Author’s response to reviews

Title: Objectively evaluated physical activity and sedentary behavior in primary school children by gender, grade and types of physical education lessons

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Author’s response to reviews:

Editor Comments:

Thank you very much for your response regarding our manuscript. We agree with the comments made by the reviewer 2. We appreciate the suggestions.

We made revisions to our manuscript based on the reviewers’ suggestions with point-by-point responses.

Dear Dr. Travis Saunders (Reviewer 2)

Thank you very much for your helpful comments regarding our manuscript.

Our responses to your comments and suggestions are as follows:
Summary: The majority of my concerns have been appropriately addressed. I do have a few remaining comments, mostly related to changes in wording related to the revisions.

Lines 85-87: Although you state here that Nettlefold examined MVPA, LPA and SB, you don't say how much time was spent in each. This would be very helpful for the reader here.

Response: We have added percentages of modified MVPA, LPA and SB as you suggested, as follows:

Lines 86-89

On the other hand, Nettlefold et al. reported that the amount and percentage of MVPA, LPA and SB (girls: 13.0 %, 5.6 % and 73.0 %, boys: 11.4 %, 5.6 % and 74.5 %, respectively) as evaluated with the ActiGraph GT1M during PE lessons in 8–11-year-old Canadian boys and girls [6].

Line 98: It is unclear what "subset students" refers to.

Response: We have deleted the subset. Thank you very much.

Lines 121-129: The expanded detail in this section is very helpful. I strongly suggest including references in this section as well, to support these decisions when possible.

Response: We have added references as you suggested.
The epoch length, nonwear time definition, and valid days criteria applied in the present study are within the recommended range or the range commonly used [13].

Line 121-122: This sentence should be clarified "on the left side of their waists AS INSTRUCTED by the research assistant…"

Response: We have modified the sentence as you suggested, as below. Thank you very much.

Lines 122-124

The participants wore their accelerometers on the left side of their waists as instructed by the research assistant and were monitored continuously for one week at school.

Lines 124-125: as worded, this sentence sounds like participants needed 600 min of data specifically from PE class. I suggest rewording as "PE class data AND 600 min/day or more…"

Response: We have modified the sentence as you suggested, as below. Thank you very much.

Lines 124-126

The participants were requested to wear the devices at all times, except under special circumstances, such as dressing and bathing, and data from participants with PE class data and 600 min/d or more for at least 2 days were extracted.
Lines 147-148: In the response to reviewers you explain how the weight of clothing was determined. I suggest adding this here as well, so the reader understands how this was done.

Response: We have modified the sentence as you suggested, as follows:

Lines 151-154

Children wore shorts or skirts and t-shirts and shirts. We measured some children’s clothes, and the average weight was 0.7 kg. The weight of clothes (0.7kg) was subtracted from the measured body weight with clothes and the subtracted weight was used as net body weight.

Line 269-270: I am still unclear what difference is being referred to. Is it that both current and previous studies have shown a difference between boys and girls, or is the difference between boys and girls larger/smaller in the present study compared to previous work? More detail here would be very helpful in clarifying the point.

Response: We have modified the sentence as you suggested, as below. Thank you very much.

Lines 273-274

The difference between boys and girls was smaller in the present study compared to previous works.

Line 296: Is this information still listed in the results? I believe it was removed in this round of revisions. If this is the case, I suggest removing from here as well.
Response: We have removed the sentence as you indicated. Thank you very much.

Tables: It is still unclear what the p values refer to in the tables. Is it boys vs girls? Do different superscripts mean significantly different? Although the response to reviewers states that a chance was made, it is not included in the tables in my version of the manuscript.

Response: P values in Table 2 shows a gender difference as you suggested. We have modified the annotation in Table 2, as follows:

*: boys vs girls (P<0.05)

The different superscripts mean statistically significant differences among three grades in Table 3 or type of lesson in Table 4. We have modified the annotation in Table 3 and Table 4, respectively, as follows:

Different letters indicate statistically significant differences among the three grades (P<0.05).

Different letters indicate statistically significant differences among the three types of lessons (P<0.05).