Author's response to reviews

Title: Factors associated with age at first sexual initiation among youths in Gamo Gofa zone, south west, Ethiopia: A cross sectional study

Authors:

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Version: 4 Date: 29 April 2013

Author's response to reviews: see over
Author’s response to reviewers

Reviewer's report

Title: Determinant factors of Age at first sexual initiation among youths in South West, Ethiopia: A cross sectional study

Version: 1 Date: 22 December 2012

Reviewer: Olufunmilayo Fawole

Reviewer's report:

Thank you for asking me to review the manuscript titled “Determinant Factors of Age at First Sexual Initiation among Youths in South West, Ethiopia: “A cross sectional study.” This study was a health facility based cross sectional survey of 405 young people which aimed to identify factors associated with early sexual initiation among the youths. The study contributes to knowledge on adolescent sexuality in Ethiopia; however it will require the corrections listed below to improve the quality of the work.

1) Abstract

Should be more concise. Delete irrelevancies in the Background and Methods Sections. Bring first line of the Result Section to the Methods.

• Done as required

Concluding part of abstract recommends teaching the community, school teachers, parents. This is not an outcome of this study. Recommendations should be related to the study.

• Done as required

2) Background

The first two paragraphs can be merged.

• Done as required

The first line of the second paragraphs states young people are “particularly” vulnerable”. Authors should state to what?

• Now this is corrected as “Young people are particularly vulnerable to HIV in Ethiopia with a prevalence of 2.4% as evidenced from the 2005 demographic and health survey report” [3].

In the 3rd paragraph please put years behind the ages listed.

• Done as required
Please give me more information, include the median/mean age, and show the trends in age of sexual initiation between year 2000 and 2005.

- This is now corrected as “In Ethiopia, trends in the median age at first sexual intercourse has increased little over the past five years from 16.5 years in 2005 to 17.1 years in 2011 for women and from 21.1 years in 2005 to 21.2 years in 2011 for men[5, 6].”

First sentence of the forth paragraph needs to be backed up with a reference. This is also probably due to cultural factors.

- Done as required

(3) Methods

What does SNNPR mean?

- This is now made to be clear as “Southern nations nationalities and peoples region (SNNPR)”

There is no description of the study area “Gamo Gofa.”

- Now description of the study area “Gamo Gofa.” Is given as “Gamo Gofa is a Zone in the Ethiopian Southern Nations, Nationalities and Peoples Region (SNNPR). It is named for the Gamo and Gofa peoples, whose homelands lie in this Zone. The administrative center of Gamo Gofa is Arba Minch”

Do all 3 hospitals and 68 health centres offer HIV testing and counseling services? How many actually do?

- This is now given as “There are a total of three hospitals and 68 health centers out of which all three hospitals and twenty four health centers offer HIV testing and counseling service for the total population”

Selecting 3 health facilities out of 71 does not appear to be representative or scientific. It much too small.

- It is not three health facilities rather 3 hospitals and 3 health centers which is 6 out of the 27 health facilities which offer HIV testing counseling service and it is now made to be clear as “Three hospitals and three health centers offering HIV testing and counseling service in Gamo-Gofa zone was included in the study.

Change “customers” to ‘clients’

- Done as required

What do you mean by “unable to communicate”?
• It is now made to be clear as “those who are unable to communicate (having hearing problem and cannot communicate with sign language) were excluded from the study.

Please give number of data collectors and supervisors used in the study
Give more information on the content of the training, by whom? Over how many days? Quality control?
• It is now given as “Six data collectors and three supervisors who were HIV counselors from the respective health institutions having BSc degree were recruited. Two days training was given for data collectors and supervisors by investigators on how to fill out the questionnaire during the pre-test counseling and correction of any ambiguity or incompleteness during the post-test counseling. Trustworthiness of the data was assured by giving training for data collectors and by using immediate and daily supervision”

Ethical consideration not detailed enough – No information on anonymity, privacy, confidentiality etc.
• It is now corrected as “The study participants and parents or legal guardians were informed that they have full right to withdraw from the study without losing any of their right as a client in the health institutions. Confidentiality of the information was assured by omitting names of study participants from the questionnaire and respondents were interviewed in a separate room to maintain their privacy”

(4) Results
Recast most of the sentences where numbers and percentages were used. Sentences should still flow even with use of numbers and percentages in the bracket. Use of bracket not well done.
• Done as required

Convert Ethiopian birr to USD.
• Done as required

In the text, please state what percentage of the students where in secondary or tertiary education.
In the methods, please provide your operational definition for terms such as “planned sex”, “alcohol use” and “comprehensive knowledge on HIV”
• Done as required

Write Result section in past test.
• Done as required
In Table 3 please include percentages beside number given e.g. 72, 66 etc.

