

Literature Searching for Qualitative Studies and Quality Appraisal

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Overview

- Key issues and challenges of locating qualitative research and quality assessment of qualitative research
- Link with Rosalind McNally presentation
 - *Perspectives on Searching - when to start & when to stop*. Evidence Synthesis Network, October 2011.
 - Summarised best practice guidance

Literature searching for qualitative studies

- *“Effectiveness of potential search strategy components for qualitative research is inconclusive”* ([Pearson et al., 2011, p.298](#))

- Searching databases

- Poor indexing, descriptive titles/abstracts, poor description of qualitative methods ([J Med Libr Assoc 2002;90\(3\):290-3.](#); [West J Nurs Res 2003; 25: 153-178](#)).

- Filters exist

- For identifying existing systematic reviews ([Supplementary Guidance for Inclusion of Qualitative Research in Cochrane Systematic Reviews of Interventions Chapter 3](#))

1.	Qualitative systematic review* OR (systematic review AND qualitative)
2.	evidence synthesis OR realist synthesis
3.	Qualitative AND synthesis
4.	meta-synthesis* OR meta synthesis* OR metasynthesis
5.	meta-ethnograph* OR metaethnograph* OR meta ethnograph*
6.	meta-study OR metastudy OR meta study
7.	OR/1-6

- Filters exist
 - For identifying primary research ([Intertasc](#))

Qualitative research

Database	Filter
CINAHL	<p>Wilczynski NL, Marks S, Haynes RB. Search strategies for identifying qualitative studies in CINAHL. <i>Qualitative Health Research</i> 2007;17(5):705-10.</p> <p>University of Alberta. After McKibbin A, Eady A and Marks S. PDQ Evidence-based principles and practice. Hamilton, Ontario: BC Decker; 1999 and Evans DJ. Database searches for qualitative research. <i>Journal of the Medical Library Association</i> 2002;90:290-3. [Ovid]</p> <p>Marks S. Qualitative studies. In: McKibbin A, Eady A, Marks S. <i>PDQ evidence-based principles and practice</i>. Hamilton, Canada: BC Decker Inc., 1999.</p> <p>Edward G Miner Library, University of Rochester Medical Center filter [undated] [Ovid]</p>
EMBASE	<p>Walters LA, Wilczynski NL, Haynes RB; Hedges Team. Developing optimal search strategies for retrieving clinically relevant qualitative studies in EMBASE. <i>Qualitative Health Research</i> 2006 Jan;16(1):162-8. [Ovid] Also at http://hiru.mcmaster.ca/hiru/HIRU_Hedges_EMBASE_Strategies.aspx</p>
MEDLINE	<p>University of Texas School of Public Health. Search filters for qualitative studies. Accessed 25 Nov 2011. [Ovid, PubMed]</p> <p>Important note: All of the MEDLINE strategies presented below were developed before the MeSH Heading 'Qualitative Research' was introduced – Year of Entry: 2003. This should be taken into account when using these strategies. As new strategies are developed which include and/or evaluate the performance of this heading they will be added to this section.</p> <p>Wong SS, Wilczynski NL, Haynes RB. Developing optimal search strategies for detecting clinically relevant qualitative studies in MEDLINE. <i>Medinfo</i> 2004;11(1):311-8. Also at http://hiru.mcmaster.ca/hiru/HIRU_Hedges_MEDLINE_Strategies.aspx</p> <p>ISSG structured abstract (pdf)</p> <p>ISSG search filter appraisal (pdf)</p> <hr/> <p>University of Alberta. After McKibbin A, Eady A and Marks S. PDQ Evidence-based principles and practice. Hamilton, Ontario: BC Decker; 1999 and Evans DJ. Database searches for qualitative research. <i>Journal of the Medical Library Association</i> 2002;90:290-3. [Ovid & PubMed]</p> <p>Grant MJ. Searching for qualitative research studies on the Medline database [oral presentation]. <i>Qualitative Evidence Based Practice Conference; 2000 May 14-16; Coventry University, UK.</i></p> <p>Grant MJ. Development of an optimal search strategy for qualitative research methodologies [oral presentation]. <i>Qualitative Evidence Based Practice Conference; 2000 May 15-17; Coventry University, UK.</i></p> <p>Marks S. Qualitative studies. In: McKibbin A, Eady A, Marks S. <i>PDQ evidence-based principles</i></p>

BUT...

- [Gorecki et al., \(2010\)](#) compared 3 qualitative research methods filters (Shaw et al., 2004) with 2 subject specific strategies on health-related quality of life to identify studies on patient-reported data of the impact of pressure ulcers on quality of life.
 - 2 subject-specific strategies had 100% sensitivity, 34%-46% specificity
 - 3 research methods filters had 72-83% sensitivity, 79-83% specificity
- What did they miss??
 - 3 research methods filters failed to locate qualitative data in studies of *mixed-methods* design

- [Pearson et al.](#), (2011) evaluated 5 search strategies to capture qualitative research on the implementation of cardiovascular disease prevention programs
- 10/30 studies included in their review came from outwith the databases.
 - 5 studies not indexed as qualitative research (4 published after the introduction of the Qualitative MeSH in 2003)
 - 2 studies not indexed in databases

“It is often a subsidiary component of a wider effectiveness evaluation where no explicit reference is made to the qualitative research component in the abstract. Subsequently, database indexing is inconsistent.” ([Pearson et al.](#), 2011, p.304)

- [Pappaioannou et al.](#), (2011) evaluated 5 search strategies (databases, reference list checking, contact with experts, citation searching, pearl growing) for a qualitative systematic review evaluating the student experience of e-learning:
- 30/41 references located where found in the databases, missed 11 which were identified by other methods above

“supplementary searches were essential to locate further important references for inclusion.” ([Pappaioannou et al.](#) p149)

What does this mean?

- Searching for qualitative research is more challenging than for other study types
- Brief methodological filters *may* be effective
- More complex designs require searches of multiple databases ([Shaw et al](#), 2004) and a wider range of strategies ([Greenhalgh & Peacock](#), 2005)
- Supplementary search strategies are critical
- Need clear idea of what type(s) of data you will include: qualitative data?/ qualitative research?; mixed method studies?/ process evaluations?/ survey data? ([ESQUIRE](#))

- Supplementary Techniques of potential usefulness for non-Cochrane qualitative systematic reviews

“The assumption in suggesting these sources is that one is trying to achieve a comprehensive and exhaustive search, analogous to that of required for a review of effectiveness”

- Qualitative filters
- Examination of references
- Use of “related articles” features
- Citation searching
- Hand-searching - topic specific journals, topic specific journals focusing primarily on qualitative research (e.g. several nursing journals), specialist qualitative research journals (e.g. Qualitative Health Research)
- Theses/dissertations
- Internet resources - Google Scholar limit to domain (.ac.uk, .edu, .gov, .edu.au) and ‘qualitative’ terminology

- Supplementary Techniques of potential usefulness for non-Cochrane qualitative systematic reviews
- In addition identifying trial related qualitative research *“Increasingly reports of trial data include qualitative data that may prove useful in the conduct of the review”*:
 - Related article search on the trial record. *“an associated qualitative research report will usually appear within the top 100 associated related references.”*
 - Search for process evaluations
 - Sibling studies – asking authors of the trial if they have been involved in any qualitative studies related to the trial

An alternative approach??

- “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](#))

[ESQUIRE](#)

- "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](#))

[ESQUIRE](#)

- [Suri H. Purposeful sampling in qualitative research synthesis. *Qualitative Research Journal* 2011; 11\(2\):63-75.](#)
- Awaiting further research...
 - Andrew Booth:
 - Strategies for identifying the disconfirming case. *Qualitative Health Research*
 - Use of SPIDER mnemonic for specifying qualitative evidence synthesis questions/strategies (to include mixed methods) *Qualitative Health Research*
 - Using strategies analogous to primary qualitative sampling for constructing sampling frames for Qualitative Evidence Synthesis (*writing in progress*)

- “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*”.
- “The process of undertaking metasynthesis is iterative, contingent, and never definitively complete”.

([Downe 2008](#))

Quality assessment

- Should quality assessment be applied in the same way as for quantitative evidence?
- How should quality assessment be applied for qualitative research?

Quality assessment of qualitative studies

- *“Quality assessment of qualitative research remains a contested area”*

([Hannes, 2011 pg 12](#))

- Debate on whether quality can be legitimately assessed is on-going ([BMJ 2000;320:50.1](#) ; [Chapter 4: Critical appraisal of qualitative research, Downe, 2008](#))
- Need to determine how you will use judgements of quality ([ESQUIRE](#))
 - To moderate?
 - To exclude?
- Does it require the use of a checklist?
 - Adds a sense of '*respectability*'/ '*credibility*'
 - Reporting vs. study quality
 - Which checklist? ([ESQUIRE](#))

- [Appraising qualitative research for inclusion in systematic reviews: a quantitative and qualitative comparison of three methods](#) (Dixon-Woods et al., 2007)
- 6 (experienced) qualitative reviewers appraised 12 papers using 3 appraisal methods (unprompted, CASP, Quality Framework)
- Aim: To determine whether qualitative studies are *judged* differently by 3 methods of appraisal and *interpreted/used* differently by different reviewers.
- Results: Agreement in categorising papers was slight ($\kappa=0.13$ 95%CI 0.06-0.24)
- Conclusion: “*Structured approaches may not produce greater consistency of judgements about whether to include qualitative papers in a systematic review*” ([pg. 42](#))

To moderate or exclude?

- *“Qualitative analysis revealed researchers’ dilemmas in deciding between the potential impact of findings and the quality of the research execution or reporting practice”* ([pg. 42](#))
- Disagreements arised regardless of the method of appraisal used. Using checklists sensitised reviewers to aspects of research practice.
- *“One possible purpose of appraisal is to exclude papers that are of poor quality...However, excluding papers on the basis of detailed assessments in this way contrasts with the approach used in reviews of quantitative paper, where broad-quality criteria (e.g. adequate randomization) are often used as inclusion criteria”* ([pg. 46](#))

- *“Although checklists and other structured approaches have long been proposed as a way of assessing the quality of research reports, our analyses suggest that, for qualitative research, these are a far from straightforward solution”*
- *“conducting systematic reviews that include qualitative research should exercise care in both how they assess quality of evidence and how they use claims about quality”*
[\(pg 47\)](#)

1. Was there a clear statement of the aims of the research? Yes No

Consider:

- what the goal of the research was
- why it is important
- its relevance

2. Is a qualitative methodology

Consider:

- if the research seeks to interpret the actions and/or subjective experience of research participants

Is it worth continuing?

3. Was the research design able to address the aims of the research?

Consider:

- if the researcher has justified the research design (e.g. have they discussed how they decided which methods to use?)

4. Was the recruitment strategy appropriate to the aims of the research?

Consider:

[CASP \(2006\)](#)

5. Were the data collected in a way that addressed the research issue?

Consider:

- if the setting for data collection is appropriate
- if it is clear how data were collected (e.g. group, semi-structured interview)
- if the researcher has justified the methods chosen
- if the researcher has made the methods clear (e.g. for interview method, is the topic guide used a topic guide?)
- if methods were modified during the study has the researcher explained how?
- if the form of data is clear (e.g. audio, video material, notes etc)
- if the researcher has discussed the data

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Reflexivity (researcher's role)

6. Has the relationship between researcher and participants been adequate?

Consider whether it is clear:

- if the researcher critically examined their role, potential bias and influence
- formulation of research questions
- data collection, including sampling and choice of location
- how the researcher responded to the study and whether they considered implications of any changes in the design

7. Have ethical issues been given adequate consideration?

Consider:

- if there are sufficient details of how the research was explained to participants to assess whether ethical standards were met

Write comments here

8. Was the data analysis sufficiently rigorous?

Consider:

- if there is an in-depth description of the analysis process
- if thematic analysis is used. If so, is it clear how the categories/themes were derived from the data?
- whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process
- if sufficient data are presented to support the findings
- to what extent contradictory data are taken into account
- whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation

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Findings

9. Is there a clear statement of findings?

Consider:

- if the findings are explicit
- if there is adequate discussion of the evidence both for and against the researcher's arguments
- if the researcher has discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst.)
- if the findings are discussed in relation to the original research questions

.....
Value of the research

10. How valuable is the research?

Consider:

- if the researcher discusses the contribution the study makes to existing knowledge or practice

Write comments here

Write comments here

Write comments here

	a) Appraisal questions	b) Quality indicators (possible features for consideration)	c) Notes on study being appraised
ANALYSIS	12 How well has diversity of perspective and content been explored?	<p>Discussion of contribution of sample design/ case selection in generating diversity</p> <p>Description and illumination of diversity/multiple perspectives/alternative positions in the evidence displayed</p> <p>Evidence of attention to negative cases, outliers or exceptions</p> <p>Typologies/models of variation derived and discussed</p> <p>Examination of origins/influences on opposing or differing positions</p> <p>Identification of patterns of association/linkages with divergent positions/groups</p>	
	13 How well has detail, depth and complexity (i.e. richness) of the data been conveyed?	<p>Use and exploration of contributors' terms, concepts and meanings</p> <p>Unpacking and portrayal of nuance/subtlety/intricacy within data</p> <p>Discussion of explicit and implicit explanations</p> <p>Detection of underlying factors/influences</p> <p>Identification and discussion of patterns of association/conceptual linkages within data</p> <p>Presentation of illuminating textual extracts/observations</p>	
	14 How clear are the links between data, interpretation and conclusions – i.e. how well can the route to any conclusions be seen?	<p>Clear conceptual links between analytic commentary and presentations of original data (i.e. commentary and cited data relate; there is an analytic context to cited data, not simply repeated description)</p> <p>Discussion of how/why particular interpretation/significance is assigned to specific aspects of data – with illustrative extracts of original data</p>	

	a) Appraisal questions	b) Quality indicators (possible features for consideration)	c) Notes on study being appraised
REPORTING	15 How clear and coherent is the reporting?	<p>Demonstrates link to aims of study/research questions</p> <p>Provides a narrative/story or clearly constructed thematic account</p> <p>Has structure and signposting that usefully guide reader through the commentary</p> <p>Provides accessible information for intended target audience(s)</p> <p>Key messages highlighted or summarised</p>	
	16 How clear are the assumptions/theoretical perspectives/values that have shaped the form and output of the evaluation?	<p>Discussion/evidence of the main assumptions/hypotheses/theoretical ideas on which the evaluation was based and how these affected the form, coverage or output of the evaluation (<i>the assumption here is that no research is undertaken without some underlying assumptions or theoretical ideas</i>)</p> <p>Discussion/evidence of the ideological perspectives/values/philosophies of research team and their impact on the methodological or substantive content of the evaluation (<i>again, may not be explicitly stated</i>)</p> <p>Evidence of openness to new/alternative ways of viewing subject/theories/assumptions (e.g. discussion of learning/concepts/ constructions that have emerged from the data; refinement restatement of hypotheses/theories in light of emergent findings; evidence that alternative claims have been examined)</p> <p>Discussion of how error or bias may have arisen in design/data collection/analysis and how addressed, if at all</p> <p>Reflections on the impact of the researcher on the research process</p>	

- [Quality in Qualitative Evaluation: A framework for assessing research evidence \(2003\)](#)

- Other considerations in choosing a checklist approach

([2007, Health Information & Libraries Journal, 24: 72–76](#); Booth, 2011)

- What is the role of the reviewer in this process?- the more "advanced" the reviewer's knowledge the more able they are to apply more complex concepts
- How would a technical tool such as the [Quality in Qualitative Evaluation](#) in the hands of a novice compare with a more superficial tool such as [CASP](#) in the hands of an expert?
- CASP is often used but was designed for clinicians who were wanting to read ONE article and APPLY the results
- Weighted checklist? If you simply count the number of items against which a study performs well then you are allocating them all equal weight – is this fair??

- *“...critical appraisal is a flawed ‘technology’ with limitations surrounding the paper itself, the appraisal instrument and the appraisers, either collectively or individually. To the danger, reported by Sackett, of ‘critical appraisal nihilism’—the perception that no paper is ever good enough—we add two further dimensions—no instrument is good enough and no appraiser is good enough!”*

([Booth, 2007 p. 75](#))

- [Supplementary Guidance for Inclusion of Qualitative Research in Cochrane Systematic Reviews of Interventions](#)
 - Core criteria:
 - Credibility *“whether or not the representation of data fits the view of the participants studied, whether the findings hold true”*
 - Transferability *“whether research findings are transferable to other specific settings”*
 - Dependability *“whether the process of research is logical, traceable, and clearly documented, particularly on the methods chosen and decisions made by the researchers”*
 - Confirmability *“evaluates the extent to which findings are qualitatively confirmable through the analysis being grounded in the data and through examination of the audit trail”*

- [Supplementary Guidance for Inclusion of Qualitative Research in Cochrane Systematic Reviews of Interventions](#)
 - Stages in the appraisal:
 - Filtering (types of qualitative studies to include)
 - Technical appraisal (methodological soundness)
 - Theoretical appraisal (research paradigm, required more in-depth understanding of qualitative research)
 - Quality assessment tools
 - Using and reporting critical appraisal outcome
 - To moderate
 - To exclude

- *“Regardless of the approach eventually chosen for the quality assessment stage of the review there is a need to preserve the transparency of the method through careful documentation of decisions made”* ([Hannes, 2011, pg.12](#))

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- **Hannes K.** Chapter 4: Critical appraisal of qualitative research. In: Noyes J, Booth A, Hannes K, Harden A, Harris J, Lewin S, Lockwood C (editors), *Supplementary Guidance for Inclusion of Qualitative Research in Cochrane Systematic Reviews of Interventions*. Version 1 (updated August 2011). Cochrane Collaboration Qualitative Methods Group, 2011. Available from URL <http://cqrmg.cochrane.org/supplemental-handbook-guidance>

Literature searching for qualitative studies and quality assessment

Thank you