Reviewer’s report

Title: How the study of networks informs knowledge translation and implementation: A scoping review

Version: 0 Date: 01 Sep 2018

Reviewer: Bianca Albers

Reviewer's report:

Dear Stephanie Glegg and colleagues,

In your manuscript, you are covering a topic that is of great interest to me and - I believe - of great value to the field of KTI. I have a couple of comments that I hope will help to inform the next iteration of your work. Below I first list general recommendations for what I think needs to change for this to be ready for publication. Following these general comments, I have listed 'line-specific' comments.

GENERAL

- The language used to write the article is at times highly abstract, and filled with SNA jargon, which makes it difficult to read this article. The field of SNA of course does not make this an easy job for you - the terminology is very technical - but you need to tackle this and work more with translating the knowledge in the article into plain language - unless you want this to be for the SNA scholars community only, which I don't think is the case.

- Your results section is very brief and left me with a question of 'Okay, what is the essence in all this?'. When I continued reading, I found a lot of information in the discussion section that belongs to the results section. On top of moving these parts to the results, I also think you will need to dig deeper into describing some of the 'trends' in the materials analysed - I am still in doubt about the key take aways from all the literature you have reviewed, which tells me that a key translational job has not been fully completed.

- If you reorganise the article in this way, this should make it possible to also focus the discussion more - in its current version you spend a lot of time on reviewing the details in your materials still. I am missing a bigger discussion of how - if SNA's full potential was used - this method could help improve both the science and practice of KTI. I believe that will require you to include other KTI literature to a greater degree than you do at the moment and to embed your own piece more within broad discussions happening in the field right now (moving more to a systems-focused understanding of implementation processes etc., see e.g. Braithwaite et al., 2018).
These are my three key comments - you will also see them reflected in the more detailed feedback listed below.

Kind regards
Bianca Albers

LINE-SPECIFIC COMMENTS

Line 59: You are using the term 'science of knowledge translation' here and 'implementation science' above. If you are assuming that these are totally identical concepts and you use them in this sense, then probably stick with just one of them (and it looks as if it should be KT). If these are used based on different meanings, then this needs to be commented on.

Line 70-72: This is a description of SNA that does not make it easy to understand its essence. What is social structure? What is position? And what does it mean to influence actors? You will need to flesh this out more and link it stronger to KT so it becomes clear why it is interesting to discuss them together.

Line 83-84: Two things: This requires a reference (is it documented that planned behaviour theory is one of the most prevalent theories used? And: Why is this interesting? Where are the differences btw this and the SNA paradigm? This needs to be explained if this introduction is to remain relevant.

Line 88: The section beginning in line 88 and ending in line 106 does require some work to ensure that it is clear to readers what has been done and why this piece is necessary. What I do not understand at this stage is:

- How exactly is this different from what has been produced already?

- Where do you put your exact - different - focus?

Also note that there are other more 'recent' systematic reviews that should be mentioned here and seem to be missing in the list of references. E.g.: Sabot et al., 2017; Zhang et al., 2018 (obesity focus); McCurdie et al., 2018

Line 112-115: In outlining these objectives, I am missing a reference to and specification of the areas within the health sector that you have covered. This also applies to research question 1 below.

Line 145-148: Does this mean that you only included studies that measured outcomes at the individual level? If not, then probably explain this in a slightly different way as it gives me the impression that your focus is the individual.
Line 189-193: With multiple 'of which' in one sentence, this sentence is rather complicated and should be simplified.

Line 203: Something wrong here with sentence / grammar.

Line 203/204: I have difficulties getting my head around these statistics for 'describing networks': Are the eight / two / fourteen studies totally different studies or is their overlap? Are you telling a story of "a majority of studies did this", or are you telling the reader sth different? This is hard to guess based on your description.

Line 212: I would like to see some examples here of what type of hypotheses the included studies examined: What was generally anticipated with regard to the association / correlation between actor / network attributes and the use of evidence / research findings in clinical practice?

Line 233: Your table 3 is very complex, and may need more guiding text around it so readers have a chance to get the lay of the land. Your text is one step in that direction but the detail with which you describe the use of SNA and its different components in the table remains pretty much uncommented in the text, and I believe that needs to change so the essence of the table also is put forwards in the text.

Line 234: You are very descriptive here and just list theories, which many will not - or only partly - familiar with, which makes it difficult to get a sense of trends in the use of theories. It is clear which of these were most frequently used but how? I would suggest to provide the reader with more insights here.

Line 238: The name of this gentleman is Jürgen Habermas. Just call this Habermas's theory of communicative power

Line 242: This refers back to my above question - this means the above theories were not used for analyses but for sth different whereas what you list here is focused on approaches supporting analytical processes?

Line 266-269: For readers with no knowledge of SNA, this is a highly abstract sentence that does not sufficiently open up the potential of SNA to the reader. What could a network intervention be? How do you target network gaps? What does it mean to enhance KT processes or adherence? The mission of SNA - to examine the relationship between the qualities of social networks and the quality of KTI processes - remains invisible here because of the highly abstract language - describe concrete network attributes and how they potentially could affect KT processes and aim to bring this article more to life through clear examples. This critique applies to the remainder of this chapter, which I would recommend to rewrite with a stronger focus on 'translating the knowledge for practice' - otherwise your article will only be accessible / understandable for SNA specialists who know the terminology by heart. See for example the sentence in lines 276-278 - this is another example of a highly abstract sentence that would gain from being simplified / operationalised.
Line 294: I would suggest to also discuss the challenges implicit to self-reported data - especially when collected with a certain delay and relying on participants memory of who they interacted with when and how often. Not sure if there were any studies using technology that made it possible to build on data collected 'in real time' and / or observer based data collection was used?

Line 301-304: Okay this refer back to my above comment. Maybe go a bit deeper on the challenges inherent to self-report data.

Line 321-328: This the type of understanding I am looking for - but to me this belongs to the result and not the discussion section. In general, I would suggest to move parts of the discussion - the sections where you provide an overview of what was on the material - to the result section, probably deepen your description of these sections and then focus on really 'discussing' different aspects of SNA use here instead.

Line 337-339: This refers to one of my comments above - so this is not because you only included studies reporting outcomes at the individual level?

Line 343-344: derivation of network properties from .... what? What is it exactly you are suggesting would be possible but is not done? Make this clearer. What exactly is it that I as a KTI person can learn from the properties of the networks in which I am operating? What is the potential or improving KTI practice?

Line 354: QAP - acronym – explain

Line 356-358: And the value of this would be?

Line 362-365: Again, I think part of this belongs to the results and not the discussion section. Next, you need to explain what this means: With this trends in mind, what are the typical 'stories' that are told about the relationships between networks and KTI practice, and what is it that we seem to know too little of because certain analyses are not conducted?

Line 370-371: What does this mean?

Line 376: Belongs to result section

Line 377 - 379: To the degree the more advanced analyses have been used elsewhere, you should add references to such studies and use them as a way to illustrate the potential of SNA for an area like KTI

Line 395-398: Be careful with using a lot of SNA jargon in a single sentence - this can be described i a much more 'plain language' kind of way
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:

Not suitable for publication unless extensively edited

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