

# ` Quick Review of Model System Research

## Measuring Pain in TBI: Development of the

## TBI-QOL Pain Interference Item Bank and Short Form

### What is the study about?

### The aim of this report is to describe the development of a new tool to measure how much pain interferes in daily life in people with traumatic brain injury (TBI). The TBI-QOL Pain Interference Item Bank used an approach in agreement with established measurement development standards, using both classical and contemporary methods of test construction and validation. This report also describes the process used in developing the specific items to be used in the item bank, including: a literature review, focus group input, cognitive interviews, and analyses.

### What did the study find?

This study found that the 40-item TBI-QOL Pain Interference Item Bank demonstrated good reliability (consistency) and validity (accuracy), hence had strong psychometric properties. This item bank can also be administered as a 10-item short form or computer adaptive test.

### Who participated in the study?

Individuals with mild, moderate, or severe TBI (n=590) who were recruited from 5 medical and/or rehabilitation centers across the United States who were members of the TBI Model Systems research initiative.

### How was the study conducted?

This study was a cross-sectional survey study using two phases: (1) an item pool development stage, where many items of possible interest were selected and then reduced by discussion among the investigators and (2) a field testing phase of the selected items with study participants.

### How can people use the results?

Individuals with TBI and their families can use the results of this study to better learn if people with TBI have significant pain interference. TBI-specific pain interference can reliably be measured using the TBI-QOL Pain Interference Item Bank. Clinicians and researchers can use this item bank to measure TBI-related pain relative to the general population as well as individuals with TBI.

### Reference

Carlozzi, N.E., Kisala, P.A., Boulton, A.J., Roth, E., Kratz, A.L., Sherer, M., Sander, A.M., Heinemann, A.W., Chiaravalloti, N.D., Bushnik, T., & Tulsky, D.S. (2020). Measuring pain in TBI: Development of the TBI-QOL Pain Interference Item Bank and Short Form. *Archives of Physical Medicine and Rehabilitation, 101*, 11-19. doi: 10.1016/j.apmr.2019.07.019

**Disclaimer**

The contents of this quick review were developed under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant number 90DP0082). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this quick review do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.