Reviewer’s report

Title: Sauna bathing is associated with reduced cardiovascular mortality and improves risk prediction in men and women. A prospective cohort study

Version: 0 Date: 25 Jul 2018

Reviewer: Burkhard Weisser

Reviewer's report:

Well designed study with interesting results

Comments:

p4: "representative": please specify if the participants were representatve for an elderly finnish population or for sauna users etc.

p4 line 6-9: randomly selected: which was your method of selection? Since there is no random assignment to a group, this is a little bit difficult to understand

1688 elderly participants: " no losses to follow-up" .....? Although not impossible, this is very surprising...

Discussion:

I mostly agree with your well written discussion and your conclusion. However, you should consider the possibility that the baseline health status is influencing the frequency of sauna visits and not only the other way around. The concept that the number of sauna visits ist a marker of cardiovascular risk is very convincingly explained, but a causal relation cannot be established by the data of this study. Therefore, a recommendation to increase the number of sauna baths per week to reduce the cardiovascular events is very speculative.

In addition, blood pressure reduction by sauna bathing is one of the mechanisms discussed for the reduction of cardiovascular risk. However, in the present study there was no difference in BP between the groups

Last Point: It should be stated as a limitation of the study that there was no control group without sauna use.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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