Author's response to reviews

**Title:** Relation between awareness of circulatory disorders and smoking in a general population health examination

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Resubmission of a manuscript
Title: “Relation between awareness of circulatory disorders and smoking in a general population health examination”
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Dear editor,

thank you for giving us the opportunity to resubmit a revised version of the above mentioned paper. Please find attached the manuscript after our revision according to the comments of the reviewers. We considered each of the comments very carefully. Please find in the following text of this letter two lists of changes we made according to the comments of the reviewers.

Further to our response to the reviewers’ comments we added information about written informed consent that was given by the participants and that the study had been carried out in compliance with the Declaration of Helsinki on page 4, paragraph 3, to page 5, paragraph 1.

An English native speaker has proof-read the manuscript.

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With kind regards

Ulrich John
(on behalf of all authors)
List of changes made according to the comments of reviewer: Aulikki Nissinen

Thank you very much for the detailed and very helpful comments which in our view helped to make the manuscript more informative. Please find below how we respond to each of them. Each comment is repeated below followed by our response.

Comment
1. Background, para 2: Ref. No. 2; age group is 24-64. Also the year (1977?), from what the recalculations are made should be mentioned.

Response
Page 3, paragraph 2: We have now included that the sample was aged 25 to 64 and that the numbers we refer to are from the 1997 survey.

Comment
2. Methods; did you ask also the time, when the diagnosis was given and when smoking started? Compare the results first and second para.

Response
No information about when the diagnosis was given was available. One question referred to the age of onset of regular smoking. However, we did not use this item since it is very highly correlated with age.

Page 7, paragraph 2: The first sentence of the results section (“..., 52.1 % were current smokers, i.e. these individuals smoked after the circulatory disorders had occurred.”) just refers to that current smokers smoked at the day of the health examination, but according to their statements, the disease must have occurred before that day. To clarify this, we included: “these individuals still smoked…”.

Minor essential revision

Comment
3. Discussion: First para; first sentence; could you say that more clearly?

Response
Page 8, paragraph 2: We now have rephrased the first sentence of the Discussion section.

- end of list -
Thank you very much for the detailed and very helpful comments which in our view helped to make the manuscript more informative. Please find below how we respond to each of them. Each comment is repeated below followed by our response.

Comment
1. It would be useful to present the questionnaire items that were analysed both for self-reported illness and for cigarette smoking. In health surveys, items about self-reported illness commonly include whether the illness was present, whether a doctor diagnosed the illness, and whether the illness is currently treated. It would be useful to know what information was collected in this survey. The wording of the items about particular illnesses would also be informative.

Similarly for smoking, it would be useful to know what questions were included and what was their wording. For example, did the questions only refer to cigarette smoking or to pipe and cigar smoking as well? How many cigarettes were smoked? and How long was the interval since quitting? Were these items included in the survey?

Response
Page 5, paragraph 2: We have now included the questionnaire items for self-reported illness and the wording of the items about the particular circulatory illnesses. A list was presented to the individual, the response categories were: “Ever had: Yes No Don’t know”. Unfortunately, the items about self-reported illness did not include whether a doctor diagnosed the illness, and whether the illness was currently treated. However, our analysis is focused on what the individual reports and therefore is in her/his mind. This study only deals with attitudes of the respondents, not whether or not a disease was actually diagnosed.

Page 5, paragraph 3: We have now included the questions for smoking and also the wording for the question about smoking status. Smokers were asked how many cigarettes, cigars, pipes they had smoked on average, each for former and for current smokers.
Since there were only 6 individuals that formerly, and 8 individuals that currently smoked cigars or pipes only, the regression analysis that includes cpd was limited to cigarette smokers.

Since our analysis is focused on odds for being a current smoker among the ever smokers, we did not use information about the time since quitting.

Comment

2. Hypertension is a risk factor and not a disease. It may not be justifiable to add it with the other conditions to get a composite end-point of number of circulatory disorders.

Response

We agree that hypertension is a risk factor. Two arguments in our view show that it is defensible to also regard hypertension as an illness: First, self-stated hypertension in the health survey data that we analysed is clearly understood as a disease, the list of illnesses presented to the respondent was introduced by: “Which of the following diseases did you ever have?” Second, hypertension is an illness based on the International Classification of Diseases of WHO (ICD-10) with the codes I10 to I15 (Hypertension/hypertension disease). It is commonly diagnosed in Germany and the health insurance pays for its treatment. In our analysis hypertension is used as an illness, not in the sense of increased blood pressure.

Comment

3. Age is a key variable because the frequency of smoking declines with age but the frequency of diseases increases. The data in Table 2 are from a model adjusted for age. Nevertheless, it would be of interest to know whether the associations identified were consistent within age groups.

Response

We agree that age is an important confounder, and in addition to Table 2 we have now given the odds ratios for one and two or more central circulatory diseases stratified by the age groups 18 to 49 and 50 to 79. In addition, we have now included the odds ratios for age groups into Table 2.
Comment

4. The present analysis is rather limited in scope and it would be interesting to know whether additional information was available concerning the number of cigarettes smoked, the time since quitting or whether the patient was receiving appropriate secondary prevention therapy. This information would allow greater depth of interpretation. For example, one study of ours suggested that current smokers with hypertension were less likely to receive antihypertensive therapy. (J Human Hypertension 2001 Nov; 15(11):771-3).

Response
We now have included data about heavy smoking into the logistic regression analysis in Table 2, and have mentioned cigarettes per day in the Methods section (page 5, paragraph 3) and the Results section (page 8, paragraph 1).


Comment

5. The role of nicotine dependence could be more fully discussed. For example, the heaviest smokers may find it most difficult to quit and have the highest risks of developing complications of smoking.

Response
Page 10, paragraph 1: We have now included some interpretation according to nicotine dependence. In addition, nicotine dependence is part of the third limitation of the study. No data about nicotine dependence were available, neither from the Fagerstrom Test for Nicotine Dependence nor for DSM-IV- or ICD-10 nicotine dependence.

Comment

6. Discretionary revisions
The term ‘ever smokers’ is not ideal, perhaps it would be better to refer to ‘current and ex-smokers’.
Response

We agree that ever smoker might be somewhat difficult to understand because we used it in the abstract and in the introduction without having defined it before. But ever, current, former, and never smokers are terms that have been used in a large number of publications.

Page 6, paragraph 1: We have defined ever smokers in the methods section and propose to use this term because we often need it throughout the text since we several times refer to the proportion of current smokers among ever smokers – unfortunately we cannot use the term “quit rate” that is often used, and the phrase “current smokers among former and current smokers” does not read fluently.

Comment

The material on response rates would be better placed in the first paragraph of the results section.

Response

Page 4, paragraph 3: In accordance with many studies that include general population samples and in our view, the response rate belongs to the description of the sample in the methods section because it is one of the characteristics of the quality of the sample. Furthermore, as shown in the text, the response rate of this sample had been published before.

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