Author’s response to reviews

Title: Event-level association between alcohol use and unprotected sex during last sex: Evidence from population-based surveys in sub-Saharan Africa

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Author’s response to reviews: see over
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Dr. Francoise Dubois-Arber
Associate Editor
BMC Public Health

Dear Dr. Dubois-Arber,

Attached is the revised manuscript titled: *Event-Level Association between Alcohol Use at Last Sex and Unprotected Sex: Evidence from National Population-Based Surveys in sub-Saharan Africa*, for consideration for publication in *BMC Public Health*. We again thank the reviewers for their helpful comments which have assisted us in revising the manuscript.

Listed below are the reviewer comments and the corresponding changes that we made to the manuscript based on these comments:

**Reviewer 2**

No comments to address.

**Reviewer 3**

**Major compulsory revisions**

1) **Abstract:** Provide the main findings with AOR and 95% CI.

   We have added the AORs and 95% CI in the abstract for the main findings for the effect of drunkenness at last sex on unprotected sex.

2) Include in the methods section that Lesotho did not contribute women to the primary analysis.

   The methods section already states this. See page 5, line 13: “Lesotho was excluded from the female sample because its DHS did not collect data about drunkenness at last sex from female respondents.”

3) Results section: When describing the differences between countries regarding condom use at last sex provide p-values to show differences or report AOR and 95% CI.

   We have added AORs and 95% CI for these findings.

4) Similarly, but even more important, for the primary analysis of the event-level results description it is required to provide AOR and 95% CI for the main results.

   We have reported the AORs and 95% CIs for the main findings

5) Interpretations of results for the primary outcome analysis (event level) should be done with more caution as many of the confidence intervals overlap with 1.

   **We do note that:** “Although, this association [drunkenness affecting condom use] was marginally statistically significant (p= 0.08) in the female sample.” **Additionally we note:** “For men in the Southern and Eastern Africa regions, the effect of drunkenness during last sex on rates of
condom use at last sex varied based on partner type (marginally statistically significant for the Southern Africa region).”

Also: “For Southern Africa, the marginally statistically significant interaction showed that there was a decrease in the odds of condom use at last sex associated with drunkenness for sex with steady partners but for sex with casual partners, drunkenness increased the likelihood of condom use (AOR 1.57; 95% CI 0.95-2.54).”

In the discussion section we have been careful to note which findings were marginally statistically significant.

6) There is no data provided for the analysis of condom use at last sex and drunkenness by partnertype, although conclusions are drawn. These results should be presented in the results section.

We present these results with AORs and 95% CIs on page 11, 2nd paragraph, where we discuss the modification of the effect of drunkenness on condom use at last sex based on partner type (i.e., the interaction between drunkenness and partner type).

Minor compulsory revisions
1) Measures: The wealth index is represented on a 5 point scale and therefore divided into quintiles (not quartiles)

“Quartiles” has been changes to “quintiles” in the description of the wealth index measurement.

2) Results: Please take out the decimals for the average ages

Decimals have been removed for the average ages.

3) Rephrase the sentence page 9 line 7: Southern Africa had a higher HIV prevalence among men (17.2%) and women (23.7%) as compared to Eastern Africa (men=6.4%; women=8.2%).

Rephrased to: “HIV prevalence was higher in Southern Africa among men and women (men: 17.17%, women: 23.74%) compared to East Africa (men: 6.38%, women: 8.22%). In both regions, women had higher HIV prevalence than their male counterparts.”

4) Results: p=08 needs to be changed to p=0.08

Changed to p=0.08.

5) Table 2 reports in the footnote about bold text, but no bold text is featured .

Bold text is featured in Table 2 for all significant findings. Perhaps this did not appear properly in the copy the reviewers saw but in the PDF generated through the manuscript submission the bold text appears.

6) table 2: Drunk x partnertype, Eastern Africa, Men: upper limit of confidence interval is reported as 3.002. please amend as appropriate

We corrected this typo.
We have included this study in our literature review.

We thank you for considering our work for publication in *BMC Public Health*.

Kind regards,

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and
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