Reviewer’s report

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

Version: 1  Date: 16 April 2014

Reviewer: Ruth Gwernan-Jones

Reviewer’s report:

This is a paper that explores a methodological area in much need of development – that of synthesising study findings related to complex interventions in meaningful and useful ways. From the digging I’ve done about QCA, I understand there are few examples available, so this paper is filling a gap. As a worked example it has particular potential for those who are new to the field. It is clearly organised and well written, and as such I would recommend it for publication with one major compulsory revision, and some minor essential and discretionary revisions.

I have made a small number (12) of comments in the uploaded pdf (I have highlighted the relevant text, with comments written in the box in the margins).

One of these is a major compulsory revision;

10. The definition of the ‘high quality’ case seems to be a weakness in your argument for QCA, because the category actually encompasses a number of separate issues lumped together, and so QCA was incapable of identifying ‘those components of an intervention which are critical to its success’ – I think you need to address and discuss this issue.

Ten are minor essential revisions (1-9, 12).

There is also one discretionary revision (no. 11) that the authors may want to explore;

11. You write ‘This ‘dialogue’ between truth table and study reports is something which is contrary to established systematic review methods, since it explicitly encourages post-hoc reviewer interpretation’ (p18). I wonder if this issue is more related to a difference between what the synthesis actually involves, for example in meta-ethnography interpretation occurs during synthesis, whereas in meta-analysis interpretation occurs before and after synthesis (see Anderson LM, Oliver SR, Michie S, Rehfuess E, Noyes J, Shemilt I. Investigating complexity in systematic reviews of interventions by using a spectrum of methods. J Clin Epidemiol 2013; 66:1223-1229). In QCA, interpretation seems to occur during synthesis, during ‘the dialogue between truth table and study reports’. As such I’m not sure the issue is accurately compared to post-hoc statistics. It might be that this discussion would go better in the section further on, discussing types of knowledge.
I thought this was an excellent paper and wish the authors well with their revisions.

**Level of interest:** An article of outstanding merit and interest 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 that I have no competing interests