Reviewer's report

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

Version: 1 Date: 28 January 2014

Reviewer: Evangelos Alexopoulos

Reviewer's report:

In this article the authors analyze the relationship among lifestyle-related factors and sick leave among 2,201 employees of a Brazilian airline company and examine whether gender differences in sickness absence can be explained by differences in socio-demographic, work and lifestyle-related factors. They found that gender, age, type of work stress and other factors influenced sickness absenteeism in this cohort.

However the study has severe limitations; some are mentioned by the authors such as the non-representative sample. Also the main measures of lifestyle related factors were self-reported by the use of invalidated tools e.g. stress and physical activity.

The primary outcome, the number of days on sick leave during the 12 months of follow-up, was available from the company register. The authors did not explain how the linkage was made with the anonymously collected data. More importantly it seems that in most cases the cause of sick leave was unknown. The authors neither mention if pregnancy related sick leaves included nor the company policy in sickness absenteeism. It is common for short sick leaves (up to three days) to be only self-reported. That may cause differential misclassification since it is probably more difficult for air crew to use frequently this option. The authors should take into account the duration’s cut off above which the diagnosis was available; this may support further more valid analysis.

One questionable choice was that the authors did not take into account age into multivariate modeling; this probably would have eliminated the effect of smoking, BMI, and physical activity in sickness absenteeism. An advise that the authors may choose to take into account in future submission is to merge the two older age categories into one and reanalyze, taking into account age together with gender in multivariate analysis. Furthermore based to company policy it may be more valid to limit the analysis in long term sick leaves.

So despite the large sample the conclusions have drawn from the analysis are neither warranted nor close to causality since many factors were not taken into account or may be interrelated.

Level of interest: An article of limited interest
Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:
I declare that I have no competing interests