

# Assessing the quality of research outputs in physiotherapy

## *Manuela Filipec*

University North  
Department for Physiotherapy  
Varaždin, Croatia  
mfilipec@unin.hr

## *Anica Kuzmić*

University North  
Department for Physiotherapy  
Varaždin, Croatia  
akuzmic@unin.hr

## *Nikolina Zaplatić Degač*

University North  
Department for Physiotherapy  
Varaždin, Croatia  
nzaplatic@unin.hr

## ABSTRACT

Assessing the quality of research output is challenging. Systematic reviews and meta-analyses of randomized trials have a pivotal role in informing clinical practice and policy decisions, and there is a broad agreement that the method quality of primary research should be carefully assessed (Albanese et al., 2020). One of the instruments to do that is the Physiotherapy Evidence Database (PEDro) scale, specifically designed to assess the quality of methods used in clinical trials in the field of physiotherapy (Elkins et al., 2013). Its reliability in terms of ICC values ranges from 0.55 (95% confidence interval CI: 0.47–0.65) for the original scale, to 0.82 (95% CI: 0.70–0.89) for the Portuguese version (Shiwa et al., 2011). The PEDro scale consists of 11 items encompassing the domains of external validity (item 1: Eligibility criteria and source), internal validity (items 2 to 9: Random allocation; Concealed allocation; Baseline comparability; Blinding of participants; Blinding of therapists; Blinding of assessors; Adequate follow-up (>85%); and Intention-to-treat analysis), and statistical reporting (items 10 and 11: Between-group statistical comparisons and Reporting of point measures and measures of variability) (Cashina, McAuleya, 2020). Each item is scored as either present (1) or absent (0), leading to a maximum score of 10 (Paci, Bianchini and Baccini, 2022). A trial is considered of moderate to high quality if it scores at least 6 of 10 (Paci, Bianchini and Baccini, 2022). The purpose of the PEDro score is to help researchers identify trials that have good internal validity (items 2–9) and that report enough data to make their results interpretable (items 10 and 11) (Moseley et al., 2020). Interpreting these items correctly is critical to high-quality, evidence-based health practice. Unlike PEDro, however, the Cochrane Collaboration distinguishes between the methodological quality of a study and the risk of bias: a study of high quality can still be at high risk of bias (Higgins et al., 2011). The Cochrane risk of bias (RoB) tool focuses on the internal validity of trials and assesses six domains of bias: selection bias, performance bias, detection bias, attrition bias, reporting bias, and other bias (Higgins et al., 2011). These two tools can complement each other for an even better quality assessment of physiotherapy research and help disseminate and make transparent and available research output, encouraging interdisciplinary research along the way.

## KEYWORDS

assessment; PEDro scale; physiotherapy; research output; RoB tool

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