Author’s response to reviews

Title: Children's active play: self-reported motivators, barriers and facilitators.

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Author’s response to reviews: see over
Dear Editor

We would like to thank you for the opportunity to respond to the comments of the two reviewers. Please find below a point by point response (in italics) to each comment below. We have used the highlighter option in Word to show all of the changed sections in the main document.

Reviewer 1 (Chloe McAdam)

Thank you for the opportunity to review this interesting paper. I have a number of comments and suggestions for changes which are outlined below.

We thank the reviewer for the positive comments; responses to each of the points raised are detailed below.

Major Compulsory Revisions

1. Gender differences - you suggest that you analysed these data by gender and conclude that there may be gender differences, but these are not fully presented in the results and it is not clear from the quotations/themes presented what these gender differences may be. I do not think you can make this conclusion without the explicit presentation or discussion of these data.

We accept the reviewer’s point. Although we presented the results by gender we acknowledge that we did not explicitly analyse by gender. We have removed Line 3 of Paragraph 2 in the ‘Analyses’ section and Line 2 of the Conclusions section which we hope clarifies this.

2. The gender make-up of the focus groups is also not presented. Were these single-sex groups or mixed? I do not think the use of mixed-gender focus groups would be appropriate to complete a concrete analysis of gender differences since the very nature of a focus group means children will respond to other children’s answers and may be more likely to conform/react to traditional gender norms.

Thank you for highlighting this. We have now added in that our focus groups were mixed gender to Paragraph 3, Line 5 of the Methods section. We accept the reviewer’s point that a concrete analysis of gender differences may not be appropriate for the reasons she has discussed and have added in a sentence to the Limitations section (Paragraph 1, Line 5) acknowledging this.

3. Differences by Deprivation
   You recruited children from schools in areas of varying deprivation, but do not discuss whether you examined any differences in children’s perceptions/experiences by deprivation? I imagine that this sampling may have been chosen to give a more
representative sample or to provide a range of views rather than for a comparison and as such you may struggle to complete a full analysis of any differences due to the sample size. However, a sentence or two indicating any emerging results by deprivation and why these data cannot be used to complete a full analysis could be added.

We recruited schools from areas of varying deprivation in order to provide a more representative sample. However, we did not feel that we had a sufficiently large sample to analyse differences by deprivation level in our findings. Given the relatively small sample size we do not feel it is appropriate to discuss emerging results by deprivation, however, we have added in a sentence to the Limitations section (Paragraph 2, Lines 8-9) regarding this point.

4. Data storage - a sentence describing how these data were kept should be added

Text has now been added to the ‘Analyses’ section of the Methods, outlining the procedure for data storage/deposition (Lines 2-3).

5. Police Check - a sentence indicating if the author required a police check/authorisation from local education authority to complete this research should be added after the discussion of ethical clearance.

A sentence has now been added to Paragraph 2, Lines 6-8 of the Methods section, stating that the researcher had Criminal Records Bureau (CRB) clearance to work with children in schools.

6. Use of the term 'gang'
I do not feel that the use of the term 'gang' in the abstract, discussion and conclusion is warranted when referring to groups of teenagers. This term does not appear to come from the transcripts and implies criminal activity which is not what the children appear to be referring to in your results. Children appeared to view the presence of teenagers in general as a barrier to their active play, regardless of what the teenagers were doing/not doing. Simply ‘teenagers’ or ‘groups of teenagers’ would be more appropriate in this context.

We accept the reviewer’s point regarding the connotations of the word ‘gang’ and have now removed this term from the paper and replaced it with simply ‘teenagers’ or ‘groups of teenagers’, as suggested.

7. Themes - Enjoyment
The results presented under enjoyment include specifically the social aspect of active play. This finding is often reported as a benefit of PA more generally and I don't think it should be overlooked or included under enjoyment, as in this case.
Thank you for highlighting this point. We have now amended this theme to ‘socialising’, to reflect enjoyment specifically related to the social aspect of active play, which we agree is more representative of our findings.

8. Themes - Freedom

I do not think the quotes you have used under this term indicate that children perceive active play gives them a sense of freedom. In two of the quotes used, the children speak about letting off steam and relaxing in the way adults might talk about the way that PA might have a stress reduction effect. I feel this is more related to the mental health benefits of active play rather than freedom from rules/adults.

We agree with the reviewer that not all of the quotes under this heading accurately reflected a sense of freedom, and have now deleted a quote which was problematic. Whilst we fully acknowledge the mental health benefits of active play, we do feel that the quotes are representative of a sense of freedom, either from adult control or structured activities, such as homework or organised physical activity. After much discussion with the co-authors, where we considered use of alternative terms such as ‘Escape’ and ‘Release’, we have decided to keep the term ‘Freedom’ as we feel this most accurately captures the children’s perceptions. We have now amended the text under the term ‘Freedom’ on Page 10 (Results), to clarify our definition.

Minor Essential Revisions

Page 5 - last line: Change the term 'getting round' to 'overcoming' or similar as the first term suggests an actual, physical barrier rather than a psychological barrier.

This has now been amended. Please see Background, Paragraph 5, Line 7.

Methods - Use the term 'Deprivation' rather than 'SES' in your labels of areas. Social Economic Status reflects individual economic/social circumstances, but you measured area based deprivation. These are different measures and the use of SES in the labels confuses this.

This has now been altered throughout the manuscript.

Methods - you do not state when this research was carried out - the months and year of fieldwork should be added.

This has now been added in, thank you for spotting (Methods, Paragraph 3, Line 8).

Methods Page 7 - how were the focus groups selected? Were these selected by the teacher/friendship groups/were they from the same class/randomly? This would have an impact on how children reacted in the focus group.
Participants were selected for focus groups by the researcher by random sampling. This has now been added in to Paragraph 3, Line 6 of the Methods. The children selected were from the same classes, but we were unable to collect information on whether they were from the same friendship group or not, and how this may have impacted our findings. The limitations of our sampling method have now been acknowledged in Paragraph 1, Lines 4-6 of the Limitations section.

You do not suggest how you made these focus groups suitable for the age group involved. What actions were taken to be able to work with this age group successfully - changes to terminology, reflective activities, ice breakers, more control/steering from FG facilitators, smaller group, managing power differences etc are all commonly discussed in research with children.

Discussion of how the researcher made the focus groups suitable for the age group has now been added in the Methods (Paragraph 4, Lines 2-4 and 7-12).

Discretionary Revisions

Discussion - pg 17 - Discussion of the weather - Suggestions might also include investigations into how children may overcome the barrier of bad weather. This may be alternative spaces to play - indoors or sheltered, the correct clothing, etc

Thank you for the suggestion. We have now added in a paragraph to the Discussion section, examining how the barrier of wet weather may be overcome (Paragraph 5).

It is not clear from the results presented whether the children chose not to go out in the rain or whether their parents prevented them from going out in bad weather.

While these points may have been interesting to explore in more depth, we do not have the data to answer these questions. This is recognised in the Limitations section, Paragraph 2, Lines 5-8.
Reviewer 2 (Mei-Wei Chang)

Major Compulsory Revisions

Summary
Study of factors that motivate and prevent children from being physically active is critical. There are concerns about this study that require authors’ attention.

We thank the reviewer for taking the time to review our paper; responses to each of the points raised are detailed below.

Abstract

Conclusion. The conclusion, which is weak and vague, should draw from study findings.

We feel that our study has made an important contribution to the largely under-researched field of active play and its role in the overall physical activity of 10-11 year olds. Understanding factors which motivate and prevent children of this age from being physically active is particularly critical, as this is known to be the period in which physical activity declines. In light of this, the conclusion of the Abstract section has now been amended to summarise, more effectively, the main points to be taken from the study findings (p. 3, Lines 4-6).

Background

-page 4. Line 3, should this be children or young people?

This has now been amended to ‘children’ to correspond with the rest of the paper.

-Gap of knowledge is identified: physical activity of children declined starting aged 10-11 years. However, the study findings and focus group questions really did not address this gap.

In addition to evidence showing that children’s physical activity levels are known to decline steeply around 10-11 years (Caspersen et al., 2000; Nader et al., 2008), this is a period when parental licence for children to engage in physical activity without adult supervision increases (Hillman, 2003; Veitch et al., 2006). We have now modified Paragraph 1 of the Background section (Line 6) and added in a new paragraph to the same section (Paragraph 3) in order to clarify our rationale for using 10-11 year old children as participants in our research. We have also added in text to Paragraph 1, Line 10 of the Discussion and to Lines 1, 9 and 10 of the Conclusions to further highlight the salience of this issue.

