Reviewer's report

Title: Socioeconomic status and work, travel, and recreation related physical activity in Japanese adults: a cross-sectional study

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Reviewer: Tomi Mäkinen

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BMC Public Health

'Socioeconomic status and work, travel, and recreation related physical activity in Japanese adults: a cross-sectional study'

by Munehiro Matsushita, Kazuhiro Harada and Takashi Arao BMC Public Health Research article

1 Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

1.1 Why do you use SES (socioeconomic status) instead of SEP (socioeconomic position)? The background of these two concepts lies in the sociological theories of Marx and Weber. As for Marx, the status relates to social class and class relations based on the conflict of workers and capitalist in the means of production. For Weber, the position is related to society that is hierarchically stratified to groups that share the same “life chances”. From my point of view the physical activity is not so much determined on the Marxian class theory but rather on the Weberian “life chances” and whether individual based on his/her chances chooses to be or not to be physically active. Can the authors comment on this from the Japanese cultural point of view whether this theory is applicable and add also something to the manuscript?

For more please see for example:


1.2 The data possess a large non-participation rate, only 39.5% of sample participate to the survey. Do you have information of the non-respondents and whether this would influence on your results in some way? From my experience the non-respondents are more likely to be young, men and those with low
socioeconomic position. I wonder whether this is the case also in Japan?

1.3 DISCUSSION, page 13, “However, the reasons why the indicators of SES that are associated with travel physical activity are different in men and women in this study is unknown, and further study is required”. This might explained on the basis of what the different SEP indicators are assumed to present from theoretical perspective or cultural perspectives. Education as usually assumed to present the “knowledge of related assets of the person” whereas income presents more of the “material circumstances” that could also income ownership of car. So my question is this related to over-adjustment, did you check the multi-correlation between SEP-measures, especially car ownership and income? Moreover, from the theoretical perspective, lower educated women and men vs low income women and men might possess quite different “life chances” to physically active, as you already discuss from the environmental or also cultural perspective, what is seen as “suitable” PA for each group. The inclusion of some theoretical perspectives would benefit contents to the discussion.

2 Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

2.1 Abstract: please use same PA-concepts trough out the abstract. For example travel-related PA, work-related PA, recreational PA etc.

2.2 The abbreviation PAD = physical activity in each domain with my language skills this does not sound right? I would suggest to use domain-specific physical activity or different domains of physical activity = DPA.

2.3 Methods, page 7, it would be useful for the non-Japanese reader to have the household income be presented in euros (€), at least in the methods section? This would help reader to relate and compare the income inequalities in PA to other countries as well. Moreover, what does the household income include salary, capital income, social and transfer benefits? and is the household income adjusted based on individuals living in the same household as this would in my thinking influence how much income is usable for each person for example leisure-time activities and whether one should commute or not?

2.4 Methods, page 7, the “educational status”, to me it is unclear, without the knowledge of Japanese educational system is unclear what the educational categories include and how comparable this to other countries and, moreover, why do the authors used the concept “status” also here? I would suggest that the authors give clearer definition and explanation of the education variable.

2.5 TABLE 1, the table includes variables “body mass index” (BMI) and “material status”. BMI come by a total surprise for the reader as this has not been described in the methods. By “material status” the authors mean “marital status”. Please correct the typo and include short description of the BMI to the methods.

2.6. RESULTS, page 10, Authors use also “marriage status”, please use same words logically.
2.7 DISCUSSION, page 11, I would re-edit the phrase: “This study found a significant negative association between SES and work physical activity in men, but not in women” differently to better illustrate the main result as “Men with low SES were more likely to physically active at work.”

3 Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

3.1 TABLE 2, May I suggest a more descriptive title for the table 2 such as “Socioeconomic inequalities in different domains of physical activity among Japanese men and women”

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests