Reviewer's report

Title: Is the smokers exposure to environmental tobacco smoke negligible?

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Reviewer: Georg E Matt

Reviewer's report:

This study asks an interesting, important, and innovative question about the relative contribution of MS and ETS to the overall exposure of smokers to tobacco smoke constituents. The authors re-examine data from an earlier field study that lends itself to the investigation of this topic to make a case that ETS exposure among smokers in not negligible. Here are some specific suggestions and comments:

Major Compulsory Revisions
(1) Abstract, 2nd line from the bottom;
Replace p=95% with 95% confidence interval.

(2) Page 6, last paragraph
The authors indicate that the 95% CIs for the intercepts are not significantly different. How was this tested? Note that this is a test of “equivalence”.

(3) Page 7
Did the authors test for the difference between the two slopes? Are they significantly different from each other?

Minor Essential Revisions
(1) How representative are findings about BaP for other toxic compounds in tobacco smoke? Can the authors say more about this?

(2) I'm unclear if this study involved the examination of biological samples to measure biological exposure to BaP. A topic for future research?

(3) Tobacco smoke constituents other than BaP are better markers of tobacco smoke (e.g., nicotine, 3EP) and exposure (e.g., cotinine). Can the authors discuss this issue more? Future research?

(4) How does ETS exposure of smokers compare to that of nonsmokers? Any suggestions for future research?

(5) The authors suggest in the Conclusions to ask smokers "How many hours daily do you smoke in a closed environment and together with other smokers." I assume this is an attempt to obtain self-report data on ETS exposure. This is a bit simplistic and extremely difficult to estimate reliably. There are better
self-report measures of ETS exposure available that have been validated against biomarkers of ETS exposure in nonsmokers -- though never in smokers as far as I know.

Discretionary Revisions

(1) What might these findings suggest regarding the health risks of ETS exposure only (i.e., in nonsmokers) relative to ETS exposure in the presence of MS (i.e., in smokers) ?

**Level of interest:** An article of importance in its field

**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