Author's response to reviews

Title: Alcohol consumption, physical activity, and chronic disease risk factors: a population-based cross-sectional survey

Authors:

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Author's response to reviews:

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Melissa Norton, MD
Medical Editor
BMC Public Health
BioMed Central Ltd
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Dear Dr. Norton,

On behalf of my co-authors Eric Ding and Luc Djousse, thank you for the opportunity to revise our manuscript entitled "Alcohol Consumption, Physical Activity, and Cardiovascular Risk Factors" that was submitted to BMC Public Health. We sincerely appreciate the reviewers' comments, and the current manuscript was clearly improved by the suggested revisions. We have enclosed responses to each of the comments of the reviewers, identifying the specific changes that we made to the manuscript.

Sincerely,

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We appreciate the reviewers' instructive and insightful comments. Below we address each point raised and discuss how these points have been addressed in the manuscript.

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Reviewer 1 (Dr. Ulrich)

Comment 1:
"- abstract: In the methods section of the abstract, only chronic disease risk factors, in the results section of the abstract cardiovascular risk factors are mentioned. Cardiovascular risk factors should be explained in the methods section of the abstract."

Response:
We apologize for this confusion. In both cases, the term chronic disease risk factors (which could included both cardiovascular risk factors like hypertension and diabetes, and also risk factors for other chronic diseases, such as vaccination and colorectal cancer screening) should have been used, and we have made this change in both the abstract and the title.

Comment 2:
"- abstract, last sentence: contains little information. Please give more specific conclusion as you do on p 12."

Response:
We have amended the material from page 12 and now use it instead of the original conclusion of the abstract.

Comment 3:
"- P4, para 1, line 1: "biological plausibility". A reference should be given here."

Response:
This term comes directly from the AHA statement on exercise, which has now been referenced.

Comment 4:
"- P5, para 1: Since not all readers of BMC Public Health are familiar with the BRFSS, there should be some more information given in brief about the BRFSS: participation rate and the sample design."

Response:
We have added extensive information to pages 5 and 6 to provide better detail about the BRFSS including its participation rate (defined here as the cooperation rate; the BRFSS does not report a single participation rate) and sample design.

Comment 5:
"- P5, "Assessment of Alcohol and Physical Activity": Abstention should, firstly, be defined here as abstention from alcohol because "abstention" is used several times throughout the paper. Sometimes the reader is not quite sure whether the authors really mean abstention from alcohol. Secondly, the authors should give the precise definition of abstention, e. g. did not drink any alcohol since ...?"

Response:
We now clarify the definition of abstention in the indicated paragraph. Because the BRFSS only queries about alcohol use in the preceding month, as noted in that paragraph, abstention includes only the absence of any alcohol use in that time period.

Comment 6:
"- P7, para 2: "dependent variable abstention or sedentary lifestyle": Does this mean abstention versus all alcohol consumers or versus moderate drinkers only?"

Response:
We now clarify that this comparison was of abstention versus moderate drinking only. Heavier drinkers were not included in any of our analyses.

Comment 7:
"- P7, para 2: "in most epidemiological studies". I recommend to rephrase "in many .." since "most" might be only true for the US."

Response:
We have replaced "most" with "many."

Comment 8:
"- P7, para 2: It would be more clear to the reader if the education levels could be expressed as number of years."

Response:
Unfortunately, education levels are not assessed in years in the BRFSS, but rather in categories. Although high school completion generally constitutes 12 years of education in the US, we do not have specific information on years of schooling to incorporate in the manuscript.
Comment 9:
"- P7, last para: Instead of the p only, the correlation coefficient and whether it was Spearman's rho should be given in addition."

Response:
We apologize for the confusing use of the term "correlated" - the BRFSS does not have any continuous measure of overall physical activity (e.g., in METs or kcal expended) with which to determine the Spearman correlation coefficient. We meant to imply that alcohol use and activity, categorized dichotomously, were strongly associated, and this has been changed in the indicated paragraph.

Comment 10:
"- P 9, para 1: "suggesting that observational ... to these risk factors." belongs to the Discussion section."

Response:
We have deleted this phrase, as the material is reviewed in the Discussion already.

Comment 11:
"P11, last para: "contains some individuals who quit..." "some" should be deleted since it is conjecture."

Response:
We have reworded this sentence to indicate that the pool of abstainers may contain former drinkers, reflecting the inherent uncertainty related to our lack of information on former drinking.

Comment 12:
"- P3, para 2: "For several reasons" : I found only two reasons in that para."

Response:
We have changed "several" to "a variety of", to reflect better the diversity in the concerns about observational studies of alcohol. We should note that, for reasons of space and focus, we did not review all possible concerns, but ultimately the lack of an RCT (which we did discuss) remains the most incontrovertible.

Comment 13:
"P4, para 2: "at least a few, and typically several": should be more precise."

Response:
This sentence reflects the great heterogeneity in what confounders have been included in the many previous observational studies of moderate drinking. To enhance our precision, we now have deleted "and typically several."

Comment 14:
"P5, para 2: "IRB" should be written in full."

Response:
Please see our response to Dr. Di Castelnuovo. We have edited this sentence for clarification and removed the abbreviation.

Comment 15:
"Reference list, ref. 6: JAMA."

Response:
We have appropriately now capitalized JAMA in the reference list.

Reviewer 2 (Dr. Di Castelnuovo)

Comment 1:
"Results reported in Table 1 should be better presented in two separate tables, one for moderate drinking and the other for physical activity. Both tables have to include simple frequencies and percentages of risk factors according to abstention (or sedentary) status, odds ratios adjusted for age-sex and for age-sex-race-education (as in the present Table 1) and adjusted prevalence ratios calculated using Poisson regression. Conclusions should be based on findings of logistic as well as Poisson regression."
Response:
We thank the reviewer for this suggestion, which we have implemented in full. We initially did not include the simple frequencies and percentages because these duplicated results presented in a previous paper by Naimi and colleagues, but we fully agree that the revised presentation is considerably richer and more informative. We should note that the percentages presented are appropriately weighted to the full population, and hence do not match the expected proportions based upon the simple frequencies exactly.

Comment 2:
"What does IRB mean?"

Response:
The IRB is the institution review board, or institutional ethics committee. We have revised this paragraph to eliminate the abbreviation. The initially awkward wording reflects, in part, our attempt to maintain blinding in the original manuscript.

Editors

Ethics and consent

We have now included more information on ethical issues in the manuscript. Our analyses were reviewed by the institutional ethics committee, which declared them exempt from continuing review on the basis of their restriction to anonymous, publicly available data. The BRFSS itself did not obtain written informed consent, but respondents were provided appropriate information about the study at the outset of each interview, and consent was presumed on the basis of willingness to participate (as in most studies of this type).

Acknowledgments

We have no specific acknowledgments to make.