Reviewer's report

Title: Physical activity and risk of Metabolic Syndrome in an urban Mexican cohort

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Reviewer: Anne Vuillemin

Reviewer's report:

General comment
The objective of the work is to assess the impact of physical activity during both leisure and paid work on the risk of metabolic syndrome in urban Mexican adults. There is a lot of literature on that topic but few studies have been conducted in a mexican population. This study is part of an ongoing study on lifestyle and health.

Major Compulsory Revisions
The question posed by the authors is not well defined. Even if the objective is clear, its justification is not. Why the authors chose to assess "... both leisure and workplace activities...". It is now well known that PA is part of leisure, occupation, transport... and that it is necessary to measure these different context of practice. However, PA is often measured globally without distinction between the context. How the authors justify their choice to specify "... both leisure and workplace activities..." and not only "...daily PA...". What is the hypothesis.

p5-l5-7: this idea is not enough developed in the introduction whereas it is of a major interest. Can we consider that for MS, leisure time PA may have a different impact compared to PA at work? For obesity, it is known that the most important thing is energy expense, whatever PA practice. What's about MS?

p5-l17-19: "...ongoing cohort", no information is given regarding this cohort (constitution of the sample, design...). It is possible to cite a mother paper describing some methodological aspects of this study?

"For our analysis, we excluded...", how these exclusions were made? on the patient declaration or the physician...

p6 Physical activity assessment: the IPAQ was used to assess PA. It is necessary to precise which version and which mode of administration was used. In addition, the version was adapted but nothing is described in the paper on that point. No validation study? Finally, the IPAQ group provide a scoring protocol but it seems that the authors used other indicators without any justification and presentation of the score calculation. For exemple, the duration (30') is take into account but what's about intensity (moderate, vigorous...). More precision should be given on how the scores were calculated and what do these scores represent. MET's values used in the IPAQ are given in the IPAQ scoring protocol and these values come from the compendium. Why the authors specified that they used the
compendium to determine the METs values?

p9 Analysis: nothing appear on the analysis by sex. What is the justification for that?

Discussion: the 2 first paragraph are not the main results of the study.
p13-l8-11: this idea is not so evident and the literature doesn't provide a lot of information on that point. The authors should refer to recent publications (cf. http://www.health.gov/paguidelines/) as well as for PA at work and its effect on health.

The limitations of the work is not stated.

Minor Essential Revisions
p4-l20: "Many nations...", references are from USA and France. It should be better to write that public health recommandations for PA has been establisehd in the USA and that some countries have spread these recommandations such as France... The references cited (20,21) are not the lastest version of the recommendations (cf. Circulation or MSSE 2007).

Discretionary Revisions
p4 - l15-18: "habitual PA prevents several health parameters", references cited for that idea are not on habitual PA and some are only on leisure time PA.

Level of interest: An article whose findings are important to those with closely related research interests

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'