Reviewer’s report

Title: Evaluating and optimizing the Consolidated Framework for Implementation Research (CFIR) for use in low- and middle-income countries: A systematic review

Version: 0 Date: 19 Dec 2019

Reviewer: Laura Desveaux

Reviewer's report:

The authors present a systematic review of the use of the Consolidated Framework for Implementation Research (CFIR) in low- and middle-income countries and aim to evaluate the utility of the overall framework and its constructs in such settings. The authors identified several studies and contacted authors for additional data on usefulness of constructs. Overall, this is a well-written paper that addresses an interesting topic. My comments below are meant to enhance the readability and transparency for the implementation science audience.

I only have one point of feedback which I feel will considerably strengthen the paper and its relevance:

Page 6, final paragraph - I would encourage the authors to include the research questions across included studies, categorized according to stage of implementation (perhaps report this in a table for user friendliness). This will serve two key aims: (1) provides the reader with immediate context regarding the questions perceived to be relevant in LMIC, and (2) provides the authors with the opportunity to triangulate these results with the suggested new domains to facilitate a more nuanced discussion of the differences in needs between LMIC and HIC (comparing to the earlier review by Kirk et al).

Additional minor comments

Page 4, line 53 - Include the exact dates of the search (i.e., if the search was conducted from inception to April 5th, 2019). Also include information on who constructed and conducted the literature search (i.e., was this an information specialist)?

Page 5, lines 31-34 - regarding the use of conference abstracts- this information should be included in the section detailing your search strategy.

Page 5, lines 49-52 - This text belongs in the analysis section. Additional details on how the systematic review results and survey results are synthesized should be included. If surveys used open-text boxes, how were they analyzed or coded?

Page 6, line 11-17- The authors state the included studies reported results from 25 LMIC. Reporting the number of studies per country as currently done is confusing as it is hard to
evaluate the degree of overlap in reference to the number of included studies. A clearer approach would be reporting the respective numbers studies that are conducted in a single country only, following by a statement that n=7 studies including multiple countries which then lists those countries in brackets.

Page 6, line 58 - "only 6 (18%) studies reporting linking outcomes to specific CFIR constructs" - were these the studies all part of the n=20 post-implementation studies? This detail is relevant in light of the guidance of when and how to apply the CFIR framework, as highlighted by the authors.

Page 7, lines 9-11 - "Four studies (12%) reported neither the domains nor the constructs used" - I am confused by this finding. Can the authors provide more detail on how the CFIR was applied in these cases? How did these studies use the CFIR to guide either design, implementation, or analysis (as per the inclusion criteria)? If this is unclear, I would suggest reaching out to corresponding authors as it seems like these studies should have been excluded?

Page 7, line 27 - Please indicate how many authors were contacted, and how many emails bounced or had no response. It would also be interesting to note how this corresponds to the publication date from the respective study. Additionally, did you use author contact information from manuscripts or was there an attempt to identify most recent contact information?

Page 7, line 36 - Please report the exact n for each study respectively (if both are not n=5).

General comments

1. Please comment on how agreement was assessed in title and abstract screening and data extraction.

2. Please comment on why risk of bias was not assessed in this study and the rationale behind it.

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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