EPPI-Centre Evidence Tools, Products, and Projects

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The benefits and challenges of Reviews of Reviews

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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
  o Overlap
  o Lack of fit with RQ
  o Insufficient detail
  o Quality assessment
Key papers


Thank you

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