INTRODUCTION TO SYSTEMATIC LITERATURE REVIEW(SLR)

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Learning outcomes at the end of the training

- Describe what is SLR and their rationale
- Formulate the research question and Build search syntax
- Conduct search, select studies, appraise quality and extract data

What are systematic literature reviews

- A systematic review "uses explicit, systematic methods that are selected with a view to minimizing bias, thus providing more reliable findings from which conclusions can be drawn and decisions made "Cochrane handbook
- A review prepared using a systematic approach which is documented in a material and methods section in an a priori protocol.
- Synthesized results also presented following specific guidelines

History of SLRs

- First Critical appraisal and synthesis of research findings in a systematic manner in 1975
- Evidence-based medicine -Effectiveness and efficiency, Archie Cochrane
- The Cochrane Collaboration in 1993-international network of researchers, academics, practitioners and users; Joanna Briggs Institute (University of Adelaide) for scoping reviews
- The Campbell collaboration adapted Cochrane methodology to bring the same quality of systematic evidence to issues of broader public policy.

Indications for SLRs

- Uncover the international evidence
- Confirm current practice/ address any variation
- Identify new practices
- Identify and inform areas for future research
- Identify and investigate conflicting results
- Produce statements to guide decision-making

What makes a review systematic ?

- It is comprehensive in its coverage of the literature
- A clear, systematic approach is taken to the synthesis of the data
- A transparent and rigorous processes is followed
- The process is documented a priori in a protocol
- Careful attention is given to the quality of included evidence
- The reporting of the results as follows a standard format -PRISMA
- All this allows greater validity and reliability to be attributed to the synthesized findings.

Rationale for SLRs

- Researchers cannot read all relevant literature!
- Lack of time, resources and skills-find, appraise and interpret
- Often lots of studies sometimes with conflicting findings
- For relevant questions about important uncertainties in a particular topic
- Systematic reviews summarise the evidence
- SLR –powerful but poorly understood

Stages in conducting a systematic literature review

Define your research question and inclusion criteria

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Carry out comprehensive, systematic searches

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Select eligible studies

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Extract data

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Assess risk of bias in included studies

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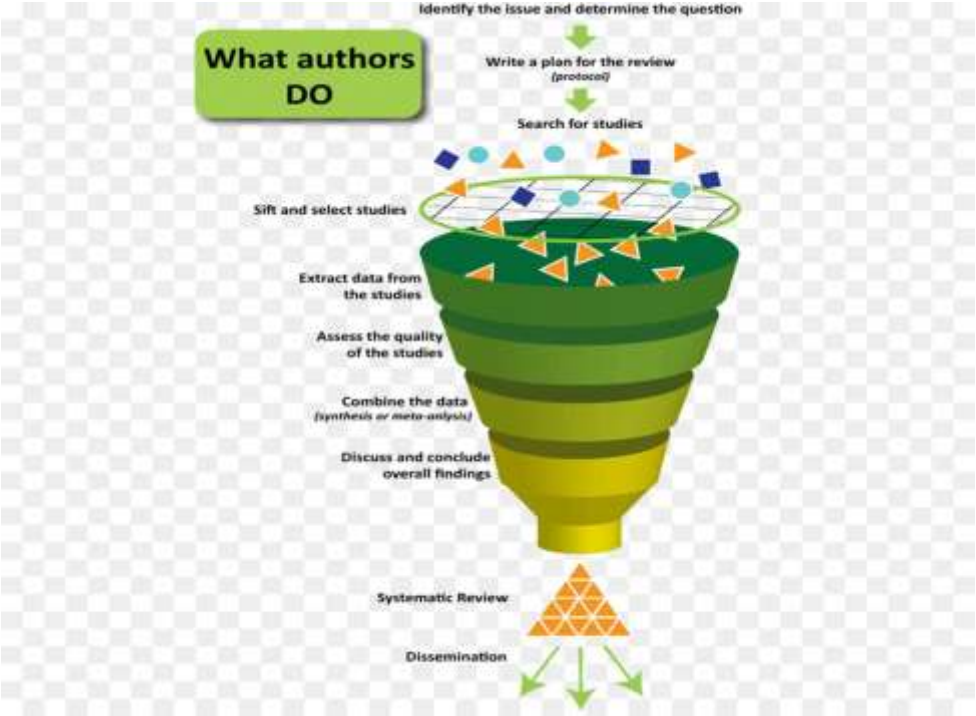
Synthesise the evidence

SLR protocol

- Have protocol written down and possibly reviewed
- Define question and search strategies
- Define Inclusion/exclusion criteria
- Quality control
- Extract data: primary outcomes, populations and interventions
- Protocols can be registered; https://www.crd.york.ac.uk/prospero/

(International Prospective register of systematic reviews)

Summary; source (https://croatia.cochrane.org/news/how-make-systematic-literature-review-basics-methodology-and-practical-steps



Summary points on SLRs

- Require comprehensive search of all evidence of good quality
- Systematic reviews are observational studies –therefore also prone to bias (methodology, selection bias, competing interests)
- Should apply the same level of rigour to reviewing research evidence as is used producing that research evidence in the first place.

Automation software

- DistillerSR:

https://www.evidencepartners.com/products/distillersr-systematic-review-software

- Ryyan:

https://www.rayyan.ai/

References

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