Reviewer's report

Title: The association of leisure-time physical activity and active commuting with measures of socioeconomic position in a multiethnic population living in the Netherlands: results from the cross-sectional SUNSET study

Version: 1 Date: 20 April 2012

Reviewer: Christopher Gidlow

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Overall, the study appears to have been undertaken well, explores an interesting area, and most limitations are acknowledged.

Major Compulsory Revisions

In addition to some specific issues that need to be addressed, there are two general but fundamental comments:

1. The specific inquiry (and associated measures/indicators) is not sufficiently justified; i.e., why LTPA and active commuting? Why these specific population groups? As highlighted in some more specific comments below, the reviewer feels there are several areas where the authors need to provide a robust rationale that underpins these analyses and makes clear the contribution of this work.

2. The use of the occupational classification (more detailed comment below) – in the context of this study and given the nature of the physical activity measures (which do not take occupational activity into account), it might be wise to dismiss manual/non-manual occupation and focus on education and the sole socio-economic indicator. Unless the authors can explain otherwise, there appear to be some fundamental issues with this that could seriously confound any patterns observed.

Minor Essential Revisions

ABSTRACT

A general re-write of the results section to make the headlines findings more obvious to the reader. For example:

- Report whether or not ethnic differences in physical activity were found
- Then make the direction of the socio-economic gradients more obvious for the reader, rather than relying on them to interpret your Beta coefficients.
- Insert ‘an’ to read ‘… we observed an ethnicity interaction for active….’

Insert ‘but’ to read ‘…lower socio-economic groups), but this strategy…’

BACKGROUND
Arguably, lifestyle activity/habitual activity associated with daily living has the most public health potential and is of greater interest to physical activity researchers at present; LTPA can often contribute little to overall physical activity levels (Cochrane et al., 2009). Traditionally, physical activity interventions have focused on promoting more leisure-time activities (e.g., structured exercise programmes). But, lack of evidence for effectiveness and sustainability of any changes, which tend to be modest and short-term increases at best (Bauman, 2005), has led to growth in interest in environmental determinants and designing environments that are conducive to active living (e.g., walkable and therefore promote active commuting) (Sallis, Bauman, & Pratt, 1998). The authors should do more to early on in this paper to make it clear why LTPA and active commuting are two measures that we should be interested in. At present, this is not strong enough.

It would be useful to provide some more background on your ethnic groups; brief context on South Asian and African groups in Netherlands (e.g., % of population they comprise; evidence of lower activity levels or greater health need in these groups). Again, make it clear that these are population groups we should be interested in studying.

Then reiterate why LTPA and active commuting in these populations should be a focus of study.

METHODS

Focus on MVPA and not light intensity physical activity could also relate to the fact that MVPA is associated with health benefits, rather than limitations of recall for light intensity activity only. Also, what are the implications for ‘active commuting’ if you exclude activity below moderate intensity? This has the potential to exclude walking for many people.

As you go on to recognise in the limitations section, there are some problems with the manual/non-manual occupational classifications. I feel that this is a particularly unsatisfactory socio-economic indicator for the purposes of this study and that you should consider excluding and relying on education, a far more stable socio-economic indicator (assuming all educated in Netherlands/similar system):

(a) if used as an socio-economic indicator, ‘routine non-manual’ work should perhaps place someone equivalent or lower down the social strata than ‘highly skilled’ or ‘semi-skilled manual work’;

(b) in the context of physical activity research, as you are not taking occupational activity into account and focusing on commuting and LTPA, likely and unaccounted impacts on peoples LTPA (and perhaps, to a lesser extent,
commuting activity) of having active jobs, could seriously confound your results. Unless you can try to explore this, consider removing the occupational classification. In any case, you need to justify and provide references for your choice of socio-economic indicator.

P7 para 3:
‘MET hours per week were skewed and therefore square-root-transformed’ – at which point did you transform the physical activity data? Should this sentence come earlier?

RESULTS

It would be interesting to know the contributions of LTPA and active commuting to overall physical activity. This could help to justify your choice of outcomes.

P10 para 3:
Include ‘data not shown’ as additional file.

DISCUSSION

Consider re-ordering so that Limitations comes after Discussion of findings (before Conclusion)

P10 para 4: re-write to read
‘We found a positive association between socioeconomic position and physical activity, in terms of active commuting and LTPA.

P11 para 2:
See previous comments re socio-economic indicators. Occupational social classification is historically much debated and difficult to measure (Jones & Cameron, 1984). Education is potentially far more stable.

P13 para 2:
‘Although the estimates for LTPA in most of the higher socioeconomic position groups seemed to be in a positive direction, there was a lack of statistical significance in all groups.’
- Re-word this to clarify for reader.

P13 para 2:
- Reword sentence to: ‘In our study, the low socioeconomic groups engaged in levels of LTPA that were comparable to (or in once case higher than) their high socioeconomic position counterparts; this diminishes the likelihood of a socioeconomic gradient’.
- ‘There may have also been differences in the methods used’ – you need to elaborate on this, not just speculate; if there were differences, what were they and what are the implications?

P14 para 2:
‘Differences in occupation might be associated to LTPA through, for example, job strain [37]’ – Explain this?

P14 para 3:
Delete ‘... we wish to point out that...’

P15 para 1:
Did you measure duration of residence? If not, why? And acknowledge in limitations.

P16 para 2:
‘Our findings imply that, contrary to the low socioeconomic position approach often currently used in European-origin populations’ – this is not quite specific enough. Do you mean the typical targeting of physical activity interventions to lower socio-economic groups?

P16 para 2:
‘Specifically, public health workers should be aware that recommendations for stimulating physical activity through active commuting among the African-Surinamese and South Asian-Surinamese in the Netherlands should be aimed at both low and high socioeconomic position groups.’
 – I think, again, you need to qualify this recommendation with an acknowledgement of the need for more study. You are referring to only one physical activity indicator (active commuting) and have not put that in the context of its contribution towards overall physical activity (i.e., importance to health of this population). Therefore, the importance of this recommendation for practice is not clear from the information presented.

REFS:
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.