Reviewer's report

Title: How much more harmful is the Russian style of drinking? A methodology for calculating harms attributable to alcohol in Russia

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Reviewer: Laura Helena Andrade

Reviewer's report:

In this manuscript, the authors addressed an important methodological issue related to the estimation of the burden of alcohol consumption as a risk factor for a range of outcomes, from chronic and infectious diseases to injuries, in Russia. The main question raised by the authors is that in a country with a specific pattern of alcohol consumption characterized by days of intense heavy drinking alternating with days of abstinence, such as Russia and surrounding countries, using the average amount of alcohol consumed as the only exposure estimate do not reflect the true proportion of disease cause by alcohol in these countries. The importance of improving the estimate of the impact of this deleterious drinking pattern in the Russian population health is well illustrated by the low life expectancy in Russia, in comparison to other European countries.

The manuscript is an important contribution and with data and methodology sound. However, probably due to the amount of details in the methodology, there are few points that seem confused and should be clarified.

Please note that these are Minor Essential Revisions:

1. The authors used a series of modeling techniques described with details in the Methods section and supplementary files. I found it difficult to find how binge alcohol consumption (Methods, fifth paragraph), one of the dimensions of alcohol consumption, and the key issue of the manuscript, were modeled.

2. Under the subhead “Risk Relations” first paragraph, it seems that when listing weekly alcohol consumption categories, the amount of alcohol in each category is ‘per week’ rather than “per day”. Please clarify.

3. In the Results section, the authors reported findings based in the estimation using Russia-specific RRs. Around 30% of all deaths for the age group 0 to 64 are due to alcohol consumption. The authors highlighted the impact of alcohol in the mortality due to self-harm and mental disorders: 61% of all deaths caused by self-harm and personal violence, and 70% of death caused by mental disorders were attributable to alcohol consumption.

4. The authors discussed the advantage and disadvantage of their methods in the estimation of the alcohol burden in specific disorders properly. The two first paragraphs of the Discussion are difficult to follow, as some of the results are only mentioned in Tables or additional files. I would short the Discussion and add
more information in the Results.

5. The information that this study was limited to Russians 0 to 64 years of age is important, but is only stated in the 7th paragraph of the Discussion. It should appear early in the Methods section.

6. I recommend that the Limitation subsection should be shorten, for the sake of clarity and conciseness.

7. The Conclusion is too speculative. What this study adds to the literature and what is next? This is more important than these general statements.

8. Additional file 1, Last paragraph:
Estimating the alcohol PAFs for harms caused to others
In the phrase: “…alcohol PAFassaultageAustralia is the alcohol PAF for deaths or injuries caused by assaults for each specific age group in Australia, and PAFassaultAustralia is the alcohol PAF for deaths or injuries caused by assaults for Australia.” I think Australia should be replaced by country.

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

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interest.