Reviewer's report

Title: The influence of work, lifestyle, and gender on sickness absence in Brazilian workers

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Reviewer: Kustaa Piha

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Dear Sir,

I’m pleased to receive an opportunity review the original manuscript “The influence of work, lifestyle, and gender on sickness absence in Brazilian workers”. The manuscript aims to analyze relationships between lifestyle factors, such as BMI and physical activity, and sickness absence. In addition, the manuscript aims to explain gender differences by types of work, educational level, and lifestyle factors.

The study collected data by self-reported questionnaire to Brazilian airline employees in Sao Paulo, in 2010, and followed up the participants using sickness absence registers of the company for one year. The study is one of the very few studies addressing lifestyle factors, gender, and sickness absence in one of the BRICS countries and adds very well the knowledge in the issue, which is usually covered by European studies. This study is generally very well written, decisions made are justified, and the results are highly interesting and important. The outcome used comes from the registers and can be regarded as reliable.

However, there are some limitations in the study that also brings out questions, comments and suggestions for further writing of the study. I have divided them in different categories as follows:

Major compulsory revisions

1. The levels of serum glucose and cholesterol are highly dependent on the time of fasting they are taken. Were the participant informed to fast before the samples were taken? If not, this reduces the overall reliability of these measurements, and should at least be expressed in a suitable way.

2. The socio-economic gradient of sickness absence seems to be the opposite to the evidence from Western or developed countries. This is a very interesting and important finding. Are the labour market situation or job security so different in Brazil that e.g. the blue collar workers cannot afford to be absent from work?

3. The age gradient of sickness absence is also the opposite to the evidence from Western or developed countries. Could it be so that in the company studied, the age is actually a proxy for socio-economic situation? This finding clearly should be noticed in the discussion.
4. Women and men employees differ markedly from each other with several important respects. E.g. the women are mainly young and have only elementary school (91.5%). In addition, they have less risky lifestyle profiles in all measures, especially CHD risk (92.2% of women have 0% of risk). Are the gender populations so different that they can be pooled together? Or should the focus be on lifestyle factors and make the analyses separately to men and women? This could add more details and take the influence of young, less educated women, but more sickness absence more comprehensively into account.

Minor essential revisions

5. The underweight employees were excluded from the analyses. Why? The sentence informing the exclusion is suggested to be moved to the study design and participants section (as it is now in the results section).

6. The air crew work is highly regulated by international aviation authorities (ICAO). By the regulations, the air crew must be able to act in emergency situations, so their physical working condition must be good all the times. Air crew workers are not allowed to work in similar conditions that may be sufficient to work in other fields. A few words may elucidate the differences between the work tasks between types of work in the discussion section.

Discretionary revisions

7. The risk of CHD seems to be very much higher among men as compared to women. The finding is a really interesting one and one or two possible more explanations on the issue would have benefited the discussion section.

Level of interest: An article of importance in its field

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.