Reviewer's report

Title: Physical activity, ethnicity and sociodemographic factors. Three year follow-up of 15 years olds in Oslo, Norway

Version: 1  Date: 11 June 2008

Reviewer: Larry Webber

Reviewer's report:

This is a reasonably well-written manuscript describing factors related to physical activity and tracking of physical activity in Norwegian and non-Norwegian adolescents. The questions posed are important, particularly with the decline of physical activity in children and adolescents and the increase of obesity noted in most developed countries. Although the data presented in this manuscript are, for the most part, based on self-report, there is evidence presented concerning the appropriateness of these data.

Major Compulsory Revisions

1. There is a need for a thorough review of some of the statistical procedures used. In some instances there may be more appropriate procedures than those used by these investigators.

2. Page 9, last paragraph. The fact that only 56% of the ethnic minorities participated in the follow-up study is important. Data are presented to indicate that participants were different from non-participants at baseline. On page 19, the authors indicate that 54% participated in the follow-up. Which is correct? This is a rather low number. I would wonder if the higher physical activity at baseline in the follow-up participants is reflective of how long these individuals were in Norway. Are there any data to support this?

3. Page 11, Results, 1st paragraph. The data in Table 1 seem to be under-analyzed. The analysis as presented compares Norwegian to ethnic minority boys and girls separately. This assumes main effects for ethnicity. No gender comparisons are given. No interaction is described. The variables are all categorical. Perhaps logistic regression, multinomial logistic regression, polytomous logistic regression, or log-linear analyses including interaction terms could be considered.

4. Page 11, Results, 2nd paragraph. The outcome variable for the data in Table 2 is continuous; hence, the Analysis of Variance may be appropriate. It appears, however, that the analysis should be a factorial model with interaction.

5. Pages 11-12. It appears that the data described in Tables 3a and 3b were analyzed separately for boys and girls. This may not be appropriate as this leads to a large number of tests. The effects of type 1 error are not described.

Minor Essential Revisions
1. There are a number of grammatical errors that will need correcting.
2. The ethnicity of the non-Norwegian subjects is not well described. It is very difficult to assess the relevance of the findings without further documentation of the countries of origin for these adolescents.
3. Page 2, Abstract, Background. The second sentence should be slightly reworded. “This paper investigates sociodemographic factors associated with …”
4. Page 4, Background, 4th sentence. “… adult patterns of health behaviours start …”
5. Page 4, Background, 1st paragraph, 2nd to last sentence. “Moreover, studies indicate that physical activity tracks at …”
6. Page 5, Background, 2nd line from the top. “In children and adolescents, the …”
7. Page 5, Background, 4th line from the top. “… physical activity level are positively …”
8. Page 5, Background, 2nd paragraph, last sentence. “… despite the fact that some …”
9. Page 6, Methods, Follow-up study, 1st sentence. Delete the word thoroughly.
10. Page 7, Methods, Study population. After 2489, please enter the percent participation (65.3%) in the text. Also, the last sentence of this paragraph is very important for interpreting the results of this study. Can these results be provided for the sample that is being followed at the two time points? Are data present on how long the adolescents have lived in Norway?
11. Page 8, Methods, Ethnic minority/ethnic Norwegian. This short paragraph is somewhat redundant with the information under study population. Perhaps the two paragraphs can be combined.
12. Page 10, Statistical analysis, 2nd to last line. By variance analysis, do the authors mean Analysis of Variance?
13. Page 11, Statistical analysis, 3rd line. Since only participants who had information on all variables are included, how many participants were excluded? Were there any differences in those included and excluded for any variables?
14. Page 11, Statistics analysis, top paragraph, last line. “Data were analyzed …”
15. Page 14, Discussion, 3rd line from the bottom of the page. “…sports in Norway, where the gender …”
16. Page 20, Conclusions, 2nd line. “… differences in physical activity are more …”
17. Table 4. I don’t think the 95% confidence intervals are necessary; rather, there should be a statistical test indicating whether the percent who decreases, increase or remain stable is consistent by ethnicity and gender.

Discretionary Revisions
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: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.