Author's response to reviews

Title: Enhancing the scoping study methodology: A large, inter-professional team's experience with Arksey and O'Malley's framework

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Author's response to reviews: see over
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Dear Editor of BMC Medical Research Methodology:

Enclosed is a revised version of our paper, re-titled "Enhancing the scoping study methodology: A large, inter-professional team’s experience with Arksey and O’Malley’s framework." Attached below with this cover letter you will find in italics our point-by-point response to the reviewers’ comments.

Sincerely,

Helena Daudt

Reviewer's report
Title: Enhancing the scoping review methodology: A large, inter-professional team’s experience with Arksey and O’Malley’s framework
Version: 1 Date: 1 June 2012
Reviewer: Maria Grant

Reviewer's report:

Major Compulsory Revisions
1. This is an ambitious paper that has two goals: 1) enhancing the scoping review methodology; 2) the experiences of a large inter-professional team in using the Arksey and O’Malley framework (AOF). However, it is unclear whether the authors wish to enhance the scoping review methodology per se, or enhance the methodology with specific reference to its use by large (possibly inter-professional) teams as per the adjustment referred to on page 12? Acknowledging that this paper has been submitted as a ‘Debate’ within the BMC, neither of these goals is sufficiently explored in a way I would expect within an academic journal.
We addressed this issue by reviewing the objective of our paper (page 3) and making substantial changes throughout the manuscript.

2. Having stated that beyond the Arksey and O’Malley framework there is a lack of a concrete, universally agreed upon definition (page 4), the authors proceed to provide statements from other authors which appear to set out a coherent understanding of what a scoping review is within the context of this paper. This is a missed opportunity to either restate Arksey and O’Malley’s definition or to compare and contrast other published definitions.
We re-stated Arksey and O’Malley’s definition (page 5) and proposed an amendment to it (page 24).

3. Although referred to throughout the manuscript, it is not until page 12 that a
sense of the size of this ‘large’ team (n=12) is given and not until page 16 that an indication is given of how the ‘inter-professional team’ is comprised. The composition of the group could be appropriately explored in the background section on page 4.

We moved the description of our team (page 4).

4. The methodology by which the ‘collective suggestions’ (page 4) of the ‘large inter-professional team’ were collected in drawing this manuscript together is not stated.

We described the collection of our team’s perspectives on page 8 (just before point 2).

5. The authors state that ‘we could not say anything specific’ (page 6) because ‘we underestimated’ (page 7), and ‘we misinterpreted’ (page 7) the methodology and the fact that the likely findings arising from the application of the scoping methodology ‘can typically only offer generalizations’ (page 6). In spite of this revision, our research question demanded a specific set of responses from a methodology that is only intended to offer general snapshots of the literature’s landscape (6). This seems to be the crux of this paper. Merely stating that ‘those undertaking a scoping review need to understand the boundaries of this methodology’ (page 7) and that ‘researchers would benefit from fully understanding how a scoping review works’ is not enough. Please draw the lessons of the writing team together within a coherent section within the manuscript and state the implications for this in enhancing the scoping review methodology.

We revised the summary section (page 23-25 - Summary: Lessons learned), created a table summarizing our results, and highlighted recommendations throughout the manuscript.

6. While acknowledging that the ‘framework did not offer sufficient guidance to assist us’ (page 6), even within the critical commentary, very little is explicitly stated to indicate the ways in which the authors believe the scoping review methodology could be enhanced. I would expect overt statements about what could or should be changed about the AOF. This could be achieved by:

   6.1. An extended narrative within the critical commentary. The six steps of the AOF would be greatly enhanced by concluding each section with a recommendation on how the guidance for the step could/should be revised/expanded upon e.g. acknowledging the teams experience of over extending the methodology.

   This topic has been addressed as discussed above (answer to comment #5)

   Incidentally, it is unclear why the authors decided to extend the seven variables of the AOF scoping methodology to 15 variables/101 subcategories (page 13) thereby resulting in too much data to report. We addressed this issue on page 15 (second paragraph).

   6.2. It would be useful to add an accompanying table summarising current guidance and recommended changes/enhancements. If appropriate, this could bring together recommendations stated elsewhere in the published literature e.g. as acknowledged on page 15 ‘scoping reviews are able to inform policymakers as to whether a full systematic review is needed’.

