

Wheelchair Outcome Measure (WhOM)

Assessment Overview

Assessment Area

ICF Domain:

Participation

Subcategory:

Mobility, Community, Major Life Areas, General Tasks and Demands

You Will Need

Length: Approx. 30 minutes.

Number of items varies based on outcomes identified by the participant.

Scoring: In part I, Importance and Satisfaction are rated (0-10) for each identified activity.

Sat x Imp score (0-100) for each activity is the product of the two values. Overall Sat and Sat x Imp scores are the means of the respective activity scores.

In part II, change (post-pre) scores can be calculated.

Training:

No training required though good clinical interviewing skills are essential.

Summary

The WhOM is a semi-structured interview/assessment focused on participation outcomes as identified by the participants. In Part I, participants identify their participation outcome goals (i.e. specific things that they want to do and achieve) at home and in the community, and they then rate the **importance (Imp)** of the goals and **satisfaction (Sat)** with their performance in reaching their goals. Part II consists of structured questions about their comfort, satisfaction with positioning, and skin breakdown.

This information is intended to be re-tested to:

- 1) Monitor a participant's performance (post-intervention or over time);
- 2) To assist them in participating fully in their lives; and
- 3) Helping people to choose appropriate seating equipment.

Availability

<http://millerresearch.osot.ubc.ca/tools/mobility-outcome-tools-2/the-wheelchair-outcome-measure-whom/>

Languages: English, French, Farsi and Italian

Assessment Interpretability

Minimal Clinically Important Difference

Not established in SCI

Statistical Error

Minimum Detectable Change:

Mean Sat: 1.19-1.61

Mean Sat x Imp: 15.02-16.27

Standard Error of Measurement:

Mean Sat: 0.43-0.58

Mean Sat x Imp: 5.42-5.87

(Miller et al., 2011; N=50, 42 male, mixed injury types, mean (SD) time post-SCI = 16.1 (10.1) years)

Typical Values

Not established in SCI

Measurement Properties

Validity – Low to High

Moderate correlation with Spinal Cord Independence Measure (SCIM-III):

WhOM mean Sat: 0.338

WhOM mean Sat x Imp: 0.507

Low correlation with Beck Depression Inventory (BDI-II):

WhOM mean Sat: -0.220

WhOM mean Sat x Imp: -0.262

(Alimohammad et al., 2016; N=75 with SCI; no info on injury type; Farsi speakers, wheelchair as primary mobility device; mean (SD) time post-SCI = 60 (61) months)

Low to High correlation with Assessment of Life Habits (LIFE-H):

WhOM mean Sat: 0.18-0.62

WhOM mean Sat x Imp: 0.16-0.55

(Miller et al., 2011; N=50, 42 male, mixed injury types, mean (SD) time post-SCI = 16.1 (10.1) years)

Low Construct Validity with the Psychosocial Impact of Assistive Devices Scale (PIADS) and the Return to Normal Living Index (RNLI):

Spearman's ρ = 0.06-0.23.

(Garden, 2009; N=50, 42 male, 8 female; 64% tetraplegia, Mean age was 43.7 years (SD=10.7, range 20 - 66)).

High Construct Validity with Quebec User Evaluation of Satisfaction with Assistive Technology (QUEST):

Spearman's ρ = 0.65

(Garden, 2009; N=50, 42 male, 8 female; 64% tetraplegia, Mean age was 43.7 years (SD=10.7, range 20 - 66)).

Number of studies reporting validity data: 4

Reliability – High

High Test-retest Reliability:

WhOM Sat ICC = 0.90

WhOM Sat x Imp ICC = 0.93

WhOM Body Function ICC = 0.83

(Alimohammad et al., 2016; N=75; no info on injury type; Farsi speakers, wheelchair as primary mobility device; mean (SD) time post-SCI = 60 (61) months)

High Inter-rater Reliability:

ICC = 0.99

(Alimohammad et al., 2016; N=75; no info on injury type; Farsi speakers, wheelchair as primary mobility device; mean (SD) time post-SCI = 60 (61) months)

Substantial agreement between raters for identified participation outcomes was achieved ($K > 0.71$).

(Garden, 2009; N=50, 42 male, 8 female; 64% tetraplegia, Mean age was 43.7 years (SD=10.7, range 20 - 66)).

Number of studies reporting reliability data: 4

Responsiveness

Floor/Ceiling Effect:

Ceiling effect detected for mean Sat in home activities (22%). No ceiling or floor effect detected in all other scores.

(Alimohammad et al., 2016; N=75; no info on injury type; Farsi speakers, wheelchair as primary mobility device; mean (SD) time post-SCI = 60 (61) months)

Effect Size:

Not established in SCI

Number of studies reporting responsiveness data: 1