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Refinement & Preliminary Examination of a Fidelity Assessment for the Spinal Cord Injury -- Movement Index (SCI-MI)

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Title of the Doctoral Presentation: Refinement & Preliminary Examination of a Fidelity Assessment for the Spinal Cord Injury Movement Index

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Abstract:

Introduction: Assessment fidelity refers to the adherence to intended procedures and guidelines when administering an assessment (Mowbray et al., 2003; Walton et al., 2020). Clinical outcome assessments (COAs) play a crucial role in the assessment of treatment effects in clinical trials. However, there is a scarcity of fidelity assessments for COAs, which has the potential to impact the accurate evaluation of treatment effects (Richardson et al., 2016). The Spinal Cord Injury Movement Index (SCI-MI) is a performance-based COA being developed with the intent to be used in spinal cord injury (SCI) clinical trials. As the stakes in SCI clinical trials are high, the SCI-MI fidelity assessment was developed to facilitate the training and the evaluation of therapists when administering the SCI-MI. The purpose of this project was to describe the development and refinement of the SCI-MI fidelity assessment and evaluate its reliability and usability.

Objectives: The objectives of this project were to: 1) refine the SCI-MI fidelity assessment; 2) establish rater agreement and inter-rater reliability; 3) establish usability

Methods: A mixed methods approach was used for this study. To refine the SCI-MI fidelity assessment, the set-up and administration fidelity criteria were exposed to the modified Delphi process with a convenience sample (n=3) using a Qualtrics survey which was open for 1 week with 1 email reminder. Results were then analyzed and revisions to the fidelity assessment were made, followed by a subsequent survey round. This process continued iteratively until 100% agreement was achieved that every criteria on the fidelity assessment was relevant, clear, specific, and in alignment with the response scale; that the fidelity assessment as a whole was comprehensive; and the rating system and instructions were clear. Descriptive statistics were used to calculate percent agreement. To establish rater agreement, inter-rater reliability, and usability, a random sampling of 21 video-recorded sessions were reviewed by 3 trained fidelity raters. Raters were blinded to each other's assessments and data were entered by an independent research assistant. Coefficient of agreement (target of ≥ 80%) and intraclass correlation coefficient (ICC; target > 0.90) were calculated. Two fidelity raters

completed a 1 question usability question using a 6-point Likert scale. Descriptive statistics were used to calculate the frequency distributions and percentages for each response option (target: ≥ 80% agreement [strongly agree, agree]).

Results: Four rounds of the Delphi process were required to achieve 100% consensus. The total absolute agreement for the fidelity criteria was 78.93%, and 6 of the 13 individual criteria had agreement of >80%. The intraclass correlation coefficient was 0.617 (moderate) for the set-up subscale and 0.312 (poor) for the administration subscale. The fidelity raters agreed/strongly agreed the fidelity assessment was usable for 57.1% of sessions.

Conclusion: The quantitative and qualitative data from this study will be used to modify the SCI-MI set-up and administration guidelines and fidelity assessment.

References:

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Synopsis: It is important that assessments tools are implemented as intended so that they can accurately measure the effects of treatments, including therapy interventions, and the results from assessments provide a true picture of the client. This is known as assessment fidelity. The Spinal Cord Injury Movement Index (SCI-MI) is an assessment being developed for which assessment fidelity needed to be studied. A multi-step process was used to accomplish this. This process helped to identify revisions to the SCI-MI fidelity assessment and ways the SCI-MI manual and administration guidelines needed to be revised.

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Keywords: clinical outcome assessment, fidelity, spinal cord injury

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