Author’s response to reviews

Title: Comprehensive knowledge on cervical cancer, attitude towards its screening and associated factors among women aged 30-49 years in Finote Selam town, northwest Ethiopia

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Author’s response to reviews:

To: BMC Reproductive Health

We have received editor’s and reviewers’ comments to the manuscript entitled ‘Comprehensive knowledge on cervical cancer, attitude towards its screening and associated factors among women aged 30-49 years in northwest Ethiopia’. The authors tried to address all the comments and suggestions given and a point-by-point responses have been given with a blue font and are attached as a supplementary file.

Additionally, for the comments and suggestions given in the attached word document, the authors have provided their point-by-point response within the document which is submitted as a supplementary file.

Authors' point-by-point response to Reviewer I reports

Title: Comprehensive knowledge on cervical cancer, attitude towards its screening and associated factors among women aged 30-49 years in northwest Ethiopia

First of all, the authors would like to thank BMC Reproductive Health editors and the respected reviewers for reviewing our manuscript and providing the necessary comments for corrections. The authors have made corrections point by point to the comments given and have tried to Response all the issues raised by the reviewers. Please note that we gave our response in blue font color for reviewers’ comments.
Reviewer 1

1. On the 'Abstract'. indicate what was adjusted for in the AOR.

Response: Thank you dear reviewer.

The multivariable regression intrinsically controls the potential confounders. Hence, the odds ratio output of the multivariable regression is called ‘Adjusted Odds ratio’. It is not to mean it is externally adjusted. To make it clear, the authors tried to rewrite it.

2. Include the p-values in the AOR in the abstract section.

Response: The advantage/use of ‘P-value’ is encompassed by the ‘Odds ratio’ (Odds ratio is broader than P-value) that the authors thought and decided to use the odds ratio finding rather than the p-value. If we add the P-values in the abstract, the number of words may go beyond the word limit which is 350 words and hence we will be forced to erase other important terms/words. However, we tried to mention the p-value finding in the foot note of each tables.

2. State the calculated sample size on the abstract section.

Response: Thank you dear reviewer. The comment is accepted and corrected.

Introduction

4. State the risk of dying from cervical cancer in Ethiopia with statistics relating more closely to the study site.

Response: The authors have looked for journals or any other documents to get information about the risk of dying from cervical cancer in Ethiopia, but we couldn't find any evidence.

Methods

5. Rationale for targeting the study site in relation to prevalence of cervical cancer or access to the services need to be provided i.e. for Finote Salam town, northwest Ethiopia.

Response: As we mentioned in the method section, page 6, paragraph 1, Finote Selam hospital, provision of ‘cervical CA screening’ service was initiated recently (in 2016). It is clear that the knowledge and attitude of the community determines the uptake of the service. So, having
information about the knowledge and attitude of the beneficiaries can help a local administrators and the health system take appropriate action. Which in turn, can increase service utilization.

6. What was the formula used for determining the sample size and what was the rationale for using that formula?

Response: The sample size was calculated for the outcome variables as well as for factors. This was described in methods section, particularly sample size and sampling procedure (page 6, line number 133)

For the ‘outcome variables’ we considered the single proportion formula:

\[ n = \left( \frac{Z \alpha}{2} \right)^2 \frac{p(1-p)}{d^2} \]

Where \( \alpha \) is level of significant
\[ Z = \] Standard normal distribution curve value for 95% confidence level=1.96
\( p \) is proportion of knowledge or attitude
\( d \) is degree of precision =4% or 5% for attitude and compressive knowledge respectively

Therefore, the sample size for knowledge and attitude were 380 and 584 respectively. Considering a design effect of 2 and 5% non response rate, the final sample size for were 797 and 1224.

The sample size calculated for factors with assumptions is displayed in the following table

<table>
<thead>
<tr>
<th>Factors For knowledge</th>
<th>Ratio</th>
<th>CI%</th>
<th>Power</th>
<th>AOR</th>
<th>Proportion</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational status</td>
<td>1:1</td>
<td>95</td>
<td>80</td>
<td>2.492</td>
<td>P1=24.1,P2=57.9</td>
<td>76</td>
</tr>
<tr>
<td>Occupation ratio</td>
<td>1:1</td>
<td>95</td>
<td>80</td>
<td>1.928</td>
<td>P1=36.6,P2=72.3</td>
<td>70</td>
</tr>
<tr>
<td>Age</td>
<td>1:1</td>
<td>95</td>
<td>80</td>
<td>0.28</td>
<td>P1=44.6,P2=15.2</td>
<td>88</td>
</tr>
<tr>
<td>Education</td>
<td>1:1</td>
<td>95</td>
<td>80</td>
<td>1.635</td>
<td>P1=29.7,P2=43.7</td>
<td>398</td>
</tr>
</tbody>
</table>
We also considered design effect 2 and 5% non response rate for factors. However, the largest sample size was the one calculated for attitude (n= 1224).

But, the authors thought that this detail is not necessary. However, if you decide that this detail is necessary, we can incorporate as per your future recommendation.

7. What were the potential confounders in this study and how were they identified?
Response: We were considered different variables like education, employment, marital status, maternal health service utilization might have confounding effect one on another. Using multivariate regression model by itself can control/handle the confounding effect.

