

Methodological issues in rehabilitation research: a scoping review

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Abstract

Background. Rehabilitation interventions are usually complex and include different aspects that make difficult to accomplish with classical measures of methodological quality in clinical research. The aim of the present study was to identify, synthesize and categorize the main methodological issues in rehabilitation research to guide the development of methods for reporting and evaluating evidence in the rehabilitation field.

Methods. A scoping review was conducted on PubMed, Cochrane Library, EMBASE, Web of Science, Scopus, Pedro and Google Scholar database up to August 2018. Methodological studies, special communications and literature reviews addressing any methodological issue in rehabilitation research were included. For each study, we identified the methodological issues addressed. Quantitative (frequencies of issues addressed in the studies) and qualitative (content analysis of the issues) synthesis have been conducted.

Results. After removing duplicates, we screened 2,879 citations, and 71 studies were finally included. Of these, 69% (n=49) were narrative reviews, 14% (n=11) systematic reviews, 7% (n=5) editorials, 4% (n=3) meta-epidemiological studies, 3% (n=2) cross-sectional survey, 1% (n=1) mapping review and 1% (n=1) overview. The methodological problems in rehabilitation research included: poor data

collection description and statistical analysis methods (56%); problematic application of randomized-controlled trials (38%); interventions description (35%); the definition of a core outcome sets for different clinical problems (31%); lack of blinding assessor (17%); clinical practice applicability (11%); randomization method description (10%); participants characteristics description and recruitment (8%); methodological and reporting quality (10% vs 8%). Studies also discussed other issues more related to the peer-review process, such as the methodology training need (7%), low-quality of the peer-review process (6%), funding (6%) and ethical statement (3%), lack of protocol registration (3%), and conflict of interest declaration (1%).

Conclusion. This study highlights several methodological and reporting issues in rehabilitation research and in the peer review process. Research looking at methods to improve reporting as well as improving the conduct of trials in the rehabilitation field is needed. The first step moving forward would be to evaluate the influence of all these issues on the validity of trial results and the development of a specific check-list for the evaluation of rehabilitation research specifically.

Patient or healthcare consumer involvement. Not applicable.

Relevance to diversity. The research is targeted to authors and reviewers. Improving the quality of reporting and conduct in rehabilitation research allows to produce better evidence that inform clinical and public health decisions.