Author’s response to reviews

Title: Implementation of health promotion programmes in schools: An approach to understand the influence of contextual factors on the process?

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"Implementation of health promotion programmes in schools: how do interactions between contextual factors influence the implementation process to result in variable programme impact?"

Dear Editor,

We are pleased to send you our revised manuscript. We are pleased and honored that the reviewers liked the manuscript and thought that it “is an interesting manuscript and research idea. It is an important topic and one which requires more emphasis in the literature.” (Rev 4). We are also pleased that the paper, subject to a number of revision, could be suitable for publication.

We have now revised the paper based on your suggestions and the constructive responses from Reviewer #1, #2, #3 and #4. The various comments have been considered carefully. Detailed responses to the individual reviewer concerns are listed below. We believe they have made great improvements to the manuscript. Substantial changes have been made to the manuscript using revision tracking mode. Also, added paragraphs are highlighted in the text.
As stated at the time of the initial submission, the manuscript is the results of our own original research, which has been submitted only to BMC PH and is not under consideration or peer review or accepted for publication or in press or published by any other journal. The manuscript does not duplicate any other previously published work, including our own previously published work. The revised manuscript contains 39 pages.

The authors are Emily Darlington, Nolwenn Violon, and Didier Jourdan. All authors have read and approved the final version of the revised manuscript.

We confirm that all author details on the revised version are correct, that all authors have agreed to authorship and order of authorship for this manuscript and that all authors have the appropriate permissions and rights to the reported data.

Yours sincerely,

The authors

RESPONSES TO COMMENTS FROM THE REVIEWERS

Reviewer#1

Comments from scanned pdf document were taken into account. Changes were made were appropriate and as requested by reviewer #1.

- Attention was given to wording and expressions. Substantial changes were made to the text
- Attention was given to the repetition of ideas in the background section
- The research focus was highlighted
- Information was added on the format of the questionnaires handed out to the children (paper format). Parents gave their consent for their children to participate in the research. The ethics statement was changed.
- The format of references was checked and altered when necessary

Reviewer#2

Comments:
“This paper has the potential to contribute to the school-based health promotion literature, as often implementation of such programs, as well as contextual factors, impacts on whether outcomes are achieved or not. This has been emphasized in school-based literature for many years. What this paper brings is a new approach to assessing implementation and contextual factors”.

Thank you for this very encouraging comment.

“However, I am hesitant to support this new approach without further justification. Please find below my comments.”

Thank you very much. We appreciate your time and effort. We strongly believe your comments have helped us improve the paper substantially.

“Major revisions: Methods (page 6): You state how this new approach is different to program fidelity measures and outcomes, but another useful area of research has been the testing for mechanisms or mediators and moderators on outcome measures. This is not mentioned in the methods to highlight differences or contributions this new approach will bring to existing literature. Yet, in the results, moderators are mentioned (page 13). See research conducted by Lubans, Baranowski.”

We have made additions to the METHODS Section on p6 to position our approach in relation to the Mediating Variable Framework used by Baranowski (Baranowski et al. 1998).

From what we understand of their work, both Baranowski and Lubans focus on explaining the process of individual behaviour changes. The efficiency of a programme can be explained by the fact that a number of variables operate as mediators of the process of behaviour change. Our approach uses the same type of skeleton to model the process, i.e. a process resulting in variable types of outcomes, and influenced by numerous factors which operate as mediators to this process. The major difference between our approach and the mediating variable framework is the process which is considered: we consider the process of implementation and what elements may influence it. In our article, we do not consider behaviour change and impact on people’s health which could of course result from the implementation of a programme.
“Methods (page 7): Program theory is not clear. What was the underpinning theoretical framework?”

We added two types of additional information to the METHODS section:

- The theories underpinning programme design: the programme refers explicitly to Health Promotion and we added a reference to health promoting School Principles (Steward-Brown, 2006). Also in terms of underpinning theories, we added a reference to Pommier et al., 2010 and Pommier et al. 2011, to which one of our co-authors contributed. These two articles describe the theory of change used for the programme considered in this article. The programme in focus in our work was an offshoot of the initiative by Pommier et al.. We added the model from Pommier et al. to elicit the underpinning theory used.

- The programme theory as part of the realist evaluation framework, in the form of a model including the potential outcomes of the programme, the potential contextual factors which could influence the implementation process, and the potential processes involved (mechanisms).

“What were the expected outcomes of the health program program? What were the potential contextual factors? This should be outlined in this section, with the analyses framework moved to the end of the methods section.”

