Author’s response to reviews

Title: Understanding Tobacco Use and Socioeconomic Inequalities Among Men in Ghana and Lesotho

Authors:

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Author’s response to reviews:

Reviewer reports:

Reviewer #1: Acceptable

Reviewer #2: Paper is well-written and concise, it also addresses an important social and public health problem which is smoking. The methodology adopted is adequate. I also like the style in presenting only the results that are of interest rather than bore readers with irrelevant statistics - this has made the paper very compact and limited the tables to just two. More focus was also placed on the discussion of the findings which is commendable.

The authors however need to address a few issues raised below:

Their choice of both Ghana and Kenya (where in their review in lines 4-7 of page 5, the smoking usage is under 2%) is questionable and requires justification. In my opinion, one of these two countries would have sufficed if a comparison between a low-use and high-use country is the aim. I think the focus should have been more, if not entirely on, the countries with high usage.
Kenya has been dropped. So the focus is now on a high usage country (Lesotho) and a low usage country Ghana

I am uncomfortable with the opening statement in the presentation of results ("The survey included un-weighted total male population of 4388, 12,818 and 2,028 in the age range 15-59 from Ghana, Kenya and Lesotho respectively"), the weighted totals should be the outcome of interest given the DHS sampling methodology. Although the authors state in the methodology ("The complex design used to collect the data were also built into the analysis to account for the two-stage design"), I cannot resist asking if the results tabulated in Table 1 are weighted or unweighted. The authors need to state this because of the opening statement which suggests they might be analysing unweighted frequencies, which would be wrong.

All the results in table 1 and 2 were weighted to take care of the biases that may occur due to the sampling procedure. The opening statement in the presentation of results was an oversight.

The presentation of the results (beginning from line 47 on page 6) would have been better if the authors first presented the overall picture for tobacco use among men in the three countries. Instead, for instance, they presented dis-aggregated results for age groups 35-59 in Ghana and Kenya, and for 25-34 in Lesotho. It would have been better to see the picture for the entire study population first (men age 15-59) in each of the three countries.

The results showed that the prevalence of tobacco use was high in Lesotho (47.9%) as compared to that of Ghana (6.3%).

The authors, perhaps in a bid to limit space used, have neglected to directly draw some comparisons among the countries. For instance, in table 1 for Lesotho, the paper highlighted only age 25-34 where tobacco use is 52% thus failing to show that about the same proportion (51%) use tobacco among men age 35-59, it also fails to show that tobacco use among men is generally high across all age groups in the country and that in contrast, it is relatively low across all age groups in Ghana.

The results revealed that 10.2% of men aged 35-59 in Ghana and 50.8% of men aged 35-39 had used at least one type of tobacco in Lesotho. Tobacco use was generally high across all age groups in Lesotho and in contrast, it was relatively low across age groups in Ghana.
The Tables (1 & 2) are not appropriately titled. At first glance, "background characteristics" in Table 1 suggest it is the simple tabulation of the study population by age, education, religion, etc. that is presented, but reading the paper itself, it shows that the variables (age, residence, etc) have been dis-aggregated by tobacco use. The title should reflect this.

Table 1 and 2 have been appropriated title. “Table 1: Background Characteristics and the prevalence of tobacco use” and Table 2 “Binary Logistic Regression analysis to show factors associated with tobacco use among males in Ghana and Lesotho”

The first and last categories of marital status are not different as presently labelled. I guess the first category refers to those "never married", if so, it should be correctly labelled.

Marital status was recoded as currently not married (never married, and not living together, separated), married and formerly married (widowed, divorced) (see study variable)

Finally, the sections on funding and ethical approval suggests that the govt. of Ghana is responsible for the DHS surveys in all three countries used, if this is not so, then the write-ups should be adjusted.

The design of questionnaires and data collection was funded by measure DHS and the government of Ghana and the government of Lesotho through the ministry of health.

COMMENTS OF THE Editor-in-Chief

We thank the authors for the paper on an important public problem, often ignored in the developing countries. However, the paper cannot be published as such as there are important points unclear.

1. Of the variable of interest “tobacco use”, no information is given. Therefore, information on tobacco use should be added to table 1, both as the final binary variable, but also by subcategories.

Information about tobacco use has been given and added to table 1.

Variable Ghana
N= 4,372 (%) Lesotho
N= 1,836 (%)
Tobacco use

<p>| | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>No</td>
<td>4096 (93.7)</td>
<td>956 (52.1)</td>
</tr>
<tr>
<td>Yes</td>
<td>276 (6.3)</td>
<td>880 (47.9)</td>
</tr>
</tbody>
</table>

2. The number of people in the text and in table 1 are different. In the method section e.g. for Kenya, a figure of 12812 is given and a figure 12712 (reason of the difference is item-missing??, while in the result section the figure of 12812 is presented again. In table 1, the total e.g. on age is 1317. The different in numbers of subjects is unclear.

   The difference has been cleared. The total number of respondents from Ghana was 4,372 and Lesotho was 1836. Table 1 presented the prevalence of tobacco use and the background characteristics. Only responses of those who had used tobacco was recorded.

3. The analysis is limited as only a set of logistic regressions is presented in Table 2. One would expect at least a multivariable analysis, although there may be colinearity between the social position variables.

   The study focused on the socioeconomic inequalities among men that resulted in the use of tobacco.

4. Difference between countries could be evaluated through the evaluation of the introduction of an interaction in the model.

   There has been an introduction on a new table to help explain this

   Table 3: Binary Logistic Regression analysis showing the interaction between countries and tobacco use among males

<table>
<thead>
<tr>
<th>Variable</th>
<th>OR</th>
<th>Cl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>Lesotho</td>
<td>11.39***</td>
<td>9.84 – 13.17</td>
</tr>
</tbody>
</table>

*p<0.10  **p<0.05  ***p<0.001   Computed from 2014 GDHS and 2014 LDHS
OR= Odds Ratio CI= Confidence Interval  Ref = Reference category

5. The results description (both in the text as in the abstract) should focus on the essential and not repeat all figures given in the tables and not discuss issues that are not statistical significant especially when the number of subjects in the category is very small. E.g. Muslim in Lesotho, N = 3 and OR is not statistical significant; this should not be the focus of a text.

This has been done and results description both in the text and in the abstract which are not statistical significant results have been deleted.

6. When an OR is given in the text, the reference should also be given: e.g. 1 line result in the abstract.

In Ghana, the odds of tobacco use were high among men aged 35-59 years [OR=13.3, 95 % CI: (7.58-23.32)] compared to men aged 15 – 24 years.

7. The OR should always be in relation to the reference categories. E.g in abstract in relation to religion (in Kenya): traditionalist/ spiritualist or no religion are compared to the other religions while the OR given is in relation to Christians.

Men who are traditionalist/spiritualists or who had no religion were more likely to use tobacco compared to those in the other religions in Ghana [OR=2.75, 95 % CI: (1.85-4.09)] compared to Christian men. On the contrary, in Lesotho, men who were Muslims [OR=1.93, 95 % CI: (0.36-10.36)] were more likely to use tobacco compared to Christian men.

8. Titles of tables should make reference to Males, place, time and the survey.

Table 1: Background Characteristics and the prevalence of tobacco use among male in Ghana (GDHS 2014) and Lesotho (LDHS 2014). Table 2: Binary Logistic Regression analysis to show factors associated with tobacco use among males in Ghana (GDHS 2014) and Lesotho (LDHS 2014). Table 3: Binary Logistic Regression analysis showing the interaction between countries and tobacco use among males in Ghana (GDHS 2014) and Lesotho (LDHS 2014).