Capabilities of Upper Extremities Test (CUE-T)

Assessment Overview

Assessment Area

ICF Domain:
Activity

Subcategory:
Mobility

You Will Need

Length:
17 items
Scoring:
Raw scores recorded as indicated on the data collection sheet, are converted to a five-point scale (from 0 to 4). Higher scores reflect better function.
Equipment:
Timer, yardstick, round marker, wood block with L-bracket, weights (1/2 – 2 kg), nonslip mat, clamp, height adjustable table, hand-held dynamometer, plastic container with lid, credit card, pencil, calculator, and cell phone. For a detailed list of equipment, consult the CUE-T manual.

Summary

The Capabilities of Upper Extremities Test (CUE-T) is a performance measure, designed to measure functional limitations, and assess the amount of difficulty experienced in performing specific actions (involving arms and hands) in people with tetraplegia.

Availability

Worksheet: Can be found for free here.

Assessment Interpretability

Minimal Clinically Important Difference

$MCID_{adjust}$:

- CUE-T total = 7.7
- CUE-T hand = 2.0
- CUE-T side = 3.7

$MCID_{distribution}$:

- CUE-T total = 3.4
- CUE-T hand = 1.1
- CUE-T side = 1.6

(Jimbo et al. 2023; n=52; 45 males, 7 females; mean (SD) age: 56.8 (13.5) years; ASIA A-D; level of injury: C1-T1; subacute SCI)

Statistical Error

Not established in SCI

Typical Values

Cutoff values (CUE-T score by points) for independence in activities of daily living:

- Feeding: 37
- Bathing the upper body: 91
- Bathing the lower body: 90
- Dressing the upper body: 82
- Dressing the lower body: 81
- Grooming: 60

(Jimbo et al. 2024; n=71; 60 males, 11 females; median age: 61.0 years; ASIA A-D; level of injury: C1-T1; subacute SCI)

Measurement Properties

Validity – High

High Different unilateral motor levels were significantly different (except those adjacent):
P < 0.001

High Correlation of CUE-T with GRASSP:
GRASSP-Sensation subscale: r = 0.77
GRASSP-Strength subscale: r = 0.76
GRASSP-Prehension subscale: r = 0.83

High Correlation of CUE-T with Upper Limb Motor Score:
R = 0.91
(right side) r=0.91, (left side) r=0.55

(Dent et al. 2018; n=39; mean age: 12.9 (all < 18 years); tetraplegia)
(Marino et al. 2012; n=30; 30 males; mean age: 44.8 years; 10 incomplete and 20 complete injury)

High Correlation of CUE-T with SCIM:
SCIM Self-care score: r = 0.70
SCIM Mobility score: r = 0.55

(Marino et al. 2015; n=50, 36 male, 14 females; mean (SD) age = 48.1 (18.2) years; 20 motor complete (ASIA A-B), 30 motor incomplete (ASIA C-D))

Number of studies reporting validity data: 3

Reliability – High

High Internal consistency:
α = 0.96

(Marino et al. 2012; n=30; 30 males; mean age: 44.8 years; 10 incomplete and 20 complete injury)

Number of studies reporting reliability data: 1

Responsiveness

Floor/Ceiling Effect:

Not established in SCI

Effect Size:
Standardized response mean (SRM) in subacute period after SCI: 1.07

(Marino et al. 2018; n=69, mean (SD) age: 41.9 (18.1) years, ASIA A-D), acute and chronic)

Number of studies reporting responsiveness data: 1