Numeric Pain Rating Scale (NPRS)

Assessment Overview

Assessment Area

ICF Domain:
Body Function
Subscales:
Sensory Function

You Will Need

Length:
<1 minute
Items:
- 0: No pain
- 10: Worst pain imaginable

Scoring:
Ask the participant to make 3 pain ratings, corresponding to current, best, and worst pain experienced over the past 24 hours.
Scores range from 0-10 points, with higher scores indicating greater pain intensity. The average of the 3 rating is used.

Summary

The Numeric Pain Rating Scale (NPRS) is used to quantify pain on a numerical scale. It is an 11-item scale that ranges from 0 through 10 (sometimes 0-20 or 0-100) to represent pain severity levels from "no pain" to "most intense pain imaginable."

The NPRS can be described verbally or as a pen/paper version, the latter commonly as a box-scale.

The NPRS may have advantages over a verbal rating scale for its simplicity, and that it does not require understanding of English.

Availability

Worksheet: Can be found for here.

Languages: English

Assessment Interpretability

Minimal Clinically Important Difference

1.80 points or 36%

(Hanley et al. 2006; n=82; mean age 41.44 years; level of injury: 54% cervical SCI, 38% thoracic SCI, 7% lumbar/sacral SCI)

Pooled/weighted MCID: 1.6

(Sobreira et al. 2021; n=57; 36 males, 24 females; mean (SD) age: 54.5 (15.9) years; level of injury: 31 cervical, 19 thoracic, 10 lumbar; ASIA A-D; mean (SD) time since injury: 5.5 (1.47) months)

Statistical Error

Not established in SCI

Typical Values

Cut-off Scores:

- For rating overall pain:
  - Mild = 1-3, Moderate = 4-7, Severe = 8-10
- For rating worst pain problem:
  - Mild = 1-3, Moderate = 4-6, Severe = 7-10

(Hanley et al. 2006; For questions about general pain: N=307, mean age=43.1 (13.0) years. For questions about worst pain: N=174, mean age=41.6 (13.6) years; inclusion criteria of SCI >6 months)

Measurement Properties

Validity – Moderate

Moderate correlation between NPRS and Verbal Rating Scale:

r = 0.38

(Dijkers et al. 2010; n=168; mean age 38 years; 10% paraplegia incomplete, 26% paraplegia complete, 45% tetraplegia incomplete, 19% tetraplegia complete)

Number of studies reporting validity data: 1

Reliability – High

High Test-retest Reliability:

100%

(Bryce et al. 2007; N=50 health care providers attending the 2006 combined American Spinal Injury Association (ASIA)/International Spinal Cord Society (ISCoS) scientific meeting)

High Internal Consistency:

ICC: 0.95

(Sobreira et al. 2021; n=57; 36 males, 24 females; mean (SD) age: 54.5 (15.9) years; level of injury: 31 cervical, 19 thoracic, 10 lumbar; ASIA A-D; mean (SD) time since injury: 5.5 (1.47) months)

Number of studies reporting reliability data: 2

Responsiveness

Floor/Ceiling Effect:
Not established in SCI

Effect Size:
Not established in SCI

Number of studies reporting responsiveness data: 0