Reviewer’s report

Title: Measuring Research Use in Healthcare Organizations: A Systematic Review of Reliability and Validity of Research Utilization Instruments

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Reviewer: Luciana Ballini

Reviewer’s report:

Major Compulsory Revisions

I believe that a systematic review on instruments measuring research utilization is indeed a very important piece of work, capable of giving an important contribution to the science of implementation, as the authors rightly point out in their introduction. I have therefore read the article with great interest.

I must state, as a preface to my comments, that I am no expert of the methods and theories the authors have used to inform and structure the analysis of their systematic review.

My comments will therefore be limited to requests for clarification, as the article is targeted, and would be of interest, to field experts and non-experts (like myself).

Abstract

I found it quite cryptical and would appreciate if objectives, methods and results were defined in a more plain language.

I understood that validity, as a study inclusion criteria, referred to the instrument used in the study and not to the study. Is that correct? If so I would suggest stating first criteria for including studies and criteria for considering instruments.

The authors have used “psychometric properties of instruments” as object of their review. Could they briefly outline what other properties could have been considered, and explain reasons for their choice / exclusion (how do psychometric properties compare to other properties, if they exist).

Page 8, last paragraph:

"we defined research utilization as the use of research-based (empirically derived) information"

Defining utilization as the use seems a bit tautological to me. If one has to grasp whether an instrument is actually measuring what it should measure it might be better to keep to the other definition provided by the authors (the process by which specific research-based knowledge (science) is implemented in practice). This is particularly important as the authors later on criticize the studies for the lack of construct clarity in defining research utilization."
I do not completely understand the point of Table 3, which lists implementation’s interventions and their impact (direction of effect), but refers to them as independent variables. To me it seems that purposefully introduced interventions (e.g. reminders or opinion leaders) are mixed up with pre-existing and spontaneous characteristics of the environment (e.g. attitude towards research, size of organization, ) which are effect modifiers. Objective of Table 3 needs to be clarified.

The paragraphs reporting instruments according to number of sources of validity evidence resulted quite obscure to me, as they gave no insight on the characteristics, objectives and “functioning” of the instruments. Authors will have to oblige to more explanatory text.

In the discussion, some of the conclusions seem similar to the conclusions of review on effectiveness of implementation interventions, with respect to the naming of the instruments / interventions, methodological problems, lack of theories. Maybe they would like to comment on this.

The paragraph “Instrument Hierarchy” offers a wide range of examples, but does not aid comprehension as it is very long and dispersive - it needs to be more neatly organized.

Conclusions are clear, but the analytical process leading to the conclusions is not at all clear to me.

The paper certainly needs to be reviewed by an expert of the field, and my comments can be useful if it is to be intended for a larger audience.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests