Reviewer's report

Title: Patterns in sedentary and exercise behavior and associations with overweight in boys and girls

Version: 1 Date: 3 October 2006

Reviewer: Jo Salmon

Reviewer's report:

General

Overall, this is a thoughtful and well-written paper. Few studies have examined how physical activity and sedentary behaviour cluster and relate to weight status among children. A stylistic comment, I realise that the physical activity measure was one of vigorous-intensity exercise during leisure-time, but I am not keen on use of the term “physical exercise”, “physical activity” would be preferable, particularly in the Introduction. Specific comments are provided below.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

None

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

INTRODUCTION

1. Please make a stronger argument in the Introduction regarding the need to identify clusters of physical activity and sedentary behaviour, why this is important to do has not been made explicit (ie, what are the implications of identifying behavioural clusters?).

METHODS

2. Sample, 2nd paragraph: “..no response differences according to age or educational level were found”. Please clarify if this is parental, maternal or paternal education.

3. Measures, Behaviors, 1st paragraph: please identify the time frame for daily TV viewing and computer use, is this in a usual week/month..?

4. Measures, Behaviors, 1st paragraph: Was there a rationale for the 3 hr/week cut-off for physical activity? Was this based on the distribution of the data? Several countries recommend children participate in at least one hour of moderate-to-vigorous intensity physical activity every day (eg, UK, US, Australia). What was the rationale for assessing vigorous-intensity exercise during leisure-time? This needs to be stated in the Methods or woven into the Introduction. For example, perhaps it was considered that vigorous-intensity PA is more likely to be related to weight status in children..? Or, was this measure based on previous ACSM recommendations for fitness (3 x 20-30 mins/wk in vigorous-intensity PA)?

DISCUSSION

5. 3rd paragraph: This paragraph discusses the findings of relationships between TV viewing and physical activity. It is appropriate that the authors acknowledge that TV viewing is just one of many sedentary behaviours and this could be further clarified in the 3rd last sentence: “This latter finding supports the idea that SOME sedentary behaviors and physical activity can co-exist.”

6. 4th paragraph: “We found that among girls the high TV viewers...”. Comparisons could be made to the literature here, particularly studies that report associations between TV viewing and weight status separately by sex.

7. 6th paragraph: Study limitations. As your study did not use self-report to assess children's height and weight, the final sentence and two references in this paragraph is irrelevant.
CONCLUSION

8. 2nd sentence: “Boys appeared to be more sedentary...”. The term sedentary in isolation implies inactive (i.e., absence of physical activity), it would be more accurate to say that “Boys appeared to engage in more sedentary behavior, while girls participated in less sedentary behavior but were also less physically active”

9. Typographical errors:

   Introduction, 1st paragraph, last sentence: “Moreover, only a few studies explore...”

   Methods, Sample, 1st paragraph, last sentence: “The recruited samples were NATIONALLY representative...”

   Methods, Sample, 2nd paragraph, last sentence: “…did not respond to questions on all these four behaviors…”, delete the word “these”

   Results, 2nd paragraph, 1st sentence: “Overall, Portuguese boys were most likely to REPORT sedentary behaviors...”

   Results, Clusters of sedentary and physical exercise behavior, 3rd paragraph, 1st sentence: “Being in the healthy behavior cluster discriminated very well for EVERYDAY TV viewing during dinner (nobody EXHIBITED this behavior)...”

   Results, Associations with overweight, 2nd paragraph, 2nd last sentence: “The odds ratios (ORs)...”, the letter ‘r’ in parentheses should be a capital letter.

   Discussion, 1st paragraph, 1st sentence: “…with boys exhibiting more typical RECREATIONAL sedentary behavior...”

   Discussion, 3rd paragraph, 2nd sentence: “…the typical physical activities IN WHICH girls normally engage.”

   Discussion, 3rd paragraph, 4th sentence: “…low intensity sports and exercises…which WERE not ASSESSED in the questionnaire.”

   Discussion, 7th paragraph, last sentence: “However, SCHMITZ et al...showed that a brief self-administered...”

   Discussion, 8th paragraph, 1st sentence: “Thirdly, we used parent-reported data to calculate CHILDREN’S BMI.”

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

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

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests