**Reviewer’s report**

**Title:** Purposive sampling in a qualitative evidence synthesis: A worked example from a synthesis on parental perceptions of vaccination communication

**Version:** 0  **Date:** 23 Oct 2018

**Reviewer:** Christopher Carroll

**Reviewer's report:**

This is an important exploratory study that offers a practical and highly instructive example of an attempt to address an unresolved but relevant issue for QES, and points others researchers in the right direction for conducting more of this type of work.

My principal revisions concern structure and the provision of some additional information. So, all quite straightforward.

p.5, 122: The difficulty of achieving interpretive synthesis with large volumes of data - while this is true, it has been done by others and that could be acknowledged, e.g. Toye et al 2017 performed a meta-ethnography of 77 studies.

p.10, Table 2, row 6, column 3: Example: 'with the same objectives as the synthesis'. This is an error, surely? This table relates to data richness only, and the matching with objectives is step 3 of the sampling frame, which only becomes merged with Step 2 in the final version (Table 4).

p.10, 217-224: 'studies that had primarily focused on parental perceptions …'. I was initially unclear on this point: whether the included studies' own objectives had to tally with the review's, or that the findings of the included study had to tally with the review's objectives. It became apparent that the latter was intended. However, that could made more clear here. Also, was no consideration made of the included studies own objectives in this step?

pp.11-12, Table 3, and 241-245 text, would be better placed at the end of the Discussion, p.19, line 406, after the 'around the topic' sentence, as this is where these issues are also discussed, and the authors findings on the relevance of the various sampling approaches from Suri, and their possible application by others, is considered.

p.13, 269-273: 'We are aware … criteria'. I would delete this text because it is repeated at a more appropriate place on p.14, 291-99, and move the last sentence of the paragraph to 267.

p.16, 341-342. I am not sure it is correct to state that the sampling, 'allowed us to achieve a wider geographical spread'. The geographical spread would have been as wide or wider had no sampling been applied. The sampling enabled the authors to achieve a sufficiently wide geographical spread while limiting the number of studies for synthesis.
p.17: I think it is also worth making the point that the two syntheses that have used this approach so far both performed thematic synthesis; different approaches to QES might also produce different findings.

pp.17-18. The correspondence between the sampling frame and the CERQual domains of 'relevance' and 'data adequacy' offered a useful and convincing support for the approach. However, I am surprised, given the authors of the paper, that the CERQual domains did not inform the sampling frame a priori, rather than their consistency only becoming apparent post-hoc, as it is presented here. Did the CERQual work not inform the study's sampling frame at all? It would make a great deal of sense had it done so. Indeed, the argument made here for its value in informing future sampling strategies is entirely convincing.

p.19, 391-395: I think the paper needs more discussion around the possible use of 'Methodological limitations' as a step in any sampling frame, given the debates around critical appraisal of qualitative research and how findings from that process might be used in QES.

There are a few typos and some sentences that would benefit from re-writing, e.g.

p.5, 124-126: 'Furthermore … in a context', and p.6, 128-130: 'Exhaustive …. Generalizability', would both benefit from appropriate punctuation.

p.11, Table 3, second row, third column 'Could This approach could …'

p.15, 311: Table 4 is labelled as Table 3; p.16, 332: Table 5 as Table 4 etc.

p.16, 330: 'contributed to while'

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?  
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

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