

Module 2: Lecture 3. Measurement in physiotherapy clinical care

Introduction

A patient-reported outcome (PRO) is “any report of the status of a patient's health condition that comes directly from the patient without interpretation of the patient's response by a clinician or anyone else” (FDA 2009). PROs provide patients’ perspectives regarding treatment benefit and harm, directly measure treatment benefit and harm beyond survival, major morbid events and biomarkers, and are often the outcomes of most importance to patients and families. PROs are essential when externally observable patient-important outcomes are rare or unavailable. They provide the only reasonable strategy for evaluating treatment impact of many conditions including pain syndromes, fatigue, disorders such as irritable bowel syndrome, sexual dysfunction, and emotional function and adverse effects such as nausea and anxiety for which physiological measurements are limited or unavailable. A common term used in the health status measurement literature is **construct**. Construct refers to what Patient Reported Outcome Measures (PROMS) are trying to measure, the concept that defines the PROM such as pain, physical function or depressive mood. PROMS can be used for assessment, evaluation of treatment success or for prognosis / risk assessment.

Learning Outcomes Mapped to EFIC Pain Physiotherapy Curriculum

2.2.3 Demonstrate the ability to choose appropriate and validated tools to assess and monitor treatment and modify as necessary across the life span and in specific populations (infants, children, adolescents, older adults, patients from linguistically or culturally diverse backgrounds, patients who are cognitively impaired, patients with behavioural issues)

Preparation

Participants should go to the COSMIN website <https://www.cosmin.nl/> and review the COSMIN Taxonomy of Measurement Properties.

Content

In this lecture I will use a low back pain case to illustrate the various purposes of using PROMS and the steps clinicians can take to choose the right instrument for the right purpose, looking at their measurement properties.

Follow up / suggestions for processing and practice

Review the PROMS available in your country that are applicable to physiotherapy practice. Do you have a sense of their measurement properties?

Reference material

<https://www.cosmin.nl/>

Köke AJA, Bastiaenen CHG, Kleijnen J, Telgenkamp I, Smeets RJEM, Beckers LWME. Measurement properties of patient-reported outcome measures used in rehabilitation of

adults with chronic musculoskeletal pain: A mapping review. *J Back Musculoskelet Rehabil.* 2022 Dec 8. doi: 10.3233/BMR-220133. Epub ahead of print. PMID: 36565099.

Pulles ANTD, Köke AJA, Strackke RP, Smeets RJEM. The responsiveness and interpretability of psychosocial patient-reported outcome measures in chronic musculoskeletal pain rehabilitation. *Eur J Pain.* 2020 Jan;24(1):134-144. doi: 10.1002/ejp.1470. Epub 2019 Sep 2. PMID: 31408556.

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Köke AJ, Smeets RJ, Schreurs KM, van Baalen B, de Haan P, Remerie SC, Schiphorst Preuper HR, Reneman MF. Dutch Dataset Pain Rehabilitation in daily practice: Content, patient characteristics and reference data. *Eur J Pain.* 2017 Mar;21(3):434-444. doi: 10.1002/ejp.937. Epub 2016 Sep 15. PMID: 27634023.

Chiarotto A, Maxwell LJ, Ostelo RW, Boers M, Tugwell P, Terwee CB. Measurement Properties of Visual Analogue Scale, Numeric Rating Scale, and Pain Severity Subscale of the Brief Pain Inventory in Patients With Low Back Pain: A Systematic Review. *J Pain.* 2019 Mar;20(3):245-263. doi: 10.1016/j.jpain.2018.07.009. Epub 2018 Aug 10. PMID: 30099210.

Terwee CB, Bot SD, de Boer MR, van der Windt DA, Knol DL, Dekker J, Bouter LM, de Vet HC. Quality criteria were proposed for measurement properties of health status questionnaires. *J Clin Epidemiol.* 2007 Jan;60(1):34-42. doi: 10.1016/j.jclinepi.2006.03.012. Epub 2006 Aug 24. PMID: 17161752.

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