; N=140, 104 male, mixed injury types, inpatient, mean time since injury = 25.2 months)

Number of studies reporting validity data: 13

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

Moderate to **High** Inter-rater Reliability: ICC = 0.52-0.98

Moderate to **High** Intra-rater Reliability: ICC = 0.71-0.99

Moderate to **High** Internal Consistency: $\alpha = 0.72-0.98$

(Lin 2007; N=187, 151 male, traumatic SCI; mixed injury types, mean time since injury = 7.4 years)

Number of studies reporting reliability data: 5

Responsiveness

Floor/Ceiling Effect:

Percentage of patients at lowest score:

Items 3a-3j: 29%

Items 3g, 3h, 3i: >90%

(Lee et al., 2009; N=305, 83% male, SCI patients with neuropathic bladder, mixed injury types, mean 14 years post-SCI)

2 subscales >20%

Percentage of patients at highest score:

3 subscales >20%

(Lin 2007; N=187, 151 male, traumatic SCI; mixed injury types, mean time since injury = 7.4 years)

Effect Size:

Physical Functioning Domain: 0.36

Physical Composite Score: 0.58

Mental Composite Score: 0.71

(Lee et al., 2009; N=305, 83% male, SCI patients with neuropathic bladder, mixed injury types, mean 14 years post-SCI)

Number of studies reporting responsiveness data: 7