Reviewer’s report

Title: Using Qualitative Comparative Analysis (QCA) in systematic reviews of complex interventions: a worked example

Version: 1
Date: 22 April 2014

Reviewer: Wendy Olsen

Reviewer’s report:

This paper is cleanly written, adds much to knowledge, and is consistent with the aims of the journal. It shows a solid knowledge of systematic review and QCA. By doing a case study it adds to knowledge in an innovative way. I am impressed with the paper. I enjoyed reading it. It will suit a wide interdisciplinary audience.

There are changes needed of a minor kind. Thank you for a lovely paper.

Minor Essential Revisions

Pg 3 middle is very good, but the label on Figure 1 is inadequate, and I suggest that you add some textual labels on each of the four parts to indicate what the text says they represent.

On pg 6, put the aims that are shown here into pg 2 (or somewhere, 1-3) as well, so that pg 2 presages what is to come. Readers need these structuring guides please.

Page 7 needs to include mention of the key innovative findings. Don’t postpone them to the middle/end because by doing so, your bore your reader. We can be led to know what were a priori claims vs. what were new findings that got merged together during your analysis.

Pg 7 be more original. Modify the steps shown in numbered bullets as necessary to suit the systematic review function, please. Don’t tease us with possible alterations. If no alterations, then don’t mention the possibility of needing to amend the protocol.

Pg 8 mentioning odds ratios assumes random samples were taken. Please make this explicit. The Odds Ratio (OR) section on page 8 is not preceded by any discussion of random vs. convenience samples. Please expand on pg 7 or 8 to simply distinguish studies with random vs. non random samples of cases. What you do presently say about sampling advice for QCA is correct but assumes purposive sampling, as seen in grounded theory where it is known as theoretical sampling.

Pg 12 I think you don’t mean ‘uniformity’. Here the description of QCA has gone wrong. However the next sentence is fine, and in general the description of what consistency measure represents is agreeable. So modify the sentence that has uniformity in it. Instead the consistency represents how far the pattern of all the cases (both X and Not X, and Y and Not Y, for X being the intersection of all the conditions in that configuration) is consistent with sufficiency.
You have erred in not giving a short paragraph on necessity. Could you add this before or after the main consistency discussion? Thank you.

1 Permitted additional discretionary change:
The interpretation of the subgroup issue is very interesting. You may want to give an example. The reader is not sure what you mean by heterogeneity of the sample, i.e. these sub groups, unless you give 2-3 examples – one from epidemiology, one from policy studies, one from sociology of policy perhaps.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests: I declare I have no competing interest.