Editorial: Scoping Reviews

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Scoping Reviews

Systematic reviews and meta-analyses are important studies that can help avoid research waste by synthesising existing evidence, from randomised controlled trials for example, before embarking on new and expensive studies (1). However many systematic reviews fail to identify sufficient high quality studies to include and therefore effectiveness of an intervention cannot be established. These are often conducted in areas where a condition is prevalent. Systematic reviews with and without meta-analyses are published in most issues of Physiotherapy (eg: 2-3). Where the evidence is largely qualitative, an alternative review methodology is required which combines and summarises various qualitative sources. The qualitative meta-synthesis is a process whereby the researchers can select, appraise, summarize, and combine qualitative evidence to address a research question (eg: 4).

More recently, we have seen the emergence of systematic scoping reviews as a formal method of assessing the state of the art in an area where perhaps there are insufficient high quality studies. They allow knowledge synthesis, the purpose of which is to characterise the literature in an area of interest and therefore identify gaps in the current evidence or the value of a full systematic review (5).

A scoping review follows a systematic approach which maps evidence, theories, concepts and sources. These reviews have emerged over the past decade and are becoming an increasingly common approach for mapping broad topics. However, early scoping reviews lacked methodological

standardisation and rigour and it was recognised that to be reliable and provide valid evidence, that more stringent guidelines were required (6). Using knowledge and implementing results can be complex and requires time, skill in searching and evaluating research evidence and having the authority to implement findings (7). However, it has been reported that both the use of guidelines and methodological transparency increases research uptake (8). Recognition that the methodological and reporting quality of scoping reviews needed improvement led to the development of guidelines for conducting scoping reviews; The Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for Scoping Reviews (PRISMA-ScR) is available on the EQUATOR website (http://www.equator-network.org/reporting-guidelines/prisma-scr/) (8). The checklist consists of 20 essential reporting items and 2 optional items. A helpful introductory video and a series of tip sheets for reporting each PRISMA-ScR item can be found at: https://knowledgetranslation.net/portfolios/the-prisma-scr-prisma-extension-for-scoping-reviews/

Two recent Scoping Reviews published in Physiotherapy demonstrate the relevance of this methodology to the profession; these are in the areas of the use of thoracic ultrasound by physiotherapists (9) and interventions for people with dementia and hip fracture (10).

Whilst the limitations of scoping reviews are acknowledged (11,12) as with all research, transparency is key. Provided the scope, rigour and limitations are clearly acknowledged, then the reader can determine the reliance they can place on the results. Scoping reviews may enable researchers to determine whether sufficient robust research exists, and to define a research question that a systematic review can address.

When embarking on an exercise to accumulate information, Table 1 highlights issues to consider when deciding whether to conduct a systematic review or a scoping review.

Systematic Review	Scoping Review
Usually takes a focused approach Often conducted by review groups Reviews international evidence Focuses on a precise/particular question Uses a pre-defined process Uses a structured process Is rigorous/reliable Aims to minimise bias Allows conclusions to be made Inform decisions Answer a clinically meaningful question	Usually takes a broad approach Quantifies volume of literature Identifies knowledge gaps Overviews focus of literature Clarifies concepts, definitions, classifications etc. Maps and establishes scope of literature Examines research conduct Uses a structured process Conducted where a systematic review is not possible Informs planning of systematic reviews, planning and commissioning of research Useful for emerging evidence Can include both quantitative and qualitative studies

Table 1: Characteristics of Systematic Reviews and Scoping Reviews

A scoping review may help to identify, for example, that the body of research in a given area, was undertaken with a small cohort or with heterogenous groups or varied methods and therefore recommend more rigorous trials to be conducted or outcome measures standardised before a systematic review would be worthwhile.

Scoping reviews can be registered prospectively on a platform like Open Science Framework (https://osf.io). Whilst this is not mandatory at this stage, it is good practice to allow access to the review protocol on an open platform.

Scoping reviews provide a useful method of knowledge synthesis although the interpretation and conclusions drawn may reflect the broad approach of the review. However, transparency, methodological standardisation and rigour and will help to consolidate their usefulness in the research process.

References

1. Chalmers I, Glasziou P. Avoidable waste in the production and reporting of research evidence. The Lancet 2009; 374 (9683): 86-89

   doi.org/10.1016/S0140-6736(09)60329-9

2. New 1 Collins KC, Kennedy NC, Clark A, Pomeroy VM. Getting a kinematic handle on reach-to-grasp: a meta-analysis. Physiotherapy 2017;104(2) 153–166.

   https://doi.org/10.1016/j.physio.2017.10.002

3. Bohannon RW, Tudini F. Unipedal balance test for older adults: a systematic review and meta-analysis of studies providing normative data Physiotherapy 2018; 104 (4): 376–382.

   https://doi.org/10.1016/j.physio.2018.04.001

4. Wride JM, Bannigan K. If you can't help me, so help me God I will cut it off myself…' The experience of living with knee pain: a qualitative meta-synthesis. Physiotherapy 2018; 104 (3): 299–310.

   https://doi.org/10.1016/j.physio.2018.04.002

5. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. International Journal of Social Research Methodology 2005; 8 (1): 19-32

6. Pham MT, Rajić A, Greig JD, Sargeant JM, Papadopoulos A, McEwena SA. A scoping review of scoping reviews: advancing the approach and enhancing the consistency. Res Synth Methods. 2014; 5(4): 371–385.

   doi: 10.1002/jrsm.1123

7. Bérubé ME, Poitras S, Bastien M, Laliberté LA, Lacharité A, Grossb DP. Strategies to translate knowledge related to common musculoskeletal conditions into physiotherapy practice: a systematic review. Physiotherapy 2017; 104(1): 1-8

https://doi.org/10.1016/j.physio.2017.05.002

8. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169(7):467-473.

doi: 10.7326/M18-0850

9. Hayward SA, Janssen J. Use of thoracic ultrasound by physiotherapists: a scoping review of the literature. Physiotherapy 2018; 104 (4): 367-375.

https://doi.org/10.1016/j.physio.2018.01.001.

10. Hall AJ, Lang IA, Endacott R, Hall A, Goodwin VA. Physiotherapy interventions for people with dementia and a hip fracture—a scoping review of the literature. Physiotherapy 2017; 103 (4): 361-368,

https://doi.org/10.1016/j.physio.2017.01.001.

11. Stevens ML, Moseley AM, Elkins MR, Lin CWC, Maher CG. Evidence-based physiotherapy and the use of PEDro. Physiotherapy 2017; 103 (3): 337-338.

https://doi.org/10.1016/j.physio.2016.07.004.

12. Condon C. Response to Letter to the Editor re 'Physiotherapists' abilities to undertake the evidence based practice steps: a scoping review'. Physiotherapy 2017; 103 (3): 338-339.

https://doi.org/10.1016/j.physio.2016.07.005

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