-Please spell out PE.

This has now been added in. Please refer to Background, Paragraph 2, Line 2.
-page 5, “although recent research.... For active play [24]” how does this part of literature review related to the purpose of the study. Suggest deleting.

*We accept the reviewer’s point and have now removed this sentence from Page 5.*

**Methods**

-were focus group conducted by SES and gender. If mix genders, why not separate them. Based on results, there were different perspectives between boys and girls.

*As stated in Paragraph 1, Line 1 of the Methods section, four primary schools were recruited - one from each quartile of the Index of Multiple Deprivation (IMD), and separate focus groups were conducted at each school (Methods, Paragraph 3, Line 5). We have now added in text stating that our focus groups were mixed gender and based on random sampling (Methods, Paragraph 3, Lines 5-6) and the potential bias this may have caused has now been acknowledged in Paragraph 1, Lines 4-6 of the Limitations section.*

-p 8, please add % after number of participants.

*These have now been added in. Please refer to Paragraph 1, Lines 2-4 of the Results section.*

-what was the inter-rater reliability

*As noted in the Acknowledgements and Funding section, this research was conducted as part of a PhD project and therefore the data collection and vast majority of the analyses were carried out by the PhD student herself. Initial coding of the data was performed by the PhD student and then the second and third authors reviewed the codes and emergent themes. However, formal inter-rater reliability was not performed.*

-procedure to come up with theme need to be clear

*Text has now been added to the ‘Analyses’ section clarifying the procedure for establishing themes (Lines 3-4 and 8-11).*

-need to include inclusion and exclusion criteria

*A sentence to this effect has now been added to the Methods, Paragraph 2, Lines 5-6.*

**Results**

-this study was not designed to compare SES and gender difference among children aged 10-11 years. However, most quotes were presented by SES and gender, which showed differences between high and low SES and between boys and girls. Number of quotes could be reduced because most of them have the same meaning and don’t stand out as anything unique.
We accept the reviewer’s point and have removed some of the quotes which have similar meanings from the Results section.

-p12, the theme called “child-driven constraint” should be modified. Based on quotes presented, children were afraid of being intimated or teased.

In light of the reviewer’s comments we have now modified the name of the theme to ‘children’s perceived constraints’, which we feel more accurately represents our findings (Page 12).

- need to distinguish the difference between motivators and facilitators. One is personal motivator while the other is environmental factors based on the description of the text.

We accept the reviewer’s comments. Whilst we directly asked about motivations for active play, (‘Why do you take part in active play?’), ‘Facilitators’ was a theme which emerged from the focus group discussions. We have now made this distinction clear in the Results section (page 14, Line 1 & page 15, Lines 1-2).

Discussion

-the second paragraph—“our research also suggests…… may be particularly effective [14].” No data presented in this manuscript support this statement. Therefore, please delete

We accept the reviewer’s point and have now deleted this section.

-The strength of this study is not convincing. Please delete

We disagree with the reviewer on this point. Given that there are few recent and systematic studies in the UK that have described the nature of children’s play (Burdette and Whitaker, 2005) and also that research has rarely given children themselves the opportunity to discuss their play behaviours (Chawla, 2002), we would argue that the direct involvement of children in the study and the ability to gather information from them about their own local neighbourhood was indeed a strength of this research.

-limitation should acknowledge convenience sampling (self-selection bias)

The potential limitations of our sampling method have now been added to Paragraph 1 of the Limitations section, Lines 4-6.

-Based on the study findings, there are only few barriers to be physically activity. This may be resulted from how the focus group questions that were constructed and how the children were selected to participate in the study.

We understand the reviewer’s concerns about the limited nature of the results. However, we wanted to present this paper as a ‘first step’ in locating the key issues underpinning play, and how play may be used as a mechanism for increasing levels of children’s physical
activity. As such, the range of topics discussed was relatively broad, and, acknowledging the need to limit participant burden, we were unable to conduct detailed examinations of certain issues. This has now been noted in Paragraph 2, Lines 5-9 of the Limitations section. The potential limitations of our sampling procedure and how they were dealt with have been added in to Paragraph 1, Lines 4-8 of the Limitations section.