Reviewer's report

Title: Uptake and correlates of HIV testing among men in Malawi: evidence from a national population–based household survey

Version: 0 Date: 04 Dec 2018

Reviewer: Huiru Dong

Reviewer's report:

This study used data from 2015-2016 Malawi Demographic and Health Survey to examine factors associated with HIV testing among men aged 15-54 years. The study utilized a relatively representative sample. This is an important work considering its contributions to the UNAIDS 90-90-90 targets. The manuscript was nicely written and results were clearly reported.

Specific comments are provided below. I hope they are helpful.

Abstract:

1. 0.05 significance level is conventionally used, so "The level of significance was set at P0.05." is not be necessary to mention in the abstract.

Introduction:

1. The prevalence of HIV over the past five years was noted, how about the incidence of HIV?

2. Is there data available on the HIV testing rate over time?

3. It is helpful to provide more context about HIV testing specific to Malawi, for example, where can people receive this service, recommended frequency, cost, availability, barriers, etc.

4. Factors associated with HIV testing among women in Malawi have been examined in previous studies. It is helpful if authors provide more rationales about why the factors for men would be different.
Method:

1. A typo on line 98: "The survey was was implemented by…".

2. What is the detailed measure for wealth? Considering that there were participants as young as 15 years old, was it measured as individual or household wealth/income? How the categories of poor, medium, and rich were defined? More information is also needed about the measurement of working status. Additionally, are these two factors highly correlated?

3. Is there data available on substance use and sexual orientation, which are important factors to consider for HIV testing?

4. It is easy to understand that factors like religion might be stable over time. However, the authors mentioned that history of genital discharge referred to information in the past 12 months. Are other independent variables, such as area of residence, work status, and number of sexual partners, referred to status or behaviours in the past 12 months as well? Considering that the dependent variable was based on the question "Have you ever tested for HIV?", the timing of HIV testing is unclear. It is therefore possible that HIV testing happened before the exposure status. In this case, the factors are not qualified as the predictors of HIV testing, or factors affecting HIV testing service utilization. The authors need to justify the temporal relationship between these exposures and HIV testing.

5. How many observations have missing value for all these variables? Assuming observations used in this analysis were based on completed sample without missing value, authors need to report how many incomplete sample were excluded.

Results:

1. Region (Northern, Central, Southern), frequency of reading newspaper, frequency of listening to the radio, and frequency of watching TV were included in result tables, but not in method section. The authors need to provide more rationales on why accessing to media (probably in the past 12 months), i.e., newspaper, radio, TV, will be predictive for HIV testing.

2. Conceptually speaking, there should be moderate level of correlation between marital status and number of sexual partners. Looking at Table 1, 58.1% sample were currently married, however, 74% sample had 0 sexual partner and 26% sample had at least 1 sexual partner. Shouldn't the frequency of people who had sexual partner be higher?
Discussion:

1. The rate of HIV testing information could be provided in the introduction section.

2. Regarding age as a predictor for HIV testing, what is the guideline for HIV testing in Malawi? It is expected that men aged 15 to 19 years might have low engagement of sexual behaviors, therefore at lower risk of HIV, which in turns will be associated with low prevalence of HIV testing. It is hard to tell from the current study that the low prevalence of HIV testing among young men is due to poor access to health care services. Potential sub-analysis can be done to restrict the sample to those who are sexually active, then examine whether age is still a predictor.

3. It is interesting to see that key socio-demographic factors such as wealth index, working status, covered by health insurance, were strongly associated with HIV testing in bivariate analyses, however, they were all not significantly associated with HIV testing in multivariable model. It is helpful if authors provide some potential explanations.

4. Reading newspaper once a week or more than once a week increases likelihood of HIV testing, however, watching TV once a week decreases likelihood of HIV testing. The authors only discussed the effect of reading newspapers. It is helpful to discuss the result of watching TV, especially why it is negatively associated with HIV testing.

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

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.
I agree to the open peer review policy of the journal

Do you want to get recognition for reviewing this manuscript?

Add a record of this review to Publons to track and showcase your reviewing expertise across the world’s journals. Signing up is quick, easy and free!

Yes