Reviewer's report

Title: Social Networks and Implementation of Evidence-Based Practices in Public Youth-Serving Systems: A Mixed Methods Study

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Reviewer: Alan J Daly

Reviewer's report:

The work is exploring an important topic around the diffusion of evidence based practices (EBP) within mental health organizations. This study provides an important contribution not only for its focus on EBP in mental health, but for the mixed methods approach to investigating phenomena. The paper is clear, well grounded, and provides important implications for how EBP are diffused through systems. I especially valued the way in which the authors link together the multiple methods in creating a coherent reporting of evidence.

I have included in the next sections some questions and areas for further consideration by the authors as they work in making this fine manuscript even stronger.

General comments

1. The mixed methods of this study are a real strength of the work!
2. The biggest limitation of this study is the size of sample (at least for the quantitative portion). The authors are to be credited for acknowledging this fact up front.
3. The authors are to be commended on their qualitative methods--the description of the qualitative methods was thoughtful and carefully outlined. In addition, the authors provided rich, thick descriptions of the data.
4. The authors do an admirable job of acknowledging the limitations of the study and as such provide additional insight into the work

Major Compulsory Revisions

Methods

1. I had a question on the relation upon which the network was created—the authors indicate they used ‘relied to for advice about whether and how to use EBPs for meeting…” It seems that this may be tapping two forms of advice—whether to select a particular and how to use—did the authors use the qualitative data to better understand if this relationship was capturing ‘both’ aspects of the advice relationship or whether respondents focused more on one or the other.
2. I found the choice of network measures to be appropriate for the study. However, I was left wondering--there are a number of commonly used measures
that could be used in network analysis. The authors have selected a number of very typical network level measures (density, distance), which seem appropriate. However, I would have appreciated a bit more clarity on what theoretical/research question/empirical basis that the authors privileged those measures and not for example network ‘centralization’.

3. I have the same question regarding ego level measures. More detailed grounding as to why those measures were selected, when one might expect others might be used such as ‘betweenness’ given one could consider implementing EBP as a type of innovation? I also wondered about ‘homophily’, was there some reason to hypothesize that leaders would select similar others? Once again, I find these measures reasonable, but would value a bit more on what drives the selection—I think this is particularly useful for readers as the application of social networks is relatively new in this area.

4. In regard to the regression models—why in and outdegree and not some other network measure—it seems a reasonable choice, but one could also make arguments that one or the other or indeed other measures may be important to consider such as ‘closeness’ or ‘betweness’. The authors do provide some grounding initially, but reconnecting to that work would assist the reader in really understanding this unique method.

5. I also wondered if other additional variables were included in the model? The authors indicate they collected some additional demographic data as well as homophily scores, were those also included in the models? I realize the authors are bumping up against statistical power issues. It seems the models are pretty parsimonious, but as such additional acknowledgement is warranted as the models may well be missing some other important predictor variables.

6. As for in and outdegree it seems these may be tapping very different takes on ‘status’. Would one have any reason to think that these qualities may be associated with different stages, not just both for every stage? As a reader I would value some more clarity on why both are included in the models as predictors?

7. In and out degree are often highly correlated (as can be the case in many other ego level measures), as such how did the authors account for this in their models.

8. How did the authors handle missing network data?

9. I also wondered if the authors assessed the ‘strength’ of the relationship between actors and if so was that related to outcomes. This may be of interest as the authors further point to ‘brokers’ of knowledge.

Results

1. It would have been helpful to have the nodes in the sociogram sized by in and outdegree as those were important in the overall results (I realize this requires creating an additional sociogram, but it would provide added value to the thoughtful analysis.

2. Unfortunately, the color of the nodes is not apparent in my copy of the article—can the authors use greyscale to assist readers who may not have
access to color copies of the study.

3. The finding of ‘indegree’ being associated with implementation seems not very surprising given the network question was about ‘how to use’ EBPs for mental health needs. What is a bit surprising is that it doesn’t predict higher stages of implementation I would expect this would be further discussed in the discussion section.

Discussion

1. The point around ‘opinion leaders’ is a good one, there is also some work to suggest that opinion leaders are represented by more than high indegree, I would value some acknowledgement of the limitations of assessing ‘opinion leaders’ just using measures of indegree.

2. I really value the discussion around the idea of building ‘influence’ networks and examining existing networks as being supports or constraints for implementation. I think that there are also some additional issues to be considered. For example, well connected networks can move not only ‘good’ information related to implementation, but also these networks can also move information that runs counter to implementation—the ‘dark side’ of social capital if you will. How might this play out in this work.

In sum, this work will make a fine contribution to the literature after attending to some of the issues raised above. I found the work to be particularly insightful as related to the general field of implementation.

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 have no competing interests in regard to this manuscript.