Reviewer's report

Title: Physical activity and health related quality of life

Version: 2  Date: 10 April 2012

Reviewer: Iva Tendais

Reviewer's report:

The manuscript addresses an interesting and important topic.

Major Compulsory Revisions

It is not clear whether the current study aims to examine the criterion validity of the self-report physical activity data against accelerometer. If so, the analyses should be restricted to participants who completed both subjective and objective assessments.

Similarly, authors do not justify is not said why separate models were run for sports and exercise and walking since brisk walking can be done either for transportation or exercise.

There is an inconsistency between the study objective (association) and the chosen statistical analysis (regression analysis). Nevertheless, a hierarchical multiple regression analysis could provide information on the specific proportion of variance of health related quality of life explained by physical activity status.

The following issues should be clearly addressed: 1) were all participants asked to complete both objective and subjective assessments?; 2) were there any differences in self-report physical activity between those who provided accelerometry data; 3) the “subjective measurement” category includes housework, occupational activity besides walking and sports and exercise?

In the present study, participants were classified as “physically active” if they performed a “minimum of 90 min of at least moderate physical activity ... per week” (p. 6). However, current physical activity guidelines recommend that healthy adults (18-65 years) should accumulate at least 150 min of moderate-intensity aerobic physical activity, 75 min of vigorous-intensity aerobic physical activity per week or equivalent combinations of moderate- and vigorous-intensity physical activity to have health benefits (e.g. O'Donovan G, Blazevich AJ, Boreham C, Cooper AR, Crank H, Ekelund U, Fox KR, Gately P, Giles-Corti B, Gill JMR, et al: The ABC of Physical Activity for Health: A consensus statement from the British Association of Sport and Exercise...
Abbreviations should be defined in parentheses after their first mention in the text (e.g. EQ-5D, p. 5).

Further description is needed on the instruments used to assess physical activity and health-related quality of life and their validity. The original reference of the EQ-5D should also be provided (EuroQol G: EuroQol—a new facility for the measurement of health-related quality of life. Health Policy 1990, 16(3):199–208). In addition, upper and lower limits of utility scores should be provided, namely the lower limit of negative scores.

The number of references cited in text (27) does not correspond to those in the reference list (43). Moreover, they do not comply with BMC Public Health formatting requirements.

No sufficient information is provided on “psycho-social wellbeing” mentioned in Appendix 1 and Table 4.

Minor essential revisions
Table 2 should be eliminated. The information can be briefly presented in text. Excessive details are provided in Appendix 1 and Table 4, namely on education level, marital status, house tenure, ethnicity and types of illness.

**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, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.