Reviewer's report

Title: Correlates of objectively assessed physical activity and sedentary time in children: a cross-sectional study (The European Youth Heart Study)

Version: 1 Date: 23 February 2009

Reviewer: Jo Salmon

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Understanding the correlates and patterns of children’s physical activity and sedentary behaviour is important for informing the development of interventions targeting these behaviours.

Major Compulsory Revisions

1. The Introduction needs to be substantially rewritten. It could be reduced and a clearer/stronger rationale is required for focusing on the behavioural correlates (ie, mode of transport, outdoor play after school, organised sport and TV viewing) of PA and SB. Why were those behaviours selected and how does understanding associations between these specific behavioural correlates and PA and SB assist the development of future interventions?

2. Was a theoretical framework used to guide the selection of correlates in this study?

3. Please provide more information about the accelerometry data in the Methods. EG, was the percentage of time spent sedentary and in MVPA per day an average score calculated from the days worn? It is stated in the Methods that some children wore the monitor for a minimum of 3 days, others for the maximum 4 days. Please report what percentage of children met the 600 mins/day criterion for wearing time each day and what proportion of children wore the monitors for 3 days or 4 days.

Minor essential revisions

Introduction

4. Please specify what proportion of children are currently meeting PA recommendations? The Nader, JAMA reference is not as relevant to the sample of children in this manuscript as would be data from Portugal, Estonia and Norway. If such data are not available, then this needs to be noted in the manuscript. In addition, a number of countries now have SB recommendations for children. This may be worth mentioning given the focus of this paper on these dual health behaviours.

5. The authors argue that one rationale for examining TV viewing is that it may displace PA. However, the majority of evidence disputes this (see for example a review of correlates of TV viewing by Gorely et al).
6. The 2nd-last paragraph in the Introduction attempts to provide a rationale for the correlates included in this study. As noted earlier, this rationale needs to be stronger, also there is an odd assortment of references to support the statement regarding correlates of self-reported PA (refs 14-16, 20, 24).

Methods, Self-reported Measures
7. Kowalski et al Ped Ex Sci 1997 only reports reliability-validity of a measure to assess PA behaviours, not “behavioural, social and environmental influences on physical activity” as stated currently.

8. How were children’s age and sex collected? Were these self-reported or reported by parents?

Methods, Statistics
9. What are the ‘physical characteristics’ described in the first and second sentences here? This is unclear. Also, I assume that the differences examined using ANOVA are with MEAN percent time in SB and MVPA?

10. With schools as the sampling unit have the authors considered adjusting analyses for clustering? Adjusting for study location as a covariate is not the same thing as adjusting for clustering at the school level, to my knowledge SPSS cannot make such multi-level adjustments.

Results
11. Children’s height and weight are presented in the results, yet the Methods do not describe how this was collected.

Discussion
12. At times the Discussion tends to repeat results without much interpretation. This should be substantially reduced.

Table 1.
13. Needs a more descriptive title, EG: “Proportion (%) of children engaging in self-reported physical activity and sedentary behaviour by age and sex”

14. The manuscript could benefit from English language editing throughout (eg, use of the term ‘time of MVPA’ rather than ‘time in MVPA’; ‘In opposite’ rather than ‘In contrast’, etc).

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