Author’s response to reviews

Title: Sitting less at work: A qualitative study of barriers and enablers in organisations of different size and sector

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Version: 1 Date: 01 May 2019

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BMC Public Health Manuscript Cover Letter

Dear Editor,

Re: Sitting less at work: A qualitative study of barriers and enablers in organisations of different size and sector

Thank you for yours and the reviewers’ comments on our initial manuscript submission. We have since made some substantial changes in line with the feedback received and would be grateful if you would reconsider this paper for publication.

Please see the comments below which provides the details on each point of feedback including what changes have been made and where these changes can be found. Changes to the manuscript have been highlighted using “Track Changes”. (Please refer to the Cover letter submitted as supplementary material for a table with each point comment and our response).

Editor Comments:

In accordance with BioMed Central editorial policies (http://www.biomedcentral.com/submissions/editorial-policies#standards+of+reporting), could you please ensure your manuscript reporting adheres to COREQ guidelines (http://intqhc.oxfordjournals.org/content/19/6/349.long) for reporting qualitative studies. This is so your methodology can be fully evaluated and utilized. Can you please include a completed COREQ checklist as an additional file when submitting your revised manuscript? Response: As
requested, we have completed the COREQ Checklist and included as an additional file when submitting the revised manuscript.

Reviewer 1 Comments:

Title

1. The title suggests that only organisational-level factors will be investigated, while - if I understood correctly- several level factors will be compared between different organisations. Consider an adjusted title please. Response: In line with the reviewer’s comment we have changed the title to: “Sitting less at work: A qualitative study of barriers and enablers in organisations of different size and sector”.

2. In addition, it could be more informative to specify which organisational aspects (type, size, ‘rules’, culture?) will be considered. Response: We have this point as well in the revised title.

Abstract

3. I think it is too strong to say that this is the first study to identify barriers and enablers to sitting less at work as a precursor to intervention development. Response: The abstract has been amended to clarify this point. The abstract now highlights that the study had two aims. The primary aim was to understand the differences by organisation and the secondary aim was to identify barriers and enablers as a precursor to intervention development (see changes on lines 25-27).

4. What is the added value compared to the existing literature? How does this study fill any gaps? Response: We have amended the abstract to strengthen the rationale for this study, focusing on why it may be important to understand differences in barriers and enablers by organisations of different sizes and sectors (see changes on lines 19-22).

5. What was the base for the pre-defined themes? Response: We have explained in the main manuscript methods section that the pre-defined themes were taken from findings from a recent qualitative systematic review (see lines 205-210). Due to limitations in word count, we have not been able to include this information in the abstract.

6. The results and conclusions sections are rather vague and little informative to the reader. Can you be more specific (What are enablers? What are barriers?) or give some clear implications for practice and further research? Response: We have amended the results section to provide more specific details on the barriers and enablers that are consistent and differ by organisation (see
changes to the results section on lines 42-49). We have also included a more informative conclusion (see changes to the conclusion section on lines 52-57).

Introduction

7. As stated in the introduction there are other studies looking at factors influencing workplace SB, using similar methods and analyses. The author should define a clear gap in the literature and rationale for this paper to show why the current study (especially the first aim) and these methods is needed and of added values, especially in the abstract too. I would consider having only the second aim as the main objective of this study? Response: In line with the reviewer’s comment, the primary aim of the study has been amended to identifying the differences in barriers and enablers between organisations of different sizes and sectors and the aim relating to understanding barriers and enablers as a precursor to intervention development is now referred to as a secondary aim. We have strengthened the rationale for the study in relation to the new primary aim. See lines 82-153 highlighting the main changes to the rationale and aims.

8. Recent reviews including those of for example Gardner B et al 2016, Shrestha N et al 2018, Hadgraft N et al, 2018 should be considered to be included and described. Response: The Shrestha paper has been included as part of the summary of systematic reviews reporting on the effectiveness of interventions (see line 77). We have included the Gardner paper in the introduction section (see amendments on lines 77-81). The Hadgraft paper has been explored in some detail and replaces the summary of the findings from the individual qualitative studies (see sections added on lines 100-122 and lines 492-496). This paper had not been published when we originally submitted this manuscript in September last year, but we agree is extremely relevant to the present study.

9. In 74: why would that then not be useful for intervention development? Response: We have added in a sentence clarifying the importance of overcoming barriers and maximising enablers when developing interventions (see lines 86-88).

10. In 77: ref 19 can also be added to for example perceived loss of productivity, please check this carefully for all references. Response: We have since amended this section and rather than state barriers and enablers from individual studies, we have included the findings from the Hadgraft review instead (see lines 100-122).

11. In 94-95: why is lunch time so important? Response: Lunch break was the primary cultural factor assessed by that study in relation to its influence on sitting behaviours. The lack of contextual information in general, was a limitation of this study and we have provided the lack of information relating to lunchtime purely as an example. We have added more information to clarify this in the manuscript (see changes on lines 135-143).
12. Was the focus on reducing total sitting time and replacing sitting by standing, or was the focus also on interrupting prolonged sitting? Response: The aim of our study was to explore the barriers and enablers to sitting less at work in general-terms. We did not specifically focus on either reductions of totals or interrupting prolonged bouts of sitting time.

Methods

13. This section of the manuscript could be strengthened if the authors include a justification for choice of methods. Why qualitative methods? What is the advantage of having used qualitative methods to obtain in-depth information rather than using, for example, a quantitative survey design with a larger sample? In addition, why were focus groups used, rather than e.g. individual interviews? Response: A justification of why qualitative methods were chosen has been included, referring to the in-depth nature of the data required to address the main aim of the study. We have also clarified the sentence justifying the use of focus group methodology to include why we chose this method for data collection. See amendments on lines 156-160 and lines 184-186.

14. Additional information is needed regarding the sampling frame and population demographics. How and why were these four organisations selected? How representative is the cohort of the population? How many participants were contacted, how many declined? Why was only one 'company' selected for each type of organisation? Response: A clear description of how and why the four organisations were recruited has been included under “Organisations”, see lines 162-170.

It is not possible to gain an exact number of participants that were contacted in the charity and local authority as this was done via email lists using the contacts in each organisation. However, it has been clarified that only desk-based staff were targeted with the recruitment email (see lines 176-177). The numbers of participants contacted in the small business and large corporation has now been included in the manuscript (see lines 175-178). As convenience sampling was used, we were not aiming for representativeness. We also were not able to access organisation-level demographic data for each organisation, so it was not possible to check the representativeness of the focus groups. No participants “declined” to participate as convenience samples were used, with participation being voluntary.

15. Was any type of software used for the analyses? Response: NVivo Version 11 was used for analysis. This was mentioned in the “Procedures” section of the methods, but we have now moved this into the “Analysis” section for clarity (see line 204).

Results

16. Table 1: can you add the number of focus groups in every organisations? And the number of participants in each focus group (was this 4 per focus group?). Why was the number of
participants per focus group rather low, why not bigger groups? Response: As Table 1 only provides information on organisation characteristics (for background information purposes) we decided to include the number of focus groups and number of participants per focus group in Table 3 instead.

We also clarified why the number of participants per focus group was small in some cases – as the emphasis was on gaining the maximum number of participants based on their availability (see lines 187-190).

17. Table 3: is there a difference in some variable between the 4 organisations. For example: only one women in the small business, only management-level participants in the large corporation… it is known that managers might have different views than other employees. How can this impact the results? Please reflect on this. Should the results be presented in another way? In addition, how could the results be different if the local authority had no standing desks available? The availability of standing desks could have an impact on their employees view regarding other barriers and enablers. Response: We have added in a paragraph about the broad similarities and differences between the organisations in terms of demographics (see lines 229-239). The management-level participants in the large corporation were “junior managers” and in fact the teams that were involved in the study were entirely made up of junior managers who were led by two team leaders. Although we agree management views are likely to differ from other members of staff, as they were all “junior” managers in this branch of the organisation, their views are likely more representative of other staff than senior managers. This has been reflected in Table 3 by labelling the management-level participants as “senior”. Finally, we included an explanation of the issue of the standing desks only being present in the local authority in the discussion section (see lines 516-526).

18. Table 3: it might be useful to the reader to add percentages, in addition make clear that the figures are numbers for rows 4 and more. Response: We felt that percentages might not be helpful given the small numbers, so instead we have clarified that the figures are numbers by adding (n) where appropriate (see Table 3 for changes).

19. Table 4: what is the meaning of the 'X'? does this mean the factor is present or absent? Response: We have added a note under the table to clarify that ‘X’ means that a sub-theme is present (see line 248).

20. In 236: why is 'nature of work' considered an organisational factor? I believe you can have administration roles or certain tasks requiring intense concentration in every type of organisation? This is not clear to me… Response: In the review by Hadgraft et al. 2018, they included “nature of work” as part of the “work-related” theme. We did not have such as theme, but instead felt that work-related issues should be included under organisational-level factors as this is something determined at the organisational-level. Themes are not intended to be mutually
exclusive but cut across and between the different levels of influence. We have made this clear in the revised manuscript (see lines 243-244).

21. In 259-285: could this also be considered as a concern about what colleagues may think (1.3). Why is this considered to be an organisational factor? Response: We have re-phrased the theme “Concerns about what colleagues may think” to “Concerns about distracting colleagues” to clarify why we feel there is a difference here (see revised Table 4). We felt that the perception that there needs to be an excuse to move away from the desk was an organisational cultural issue (and hence an organisational-level factor) rather than an individual-level issue, but we do mention that there are links to the individual-level factor of a motivation for sitting less being taking a purposeful or productive break and as stated above have commented that the themes are not intended to be mutually exclusive. Similarly, we felt the issues of lack of time and workload pressure and the role of managers to be organisational cultural issues, and hence issues that are linked to the organisational-level.

22. In 303-320: it might be useful to compare this to the following paper in the discussion section: Olsen et al Health Promot J Austr 2018. Response: We have included a comparison to the Olsen paper in the discussion section as suggested (see lines 566-574). Thank you for highlighting this paper.

23. Can the internal physical environment be interpreted as a true reflection of differences in organizations? For example, not all local authorities will have the same facilities or layout I suppose? Please reflect on this. Response: The internal physical environments will inevitably be different for every organisation regardless of whether they share the same size or sector. There are, however, substantial similarities in the internal physical environments in offices and these created a barrier and/or an enabler to sitting less. We have clarified this in the discussion section (see lines 512-515).

Discussion

24. At present the discussion tends to be a summary of the results, rather than an interpretation against previous literature. This is especially through for the second and third paragraphs. In addition, some parts need more in-depths insights in order to add to the current literature. Response: We have minimised the summary sections and provided some more insightful commentary as well as further supporting evidence throughout the discussion section.

25. The conclusions section is a bit vague and general. Can you make it more informative to the reader in terms of implications for practice or suggestions for future research? Response: We have amended the conclusion section to make it more specific regarding the implications of our findings for research and practice (see revised Conclusion on lines 663-677).
Reviewer 2

This qualitative study conducted 10 focus groups of staff from four different organisations in the UK in order to understand organizational-specific barriers and enablers of physical activity. Although the methodology looks fine and the findings are sensible, I do not see much additional knowledge gain from this study. I believe that this work could have contributed a lot more to the literature if some forms of organization-based measurement developed from the qualitative findings is proposed. Redo the qualitative data analysis and propose some forms of measurement for assessing organization-based physical activity situation. Response: Although the development of a measurement tool is one method to support the future development of sit less at work interventions, what we are advocating is a more bespoke approach. This will include an assessment of barriers and enablers to sitting less at work in the target organisation, paying particular consideration to some of the key differences this paper has highlighted relating to organisational culture and wider political and economic factors. In order to overcome the identified barriers and maximise the enablers, we then propose using a participatory approach to intervention development and implementation. This approach is supported by a recent qualitative systematic review: Mackenzie et al. 2018. The development, implementation and evaluation of interventions to reduce workplace sitting: a qualitative systematic review and evidence-based operational framework, BMC Public Health, 18(1):833. To clarify the differences between these approaches we have referred to the potential scope for the more quantitative approach suggested here in an additional section that we have added to the discussion section (see lines 610-624).

All authors declare that they have no competing interests.

All authors have approved the manuscript for submission.

The content of this manuscript has not been published or submitted for publication elsewhere.

Author details are listed below.

Thank you for reconsidering this paper for publication.

Yours faithfully,

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