   We created a table. It is attached to the revised version of the manuscript.
7. Elaboration of the ‘trial charting exercise’ would be better placed on page 12 (when it is first mentioned) than in its current position on page 14. 
*We moved the description of the trial charting exercise to the place where it is first mentioned (page 15 now).*

Minor Essential Revisions

None.

Discretionary Revisions

None.

**Level of interest:** An article of limited interest
**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.

**Reviewer’s report**

**Title:** Enhancing the scoping review methodology: A large, inter-professional team’s experience with Arksey and O’Malley’s framework  
**Version:** 1  
**Date:** 23 May 2012  
**Reviewer:** Danielle Levac  

**Reviewer’s report:**
Overall I think this is a well-written and important paper that could serve to further the discussion and debate as to the role of scoping studies in health care. I think it offers an interesting perspective and that it is ultimately always helpful for others to read of, and learn from, researchers’ experiences undertaking this methodology. I would be eager to see it published but I do have the following issues that I would like to see addressed.

Discretionary revisions

1. The authors use the term ‘scoping review’ despite both Arksey & O’Malley’s and Levac et al.’s use of the term scoping study. Therefore, it would contribute to the literature for the authors to present an argument (that could be cited by others) as to why they advocate for/have chosen the term ‘review’ over ‘study.’
*We opted to use the term “study” and made the changes throughout the manuscript.*
2. The authors could consider removing the citations from other work from their definition of scoping review and writing it entirely in their own words. This would again provide a citable definition for others to utilize or with which to disagree.

*We removed the citations from other researchers, re-stated Arksey & O’Malley’s definition in the background section (page 5), and proposed revisions to this definition (page 24).*

**Minor essential revisions**

1. The authors do not address the issues identified by Levac et al with the 4 Arksey & O’Malley scoping study purposes. It is important to justify why they chose the two purposes as described in their paper, given the issues addressed by Levac et al.

*We addressed this issue on page 9-10, throughout the manuscript, and then on page 23.*

2. Scoping studies do not appraise quality of the evidence reviewed. As such, the reader may be confused as to how the authors can aim to “[provide] health care providers suggestions to improve their practice.” When should findings from a scoping study be used to inform health care recommendations, especially when there has been no critical appraisal of the sources in the scoping study? Please clarify.

*We clarified our research goals throughout the paper and addressed this issue in section 4: Summary-Lessons learned (page 23-25).*

3. It could be argued that some of the challenges identified relating to using a large inter-professional team are not specific to a scoping methodology but are relevant to any research endeavour. Could you be more clear as to how you feel they are similar or different.

*We addressed this issue on page 22.*

**Major compulsory revisions**

1. It is my belief that the authors find themselves in a difficult position because they undertook a scoping study using the original Arksey & O’Malley framework at a time when the updated Levac et al. recommendations were being published. As such, they don’t seem to be in a place to provide a paper that would most advance the field (and which is called for by Levac et al), which would be to comment on the process (challenges and benefits) of using the updated Levac et al framework in practice. The Levac et al open-access manuscript has received many citations and downloads since its publication in 2010, and one could argue (though this is only a hypothesis and certainly not a forgone conclusion!) that most people who are undertaking a scoping study will now be using their recommendations. As such, it is a limitation of this paper that it cannot provide a critical commentary related to their use. To address this issue, the authors should consider the following suggestions:

   a. The authors mention many instances where they agree, and some where they disagree, with Levac et al’s recommendations. As such, readers would benefit from 1) a table summarizing these agreements/disagreements and 2) a table summarizing their own, additional recommendations (i.e. “instances where the
framework can be improved”, “proposals for consideration not yet expressed by others“). They should be clear as to how these either builds on Levac et al or on Arksey & O’Malley. Doing this will clearly continue the linearity of scoping methodology updates (Arksey & O’Malley # Levac et al # the authors). I agree that reaching the same conclusions is important and worthy of note; the particular conclusions that are similar between the two papers therefore need to be highlighted in a summary table. 

A table has been created and is attached to the revised manuscript. The data suggested to be included in two tables has been combined and collated in the attached table.

b. Doing the above would also facilitate the authors in being more specific about the purpose of this paper beyond “contributing to the discussion.” We have also highlighted our recommendations throughout the manuscript and inserted them into the table.

