PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (http://bmjopen.bmj.com/site/about/resources/checklist.pdf) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

| TITLE (PROVISIONAL) | iLead- Evaluation of a generic implementation leadership intervention: A mixed method pre-post intervention design |
|---------------------|--|
| AUTHORS | Richter, Anne; Lornudd, Caroline; von Thiele Schwarz, Ulrica; Lundmark, Robert; Mosson, Rebecca; Eskner Skoger, Ulrika; Hirvikoski, Tatja; Hasson, Henna |

VERSION 1 – REVIEW

| REVIEWER | Clayton J. Shuman |
|------------------|---|
| | University of Michigan, USA |
| REVIEW RETURNED | 20-Sep-2019 |
| |] _• |
| GENERAL COMMENTS | This is a paper reporting an evaluation of the iLead intervention among healthcare managers in Sweden. Leadership development for implementation of evidence-based practices is an important area, but is relatively understudied with few interventions available. The authors evaluate the intervention as described in their previously published protocol as well as a version which is "contextualized." As an implementation scientist with interest in the role of formal leaders in implementation, I read this paper with keen interest and commend the authors on their work. I have a few comments on the manuscript for the authors to consider. 1. The authors refer to their published protocol in multiple places rather than describing the intervention. It would be much easier for the readers if the authors included more detail about the intervention/study rather than sending the reader back to the protocol. Also, some protocols change and evolve over time. I would appreciate knowing exactly what was done, not what was planned. The intervention description is only 3 sentences. |
| | 2. Significant detail about the sample is missing. It is unclear if the participants are managers of units, departments, teams, etc. Also, what type of area do they manage (nurses, pediatrics, human resources, research, ambulatory, tertiary, etc.)? What is their span of leadership? Do they manage multiple groups? Are they middle or frontline managers (I see "line managers" in a few places)? What is senior management? Use of the terms "managers" and "senior managers" without sufficient description makes it very difficult to understand who participated in the study. |
| | 3. Table 1 formatting needs revision. I was unable to read column1. |
| | 4. The "contextualized" group is unclear. Why was group 2 mandated to take the training? The requirement to participate is an important component to address in addition to the "contextualization." |

| 5. Description of stakeholder involvement in intervention development is brief and lacks detail. How many were involved? How were they involved? |
|--|
| 6. The authors describe their intervention as improving "generic" implementation leadership. This can be confusing because implementation leadership is a more specific or focused from of generic leadership. The authors should make it clear that they are interested in focused leadership on implementation but not specific to an implementation effort. |
| 7. It's nice to see multilevel models. Is it possible to provide more details about the models, such as how much variance in the constructs are accounted for at level 2 and if this variance is significant. |
| 8. Some paragraphs are very long and difficult to get through. I suggest revisiting these long sections and either slimming them down or breaking them up. |

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1 (Reviewer Name: Clayton J. Shuman, Institution and Country: University of Michigan, USA Please state any competing interests or state 'None declared': None declared)

Reviewer comment 1: This is a paper reporting an evaluation of the iLead intervention among healthcare managers in Sweden. Leadership development for implementation of evidence-based practices is an important area, but is relatively understudied with few interventions available. The authors evaluate the intervention as described in their previously published protocol as well as a version which is "contextualized." As an implementation scientist with interest in the role of formal leaders in implementation, I read this paper with keen interest and commend the authors on their work. I have a few comments on the manuscript for the authors to consider.

Authors' comment: Thank you for your kind words! We value the time you have put into reading and providing helpful comments to improve our manuscript.

Reviewer comment 2: The authors refer to their published protocol in multiple places rather than describing the intervention. It would be much easier for the readers if the authors included more detail about the intervention/study rather than sending the reader back to the protocol. Also, some protocols change and evolve over time. I would appreciate knowing exactly what was done, not what was planned. The intervention description is only 3 sentences.

