Reviewer's report

Title: Physical activity patterns in children attending 43 preschools: A cross-sectional study.

Version: 4  Date: 3 July 2014

Reviewer: Glen Nielsen

Reviewer's report:

This is a well conducted study with sound data that is well analysed. It produces some interesting findings. However a few easily done changes and improvements are needed.

TITLE

Discretionary revision:
I think the title should include motor skills as this is a central part of the manuscript/study;
E.g. “Physical activity and motor skills in children attending 43 preschools”

ABSTRACT

Minor essential revisions:
Proofreading is needed.
Especially:
L 21-22. You need to correct the syntax and grammar of the sentence “Therefore the objective was to describe steh study population’s gender in relation to …… You are not studying the population’s gender. You are studying gender differences.
L 29- 30. “Descriptive statistics was a applied for

Major Compulsory revision:
44-46. In the conclusion part of the abstract, in line 44 to 46 you conclude:
1 the weekend could be a target for PA intervention.
2. Promotion of PA in less physically active children cannot be restricted to single settings.
3 The preschool has a significant impact on children’s PA level.

These three conclusions are somewhat contradictory.
Furthermore conclusion 1 and 2 are not based on your data/study. They might be true, but your data does not provide any evidence for this.
Regarding conclusion 3: the study shows that children are less active during leisure time (time outside preschool) and that the least active children are especially less active during leisure time. However you do not show why they are less active in leisure time. It might be for reasons that are extremely hard to intervene on (in fact other studies point to that it often is). Just because activity levels are low in one setting does not alone mean that this setting would be a good setting to intervene in.

On the contrary you have shown activity levels in preschools to be relatively high but dependent on which preschool they go to. This implies that some preschools provide better conditions for the children’s PA than others. Improving the different conditions for PA in the preschool and making the children even more active in this setting might be a much more effective way to increase the activity levels - also of the least active. We simply do not know from your data.

From what we know from other studies I would say it seems like PA interventions targeting the children’s leisure and family time are very ineffective whereas more “structural” or institution based interventions seems more effective - especially at reaching previously inactive children. On the theoretical level there are good explanations for why this is so (larger units, under public control, professional staff, inequality in family resources and priorities etc.)

In short I strongly disagree with conclusion 3. It can’t be deducted from the data. It should be deleted and perhaps replaced with just stating that children where more active in preschool than leisure time and that the least active children where especially less active during leisure time.

Conclusion 2 might be an important point to bear in mind (and as such it could be placed in the discussion section). However I don’t see how it is supported or produced by your findings. I would argue that it depends on how much more active you want the less active children to become combined with how much you are actually able to increase their activity level in one setting e.g. in preschool. You do not describe the first or test the latter.

BACKGROUND

Major Compulsory revision:

L 54-56. Please explain the context/ institution “preschool” in more detail. Non-Danish readers will not know that these children go to a sort of daycare institution with children aged 3-6. That these institutions are not located at schools. That most Danish children go. The general purposes, aims and activities of preschools in DK.

All these details are essential to understanding one of the articles main findings; that children are more active during kindergarten time than in leisure time.

In fact I am not sure whether preschool is the best word. Kindergarten or perhaps preschool daycare institution might be better. It might be good to introduce some synonyms to help the reader understand the context of the study i.e. preschools
in Denmark.

METHODS

Minor essential revisions:
L. 154 ….at-risk OF or
L.155. I think you mean #1 (i.e. more than 1) standard deviation and #2 standard deviations below the mean

Discretionary Revisions:
L. 169. If you have a reference to another study where this approach is supported in more depth, it would be great to add it.

RESULTS

Discretionary Revisions:
L. 245. Do you mean KTK subtest? Please clarify.
L 245. And the KTK score: do you mean total KTK score?
L.261-264. This sentence is a bit confusing. I had to read it several times to understand it. Please rewrite in a more simple and easy to understand sentence structure. Perhaps divide in to several sentences.
L. 268-269. This is another confusing sentence. What does it really mean; “with respect to eligible data”? You should by now have described how much data were eligible and perhaps gender differences in the amounts of eligible data. The rest of the analyses are obviously done on eligible data only. Or am I missing the point. Perhaps delete; “with respect to eligible data”.

DISCUSSION

Discretionary Revisions:
356 delete “could”. There sentence has already been made vague by one “could” There are without a doubt cross-cultural variation in gender specific PA. Gender differences in children’s daily activities (praxis) is by large a cultural construct.
377-381. A bit speculative perhaps?

L 419. I agree with this point but would like to add that the most important finding to state here is that it seems that some preschools are poor at providing good conditions for girl’s physical activities while others are better. It is important to look further into why and how some are poor and others good at including girls in the physical activities.

CONCLUSION

Major Compulsory Revisions:
My comments to the conclusion in the abstract also apply here. L. 443-444 and 451-454 are ok. The rest should be carefully revised. Actually I think you should spend some time thinking through what this study really shows. What is the essence? As of now the conclusion is very fragmented. I feel that some important and interesting findings are not presented in the conclusion. Instead you describe some very speculative practical perspectives that are not based on thorough analyses (combining data with other studies and/or theory). I surgest you leave these perspectives out of the conclusion as they can not be concluded from this study.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests