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A Quality Appraisal Tool for Syntheses of Qualitative Evidence

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Background (1)



Why are syntheses of qualitative evidence important?

- often investigate questions about associations, relationships or mechanisms of interaction (i.e., go beyond the effectiveness of an intervention)
- Provide knowledge support for evidence-informed practice and decision-making among various stakeholders

Some caveats...

- methods are early in development and often vary depending on the topic area and the investigator(s)
- Currently no quality appraisal tools available



Why is it important to appraise the quality of syntheses of qualitative evidence?

1. Can be provided as part of knowledge support systems for stakeholders (e.g., healthcare managers and policymakers)
 - Policymakers typically do not possess the time and/or the skills to make reliable quality judgements

2. A quality appraisal tool may provide an initial reflection on quality of reporting for those engaged in qualitative syntheses
 - Reflection could spur discussion among scholars and journal editors about improving quality of reporting



To develop a tool that is appropriate and flexible enough to appraise the quality of syntheses of qualitative evidence that use a range of methods and address a broad spectrum of topics.

Specific Objectives

1. Review the methodological literature for syntheses of qualitative evidence and existing quality appraisal tools for primary qualitative research and quantitative systematic reviews.
2. Develop a quality appraisal tool for syntheses of qualitative evidence by using relevant findings from the literature review; and
3. Further refine the quality appraisal tool through one-on-one interviews with health services researchers



What I did:

- Conducted a related links search (PubMed) using 9 key articles
- Developed search terms (metasynthesis OR meta-synthesis, metaethnography or meta-ethnography, qualitative synthesis) for Medline, Embase and Web of Science
- Scanned reference lists of retrieved articles
- Requested references from key contacts
- Located an existing review of quality appraisal tools for quantitative systematic reviews
- Reviewed all search results and developed a 1-2 page summary of key information from relevant references

Syntheses of qualitative evidence



Several distinguishing features emerged from the review:

1. Primary studies included in a synthesis are used to “generate new and more complete understandings of the phenomenon under study” (Paterson et al. 2001 and Paterson & Thorne 2003)
2. Syntheses should be clearly grounded in the primary research with which its interpretations and reconstructions are based
3. Need a clear aim, clear and comprehensive description of the methods, justification for why the methods are appropriate to the particular study objective and ensuring ‘fit’ between the question and the evidence used in the synthesis (i.e., make the review auditable)
4. Quality appraisal of primary studies (no consensus) – lose potentially relevant information or include poorly conducted studies?

Quality appraisal tools for individual qualitative studies



What I found

- 31 references that provided either tools or approaches for appraising the quality of primary qualitative studies and one review (Harden 2007) of 31 appraisal tools that used 515 different criteria, which fit into 5 domains (1. fieldwork, 2. data collection and analysis, findings, 3. background, theory and research questions, 4. write-up and ethics approval and 5. sample, sampling and study setting)
- Some tools provided broad questions with sub-questions to help the appraiser think through important factors
- Some used numerical scoring but most used categorical response options (e.g., yes/no or a grading scale)
- Attree & Milton (2006) provide a useful model:
 - 10 domains with yes/no response options for each sub-question
 - A grade of A (no or few flaws), B (some flaws), C (considerable flaws) or D (significant flaws that threaten the validity of the whole study) is required for each of the 10 domains
 - Overall study appraisal grade assigned using the 10 domains as a guide

Quality appraisal tools for quantitative systematic reviews



What I found

- 7 key quality domains:
 - study question, search strategy, inclusion and exclusion criteria, data abstraction, study quality, data synthesis and analysis, and funding or sponsorship
- Extensive review of existing tools determined that the **AMSTAR** instrument is the best for assessing the quality of systematic reviews (Oxman et al. 2006)
 - 11 questions related to the 7 key quality domains
 - 4 response categories ('yes', 'no', 'can't answer' and 'not applicable')
- **AGREE** – produces 3 possible conclusions: 'strongly recommend', 'recommend (with provisos or alterations)' or 'would not recommend'
 - Arrived at using the 23 quality criteria as a guide and through discussion with multiple raters

Development of a quality appraisal tool for syntheses of qualitative evidence (1)



What I did

- Developed an outline of important factors that contribute to the quality of syntheses of qualitative evidence and common approaches for quality appraisal from existing tools
- Created a draft of 12 criteria and 4 categorical appraisal scores by:
 1. creating a list of potential questions
 2. combining questions which were similar or redundant
 3. organizing the questions into a logical progression (i.e., according to the question, methods, analysis and review impact)
 4. outlining examples and factors that should likely be taken into consideration when answering each question (based on the review of methods for qualitative synthesis), and
 5. revising terminology (through discussion and by applying the tool to sample reviews) to better reflect the qualitative tradition

Interviews with health services researchers (1)



- **Interviewed 20 health services researchers in Australia, Canada, UK, US, and Norway.**
 - Sampled in order to obtain a breadth of perspective (research focus, disciplinary focus, types of questions they address in their research and career level)
- **Most interviewees indicated that the appraisal tool was helpful and the criteria were generally reflective of the key components of a review.**
- **Most indicated that the language used in the appraisal tool did not adequately reflect the broad spectrum of approaches and methods used in syntheses of qualitative research.**

Interviews with health services researchers (2)



Quotes:

- **“I think [the questions] are modeled on a quantitative approach to reviewing qualitative evidence and makes a whole set of assumptions about what are the characteristics of a good quality qualitative review that I don’t agree with.”**
- **“In terms of a search strategy, I think the important characteristic of that is not is it clearly and comprehensively described in such a way that you could pre-specify protocol, but is it well-justified and has it been explained? So have they clearly described what the strategy was, which may include lots of things and have they provided an appropriate rationale for that.”**
- **“it could be that that protocol-driven approach is completely inappropriate for some other type of question, in which case, having those type of questions in some ways inclines you to or prompts you to give a poor rating when actually that’s not what’s warranted.”**

Appraisal tool (1)



Quality appraisal criteria (yes/no/can't answer/not applicable):

1. Are the objectives and questions posed by the review clear and consistent with the approach and/or theoretical grounding of the review?
2. Is the search strategy for the review clearly and comprehensively described?
3. Are you confident that the search strategy located the studies needed to fulfill the study objective(s)?
4. Are the criteria for study selection clearly and comprehensively described?
5. Are the criteria for study selection appropriate based on the study objectives and questions?
6. Are included and described?
7. Are methods used for combining study findings clearly and comprehensively described?
8. Are the studies included in the review combined appropriately?

Appraisal tool (2)



9. Are the findings clearly based on the primary studies and the theoretical grounding of the review?
10. Does the review contribute to knowledge or practice in some manner (e.g., additional insights into a theory, better understanding of a phenomenon, etc.)?
11. Were the study selection and analysis stages of the review conducted by multiple members of the research team in order to ensure the review was conducted in a way that is auditable and trustworthy?
12. Was conflict of interest and sources of support disclosed?

2 reviewers appraise independently, discuss their results and arrive at a final appraisal grade of

- A (few limitations – high quality review),
- B (some limitations– good quality review),
- C (considerable limitations– moderate/low quality review) or
- D (considerable limitations – low quality review)



Implications

- can be used in supporting stakeholders' use of syntheses of qualitative evidence in their decision-making
- this is the first quality appraisal tool for syntheses of qualitative evidence and therefore it fills an important gap.
- can be used to help initiate a critical reflection of the quality of reporting in syntheses

Future research

1. Apply to a broader sample of syntheses
2. Engage experts in the field to pilot test the appraisal tool using a small sample of syntheses of qualitative evidence

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