Authors' comment: We have added a supplementary file including more details on the intervention content and the pedagogical tools used. In the supplementary file the intervention is described as it

was performed so this file will give an accurate picture of the intervention in terms of what was done. Hopefully the reader will now receive all relevant information in order to understand the intervention. Thank you for pointing this out.

Reviewer comment 3: Significant detail about the sample is missing. It is unclear if the participants are managers of units, departments, teams, etc. Also, what type of area do they manage (nurses, pediatrics, human resources, research, ambulatory, tertiary, etc.)? What is their span of leadership? Do they manage multiple groups? Are they middle or frontline managers (I see "line managers" in a few places)? What is senior management? Use of the terms "managers" and "senior managers" without sufficient description makes it very difficult to understand who participated in the study.

Authors' comment: Thanks for this comment. We realized that we have been too brief when describing our sample. We added more details on the participants in the method section, clarified what we mean by line managers and senior managers as well as tried to use the terms more consistently.

Reviewer comment 4: Table 1 formatting needs revision. I was unable to read column 1.

Authors' comment: We have re-formatted Table 1, so that all columns are readable. Sorry for this miss.

Reviewer comment 5: The "contextualized" group is unclear. Why was group 2 mandated to take the training? The requirement to participate is an important component to address in addition to the "contextualization."

Authors' comment: Thank you for pointing this out. We added additional information to explain the contextualized group (group 2) in the method section, which clarifies the mandate to participate of group 2. The major difference between the two intervention groups, related to the mandate to participate, was that second group's participation was initiated by their senior management (hence, first line managers were able to set aside time for the intervention). Whereas line managers in group 1 initiated their participation themselves. This also meant that their senior management did not set aside time for the line managers to participate in the training. These two ways of how first line managers enrolled in the training was also mirrored in the attrition rate. Managers from group 1 dropped out to a larger extent than managers from group 2. Their explanation was that they had to prioritize day to day business and therefore were not able to continue with the training.

Reviewer comment 6: Description of stakeholder involvement in intervention development is brief and lacks detail. How many were involved? How were they involved?

Authors' comment: We added additional detail on how we involved the different stakeholder groups (i.e., researchers focusing on leadership and implementation, practitioners working with implementation as well as senior management and first line managers, who are the target group of

the intervention) through the COP process (a structured brainstorming process). We published a book chapter that only focuses on the COP process and that uses the iLead intervention as a case, which is why we guide interested readers to reference 39.

Reviewer comment 7: The authors describe their intervention as improving "generic" implementation leadership. This can be confusing because implementation leadership is a more specific or focused from of generic leadership. The authors should make it clear that they are interested in focused leadership on implementation but not specific to an implementation effort.

Authors' comment: Thank you for highlighting this source of confusion. While other interventions target a specific implementation object/effort [e.g., 1–3] and the leadership related to this implementation effort, our intervention was designed to be applicable for all kinds of implementation objects/efforts. Meaning, the training is still implementation-leadership specific (compared to general leadership training initiatives) but the implementation leadership training is relevant for all kinds of implementation objects. We tried to be more specific in the first paragraph of the background section in order to clarify what we mean by generic.

Reviewer comment 8: It's nice to see multilevel models. Is it possible to provide more details about the models, such as how much variance in the constructs are accounted for at level 2 and if this variance is significant.

Authors' comment: We have added ICCs and pseudo R^2 for level 1 and 2 in the tables to provide a more detailed picture. It is not possible to significance test Pseudo R^2 , however the deviance can be used to understand if adding a predictor makes a significant contribution to the model.

Reviewer comment 9: Some paragraphs are very long and difficult to get through. I suggest revisiting these long sections and either slimming them down or breaking them up.

Authors' comment: We have now edited the text to improve readability.

VERSION 2 – REVIEW

| REVIEWER | Clayton Shuman |
|------------------|---|
| | University of Michigan, USA |
| REVIEW RETURNED | 03-Dec-2019 |
| | |
| GENERAL COMMENTS | Thank you for addressing my comments and providing additional detail and clarity where needed. I wish you the best of the luck and appreciate your contribution to the science. |