**Reviewer’s report**

**Title:** Developing a framework to evaluate knowledge into action interventions

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**Reviewer:** Rebecca Johnson

**Reviewer's report:**

This paper is about: developing an evaluation framework to evaluate the K2A model in Scotland

Its key strengths are: It is pragmatic and rooted in practice and aims to cover the key issues associated with translating research evidence into public health practice in local authorities.

It needs improvement in: The manuscript would benefit from being restructured to follow a traditional research article format. For example, there are some components of the paper that are in the methods section that would normally be in the background, some parts of the background that would normally be in methods and some aspects of an intro and background that I would expect to see but have not seen in this manuscript.

Because of the structural issues and lack of clarity in precisely what this particular paper was aiming to demonstrate to readers, I found it difficult to follow.

I have made some comments below which I hope will help the authors to improve the structure of their paper, which can then further illustrate the key messages from their research which I do think have merit to the BMC HSR readership. Following the structure of other similar BMC articles may be useful in helping structure this paper.

I appreciate the challenge of writing a non-traditional paper eg when the results may be the development of something rather than traditional quantitative or qualitative results, which is why I have tried to be as specific as I can be about suggestions for improving the structure of the paper. However, this is why it is vital to clarify what this paper is about and what it will tell the reader, how the results were achieved, what they were, and what that means in the wider context.
I would also add that there are some grammar and style inconsistencies in the paper and particularly in the references section that need to be double checked and corrected by the authors.

Some areas for improvement:
The title: I don't know that the paper is answering the question posed here, as the paper describes the development of the evaluation but not a testing or result of a knowledge into practice case. It might perhaps read something like: 'Developing a knowledge to action evaluation framework' or 'developing a framework to evaluate knowledge into action interventions'.

In the abstract:
This sentence doesn't make sense and seems incomplete at the end:
"Methods: NHS Education for Scotland (NES) and Healthcare Improvement Scotland (HIS) have developed a knowledge into action (K2A) model which aims to support the translation of knowledge into frontline practice, planning and policy in Scotland's health and social care."

In the methods, it would be helpful to describe and differentiate the k2a model from the evaluation framework that is being developed in the paper.

In the results section they state it is an adapted version of contribution analysis but do not say what that is - some further description of contribution analysis would be helpful here. Even just a word or two as it is the abstract.

Should the following sentence be in the methods section? 'Routinely collected data were combined with evaluation and feedback to provide assessment.'

Overall the abstract needs a lot more clarification to be ready for publication - the distinction between K2A and the work being undertaken for this study eg is this paper testing an evaluation framework for the K2A model? If so should it have a name? This isn't quite clear in the abstract yet.

Main body -
Background
Lines 12-15 are the authors talking about laying out their evaluation approach, or the approach they used relaying on contribution analysis? It isn't clear.
Please explain what contribution analysis is and how it is 1) appropriate for the development of this evaluation framework 2) how it has been used/adapted here. In the paper this is touched on eg on page 5 lines 1-6 the authors begin to expand on it but then do not say anymore about it. As this informs the methodological approach, please describe in greater detail.

This just doesn't read like a typical background - some components are out of place a bit and could benefit from some manipulation eg 'in this paper we will… at the end of the background/introduction just before methods section eg around line 36. Otherwise it is hard to follow what exactly the paper is going to talk about and where it is going to go.

There is no citation for the K2A model or it has not been made clear. When and by whom was it created? How long has it been in existence? Presumably this paper is describing the evaluation of K2A not K2A as a model? This is not yet clear.

Research questions should not ideally be in the methods section, in a manuscript they should be presented at the end of the background section eg in this paper we aimed to..first, second, third. I don't think all the RQs for the project need to be in this paper - perhaps this is part of the issue of clarity. The paper might benefit from focusing only on RQ 'C'.

The background section does not include much background on previous literature in knowledge exchange models, knowledge mobilisation or any of the theory or recent work around knowledge exchange and knowledge mobilisation, though there is some; it is heavy on the background context of NHS Scotland and its overall programmes - this could do with some summarising and trimming. Previous relevant academic literature should be clearly cited and contextualised in the intro and background in addition to the local context in which the research was under taken.

Methods

The methods section includes questions that aren't being answered by this paper, and a section on a literature review that is not the main focus or hasn't yet been described - so this literature review should inform the background section of the paper. Is the literature review part of the development of the evaluation? This is not as clear as it could be yet.

The method section might benefit from a more traditional structure in general. Currently it reads more like a report than a manuscript. There is a literature review, a set of interviews with two types of interviewees and then the testing of the evaluation framework. However the set of interview methods are not described, and there is not a particular approach described for the 'further refinement and testing'.
The specific approaches and techniques that are mixed methods in this paper are not clearly defined or described. It looks as though you have used a sequential explanatory design (Creswell 2009) but you have not indicated this or cited any mixed methods core material in your paper, though it has been mentioned in the background that mixed methods were used.

I don't get a strong sense for how the framework was to be developed in this methods section. The section on the literature review moved into the development of the framework but didn't describe the interviews you undertook ('consultation with key NHS staff involved in the delivery') The methods of interview eg approach, recruitment etc need to be described.

Pg 7 lines 28 to 36 begin to describe how the evaluation framework was developed but there is really on one sentence that highlights this. A more in-depth description would be useful, as the paper claims to be about developing the evaluation framework.

"In order to develop the evaluation framework, the research team worked with NES and HIS to establish the framework for two key projects as a proof of principle, and to help start to design suitable indicators. These are described in more detail below."

But then you move on to results. This would be okay to do so long as the reader is prepared for it, which I was not. This still feels like methods should be explained before moving concretely into what you found.

Results
The results section states that all three components were drawn together and so I would see it as mixed methods integration (and potentially an interesting one at that). The mixed methods analysis component, (which should also be described in the methods section) is missing. Please add this.

You skip over what was found in the literature review - the 163 publications identified in the methods section should be in the results section, at which point it would be good to identify some key literature you found. This is if the main focus of the paper is the development.

This paper has potential, and has some interesting points throughout, but requires substantial clarification of the aims and objectives of the paper, and subsequently a following through with those aims and objectives throughout the reporting and packaging of the evaluation tool itself.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
Unable to assess

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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Not relevant to this manuscript

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