Th11-00 Issues and Challenges around Searching the Literature

Andrew Booth, Reader in Evidence Based Information Practice, Co-Convenor – Cochrane Collaboration Qualitative Methods Group

Overview

- What is already known (overview of current methods)
  - Bibliographic Databases
  - Supplementary Methods
- What we have learnt recently
- Issues/Challenges to be resolved (methodological questions to be answered)

What is already known

What is Already Known

- Searching for QR is particularly challenging
  - Titles/Abstracts
  - Index terms
- Filters exist but scanning will be critical
- Need to create "audit trail" for transparency and "reproducibility"
- Unpublished studies may contain particularly rich, thick description

Bibliographic Databases

Supplementary Methods

What we have learnt recently

Not all studies are of equal value

- "When two articles identified late in the search process did not add anything new to the emerging synthesis, it appeared that theoretical saturation had been reached" (O'Connell and Downe 2009) .

- "As we analysed each additional study, we consciously checked if the findings extended or refuted the emerging line of argument synthesis. If additional studies continue to reinforce the line of argument, it is likely that continuing to search for new studies will reap increasingly diminutive returns, and so the search can be truncated at that point". (Downe, 2008)

Searching Is Typically Iterative

- "There is as yet, no agreement on whether search strategies for studies to include should be narrow or widely focused, or how strictly they should be applied. The approach of the author….has been to be explicit about what question they started off with, and where they ended up, and to take an iterative approach to which studies to include". (Downe 2008)

- "The process of undertaking metasynthesis is iterative, contingent, and never definitively complete". (Downe 2008)

Searching Will Require Multiple Techniques

- "Having defined the area of investigation, Downe et al (2007) use formal search strategy methods, augmented with techniques termed 'berry-picking' (Bates, 1989), where initial searching against the broad topic leads to new, unpredictable ideas and directions, and even a new formulation of the original query".

- "The search also lead to 'backchaining', which involves close searching through reference lists of included studies to identify any further papers that may fall within the scope of a review". (Downe 2008)

QES search methods may be analogous to primary QR

- "While there is general agreement on the need for search strategies aiming to identify qualitative research to be systematic and explicit, there is recent debate on whether qualitative evidence syntheses share the need for comprehensive, exhaustive searches".

- "It has been argued that a more purposive sampling approach, aiming to provide a holistic interpretation of a phenomenon, where the extent of searching is driven by the need to reach theoretical saturation and the identification of the 'disconfirming case', may be more appropriate". (Noyes et al 2008)

Issues and Challenges

- Does QES/QSR require comprehensive literature searches
- Can literature searches for QES/QSR be iterative (instead of "big bang")?
- How should sampling frame for studies be constructed?
- When is theoretical sampling appropriate?
- How many studies are "enough"?
- How many studies are "too many"?
- Is there a place for theoretical saturation?

Theoretical Sampling?

- "Key difficulties with [theoretical sampling] include how to establish the population of studies from which to sample without first identifying all relevant studies. It is also unclear how data saturation is determined in a synthesis, where access to the original data is limited, and little guidance on this is available" (Atkins et al 2008)
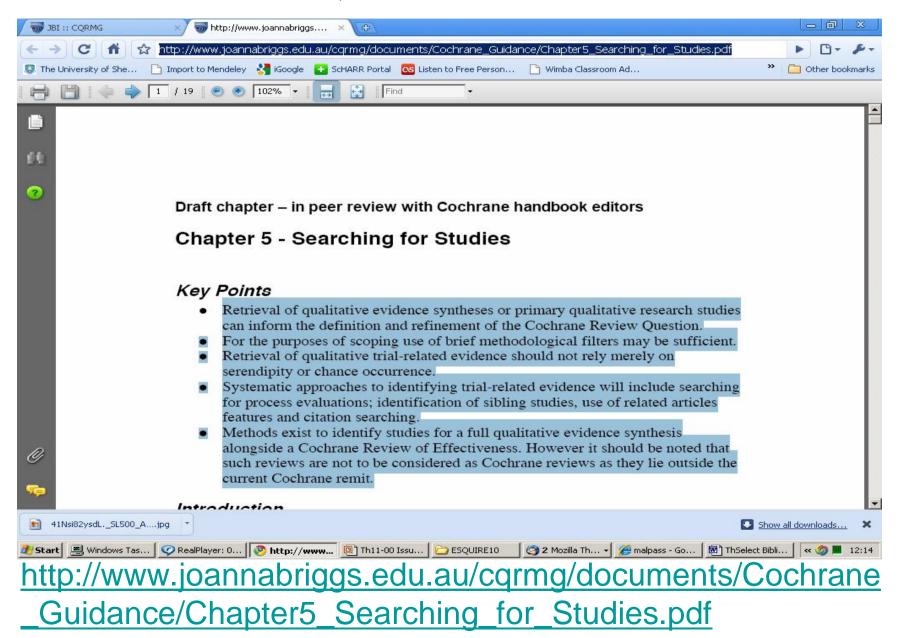
Purposive rather than Exhaustive

- "Doyle [2003, p326] states that, *"like meta-analysis, meta-ethnography utilizes multiple empirical studies but, unlike meta-analysis, the sample is purposive rather than exhaustive because the purpose is interpretive explanation and not prediction"*. …..it may not be necessary to locate every available study because, for example, the results of a conceptual synthesis will not change if ten rather than five studies contain the same concept, but will depend on the range of concepts found in the studies, their context, and whether they are in agreement or not…..Aiming for 'conceptual saturation' might be more appropriate when planning a search strategy for qualitative research, although it is not yet clear how these principles can be applied in practice. (Thomas & Harden, 2008)

Deliberately Seeking Diversity

- "Other principles from primary qualitative research methods may also be 'borrowed' such as deliberately seeking studies which might act as negative cases, aiming for maximum variability and, in essence, **designing the resulting set of studies to be heterogeneous**, in some ways, instead of achieving the homogeneity that is often the aim in statistical meta-analyses" (**Thomas & Harden 2008).**

Cochrane QRMG Draft Guidance

Draft chapter – in peer review with Cochrane handbook editors

Chapter 5 - Searching for Studies

Key Points

- Retrieval of qualitative evidence syntheses or primary qualitative research studies can inform the definition and refinement of the Cochrane Review Question.
- For the purposes of scoping use of brief methodological filters may be sufficient.
- Retrieval of qualitative trial-related evidence should not rely merely on serendipity or chance occurrence.
- Systematic approaches to identifying trial-related evidence will include searching for process evaluations; identification of sibling studies, use of related articles features and citation searching.
- Methods exist to identify studies for a full qualitative evidence synthesis alongside a Cochrane Review of Effectiveness. However it should be noted that such reviews are not to be considered as Cochrane reviews as they lie outside the current Cochrane remit.

Introduction

http://www.joannabriggs.edu.au/cqrmg/documents/Cochrane_Guidance/Chapter5_Searching_for_Studies.pdf

Key Messages

- Retrieval of qualitative evidence syntheses or primary qualitative research studies can inform definition and refinement of Cochrane Review Question.
- For scoping purposes use of brief methodological filters may be sufficient.
- Retrieval of qualitative trial-related evidence should not rely merely on serendipity or chance occurrence.
- Systematic approaches to identifying trial-related evidence will include searching for process evaluations; identification of sibling studies, use of related articles features and citation searching.
- Methods exist to identify studies for a full qualitative evidence synthesis alongside a Cochrane Review of Effectiveness. However it should be noted that *such reviews are not to be considered as Cochrane reviews* as they lie outside current Cochrane remit.