ORGANIZATION NEWS

Highlights From the Rehabilitation Measures Database

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Measurement Characteristics and Clinical Utility of the Participation With Recombined Tools-Objective Measure in a Traumatic Brain Injury Population

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Participation is the measure of the amount and types of meaningful activities a person engages in at a societal level.[1] Participation of people with disability in society is a primary aim of rehabilitation and yet definitions vary, and it is often not measured or reported.[1] Participation With Recombined Tools-Objective (PART-O) is a National Institute of Neurological Disorders and Stroke traumatic brain injury (TBI) common data element that measures frequencies of participation within the subdomains of productivity, social interaction, and out and about.[2,3] There are three Yes/No items and the rest of the items are ordinal scale with higher scores indicating more participation. Balanced scoring and Rasch scoring methods are established on the PART-O.[1] Subscale scores are calculated by taking the mean score of all items within the subscale. The PART-O demonstrates excellent construct validity (0.61-0.82) with CIQ, CHART, POPS, Mayo-Portland Participation Index, Cognitive FIM, Supervision Rating Scale, Glasgow Outcome Scale extended, and Disability Rating Scale.[4] PART-O has adequate construct validity (0.34-0.59) with the Motor FIM, and the Satisfaction with Life Scale, excellent interrater reliability, and adequate internal consistency.[4,5] Convergent validity is supported by adequate to excellent correlations between various commonly utilized scales and at least 1 factor of the PART-O.[4] The PART-O can be administered in 15-30 minutes and does not require training or additional equipment. The measure and additional resources can be found on the Center for Outcome Measurement in Brain Injury website.[2]

This abbreviated summary provides a review of the psychometric properties of the PART-O in adults with TBI. A full review of the PART-O and reviews of over 460 other instruments for patients with various health conditions can be found at: www.sralab.org/Rehabilitation-Measures.

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This instrument summary is designed to facilitate the selection of outcome measures by clinicians. The information contained in this summary represents a sample of the peer-reviewed research available at the time of this summary's publication. The information contained in this summary does not constitute an endorsement of this instrument for clinical practice. The views expressed are those of the summary authors and do not represent those of authors' employers, instrument owner(s), the *Archives of Physical Medicine and Rehabilitation*, the Rehabilitation Measures Database, or the United States Department of Health and Human Services. The information contained in this summary has not been reviewed externally.

BIBLIOGRAPHY

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Rehabilitation MEASURES	**Measure Name:** Participation Assessment with Recombined Tools– Objective	**Summary Authors:** Julie Schwertfeger, PT, DPT, MBA Roberta Kuchler-O'Shea, PT, DPT, PhD Edeth Engel, BS Linda Ehrlich-Jones, PhD, RN

Administration Time:

30 minutes

Populations Reviewed:

Traumatic Brain Injury

Acronym:	**Cost:**
PART-O	Free

Training Required:

None

Items:

24 original, 17 revised

Score:

0-5 for each question, scores are averaged by domain (Productivity, Social Relations, Out and About). Higher scores indicate more participation.

Purpose and Administration Instructions:

Objectively assess participation in patients with TBI in interview format (can be done by phone)

Standard Error of Measurement:

Total score SEM = 0.21[4]
Out and About subscale SEM = 0.33[4]
Productivity subscale SEM = 0.36[4]
Social subscale SEM= 0.35[4]

Internal Consistency:

 Acceptable Cronbach's α= 0.65[5]

Reliability:

Test-retest reliability:
- Total score ICC = 0.90 (CI 0.87-0.92)[4]
- Out and About subscale ICC = 0.79(CI 0.73-0.83)[4]
- Productivity subscale ICC = 0.87(CI 0.83-0.90)[4]
- Social subscale ICC = 0.87(CI 0.83-0.90)[4]

Rasch Analysis

Summary Statistics	PART-O
No. of item misfit	1[1,5]
Item reliability	0.96[5], 0.99[1]
Item separation	5.24[5], 11.36[1]
Range of item difficulty, logits	−1.00 to 0.90[5]
Person reliability	0.78[5], 0.86[1]
Person separation	1.87[5], 2.47[1]
Strata	2.8[5]
Eigenvalue of primary dimension (% of variance explained)	9.8 (36.6)[5]
Eigenvalue of first contrast (% of variance explained)	2.9 (10.7)[5]

Required Equipment:	**Floor/Ceiling Effects**
The PART-O	None found[5]

Validity:

Construct Validity
- **Excellent** with Community Integration Questionnaire v2 (r=0.82)[1]
- **Excellent** with Craig Handicap Assessment and Reporting Technique- Short Form (r=0.81)[1]
- **Excellent** with Participation Objective, Participation Subjective (r=0.79)[1]
- **Excellent** with Mayo-Portland Participation Index (r=0.69)[1]
- **Excellent** with Cognitive FIM (r=0.61)[1]
- **Adequate** with Motor FIM (r=0.59)[1]
- **Excellent** with Supervision Rating Scale (r=-0.64)[1]
- **Excellent** with Glasgow Outcome Scale–Extended (r=0.61)[1]
- **Excellent** with Disability Rating Scale (r=-0.70)[1]
- **Adequate** with Satisfaction with Life Scale (r=0.34)[1]

Considerations:

As of 2013, the TBI Edge group has stated they do not recommend or unable to recommend the PART-O due to limited studies in most clinical settings. They state is it appropriate for use in intervention research studies.

Abbreviations:

FIM=Functional Independence Measure
CI=Confidence interval

Cut-off Criteria:

	r	ICC
Excellent	≥ .6	≥ .75
Adequate	.31-.59	.40 -.74
Poor	≤ .3	< .4