- I was happy to give percentages beside numbers given, but another reviewer commented me to avoid classification of the age group as > 18 years and < 18 years so that I remove these classification and numbers given as required by this reviewer. As a result the table is therefore edited accordingly

(5) Discussion

Discussion repeats results stated in the Result Section. Many references are missing e.g. 2nd sentence of 1st paragraph, 2nd sentence of 2nd paragraph, last line of 3rd paragraph.

- All these missed references and others are now included and well done as required

Limitations should be recast.

- The limitation is now well done as required

What is the more representative sample of youths you will recommend?

Youth friendly centres may be recommended for those who are sexually active.

- Accepted as required

(6) References

Please list surname and initials only. References 8, 9 and 10 have first names. Journal name of reference 7 is not abbreviated.

- All are corrected now

Thank you.

Dr. O.I. Fawole

**Reviewer's report**

**Title:** Determinant factors of Age at first sexual initiation among youths in South West, Ethiopia: A cross sectional study

**Version:** 1 **Date:** 6 April 2013

**Reviewer:** Magbagbeola David M Dairo

**Reviewer's report:**

Is the question posed by the authors well defined?

The question posed by the authors appears well defined. The author sets out to determine what factors are associated with early sexual debut among the respondents. However, he needs to
define set the cut of the age he considered as early and provide appropriate references to support his definition.

- The cut off for age is now given in the operational definition section of the methods

2. Are the methods appropriate and well described?
The methods is well described. The author needs to tell the readers what are the strata he chose his respondents from. What are the proportions chosen from each strata. How did he divide the 410 into each strata? In each strata, what sampling procedure did he use to select the respondents.

- This is now given as “Stratified sampling technique was used by stratifying health institutions into health center and hospital and in each strata systematic sampling technique was used to select the respondents. Based on the number of clients who visited each health institution during the previous one year (annual report of each health institution), the total sample size was proportionally divided to each strata (41.5% for health centers and 58.5% for hospitals)”

3. Are the data sound?
The data appears sound.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes

5. Are the discussion and conclusions well balanced and adequately supported by the data?
The discussions are balanced. However the authors discussed data on viewing of pornographic materials but provided no data to support it

- The data on viewing of pornographic materials is now given in table 2 and table 3 as required and compared with other studies with giving reference.

6. Are limitations of the work clearly stated?
Yes

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes

8. Do the title and abstract accurately convey what has been found?
Yes. However the authors need to include the average age at sexual debut in the results section of the abstract
9. Is the writing acceptable?
Yes. In the results section in particular the subsection on “differences of the study participant with respect to age at first sexual initiation, It appears more linguistically correct to write “initiate sex at early age” than “initiate sex at early stage”

- It was corrected but this paragraph is now removed because of another reviewer commented me to remove the figures given so the paragraphs talking about the figures were also removed

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
'I declare that I have no competing interests'

Reviewer's report
Title: Determinant factors of Age at first sexual initiation among youths in South West, Ethiopia: A cross sectional study
Version: 1 Date: 23 March 2013
Reviewer: Oyedunni Arulogun

Reviewer's report:
1. Major Compulsory Revisions
None

2. Minor Essential Revisions
a. Abstract - result section, the sentence A total of 405 youths were actively participated should be changed to 'A total of 405 youths actively participated'.
   - Done as required

b. Ethical consideration - line 3, the sentence starting with 'Verbal informed consent from each participants was obtained' should be changed to 'Verbal informed consent from each participant was obtained'.
   - Done as required
c. In the result section, there should be a little detail on the findings about knowledge and exposure to pornography as these were well discussed but lost in the result.

- It is now given in table 2 and table 3

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
I declare that I have no competing interest.

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**Reviewer's report**

**Title:** Determinant factors of Age at first sexual initiation among youths in South West, Ethiopia: A cross sectional study

**Version:** 1  **Date:** 29 March 2013

**Reviewer:** Mekitie Wondafrash

**Reviewer's report:**
Major compulsory revision:
1. In the title: the final analysis of this study focuses on factors influencing age at first sex rather than estimation of age at first sexual experience. The authors need to correct the inconsistency observed in the document about these two issues.
   - The inconsistency is now corrected by avoiding the age classification as > 18 years and < 18 years and by using Cox regression

2. In 'abstract' section: should be a summary of what has been done and found in general. However, the following issues needs to be addressed by the authors:
   - In 'methods' section: how was the individual study subjects identified after the stratification is done by health facility? This is not also mentioned elsewhere in the methods section. Who are the study subjects in terms of age range?
     - Now it is corrected as “A total of 405 youths who are 15-24 years participated in this study using systematic sampling technique after stratification of health institutions in to health center and hospital.
   - In 'Result' section: what does "actively participated" mean in this section?
Now it is corrected as “A total of 405 youths who are 15-24 years participated in this study”

Survival analysis should be done to estimate the time to first sexual experience; here it seems that the authors divided the time of initiation as early and late. Another model (binary logistic regression) should be appropriate in this case.

- This is now corrected by avoiding the age classification as > 18 years and < 18 years and by using Cox regression

In "Conclusion' section: The second sentence doesn't seem to emerge from the findings of this study and should be removed. The text should also be reduced significantly.

- Done as required

3. In the 'Background' section of the manuscript:
- This section focuses mainly on the magnitude, age and impact of initiation of sex by youth. However, there is no introduction about the factors which might influence sexual debut among youths in Ethiopian context and elsewhere.

- Now this is corrected as “As evidenced by different literatures timing of sexual debut among youths is influenced by a wide range of factors including age, gender, residence, educational level, knowledge on HIV, economic status, watching pornography, Khat and alcohol utilization (7 – 16 ]”

- What is the reference for the median age of marriage in Ethiopia? Reference number 6 does not have Ethiopian data.

- Now it is corrected as [ 5 ]

- The overall aim of the study should be clearly stated here as well; which is missing from the background section.

- Now it is included at the end of background section as “Therefore, the main aim of this study was to determine the time of first sexual initiation and associated factors among youths in south west Ethiopia”.

4."Methods" section appears in the document as a subheading. The authors need to create another subtitle; for instance 'study setting and period' under "Methods" section.

- Accepted and done as required

In the first part of the methods some unnecessary details should be taken out.
• I was happy to remove unnecessary details but another reviewer commented me to add more on description of Gamo Gofa, so now I have added more details even as “Gamo Gofa is a Zone in the Ethiopian Southern Nations, Nationalities and Peoples Region (SNNPR). It is named for the Gamo and Gofa peoples, whose homelands lie in this Zone. The administrative center of Gamo Gofa is Arba Minch”

5. In the 'Sampling procedure' subheading:
• How was individual study subjects selected after stratification was done based on the client flow to the study health facilities?
  • Now it is made to be clear as “Three hospitals and three health centers offering HIV testing and counseling service in Gamo-Gofa zone was included in the study. Stratified sampling technique was used by stratifying health institutions into health center and hospital and in each strata systematic sampling technique was used to select the respondents. Based on the number of clients who visited each health institution during the previous one year (annual report of each health institution), the total sample size was proportionally divided to each strata (41.5% for health centers and 58.5% for hospitals)”

