Author’s response to reviews

Title: Taxonomy of approaches to developing interventions to improve health: a systematic methods overview

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Author’s response to reviews:

Dear associated editor and reviewer 2

Many thanks for these helpful comments. We respond to them below.

1. Comments from the Associated editor: Substantial editing is needed to improve the presentation (i.e. the organization of the manuscript, logic flow, focus, and precision) of the manuscript. Reviewer 2: Although the review itself is sound, the manuscript suffers a little from the writing, which is often meandering or confusing. For example, Background, page 4, line 93 'Undertaking a broad review of approaches is required because existing reviews of intervention development have taken a narrow focus'. Is this sentence necessary? There are also several minor typographical or grammatical errors which jar the reading further.

We have removed this sentence and amended other awkward sentences highlighted by the reviewer. We have read the manuscript again and removed or amended other sentences to simplify the manuscript. We have corrected typos.

2. This is a systematic methods overview that proposes a taxonomy of approaches to developing interventions to improve health. It is part of a larger project, the INDEX project, which is funded
to produce guidance on intervention development for complex interventions. The manuscript has a useful contribution to make to those who plan, design, deliver, evaluate or implement complex health interventions.

Thank you

3. Background

It would be useful to explicitly state at the outset that the paper is examining complex interventions and to define what the authors mean by this. For example, reference 1 refers to a Comment paper in the Lancet that is mostly about biomedical interventions, and reference 2 refers to interventions that aim to change health professionals' behaviour. Health interventions are far ranging.

We have stated clearly that the focus is complex interventions and defined these.

4. Methods

The first two sentences of the Methods section (page 5, lines 115 - 117) are similarly a bit awkward, like the example above. Rather than saying what they are not doing and what is similar to what they are doing, could the authors start this section by emphatically and clearly stating what they are doing (a systematic methods overview) and then clearly define or describe what this is?

We have amended this section to state what we are doing and defined this.

5. Note that PROSPERO is repeatedly mis-spelled in the manuscript.

We have corrected this spelling throughout.

6. Page 6, line 129 'The aim of the overview' - again, the first sentence is awkward and makes it unclear to the reader 'The practices undertaken within systematic methods overviews depend on the aim of the review'- yet we have been told that this is not a review, it is an overview. Although I do understand the concepts, the language is clunky and makes reading more difficult.

We have amended this text by removing this unnecessary sentence.

7. It is not until page 6, line 140 onwards - the paragraph titled 'Intervention' that the authors describe the types of interventions they are interested in and what they are excluding. This is important, but it would be good to refer to this broadly in the Background section.
We have referred to this broadly in the background section now.

8. The paragraphs on Intervention development, Refinement, optimization, modification and adaptation are clear. The Search strategies are described in sufficient detail.

Thank you

9. Results page 12, line273 - 274 'PRISMA flow charts were devised to display exhaustive searches within standard systematic reviews.' The next sentence describes the PRISMA flow chart used to search for intervention development in primary studies in 2015-16, but Figure 1 is labelled PRISMA 2009. This paragraph is confusing.

We have re-labelled the PRISMA flow chart in Figure 1 and corrected a confusing typo.

10. Taxonomy of approaches

The formatting of this section makes reading difficult but perhaps this is a function of the journal's online program? The eight approaches are numbered and would be much easier to read if each heading started on a new line.

We have changed the format so that each category starts on a new line.

11. The Results including Tables, are otherwise comprehensive.

Thank you

12. Discussion

'How to use the taxonomy and synthesis of actions' - again this paragraph is a bit awkward, eg page 20, line 430-1 'That is, the aim is not to replace existing approaches with a new approach'. There is some repetition here when the authors re-state the aim of the overview prior to this sentence. Perhaps this can be tightened or edited to be succinct and clear, to guide readers easily as to how they can use this taxonomy.

We have amended the first sentence and removed the second sentence.