

Approaches used for Scale Translation in Medical Research: A Narrative Review

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ABSTRACT

In order to maintain the validity and reliability of assessment instruments across many languages and cultural contexts, scale translation is an essential procedure in medical research. This narrative study examines the several methods used in the physiotherapy sector to translate measurement scales. The original scale's psychometric qualities, including validity, reliability, and responsiveness, must be preserved through accurate translation. The paper looks at important techniques such committee-based approaches, back translation, direct translation, and cognitive debriefing.

Direct translation involves the straightforward conversion of the scale from one language to another, ensuring basic linguistic equivalence. Back translation, where the translated scale is re-translated into the original language, serves as a quality check for accuracy and consistency. The committee-based approach involves a group of experts who review the translation, considering both linguistic and conceptual equivalence. Cognitive debriefing, typically involving the target population, assesses the cultural appropriateness and clarity

of the translated scale. These methods aim to address challenges such as idiomatic differences, cultural variations, and differing perceptions of health concepts. For this study, scales that have been translated, validated, and culturally adapted in Hindi were sought using search terms ranging from 10 January 2007 to 19 September 2024 in databases and search engines such as PubMed, Google Scholar, Medknow, Research Gate, and Science Direct.

Even with the availability of these techniques, there are still issues with translation in medical research, including regional dialects, terminology variations, and the requirement for psychometric validation. It is still crucial to test the translated scales for validity, responsiveness, and reliability in the new cultural setting. This study emphasises the value of a thorough, methodical approach to scale translation, guaranteeing that the instruments are culturally appropriate and linguistically correct, thereby promoting the generalisability and inclusivity of medical research.

Keywords: Back translation, Cognitive debriefing, Cultural adaptation, Linguistic equivalence, Physiotherapy, Psychometric properties, Reliability, Validity.