We are not sure we understand your comment as expected outcomes as well as the factors which were thought to potentially influence the implementation of the programme were presented in Table 2. However, the presentation of the programme theory was changed, and a list of the outcomes expected at each level of implementation was made more explicit in the “programme theory paragraph”.

“Methods: It would have been useful to include more detail about contextual factors (e.g., professional learning/development sessions breakdown (content, pedagogy, activities, etc.). This may have helped with discussing the impact of these on outcomes.”

We chose not to add more detail on training content to avoid the addition of text, as the text in the article is already substantial. However to answer your comment, we added a reference to another of our publications on the same programme (Violon et al.,2016). The article by Violon and al. explains the training in more detail.

Also an addition in the text was made about the type of pedagogy used in the training.

“Results: I am not sure that the realist evaluation builds upon what researchers focusing on school-based health promotion programs already know? You need to make a stronger case for
using this evaluation framework, as currently I believe that a content analysis of documentation and semi-structured interviews would replicate the same findings.”

Thank you for this very important comment. We have added information on the analysis framework. Attention was given to clarity of the method which was used to analyze the sets of data. Also, we added information about the frameworks used to analyze the data.

A paragraph was added at the end of the background section to explain how we used and adapted the realistic evaluation framework in our study.

A paragraph was added in the background section to explain how our study relates to previous research in the field of health promotion, and implementation research.

A paragraph was added in the data analysis section to show how the realist evaluation framework served to (1) collect the data as well as (2) model the result. Content analysis was indeed used, to extract the data of interest from our dataset. However, realist evaluation and causal loops were used to model interactions and links between factors extracted from the dataset. Content analysis alone would have enabled us to categorize item, but not model complex interactions between factors.

“Minor revisions: Grammatical errors throughout”.

The document was proofread.

Thank you reviewer for your sharp comments. We believe the additions made in response to your remarks improved our manuscript greatly.

Reviewer #3

“Thank you for this possibility to read and evaluate a nice research manuscript like this. My opinion is that this paper is very well planned and written, and especially I appreciate about the approach of process evaluation in school context on the three levels: district level, school level and staff level. Also I found very valuable the methods as both qualitative and quantitative touch. The initial programme theory approach in this research is valid, and it is given a basic level and approach for this article. The reached findings are clear and interesting and easy to follow them with the tables. The findings are discussed openly and integrated together with previous research findings. To the question in the title of the paper " how do interactions between contextual
factors influence in the implementation process” is very challenging to answer in a short paper totally, but my overview is that the researchers are managed very well.”

Thank you for your encouraging feedback. We feel honored that you think our article is well written and interesting.

“Maybe the only weakness in the paper is in the part of "limitations", but I feel that the researchers have touched on limitations in some how in the other parts of the paper.”

Thank you for pointing this out. We have altered the structure of the paragraph and added text to this section to take our reflection a step further

Reviewer #4

“This is an interesting manuscript and research idea. It is an important topic and one which requires more emphasis in the literature.”

Thank you for pointing out that our study addresses a critical topic in existing literature.

“However, a few things need to be addressed by the authors to enhance the manuscript before it sufficient for publication.”

Thank you for your suggestions, which we think has enabled us to improve our manuscript substantially.

“General: This is an interesting and important topic and the authors have done a good job of framing the manuscript around realist evaluation as an over-arching framework. The approach taken is timely and has potential to advance the field and the manuscript merits publication.”

Thank you for emphasizing that the use of realistic evaluation is relevant. We have added paragraphs in the background section to strengthen our argumentation, as Reviewer #1 pointed.
“Our main critiques are around the completeness of the literature review, which is missing some more recent publications in this field and the language and flow of the paper.”

Thank you for pointing this out. We have added references. The paper was proofread to improve the reader’s experience. Substantial changes were made to the text.

“For example, while this manuscript is focused on health promotion in schools, there is no reference to the WHO Health Promoting Schools (HPS) framework. Using HPS as the overarching framework would therefore be consistent with published literature, while also helping to increase clarity. If HPS was not used in the study, this is an important limitation that needs to be stated in the relevant section of the manuscript.”

Thank you for pointing towards this. We have added references to Langford et al.’s article on the HPS framework in the background section, as well as research by St Léger, and links to WHO and IUHPE Frameworks, and Steward-Brown (2006).

“While there is not much research in this area, there are published studies that have sought to better understand HPS implementation, including our own work dating back to 2013


Thank you for pointing out that we did not include your work. We added reference to all three pieces of your work in the background, methods and discussion sections. Also, reading your work on implementation was highly interesting and inspirational.
“As written, the manuscript is quite difficult to follow, uses a lot of jargon and requires copy-editing to ensure appropriate grammar and syntax, as it is awkwardly worded in places. This may be a result of translation from French to English language.”

