Reviewer’s report

Title: Graphical comparisons of relative disease burden across multiple risk factors

Version: 1 Date: 16 Jul 2019

Reviewer: Maja Katharina von Cube

Reviewer's report:

This is a very well written manuscript with an interesting idea of approximating and graphically illustrating the PAF. I thank the authors for the point-by-point response to my previous comments.

I only have some minor additional comments.

In the methods section on page 5 I still find the transition from counterfactual to 'standard' notation too sudden (l. 10). You could think about restructuring the paragraphs: Name the conditions first (l. 14-15) and then present equation E2. Please also note that the equivalence between E1 and E2 has been shown by Sjölander, Arvid. "Estimation of attributable fractions using inverse probability weighting." Statistical methods in medical research 20.4 (2011): 415-428 and also follows from Hernán, Miguel Angel. "A definition of causal effect for epidemiological research." Journal of Epidemiology & Community Health 58.4 (2004): 265-271. Referring to these publications may be already sufficient and would prevent having to redirect the reader to the supplementary material.

In Table 1 and also on page 5, please complete the list by adding the assumption of consistency which is essential for the equivalence of E1 and E2.

In Table 1: RR(j) and f(j|1) are not defined in the main manuscript. In line "graphical approximations" last column: P^=1? (see also E6)

p. 9 l. 20: Sentence is not complete

p. 12 l. 1 P^=1/P^=1 do mean only P^=1?

p. 12 l. 3 Please add the Table number

Figure 1: Maybe you could add in the labeling of the x-axis and y-axis the abbreviations (beta_ave, P^).

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.

Yes

**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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