Reviewer’s report

Title: THE EFFECTIVENESS OF RESEARCH IMPLEMENTATION STRATEGIES FOR PROMOTING EVIDENCE-INFORMED POLICY AND MANAGEMENT DECISIONS IN HEALTHCARE: A SYSTEMATIC REVIEW

Version: 0 Date: 04 May 2017

Reviewer: Michael Wilson

Reviewer's report:

This review addresses an important topic and builds on the scope of previous reviews in the area most notably through its second aim for describing factors associated with effective strategies and the inter-relationship between these factors. The methods were comprehensively reported (and could perhaps be streamlined if content needs to be cut). I assessed the review using the AMSTAR tool and found it receives a 8/10 (with the question about publication bias being not applicable given that the review didn't include a statistical analysis), which would be considered as a high-quality review. The limitations identified through this tool are that the search was limited to articles written in English and a list of include and excluded (i.e., at the full-text assessment stage of the review) articles was not provided. The latter can be addressed by making available a list of the studies excluded at the final stage of reviewing (i.e., where 94 articles were assessed). In addition to these minor limitations, I note several areas below, which would benefit from clarification. I don't believe any of these are major limitations, but nonetheless I think they should be addressed in a revised version to strengthen the paper. I have summarized these according to sections in the manuscript.

1. Abstract
   - Minor point: consider a term like digital materials instead of CD-ROM in the results to make it sound more contemporary (seems like few use CD-ROMs for storing digital materials, even if that was the finding from the original study)

2. Background
   - It seems odd that the lead sentence is focused on policymaking in a particular domain (public health) when the paper seems to be framed more broadly. Consider revising terminology and paper(s) cited for this sentence.
   - This may be personal preference, but I suggest using the term evidence-informed decision-making. The 2nd paragraph rightly describes the many factors that decision-makers need to consider, which should be reflected in the term used (i.e., it is unrealistic to think that
decisions can be exclusively based on research evidence given myriad other factors that influence decisions).

- The scope and terminology outlined in the 3rd paragraph seems contradictory at times, and this carries over to the methods, which I describe separately for that section. The scope of the paper seems to be focused on policy and management decisions (as per the title and aims), but the third paragraph and parts of the methods use terms that point to different things. For example, in the 3rd paragraph of this section, the first sentence relates the issue to healthcare practice, which many will take to mean clinical decisions and not the types of decisions focused on in this paper. The 2nd sentence similarly uses this term. While seemingly minor, this and the terminology issues raised below for the methods section should be addressed and reconciled throughout the paper.

3. Methods

- The issue with scope of the paper emerge again under the sub-section labelled 'population' under the description of study selection. It's stated that the focus of studies had to be on decisions at the managerial, executive or policy level of healthcare organizations. Focusing on healthcare organizations (which I take to mean hospitals and other such delivery agencies) seems to exclude those working in government institutions (e.g., ministries of health or those that manage systems of care in regions within a state/province). If so, I find this scope to be limiting and not reflective of the framing presented in the title and aims, that point to a focus on policy. Many (including me), would consider this to include policies at the organizational, regional and/or system level (depending on the country context in which you work). Moreover, the sentence that follows indicates that the focus was on improving population health outcomes (which seems appropriate), but would it not be more accurate to indicate that it's about strengthening health systems to improve population health outcomes if at least part of the focus of the review is on policymaking? Lastly, under the description of interventions, it's stated the strategies are defined as methods to promote the systematic uptake of province clinical treatments, practices, organisational and management interventions into routine practices. This again sounds very clinical, and I would have expected a paper about healthcare management and policy to frame this as being incorporation into decision-making processes to strengthen health systems (or something like that).

- The rest of the methods were great, in particular the last paragraph that describes the qualitative coding process.

4. Results
- The list of articles excluded at the stage of full-text reviewing should be made available in order to be transparent.

- Under characteristics of included studies (1st paragraph). Should it be "Three studies evaluated the effectiveness of research implementation strategies for promoting evidence-based policy and management decisions about health systems"? or healthcare systems?

- Under participants and settings: The list of countries in which the studies were conducted includes "one international study" but the list includes many countries. Does this mean a multi-country study? Please clarify.

- Typo - it should be policy briefs (without an apostrophe) under research implementation strategies.

- Could the implementation strategies identified be summarized in a table with their key features? This would give readers more insight into what was done. Recognized that this could be a space limitation though.

- I like that the results are presented by level of outcomes. Makes for a clear synthesis of the findings. However, it seems like a lot of text for three studies and I think the key points could be better summarized in a table that lists the rows as the interventions and the columns as the four levels of outcomes. This could be accompanied by 1-2 paragraphs pointing out the most important take-aways from the table.

- Line 26 - Authors doesn't need an apostrophe

- How are small-scale fisheries and bio-fortification healthcare decisions? These findings don't seem to fit the scope of the review.

- Could it be clarified whether this review includes the studies in the previous reviews by Murthy (citation 36) and Perrier et al. (citation 38)? It seems like it should include all of the studies they had, plus the ones relevant to expanded scope in this review. Also, it seems like important studies have been missed. For example if policy briefs and dialogues were considered, why was this paper not included - http://www.who.int/bulletin/volumes/92/1/12-116806/en/. Also this study (which to be transparent, I wrote) is not included, which would seem to meet the criteria for the review (at least for the thematic analysis since it's not an assessment of effects) - https://health-policy-systems.biomedcentral.com/articles/10.1186/s12961-015-0066-z. There are also no studies or papers about conducting rapid reviews/syntheses for policymakers, despite there being several papers published on this (again to be transparent, one of these is authored by me). I gave my recommendation of major revisions primarily based on this issue as I think further clarification is required for why these seemingly relevant studies were either not caught by the searches, or included in the review.
- The write-up of the thematic analysis has lots of great information. This is very helpful. But the possible gaps in included studies needs to be addressed.

5. Discussion

- While the point about simple implementation strategies seem intuitive on the surface, I think a more nuanced argument could be that what's needed is a menu of options that could be drawn on and tailored according what the situation calls for. For example, there could be some relatively straightforward policy issues that only require a simple approach to support implementation of research evidence, but others are much more complex and likely require a tailored strategy consisting of one or more strategies based on the specific context.

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