We have made substantial changes to the text and the article was proofread.

“For example, some parts of the introduction and methods are written in future tense, whereas past tense would be more appropriate.”

We have made changes to this section according to your comments

“There are three main foci to the paper as currently structure; 1) contextual factors; 2) realist evaluation; and 3) Content-Mechanism-Outcome. Each of these could form a separate manuscript since the three sections do not transition well. Alternatively, more attention to describe each of these with more clarity, along with a clear section on how they fit together, may help with this”

Substantial changes to the structure of the paper were made in order to address your comment and Rev 1 and 2’s comments. We hope this has improved clarity.

“Title: The title, while descriptive is lengthy and could be shortened without losing specificity.”

We agree. The title was changed to “Health promotion programmes in schools: an approach to understand the influence of contextual factors on the implementation process”

“Abstract: Well written but may need to be revisited if additional revisions are made, to ensure that it reflects these.”

The abstract was changed to reflect the changes made to the structure of the manuscript, and improve the style and language of the abstract.

“Introduction: Clear and appropriate motivation for the study is articulated. The research focus outlined in the methods section could be more clearly highlighted in the introduction. We would suggest adding more emphasis on Pawson and Tilley's framework for the purpose of background content. There has also been recent work on implementation of health promoting schools approaches as noted above. “
Thank you for highlighting this. Substantial changes were made to the introduction:

- Text was added to explain how the research focus ties in with existing literature
- The paragraph relating to Pawson and Tilley’s framework was moved to the background section
- Recent work on implementation in schools was included in the references and argumentation

“Methods: The Methods section is confusing. Although it is helpful to include working definitions, this section and the following ones do not hang together and some of the background described here could be moved to the introduction to improve readability.”

Paragraphs from the methods section were moved to the background section. Working definitions were introduced in the background section. We hope the changes made will improve the clarity, the readability and the flow of the paper.

“It may also be helpful to provide a figure that outlines the process taken, both to reduce the amount of text and to highlight where the theory and reality diverge.”

We agree, thank you for your suggestion. We chose not to add a figure, as the article already includes numerous figures and tables. However, attention was given to your comment, as we feel that the presentation of the research process was clearly insufficient. The methods were explained with much more detail. In terms of the differences between the programme theory and what was observed in field data, again, we chose not to add a figure for the reason detailed above. However, we added detail on how the identification of such differences contributed to the research and tied in with the rest of the data analysis.

Findings relating to the differences between theory and reality and potential explanations to such differences were emphasized in the discussion section.

“The four steps from realist evaluation are not clearly described. For example, step 2 is missing detailed information and there is not enough detail provided for other investigators to replicate the study.”
Thank you for put this forward. Your comment is indeed critical and we feel that the changes made in response to your suggestion improved the manuscript substantially. Each of the steps of the realist evaluation framework was linked with the steps undertaken during the research. We provided detailed information on data analysis: how the factors were categorized, how the links were made between factors and outcomes, and how the CMO configurations were designed. We hope the additions made to the text will improve the clarity of the process and provide enough information for the study to be replicated.

“Results: This section is interesting but, again, difficult to follow, as stated above. We suggest copy-editing to ensure that the flow of the manuscript is maintained. This includes being consistent with how constructs are presented. If a figure is introduced, as suggested above, this may help to guide the reader through the process more clearly so that the key results can be easily identified.”

More attention was given to the use of terms and concepts, and the coherence given to the use of terms and concepts. The text in the results section was changed, and alterations to the structure of the section were made.

“Discussion and conclusions: Authors have answered their research question, and the conclusions drawn from the results section are justified. The significance of the study is explained and the contextual factors outlined in the discussion advance the understanding of health promoting schools implementation (especially noted in the school level combination).”

Thank you for your encouraging comment. The discussion section was changed and hopefully improved.

“Limitations are stated but could be more clearly described and linked with the literature. It is also usual to include strengths of the work, e.g., the fact that this is based on a nationally implemented approach in France.”

We have made additions to the limitations section consistently with your comment and reviewer 2’s suggestion.
Editor Comments:

(1) You should seek professional help in revising this manuscript;

Thank you for your suggestion. The revised version of our article was proofread.

(2) Please read the guidelines here: https://bmcpublichealth.biomedcentral.com/submission-guidelines/preparing-your-manuscript/research-article and amend your 'Consent for publication' section accordingly. If your manuscript does not contain data from any individual person, please state “Not applicable” in this section.

Thank you for addressing this. The consent for publication section was changed to “N/A” as our manuscript does not contain data from any individual person.