Reviewer’s report

Title: Parenting Science Gang: radical co-creation of research projects led by parents of young children

Version: 0 Date: 26 Nov 2019

Reviewer: Imke Schilling

Reviewer's report:

This is an interesting paper on a project in which parents were enabled to co-design research projects on questions that are of high importance for their everyday lives. By now the paper is missing a clear aim and an adequate structure and would profit from some revisions, which are described in detail below. Beyond that, as the paper includes a lot of information, the authors need to set some focal points and sharpen their line of argumentation accordingly. I did not make concrete recommendations on focal points as these depend on the overarching aim of the paper. Some of my recommendations below might therefore not fit any longer after the aim(s) and focus of the article are sharpened.

ABSTRACT AND PLAIN ENGLISH SUMMARY

- Abstract and Plain English Summary: I would be more interested to learn about the projects' impact on the parents and researchers involved, than on the number of publications that arose from the project.

- L. 95: The authors should add more keywords, such as involvement, PPI, experiences,…

BACKGROUND

- Starting L. 108: Up to line 108 the paper wrote about "parents", starting from line 108 the focus is on "mothers", sometimes the paper gives the impression that mothers are put on a level with parents, but what about the fathers? To avoid irritations the authors should make their choice of words and their focus on mothers more explicit at the beginning.

- L. 147f: The message of the sentence is not clear, please rephrase.

- L. 174f: On line 174 the authors refer to the IAP2 Federation's Public Participation Spectrum to classify their involvement as "radical" or "radical co-design" as in the title. A) I would like to read a bit about the spectrum, if this is chosen for reference. B) The authors should argue, why they call their project "radical" (which is not part of the terminology in the spectrum). C) The term "co-design" from the title should be defined somewhere (and here it might fit) as well. There is some literature on "co-producing" research by INVOLVE that might be helpful to differentiate "co-design" from other forms and concepts of involvement. D) Building on this paragraph the authors could add some reflections to the discussion section on how well their project (and the single research projects) succeeded in achieving "co-design".

- Most important: The authors need to state the aim(s) of their paper in the background section. Furthermore they should make sure that the structure of the paper reflects its' aim(s).
METHODS

- L. 212 ff: The methods used to recruit new groups in the 2nd year raised some questions, that the authors should address in their revision: A) what is the "mother/daughter group format" in 1.? B) There is a small paragraph in the discussion on the diversity of parents involved, next to other things (e.g. why were next to no fathers involved), I would suggest to add some reflections on why the strategy described in 2. did not work and what else might be tried in another project. C) Both 3.+4. would profit from a more detailed description.

- L. 248ff: I would like to read a bit on the role and tasks of the scientific coordinator of the PSG project.

- L. 262: Are details on the precursor Nappy Science gang already published elsewhere? If so, please say so and add reference. If not, a few more details on the project would be interesting.

RESULTS

- L. 287: The authors should explain their survey in the method section: who were the 722 parents that filled out the survey, how were they recruited/contacted? How did the authors make sure that the distribution of characteristics was comparable between the actual participants and the pre-project survey?

- L. 225ff: I would suggest to incorporate all tables on the PSG-groups in one table to aid clarity and allow comparison. It would be interesting to learn more about the role and tasks of parents in each group/study and the form of cooperation/co-production between parents and researchers, whereas I found the Information on the number of events dispensable. The information on the type of study is too superficial, perhaps the authors could describe the study type more standardised (type, details on collected data, analysis). If available, the authors could also add information on the impact of involvement on the parents and researchers in each project. Furthermore, the authors should reflect on the conduction of research and co-design in the different groups in the discussion section.

- L. 418 ff: The authors need to clarify a range of terms/abbreviations in the text (and not only in the abbreviations list at the end of the paper) to enhance understanding, those are: Imperial, Wales REC 3, REIMS, HCPs.

DISCUSSION

- Discussion: the discussion contains a lot of interesting aspects, but some of them would better fit in the result section (e.g. the results of the post-project survey, which method by the way should be explained in the method section). Whereas the impact of the involvement of the experts is not reflected in the results or discussion but is just mentioned in the conclusion. The authors need to critically reflect which aspects belong to which chapter (methods, results, discussion, conclusion) and rearrange the paper accordingly.
PPI IN STUDY AND PAPER

- Authors' contributions: The authors need to state somewhere in the paper if (and how) parents were involved in the design, conduction and analysis of the PSG project and in writing up the paper.

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:

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