2. I recognize that this is an opinion paper, however, it is still important to provide some information as to how you arrived at and achieved consensus about the recommendations you make within the critical commentary. Are these issues/recommendations the product of the entire research team who undertook the scoping review? We have addressed this issue on page 8 (just before point 2).

3. I’m confused by the authors’ comment that this methodology can typically offer only generalizations and I don’t agree with it. Please expand on why you feel that scoping methods can not provide specific answers to research questions. We have removed this claim after the major revisions we have done.

4. The authors provide examples of how they used the Arksey & O’Malley framework for most of the stages, but they provide the least information related to arguably the most important 5th stage, that of ‘collating, summarizing, and reporting the results’. It isn’t necessary for the authors to repeat their methods probably described in their scoping review manuscript, but it would be of benefit to this paper to briefly outline how they did this step, particularly since Levac et al identify it as the most complex and in need of more information from researchers to describe how they got their results, and that they suggest breaking it up into three steps. It would also be relevant to know the outcome of their scoping review in brief, mostly in terms of how their findings were organized (was it a list of information needs, etc). We have revised section Arksey and O’Malley’s fifth step: Collating, summarizing, and reporting the results including a brief outline of our methods and some of our findings (pages 17-19).

5. I like your strong recommendation that researchers match their research interests with the scoping review method and your suggestion that researchers consider whether it is really the right method for their question. I think this could be strengthened by the authors presenting their definition of a scoping study/review (see above) because, as identified by Levac et al, without further clarification as to definition, purpose, etc, this is difficult to know. A definition is presented on page 24.
6. However, re # 5, I struggle with both your initial and revised research questions as presented in the paper. It seems that the initial question is actually 2 questions (1. what information is provided by HCPs and 2. what information is needed by clients). I think my confusion stems from not being clear as to how this is a scoping question as opposed to a straight literature review question. Scoping reviews differ from literature reviews in that they involve some type of analysis and reinterpretation of the data. The question as listed does not allude to that important element of scoping review methods that distinguishes it from a literature or narrative review. I guess this and the following concerns related to this section of the manuscript stem from not being convinced that the issues really relate to scoping review methods rather than the authors’ research question itself. I also think that it is not just important to consider whether the research question fits with a scoping method, but all stages of the scoping framework. In particular, ‘collating, summarizing and reporting the data’ (in terms of the recommendations provided by Levac et al) offers a lot of potential to do really interesting things with data analysis and interpretation that other methodologies do not, and considering this should also be important in deciding whether you should undertake a scoping review versus another type of review (literature or systematic).

Another example of my confusion with this section as a whole: if, as you say, you wanted to extract data that would tell you something concrete about the information needs of people with cancer, should the RQ not be ‘what are the information needs of people with colorectal cancer’? This seems to link with A&O’s first purpose of summarizing the extent, range and nature of research activity. You could chart for what researchers have identified as the research needs, your analysis could group needs together to highlight which were similar or different, and your outcome could be a list that both summarizes the needs identified and notes the gaps/areas for future research.

In clarifying our goals and making substantive changes to the manuscript, we addressed these questions. Throughout the paper, we speak to them (eg. pgs 7-8 and 20-21) and clarify how our findings point to implications for future research.

7. Please expand on why you “develop[ed] serious reservations that [you] could claim to understand patient information needs”? Was it because there wasn’t enough literature available on this topic? More explanation is necessary as to how this relates to a flaw in the scoping review methodology rather than a mismatch between research goals and scoping methods. It seems like not being able to identify ‘what information was important to patients’ could be because there weren’t any qualitative studies asking that question from which to chart the data. I don’t think a scoping study question should ask a straight qualitative question related to what information is important to patients.

We clarified on pages 7-11 why we could not answer our initial question, what we could have done about it within a scoping study framework, and how we intend on moving forward. We also speak to how, even though we did not answer our initial research question, we met our goals and found the research useful.

8. I strongly disagree with the statement that scoping studies can only answer research questions related to an analysis or comparison of studies. If the authors
make this conclusion they should support it with evidence.
We addressed this issue on pages 7-9.

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 that I have no competing interests.