6. In the 'Data collection and quality control' subheading:
• What does "...standard questionnaire" refer to?
  • It was simply to mean that structured and it is now changed to structured
• What has been attempted to avoid information bias from a client who comes for VCT since you used the same VCT counselors as data collectors on timing of sexual debut? How was the VCT and data collection organized?
  • It is now made to be clear as “Data was collected during the pre-test counseling using interviewer administered structured questionnaire before the sero-status of the individuals was known by the respondents. Any error or ambiguity and incompleteness were corrected during the post-test counseling. Six data collectors and three supervisors who were HIV counselors from the respective health institutions having BSc degree were recruited. Two days training was given for data collectors and supervisors by investigators on how to fill out the questionnaire during the pre-test counseling and correction of any ambiguity or incompleteness during the post-test counseling. Trustworthiness of the data was assured by giving training for data collectors and by using immediate and daily supervision”. 
•The last two sentences of this section are not clear to your reader. The author need to be clear on how "data coding, cleaning, and verification" can't ensure data quality.
  • It is now made to be clear as “Data coding, cleaning and verification was performed before the data was entered in to SPSS version 16”.
•How was khat and alcohol use defined for this study? Who are users and non-users?
  • It is now given in the operational definition part of the methods section
7. In the 'Data processing and analysis' sub heading:
•It is not clear where the proportion 41% comes from for the sample size calculation. Reference needs to be cited.
  • The reference is now cited there as [5].
•The model used to estimate the time to first sex is confusing to your readers and needs to be clear. Moreover, the time variable needs to be adequately described if survival analysis is to be used.
  • The model is now clearly stated by avoiding the confusion the time variable is now given as “… by taking not having sex as an outcome variable and age as a follow up period”.
•The Kaplan-Meier curves are recommended to be done for categorical predictors to have an insight about survival function. Moreover, it is mentioned that log-rank test was used and the objective of using it is not mentioned. The purpose of each one of them needs to be clear for the reader. Both are used for exploration and select covariates for multivariate analysis.
•Criteria for entering covariates to the multivariate Cox Proportional Hazards model should be indicated.
  • Now this is made to be clear as “. Kaplan-Meier curves or log-rank test were used to select variables to enter into the multivariate Cox proportional hazard regression model (variables having a p-value of ≤ 0.2 in bi-variate analysis were entered into multivariate analysis) by taking not having sex as an outcome variable and age as a follow up period. In order to measure the association of age at first sexual initiation with a number of explanatory variables, crude and adjusted hazard ratio (HR) with 95% CI were computed”.
•What are the "dependent and independent variables"? At least the dependent variable (time variable) needs to be adequately described or defined.
Now the outcome variable clearly indicated as “… by taking not having sex as an outcome variable and age as a follow up period”.

The independent variables clearly indicated as “… socio-demographic variables, comprehensive knowledge on HIV, alcohol use, khat use, peer pressure, number of sexual partners, use of condom and viewing pornographic materials which were independent variables in this study”

If the aim of this study is to estimate the time to first sexual experience, there is no need to categorize the time variable into <18 and >=18 years. Or else linear or logistic regression analysis can be used to identify predictors of sexual initiation (age at first sex as continuous or categorical variable) as suggested in the abstract section.

Now this confusion is removed by using Cox regression without categorizing the time variable into <18 and >=18 years

8. In the 'Result' section:
   - The first paragraph needs re-writing. It is not clear grammatically to your reader
   - The first sentence of the second paragraph is not clearly written as well.
     - Done as required
   - Whose income was asked on the last line of the second paragraph of this section? How was income of VCT clients measured as majority of the study participants are students (48.6%)?
     - Now this is given in the operational definition part of the methods section

9. Under 'Distribution of the study participants with respect to sexual and sexual behaviors' subheading:
   - How was alcohol and khat use measured or defined? It has to be mentioned in the methods section.
     - Now this is given in the operational definition part of the methods section

10. Under the subheading 'Differences of the study participants with respect to age at first sexual initiation'
    - The cut off for early and late sexual initiation should be defined in the methods section.
      - Now this is given in the operational definition part of the methods section
It is not recommended to reporting the result of bi-variate analysis separately; the authors then need to combine it with the following subheading. Kaplan-Meier curves or log-rank test are used to select variables to enter into the multivariate Cox Proportional Hazard regression model.

- Accepted and corrected as “Kaplan-Meier curves or log-rank test were used to select variables to enter into the multivariate Cox proportional hazard regression model” in the Data Processing and Analysis part of the methods section.

