The GRADE-CERQual approach for assessing how much confidence to place in the findings of qualitative evidence syntheses and the iSoQ tool

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April 25 2022- Cochrane Learning live webinar series
Today's webinar

• Introduce the GRADE-CERQual approach
• Give an overview of each of the GRADE-CERQual components and how to make an overall assessment of confidence
• Demonstrate how the new iSoQ tool (interactive Summary of Qualitative Findings) can assist you with applying GRADE-CERQual
What does the GRADE-CERQual approach do?

- GRADE-CERQual aims to transparently assess and describe how much **confidence** to place in **individual review findings** from **qualitative evidence syntheses**.
What is a Qualitative Evidence synthesis?

"A qualitative evidence synthesis, or QES, is a type of systematic review that brings together the findings from primary qualitative research in a systematic way. (Flemming & Noyes 2021)
New to QES?

Qualitative Evidence Synthesis (QES): Learning Live webinar series

All webinars available to watch on: https://training.cochrane.org/qes-learning-live-webinar-series

- Introduction to qualitative research and qualitative evidence synthesis
- Question formulation and searching for qualitative evidence
- Selecting studies and assessing methodological limitations
- Making sense of framework and best fit framework synthesis
- Thematic Synthesis
- Meta-ethnography
- Upcoming: Integrating qualitative evidence syntheses with intervention effect findings
GRADE-CERQual is applied to individual synthesis findings

• In the context of a qualitative evidence synthesis, a review finding is:

...an analytic output that describes a phenomenon or an aspect of a phenomenon

• Review findings from qualitative evidence syntheses can be both descriptive or more interpretive. They might describe a theme or pattern, or theory emerging from the analysis.
Difference between "full" and "summarized" review finding

1. The **full review findings** as reported in the “Findings” section of the review
   - Most detailed presentation of each finding
   - Should include references to the studies contributing to the finding
   - May include data extracts from the studies contributing to the finding
   - May include a final GRADE-CERQual assessment
Example of full review findings

- This review used a thematic synthesis approach for data analysis

**Physical Abuse**

Physical abuse during childbirth [9, 10, 13, 21, 61, 67, 68, 73, 75, 77, 80, 84, 86, 87, 91, 97] was perpetrated by nurses [10, 13, 67, 80, 84, 86], midwives [61, 73, 75, 77, 87, 91], and doctors [84, 91]. Women sometimes reported specific acts of violence, but often referred to these experiences more generally, describing beatings, aggression, physical abuse, a “rough touch,” and the use of extreme force [9, 10, 13, 21, 61, 73, 80, 84, 87]. Hitting and slapping, with an open hand or an instrument, were the most commonly reported specific acts of physical violence [10, 13, 67, 75, 77, 87, 91]. Women also reported being pinched, particularly on the thighs [13, 86] and kicked [10]. Some women were physically restrained during labor with bed restraints [97] and mouth gags [86].
Difference between "full" and "summarized" review finding

2. Summaries of review findings are reported in the Evidence Profile Table and the Summary of Qualitative Findings Table (SoQF)
   • A shorter version of each finding that is as explicit as possible.
   • Come in different styles and sizes. Is more than just a theme name.
   • The Evidence Profile and SoQF table are most useful to users of the review findings
Example of a summary of a review finding in a Summary of Qualitative Findings (SoQF) table

<table>
<thead>
<tr>
<th>Review Finding</th>
<th>Contributing Studies</th>
<th>Confidence in the Evidence</th>
<th>Explanation of Confidence in the Evidence Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical abuse</td>
<td>[6,9,10,13,21,61,67, 68,73,75,77,80,84,86, 87,91,96,97]</td>
<td>High</td>
<td>18 studies with minor to significant methodological limitations. Thick data from 11 countries across all geographical regions, but predominantly sub-Saharan Africa. High coherence.</td>
</tr>
</tbody>
</table>
What do we mean by ‘confidence in the evidence’?

The extent to which a review finding is a reasonable representation of the phenomenon of interest

• i.e. the phenomenon of interest is unlikely to be substantially different from the research finding
Confidence is based on the assessment of 4 components.
Dissemination bias in qualitative research


1) ASSESSMENT OF EACH COMPONENT

**Level of concern + explanation**

- Methodological limitations
- Coherence
- Adequacy of data
- Relevance

2) OVERALL ASSESSMENT OF CONFIDENCE

**Confidence level + explanation**

- No/very minor concerns
- Minor concerns
- Moderate concerns
- Serious concerns

- High Confidence
- Moderate confidence
- Low confidence
- Very low confidence
When and where do we use GRADE-CERQual?

• GRADE-CERQual meant to be applied in all types of QES (although so far mainly used for more descriptive findings so far)

• GRADE-CERQual assessments designed for use in all types of decision making processes

• GRADE-CERQual is applied near the end of the review process and requires review authors to draw on data they've produced in the review process (e.g. critical appraisals, study description table, extracted data underlying findings).
Two key outputs of applying GRADE-CERQual

• Evidence Profile Table
• Summary of Qualitative Findings (SoQF) table
### Table 3. Confidence in the Evidence for Reviews of Qualitative Research (CERQual) Evidence Profile

<table>
<thead>
<tr>
<th>Summary of Review Finding</th>
<th>Methodological Limitations</th>
<th>Relevance (Applicable to the Context Specified in the Review Question)</th>
<th>Coherence (Well Grounded in Data and Providing a Convincing Explanation)</th>
<th>Adequacy (the Degree of Richness and Quality of Data Supporting a Finding)</th>
<th>Assessment of Confidence in the Evidence</th>
<th>Explanation of CERQual Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in quality of life: home mechanical ventilation results in an increase in the users’ quality of life; this applies both to their physical condition, eg, they report better sleep, fewer headaches, more energy, less fatigue, and, to their psychological condition, eg, they report a sense of rehabilitation of identity, regaining autonomy and self-determinism</td>
<td>No or very minor limitations: this finding was supported by 4 papers of high quality and 2 papers of moderate quality; the limitations were mainly connected to sparse use of citations in the papers and unclear inclusion process and criteria; all the studies have scant descriptions of the researchers’ role in gathering and administration of data</td>
<td>Minor concerns: the finding was supported by 2 papers with direct relevance, 3 with unclear relevance and 1 with partial relevance; the relevance assessment was not judged to be crucial in the assessment of this particular finding: all the papers described an increase in quality of life and most of the “unclear relevance” was due to the inability to separate participants with or without help in the home; furthermore, the contributions to the finding were divided</td>
<td>No or very minor concerns: data are consistent within and across the studies; the only problem was the inability in some papers to distinguish between participants with or without help in the home or participants with invasive or noninvasive treatment; nevertheless, all the papers describe similar experiences</td>
<td>No concerns: contributions to the finding were divided across the papers, and most papers offered fairly detailed and rich data to explain the finding; the studies include a reasonable number of participants</td>
<td>High confidence</td>
<td>This finding was graded as high confidence because of minor methodological concerns and minor or no concerns for relevance, coherence, and adequacy</td>
</tr>
</tbody>
</table>
## Summary of Qualitative Findings (SoQF) table

**Summary of findings for the main comparison.**

<table>
<thead>
<tr>
<th>Finding number</th>
<th>Summary of review finding</th>
<th>Studies contributing to the review finding</th>
<th>CERQual assessment (confidence in the findings)</th>
<th>Explanation of CERQual assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The benefits of labour companionship may not be recognised by providers, women, or their partners.</td>
<td>Abushaikha 2013; Afu-\textsuperscript{\textregistered}anli 2018; Alexander 2014; Brüggemann 2014; Coley 2016; Pafs 2016</td>
<td>Moderate confidence</td>
<td>Due to minor concerns regarding methodological limitations, coherence, and relevance, and moderate concerns regarding adequacy</td>
</tr>
<tr>
<td>2</td>
<td>Labour companionship was sometimes viewed as non-essential or less important compared to other aspects of care, and therefore deprioritised due to limited resources to spend on 'expendables'.</td>
<td>Akhavan 2012b; Brüggemann 2014; Lagendyck 2005; Premberg 2011</td>
<td>Low confidence</td>
<td>Due to minor concerns regarding coherence, moderate concerns regarding methodological limitations and serious concerns regarding relevance and adequacy</td>
</tr>
</tbody>
</table>

Guidance on how to assess methodological limitations in the context of a review finding

The steps taken when assessing methodological limitations are shown in Fig. 2 and detailed below.

Step 1: collect and consider the necessary information related to methodological limitations

To assess methodological limitations of the body of data contributing to a review finding, you first need to choose an appropriate critical appraisal tool to assess the methodological strengths and limitations of the primary studies contributing data to the review finding. Regardless of the chosen tool, you will need to collect detailed information regarding the methods of data collection and analysis used in each study, as well as other aspects covered by the critical appraisal tool that you have chosen. The level of detail reported on the conduct of the included studies may vary greatly depending on the study design, the topic/field, type of publication or journal specifications.
What skills do you need to apply GRADE-CERQual?

• An understanding of systematic review methodology

• An understanding of the principles of qualitative research
GRADE-CERQual is **not** a tool for:

- Assessing how well an individual qualitative study was conducted
- Assessing how well a systematic review of qualitative studies was conducted
- Assessing how much confidence to place in review findings in general.
- Assessing confidence in findings of a narrative synthesis of quantitative studies when a meta-analysis is not possible
GRADE-CERQual is a tool for:

- assessing how much confidence to place in individual review findings from qualitative evidence syntheses
CERQual made easy
Scenario:

Decision makers are considering a new healthcare service for women. But before they introduce it, they want to know whether those affected, including female patients and healthcare workers, are likely to accept it.

A review of qualitative research is commissioned and conducted.

