EPPI-Centre Evidence Tools, Products, and Projects

A series of webisodes from the Evidence for Policy and Practice Information and Co-ordinating (EPPI) Centre

Hosted by AIR's Center on Knowledge Translation for Disability and Rehabilitation Research (KTDRR)

UCL

The benefits and challenges of Reviews of Reviews

February 2018
Katy Sutcliffe, Ginny Brunton (EPPI-Centre, UCL)

Conflict of Interest statement: We have no actual or potential conflicts of interest in relation to this presentation.

ePPI CENTRE

What is a Review of Reviews (RoR)?

- RoR: also referred to as 'umbrella review', 'overview of reviews', and 'meta-review'
- Aim: to address a specific research question
- Methods: systematic search, pre-specified eligibility criteria, quality assessment, synthesis of results
- Data: systematic reviews (SR)
- Level of analysis: SR = secondary research, RoR = tertiary research

In what situations might it be useful to do a RoR rather than SR?

1. When the research question is broad

2. When there is already a large body of SRs on the topic

3. When time/resources are constrained

What are the benefits of conducting a RoR?

- Speeds up review process as reduces the searching/screening burden
  - SRs are much easier to identify than primary research
  - Takes advantage of the comprehensive searching and screening undertaken in SRs
- Increases accessibility of burgeoning body of SRs for decision-makers
  - Where there are multiple reviews on same issue users may find it hard to decide which to use

But RoRs pose significant challenges ...

- Many papers on challenges of RoRs – key challenges raised include:
  - Overlap between reviews (studies appearing in more than one review)
  - Lack of coverage of RoR question (e.g. missing populations, outcomes)
  - Lack of detail (insufficient detail on area of interest is reported at review-level)
  - Quality Assessment (quality of review is dependent on quality of included studies – possibility of lack of detail at both levels may hinder appraisal)
- Some examples of how we have addressed issues

Example 1: How we managed overlap

- Acknowledging overlap
- Examination of common studies' contributions to each review
- Avoid vote-counting
- Extract information from one SR based on pre-specified criteria, e.g. review that is/has
  - most recent
  - highest quality review
  - largest number of included studies
  - most complete data on effect size estimates

Example 2: How we managed lack of fit with RoR question

- Careful attention to whether findings address all possible concepts
  - e.g. emotional and behavioural outcomes of looked-after youth may not be the only way to conceptualise 'wellbeing' (Dickson et al. 2010)
- Analysis of similar reviews' divergent findings (e.g. differences might be due to different population under study)
- Explain why reviews are not amenable to statistical synthesis
- Conduct a new review instead!

Example 3: How we managed insufficient detail in SRs

- Retrieve primary studies and re-extract
- Include primary studies to supplement
- Note it as a caveat: the efficacy of interventions may be limited by the availability of primary research
  - i.e. lack of review-level evidence on interventions does not mean those are ineffective, they just haven't been reviewed
- Discuss the implications of missing information on the findings of the overview

Example 4: How we managed Quality Assessment

- Include only reviews which have detailed reporting of the quality of primary studies
  - but at the cost of a loss of information
  - consider carefully whether the purpose of the review is better served by comprehensiveness or lessened uncertainty
  - possible compromises:
    - only limit if large number of reviews available
    - don't limit if intent of overview is to enlighten rather than inform decision

Strengths and limitations of RoRs

Strengths

- Good for swift, accurate appraisal of a broad area of research within a short timescale using few researchers

Limitations

- Issues of
  - Overlap
  - Lack of fit with RQ
  - Insufficient detail
  - Quality assessment

Key papers

- Caird J, Sutcliffe K, Kwan I, Dickson K, Thomas J (2015) *Mediating policy-relevant evidence at speed: are systematic reviews of systematic reviews a useful approach?* Evidence & Policy. 11(1): 81-97.

- Pollock A, Campbell P, Brunton G, Hunt H, Estcourt L (2017) *Selecting and implementing overview methods: implications from five exemplar overviews.* Systematic Reviews. 6(1): 145.

- Lunny C, Brennan SE, Mcdonald S, Mckenzie JE (2017) *Toward a comprehensive evidence map of overview of systematic review methods: paper 1—purpose, eligibility, search and data extraction.* Systematic Reviews 6(1): 231.

Thank you

IoE LONDON — Leading education and social research — Institute of Education — University of London

EPPI-Centre Website
http://eppi.ioe.ac.uk

Twitter
@EPPICentre

Email
katy.sutcliffe@ucl.ac.uk
g.Brunton@ucl.ac.uk

The EPPI-Centre is part of the Social Science Research Unit at the Institute of Education, University of London

EPPI-Centre
Social Science Research Unit
Institute of Education
University of London
18 Woburn Square
London WC1H 0NR

Tel +44 (0)20 7612 6397
Fax +44 (0)20 7612 6400
Email eppi@ioe.ac.uk
Web eppi.ioe.ac.uk/

Disclaimer

The contents of this presentation were developed by the EPPI-Centre for grant number 90DP0027 from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this presentation do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.