8. Your sample size of 1137 is below the calculated sample size of 1224. What does this mean in terms of conclusions and representativeness of the studied population?
Response: Of course, the response rate in this study was 93.7% which was slightly lower than the expected (a minimum of 95% because we considered 5% non response rate for sample size calculation). However, since we considered a design effect of two that doubles the sample size, a slightly high non response rate might not significantly affect the representativeness of the sample.

9. On Table 1, provide the chi-square p-values for each of the categories analysed and presented in percentages i.e. Age, marital status etc
Response: Thank you dear for the comment,
The authors corrected as per the comment.

10. Data on 'Women's risk of exposure and reproductive health service utilization' need to be presented on a Table for clarity.
Response: Thank you, we accepted the comment and the data presented on table (Table 2)

11. Table 2 data is not referenced anywhere in text. Chi-square p-values also need to be presented.
Response: The table 2 (now, it is table 3) was linked with the text (narrative). See page 12, line number 227.

12. On the tables with data on regression analyses, it is unclear what and reasons why the choice of reference need to be provided.

Response: Authors tried to make clear for reader by explained in the table foot note, the reference category represented by number 1 from odds ratio column of table, The reasons for reference selection during regression analysis are considering:

1). Previous published article
2). Category having high population
3). Category logically might have fewer tendency to contribute for interested outcome variable.

13. I already asked above that what was adjusted for in the AOR is not provided.

Thank you, the authors addressed it in the previous question.

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Reviewer 3

Title & abstract

Dear author, I suggest you to use study site "Finote Selam" on the title. Unless it seems that as if you conducted your study on overall northwest Ethiopia.

Response: The authors accepted and corrected the comment
Dear author, in the result part of your abstract there are unnecessary capitals (Line 44 & 45). For instance, Having College and above, Knowing someone with cervical cancer

Response: Thank you, we accepted comment and corrected

3. Background

Please would you put your reference for line number 108-110

Response: Thank you, the authors cited some of the references.

On the title of your paper you said "Comprehensive knowledge" but throughout your document you used the word "knowledge" alone. Do you think they are exactly similar? And think about consistence.

Response: Thank you dear reviewer, we tried to address the comment.

3. Methods

Line 125….use "comma" 5,530.

Response: Authors accepted the comment and corrected it

Line 131-136: Too long statements and there is also unnecessary capitals. In addition, why you Used 4% margin of error to calculate sample size? Is there any justification rather than increasing sample size?

Response: The comments are accepted and corrected.

Regarding the margin of error, as far as the proportion is between 40-60%, it is possible to use 5% margin of error. However, to increase our study precision through increasing sample size we preferred to use 4%. Otherwise, there is no other justification other than to increase the sample size.
You thought as you calculated sample size for factors. However, you didn't show us the full assumption you used and the calculated sample size. It is better to entertain the assumption and the calculated sample size here.

Response:

The sample size was calculated for the outcome variables as well as for factors. This was described in methods section, particularly sample size and sampling procedure (page 6, the second paragraph)

For the ‘outcome variables’ we considered the single proportion formula:

\[ n = \frac{(Z\alpha/2)^2 \cdot p (1-p)}{d^2} \]

Where \( \alpha \) is level of significant

\[ Z = \text{Standard normal distribution curve value for 95\% confidence level} = 1.96 \]

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Line 142: What you operationalize was knowledge about cervical cancer. So, why you used the word comprehensive knowledge on the title?

Response

The authors tried to make consistent as per your comment and we used the term ‘comprehensive knowledge’.

The authors should describe how they measure the attitude of the respondents and even the content of the questions should be mentioned. You mentioned as if you used a five point likert scale (Line 151) but you didn't show us how you categorized into favorable and unfavorable?

Response: Six attitude questions were used with five likert scale measurement: strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree. A woman who scored mean value and above was considered as having a favourable attitude.

Regarding the content of the questions, the authors thought that it not important to document the questions because we already mentioned them in the result section particularly under the heading ‘Women’s attitude towards cervical cancer screening’ (page 13, last paragraph)

Line 147: You said as you review the literatures to develop the tool. Which literatures you reviewed? You have to indicate the references.

Response: Thank you, the comment accepted and corrected

4. Results & Discussion

Line 174: Rephrase correctly

Response: Thank you, the authors accepted and corrected the comment.

Table 1: Line 8. Farmer and daily worker. Omit comma

Response: We accepted the comment and corrected

Line 200-201 should be corrected as: Knowledge about Cervical cancer

Response: Authors accepted the comment and corrected
Line 2002: Is that an awareness or knowledge?

Response: It is awareness. The authors used ‘awareness about the disease’ as one of the questions used to assess the comprehensive knowledge.

Line 232, 248,250,252,255, 271, 293, 319. Don't contract words (didn't). Usually it is not advisable to contract words in scientific writing

Response: Thank you. The authors accepted and corrected your important comment.


Response: The comment is accepted and corrected.

Line 280: Revise this sentence

Response: Authors accepted the comment and corrected it

It is essential to report the limitation of the study

Response: The authors tried to address it.