One of the findings describes women’s experiences of the intervention.
For each GRADE-CERQual component, you need to identify your concerns and whether these are:

- No or very minor concerns
- Minor concerns
- Moderate concerns
- Serious concerns
After assessing all four components an overall assessment is made, expressed as either:

- High confidence
- Moderate confidence
- Low confidence
- Very low confidence
New Online Tool!

iSoQ Beta version

An online tool for applying the GRADE-CERQual approach to findings of a qualitative evidence synthesis

- Learn more about iSoQ
- Browse
Methodological limitations

The extent to which there are problems in the design or conduct of the primary studies supporting a review finding
Concerns about methodological limitations

- We are less confident that the review finding reflects the phenomenon of interest when:
  - the primary studies underlying a review finding are shown to have **problems in the way they were designed or conducted**

- A critical appraisal tool for qualitative studies should be used to make this assessment
  - Typically includes appraisals of how the participants and settings were selected, how data was collected and analysed, researcher reflexivity etc
  - See Munthe-Kaas et al, 2019, and Noyes et al. 2017 for what to look for in a critical appraisal tool when you are planning to apply GRADE-CERQual
Grounds for concern

Where methodological limitations have been identified, think about the following issues:

• Is this particular limitation likely to have had a serious impact on the review finding? Some limitations may be more serious than others and other limitations may be serious for some review findings but not for others.

• What is the relative contribution of these studies to the review finding? If these studies are key studies, this is of more concern.
Coherence

An assessment of how clear and cogent the fit is between the data from the primary studies and the review finding
Concerns about coherence

We are less confident that the finding reflects the phenomenon of interest when the fit between the data from the primary studies and the review finding is not completely clear.
Assessing coherence of the review finding: Dealing with variation or ambiguity in the data

**Option 1:**
Most children preferred staff to have week-long shifts because they liked the stability and structure and the opportunity to form attachment. Children in one study preferred short shifts, but these children had poor relationships with their caregivers. In one study the experiences of the children were unclear.

**Option 2:**
In situations where children have good relations with their caregivers, they prefer longer shifts because these provide stability and structure and opportunities to form attachment.

Minor concerns about coherence. The finding is broadly supported by the data. However, one study gave a contradictory account of children’s experiences, although this may be explained by their poor relationship with caregivers. In another study, children’s experiences were unclear.

No concerns about coherence
Grounds for concern

If finding is descriptive in nature

• Varied data - Some elements of the underlying body of evidence might not fit the description of the key patterns captured in the review finding.
• Ambiguous data - Key aspects of the underlying body of evidence may be vaguely defined or described, or defined in different ways. Varied data or ambiguous data must either be reflected in the review finding or discussed and represented in the assessment of coherence.

If finding is interpretive in nature

• There are plausible alternative descriptions, interpretations or explanations that could be used to synthesise the data.
Adequacy of data

The degree of *richness* and *quantity of data* supporting a review finding
Concerns about adequacy of data

We are less confident that the finding reflects the phenomenon of interest when:

the data underlying a review finding are not sufficiently rich or only come from a small number of studies or participants

Review authors need to make a judgement on what constitutes data that are not sufficiently rich or too small a number in the context of a specific review finding
Grounds for concern

You may have concerns regarding the adequacy of the data if:

• there are insufficient details to gain an understanding of the phenomenon described in the review finding
• the review finding is supported by data from only one or very few studies, participants or observations

• Review findings that are simple and primarily descriptive: relatively superficial data may be sufficient.
• Review finding that are complex or explanatory: you may have concerns if the finding is based on data that is too superficial to allow a sufficient exploration of the phenomenon
Relevance

The extent to which the body of evidence from the primary studies supporting a review finding is *applicable to the context* specified in the review question.
Concerns about relevance

We are less confident that the finding reflects the phenomenon of interest when:

the contexts of the primary studies underlying a review finding are **substantively different from the context** of the review question
What do we mean by "contexts"

- Time (for example, were the studies conducted too long ago to be relevant?)
- Setting (for example, country of the study, place of care, rural vs. urban)
- Treatment (for example, is the treatment in the study different from the one specified in the review question?)
- Perspective (for example, do we only have information about a subset of the population of interest?)
Grounds for concern

• **Indirect relevance**: One study included in a review focused on health workers’ perceptions of women’s experience while the review was interested in women’s experience.

• **Partial relevance**: Most of the included studies in the review were from the USA, while the review was global in focus.

• **Unclear relevance**: The review is interested in 18-25 year olds, but some studies describe participants as "young adults" without ages.
After assessing each of the separate components, we make an overall judgement of the confidence in each review finding.
Additional support

• With applying the GRADE-CERQual approach
  • Q&A Webinars - https://www.cerqual.org/upcoming-events/

• With using iSoQ
  • iSoQ Drop-in support webinars https://www.cerqual.org/upcoming-events/
  • Help Videos - https://isoq.epistememonikos.org/help
  • iSoQ tech support: isoq@epistememonikos.org
Coming soon...

• Results of an Evaluation of GRADE-CERQual's use in Evidence Synthesis that focuses on fidelity to and reporting of the GRADE-CERQual approach - currently under review

• 2\textsuperscript{nd} iSoQ Launch Webinar hosted by PAHO and EVIPNet Americas
  • May 19 2022 @ 11:00 Eastern Time (US and Canada)
  • Registration: https://paho.org.zoom.us/webinar/register/WN_KZgaEb7HRzmogYu8N6cBBw
To learn more about GRADE-CERQual

• Join the mailing list and/or project group via the webpage or email below

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