Measurement Characteristics and Clinical Utility of the Work Rehabilitation Questionnaire Among Individuals With Musculoskeletal Conditions

Tri Pham, BA, Edeth Engel, BS, Linda Ehrlich-Jones, PhD, RN

Job reintegration and retention are integral components of vocational rehabilitation (VR) for people with musculoskeletal conditions and other physical disabilities. The Work Rehabilitation Questionnaire (WORQ) is a patient-reported outcomes measure that evaluates physical, emotional, and cognitive functioning in the VR setting. This was created with the hope to evaluate work-related functioning to identify areas of disability that may be addressed during the VR process. Development of the questionnaire was informed by the International Classification of Functioning, Disability and Health Core Set for Vocational Rehabilitation.

Administration of the WORQ is free, requires no training, and takes an average of 25.57 (SD=11.55) minutes to complete. Available in both interviewer-administered and self-reported versions, the WORQ consists of 2 parts: a 17-item section characterizing sociodemographic data and a 42-item section assessing function. The first 40 questions in the 42-item section are scored on an 11-point Likert scale and then summed, and the last 2 questions assess duration of time needed to complete general functional tasks. Lower scores signify greater function and lesser extent of issues. The WORQ demonstrates excellent test-retest reliability, internal consistency, and content validity as well as adequate to excellent convergent validity with similar instruments that measure physical, emotional, and cognitive functioning. Little to no floor and ceiling effects were detected.

This abbreviated summary provides a review of the psychometric properties of the WORQ in individuals with musculoskeletal conditions. A full review of the WORQ and reviews of over 500 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 the 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.

The Rehabilitation Measures Database and Instrument Summary Tear-sheets were initially funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), Administration for Community Living, United States Department of Health and Human Services, through the Rehabilitation Research and Training Center on Improving Measurement of Medical Rehabilitation Outcomes (H133B090024). Current funding for the Rehabilitation Measures Database comes from the Shirley Ryan AbilityLab, the first-ever “translational” research hospital where clinicians, scientists, innovators, and technologists work together in the same space, applying research in real time to physical medicine and rehabilitation and by NIDILRR through the Rehabilitation Research and Training Center on Employment for People with Physical Disabilities (90RTEM0001).

BIBLIOGRAPHY

## Work Rehabilitation Questionnaire

<table>
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<th>Measure Name:</th>
<th>Acronym:</th>
<th>Summary Authors:</th>
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<tbody>
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<td>Work Rehabilitation Questionnaire</td>
<td>WORQ</td>
<td>Tri Pham, BA, Edeth Engel, BS, Linda Ehrlich-Jones, PhD, RN</td>
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**Populations Reviewed:** Individuals with Musculoskeletal Conditions

**Items:** Section 1: 17 items; Section 2: 42 items

**Score:** 0-400

### Purpose and Administration Instructions:

The WORQ is designed to evaluate work-related function in vocational rehabilitation settings using the ICF Core Set for Vocational Rehabilitation. The first 17 questions assess sociodemographics, while the next 42 assess work-related function in the revised version.  

### Required Equipment:

Pencil & Paper

### Training Required:

None

### Administration Time:

25.57 (SD 11.55) minutes

## Validity:

**Convergent Validity:**

- **Excellent** correlation with WHO Disability Assessment Schedule ($r=0.81$)\(^5\)
- **Excellent** correlation with General rating of functioning ($r=0.62$)\(^7\)
- **Adequate** correlation with EuroQoL Instrument: “Today’s Health” ($r=-0.49$)\(^7\)
- **Adequate** correlation with Hospital Anxiety and Depression Scales ($r=0.49-0.55$)\(^7\)
- **Adequate to Excellent** correlation with corresponding Short Form-36 subsections ($r=-0.71 - -0.39$)\(^7\)
- **Adequate** correlation WHO Quality of Life Questionnaire ($r=0.47$)\(^5\)

**Content Validity:**

94% of patients reported that WORQ covered all relevant topics and 93% found the answer options to be meaningful.\(^5\)

**Standard Error of Measurement:**

SEM is 0.323 out of maximum average score of 10 per question, or 12.92 on the 400 scale.\(^2\)

**Minimal Detectable Change:**

The MDC for the WORQ at 95% CI is 0.895 for the average score per question, or 35.80 on the 400 scale.\(^2\)

## Abbreviations:

- WHO = World Health Organization
- ICC = Intraclass Correlation Coefficient
- MDC = Minimal Detectable Change
- SEM = Standard Error of Measurement
- ICF = International Classification of Functioning, Disability, and Health
- CI = Confidence Interval
- PSI = Person Separation Index

## Reliability:

**Internal Consistency:**

- **Excellent** consistency (Cronbach’s $\alpha = 0.968$; French version)\(^2\)
- **Excellent** consistency (Cronbach’s $\alpha = 0.95$; Dutch version)\(^6\)
- **Excellent** consistency (Cronbach’s $\alpha = 0.94$; German version)\(^5\)

**Test-Retest Reliability:**

- **Excellent** reliability (ICC: 0.935, PSI: 0.969; French version)\(^3\)
- **Excellent** reliability (ICC: 0.85; Dutch version)\(^4\)
- **Excellent** reliability (ICC: 0.79; German version)\(^5\)

## Scoring Information:

Only questions 1-40 of section 2 are scored. Each item is worth 0 to 10 points based on the corresponding Likert scale, and final score is the summation of the points in all 40 questions. Total score ranges from 0 to 400. Lower scores signify greater function and lesser extent of issues while higher scores indicate lower function and greater extent of issues.

## Floor / Ceiling Effects:

No ceiling or floor effect was detected.\(^2,4,5\)

- **Adequate** ceiling effect of 0.45% and **adequate** floor effect of 9.5%.\(^3\)

## Cut-off Criteria:

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<tr>
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