11. Under the subheading 'Predictors of age at first sexual initiation among youths in South West Ethiopia'

- The first sentence in this section should be taken to the method section.
  - Done as required
- What variables were entered into the multivariate analysis and what were the criteria?
  - It is now given as “Variables having a p-value of \( \leq 0.2 \) in bi-variate analysis were entered into multivariate analysis. Variables which were entered into the multivariate analysis include; Age, sex, employment, educational status, comprehensive knowledge on HIV, Khat use, alcohol use, watching pornography and HIV status”

- If the age has to be categorized as <18 and \( \geq \) 18 years, logistic regression analysis is rather appropriate than Cox proportional Hazards Model (Table 3).
- Survival analysis should be used if the objective is to estimate the age at first sex as indicated in the title of the manuscript. This discrepancy needs to be corrected.
  - This discrepancy is now corrected by avoiding the age category of <18 and \( \geq \) 18 years

12. In the 'Discussion' section:

The discussion section needs further work by the authors for the following reasons:

- No evidence has been presented for the explanation given to age at first sex.
  - Now it is given

The last sentence of the first paragraph looks like a recommendation and needs to be rewritten.

- Done as required

- The last two sentences of the second paragraph should be evidenced as well.
  - Done as required

There is no reference cited for both statements or no part of the result was used to explain the association between khat or alcohol use and early first sexual experience.

- Now evidences are given
• How was employment defined among youth? This has to be clearly stated in the methods section.

  • Now this is given in the operational definition part of the methods section

• The last sentence of paragraph three does not have reference even if Ministry of Health is mentioned as a source.

  • Now this is corrected by giving the right reference and by removing the sentence without reference

• How was "comprehensive knowledge on HIV/AIDS" measured and compared with other studies in relation to timing of first sexual experience?

  • Now this is given in the operational definition part of the methods section and compared with other studies cited there in the discussion.

• What is the "legal issues" in relation to viewing of pornographic materials in Ethiopia? It is not clear for the reader

  • Actually, as to my literature review no references for legal issues in relation to viewing of pornographic materials in Ethiopia, so I remove this sentence now.

Minor essential revision:
1. In the title 'Determinant factors of age at first sexual initiation among youths in southwest, Ethiopia: A cross sectional study', the phrase "Determinant factors" is redundant and needs to be rewritten

  • Now it is rewritten as “Factors associated with age at first sexual initiation among youths in Gamo Gofa zone, south west, Ethiopia: A cross sectional study”.

2. In the 'ethical consideration' section: how did parents or legal guardians provide written consent for those less than 18 years old?

  • Now it is made to be clear as “Written informed consent sheet was prepared for the parents or legal guardians of participants less than 18 years to give their signed consent on behalf of their children. The study participants and parents or legal guardians were informed that they have full right to withdraw from the study without losing any of their right as a client in the health institutions. Confidentiality of the information was assured by omitting names of study participants from the questionnaire and respondents were interviewed in a separate room to maintain their privacy”
3. The authors should address the formatting problems throughout the manuscript such as spaces between words, consistency in placing headings and subheadings, etc.
   - Done as required

4. The authors need to ensure proper use of active and passive voices.
   - Done as required

5. The authors need to be sure that all variables are defined in the 'Methods' section; for example, comprehensive HIV/AIDS knowledge.
   - Done as required

6. The authors generally do not need to present HR or other figures with more than 1 decimal when it is greater than 1 and it has to be consistent throughout the document (e.g. 1.1 instead of 1.123). 2 decimals are used if it is less than on (e.g. 0.56). In the article some have 3 and some have less.
   - Done as required

7. In the 'conclusion' section:
   - In the first sentence it is mentioned that the prevalence of early sexual initiation is high but it should be emphasized that it is in comparison with other studies in the country.
     - It is now corrected as “In conclusion, majority of the study participants in this study have initiated sexual intercourse …”

8. In the 'reference' section, writing of the authors (individuals or organizations) needs to be consistent in terms of style.
   - Done as required

9. In 'Table 3' it is recommended to include percentages of youth <18 and >= 18 years old. Nevertheless, the model used here should be checked for its appropriateness to identify 'predictors' of first sexual experience.
   - The model is now clearly use and the table is therefore edited accordingly

10. Kaplan-Meier curves are mostly used for exploration and to select variables for multivariate analysis. The figures (1-4) should be optional, preferably they should removed from the article.
    - All these figures and the paragraphs talking about these figures are now removed as required

**Level of interest:** An article whose findings are important to those with closely related research interests
Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests

Editor's comment

We also need you to make the following Editorial changes:

The Background Section of your Abstract needs Aims of Study

- This is now included as required

Really I would like to thank all reviewers for their constructive and valuable comments