Reviewer's report

Title: Objectively determined physical activity levels of primary schoolchildren in south-west Germany

Version: 1 Date: 29 April 2013

Reviewer: Brian Timmons

Reviewer's report:

The stated purpose of this study was to “objectively determine the amount of children’s PA and sedentary time with a multi-sensor device”, with an interest in differences between weekday and weekend days, overweight and non-overweight children, and 1st and 2nd graders.

Major Compulsory Revisions

While the flow chart in Figure 1 is appreciated, it can be improved by providing the specific reasons for why sample size changed from one step to the next.

It is recommended that you use WHO BMI charts, for example, to assess the prevalence of obesity in your sample. This can be in addition to using the German norms you already provide, but using WHO or another international cut-off will help your paper be compared to others in the field.

The authors appear to have included sleep time in their analysis of sedentary time. If this is the case, it is recommended that you remove sleep from your analysis. It is important to identify waking hours and to frame your analysis of physical activity and sedentary time within that framework. Sleep is another dimension that has its own measurement issues. To this end, it is important for the authors to explain in detail how they determined waking hours. Were log books used? Additional details are also needed regarding how meeting physical activity recommendations (guidelines) was ascertained and analyzed, keeping in mind that guidelines state daily physical activity.

Minor Essential Revisions

Please provide some additional explanation for the statistical analysis using ANCOVAs to compare overweight/obese and normal weight children and then adjusting for BMI – doesn’t that negate the point of your analysis? Likewise, for boys vs. girls and differences in grades, if you adjust for sex and age, respectively?

In your discussion, you introduce another study involving German children. Perhaps, it is important to add more details of this study in the introduction to help build your justification for the current study.

Perhaps a note on the representativeness of this sample to the German
population would be warranted, or at least more details, if possible on the socioeconomic status of the families who participated.

Discretionary Revisions

In the introduction, please add age ranges of the studies you are describing to help justify why more research in younger children is necessary.

Please add age range of your participants to Table 1.

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

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests