Reviewer's report

Title: Use of programme theory to understand the differential effects of interventions across socioeconomic groups in systematic reviews - a systematic methodology review

Version: 0 Date: 29 Jul 2017

Reviewer: Karin Diaconu

Reviewer's report:

Congratulations to the authors on a very interesting and well-structured manuscript relating to a much neglected topic - i.e. the use of programme theory and its application in relation to SES in systematic reviews.

While the manuscript is well-written, I would recommend the authors consider the following comments for improvement.

1) Major comments:

In its current format the paper is extensive and overly discursive - indeed, at times it reads more like work submitted for examination during a postgraduate degree rather than an academic paper. Extensive presentations is of course not 'wrong', however in this case I do believe it is detrimental to the message you wish to get across.

I would suggest shortening and editing the paper to enhance its clarity, while adhering to the same structure. For example, pages 6-11 and the Discussion are overly extensive and would benefit from substantial editing: not all concepts must be explained in detail and indeed, previously explained issues do not need to be repeatedly explained. Make better use of the references, tables and ideas already clearly explained during the introductory, methods and results sections. Should this be done, it would then also be easier to edit out repetitive passages (e.g. you allude to the aims of the review frequently - this is not necessary as you already have a very good section on Aims)

2) Minor comments:

Page 5:

Line 86 - "for systematic reviewers" is repetitive - please cut.
Line 88 - What do you mean by such 'a priori' knowledge - is it necessary that such knowledge is a priori? I do not understand how this would have been established.

Line 93 - I would cut "on health inequalities" - it is not only review questions on health inequalities that traditional approaches do not help with and further explanations could apply to other types of questions

Line 107 - what does 'rationalising' mean here? Do you simply mean 'deciding’?

Page 6:
Explain why you are excluding 'theory of action' from your definition of programme theory.

Page 8:
Box on perceived value of programme theory to inform systematic reviews: the issues listed here follow no logical order. I.e. do we not apply program theory first in order to gain understanding of how a definition might work? Transparency is a by-product. I would suggest re-ordering.

Change "in gaining" to "to gain"

Page 13: In table, please explain what is meant by "studies were inaccessible at time of data collection’’?

Page 17 and flowchart: Why do the numbers not add up?

Page 20: Section "proportion of systematic reviews operationalising..." - why is this commentary not included at the start of Results re: characteristics of included studies? Please review the placement of this section and as per usual in the paper, try to shorten paragraphs.

Pages 20-22 (lines 387-412) - these sections do not read well without examples to illustrate your points. Please consider adding such examples.

Page 27: Lines 537-539 - I understand what MacLure alludes to but is this sentence well phrased?
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