Reviewer’s report

Title: Patterns, levels and correlates of physical activity in urban black Soweto women

Version: 1 Date: 4 January 2014

Reviewer: Colette Cunningham-Myrie

Reviewer’s report:

This paper sought to i) describe patterns of physical activity (PA) among middle-aged urban Black South African women and ii) examine associations between a) socio-economic status and PA patterns and b) PA and anthropometry and cardio-metabolic risk factors. The subject is of interest but the paper has not achieved an acceptable standard in a number of areas which are specified below.

- Major Compulsory Revisions

Introduction
1. Given the stated aims of the paper, the authors have failed to justify why middle aged Black women were being investigated
2. The hypotheses of the study was not stated
3. It was unclear whether the terms metabolic disease, metabolic syndrome and cardio-metabolic risk factors were being used interchangeably at times
4. The literature review inadequately addressed the linkages between physical activity and metabolic disease, metabolic syndrome and/or cardio-metabolic risk factors.

Methods
1. Paragraph 1, 4th sentence - It is unclear whether the caregivers included mothers
2. No mention is made of how those shown to be at high risk for metabolic syndrome were selected from the Birth to Twenty study
3. Under the subsection heading 'Body Composition' the cut-off points for waist circumference and hip circumference were not stated
4. Under the subsection heading 'Metabolic Risk Factors' the authors have not included the measure of central obesity as stated in the harmonised guidelines in Reference # 20 by Alberti et al
5. The cut-off values for systolic and diastolic blood pressures as stated in the first sentence under subsection "Metabolic Risk Factors" are different from those in the article cited by Alberti et al as Ref # 20. Specifically in the article the cut offs are Systolic BP #130 mmHg and diastolic BP #85 mmHg
6. Under the subsection heading 'Physical Activity Measurements' 6th sentence
beginning " It was divided into tertiles.." the information given on sample sizes and MET minutes per week belongs in the results section
7. Under the subsection heading 'Statistical Methods' 6th sentence, the authors failed to state what type of that regression models were constructed for the analysis.. for e.g. linear, logistic or other models.
8. Under the subsection heading 'Statistical Methods' it is unclear why the p-value level of statistical significance varied and what were explanatory versus outcome variables

Results
1. The first paragraph dealing with subject characteristics is inadequate.
2. Table 1 needs a more specific title. In addition the first column needs to be labelled
3. Table 2 needs to be more informative. For example Confidence intervals around the prevalence estimates should have been provided. A more substantive narrative is needed in the results section on Table 2
4. Under the subsection 'Physical activity', 2nd paragraph the authors speak to significant differences between the physical activity group but have failed to state the p-value levels. It is also unclear how the authors interpreted that there were statistically significant differences between groups shown in Figures 1a and 1b.
5. It is unclear from the results how regression models were constructed and if or how log transformed data were used for analysis.
6. Table 3- the labelling needs to be improved to aid interpretation. It is confusing what are outcome versus explanatory variables.
7. Table 4 is unnecessary.

Discussion
1. In general, it was difficult to follow the flow of the discussion especially given the aforementioned weaknesses in the previous sections. The comparison of the findings with other studies was generally inadequate, at times lacking sufficient details to support conclusions being drawn.
2. Second paragraph, last sentence - data is needed from the studies cited for the reader to understand the contrast with the current study. Also the authors would need to specify which physical activity domain(s) have a greater prevalence.
3. Third paragraph, second sentence.- this belongs in the Introduction
4. Fourth paragraph. This is confusing/contradictory in parts , in particular sentences 4 to 6.

References:
The online references need to be properly formatted.

- Minor Essential Revisions
Abstract
1. The abbreviation MVPA appears in the results for the first time. It needs to be expanded and the abbreviation placed beside the full term.

- Discretionary Revisions
Title
1. I would specify self-reported in the title as it relates to physical activity
Background
1. Second paragraph, sentences 4 and 5 should be shifted to the discussion
2. Last sentence, second paragraph should be edited to read "These studies showed that rural women were significantly more sedentary than rural men

Methods
1. Under subsection "Physical Activity Questionnaire", 2nd paragraph, remove extra bracket at end of penultimate sentence.
2. Under subsection "Statistical Methods", a reference is needed for the statistical package used.
3. Under subsection "Statistical Methods", remove the extra bracket in 3rd sentence after IQR.

Discussion
1. Second paragraph 6th sentence expand abbreviation SA

Level of interest: An article of limited interest

Quality of written English: Acceptable

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