Author’s response to reviews

Title: Availability of Adequately Iodized Salt in Northwest Ethiopia: a Cross-sectional Study

Authors:
Zegeye Abebe (zegeye24@gmail.com)
Amare Tariku (amaretariku15@yahoo.com)
Ejigu Gebeye (ejigugebeye@gmail.com)

Version: 1 Date: 25 Mar 2017

Author’s response to reviews:

Title: Availability of Adequately Iodized Salt at Household Level and Associated Factors in Dabat District, Northwest Ethiopia: a Cross-sectional Study

Authors:
Zegeye Abebe (ZA): zegeye24@gmail.com
Amare Tariku (AT): amaretariku15@yahoo.com
Ejigu Gebeye (EG): ejigugebeye@gmail.com

Version: 1 Date: March, 2017

With regards!

From: Zegeye Abebe (E-mail: zegeye24@gmail.com)

Correspondence Author
To: Archives of Public Health Journal, Editorial Office

Subject: Submitting a revised version of manuscript

Object: Manuscript ID= AOPH-D-16-00152: Availability of Adequately Iodized Salt at Household Level and Associated Factors in Dabat District, Northwest Ethiopia: a Cross-sectional Study

We would like to thank the reviewers and editor for sharing their views, experiences and constrictive comments. The comments are very important which will improve clarity of our manuscript. The point-by-point responses for each of the comments and the revised manuscript with track changes are provided in the attached documents.

Point by point Response

Reviewer #1

Comments and responses

1. But to be more closely integrated in the general context of IDD: is there still goiter and cretinism in this part of Northwest Ethiopia studied?

   Answer: Thank you very much for your critical comments. Regarding ID in northwest Ethiopia, there are some studies in this part of Ethiopia using goiter rate as the outcome variable and all studies showed that ID is the major public health problem and already cited in the introduction section of the manuscript

2. Some regions of Ethiopia were affected historically by goiter and cretinism: is it the case for northwest Ethiopia?

   Answer: It is true. ID is the problem all over Ethiopia. The country is the second iodine deficient in Africa

3. The authors describe an altitude between 1000 - 2500 meters: I guess that the urban kebele "city" was close to 1000 meter, and the 3 rural kebele's "villages" were close to 2500 meters. As altitude is a major determinant of IDD, the authors should clearly state the altitude of their 4 Kebele's surveyed.
Answer: Thank you very much! As it is describe in the method section the district covers different ecological zones (highland, lowland and midland) with range of altitude from 1000 to 2500 meters. But the four selected kebeles for this study have an altitude around 2500 meters above sea level.

4. Many reports on IDD in Ethiopia cited by the authors: is there a general integrated coordination of IDD programs?

Answer: Since the problem is vast, the government endorsed mandatory salt iodization since 2011 and started to established centralized iodization facility but not yet functional. In addition, there is also salt mining association in the country and other non-governmental organization like UNICEF and Micronutrient initiative support the government to ensure utilization of adequately iodized salt in the country

5. Are the Health and Demographic Surveillance Systems HDSS official administrative public health organizations?

Answer: Thank you. HDSS site is found in Dabat District, northwest Ethiopia and it is considered as the representative of northwest part of the country. Only vital statistics, birth, marriage, death, and occurrence of disease and population displacement are recorded by the site data collectors regularly and the data is analyzed by the university of Gondar. The site is not giving any intervention regarding iodized salt utilization. As it is already mentioned in the methods section, HDSS site has been running since 1996 and hosted by the University of Gondar.

6. It seems that iodized salt is legally mandatory in Ethiopia on the commercial market. Is there a surveillance program? Which official administrative program has the authority to forbid the selling of not-iodized salt? If the law exists, but is not in application, it should be clearly stated.

Answer: yes, it is mandatory to fortify salt with iodine in Ethiopia. There is a surveillance program at the Federal level, but it is not frequent. As far as my knowledge is concerned there is no frequent testing of salt for iodine content at retail and community (household) levels. The Ethiopia Public Health Institute is responsible for checking the salt content of iodine.
Punctual suggestions:

7. Shorter title: "2016 Monitoring of household iodized salt in Northwest Ethiopia"

Answer: Thank you for your suggestion. But I prefer to maintain the current way of description. Because monitoring is wider and it may include testing of salt at whole sealer and retail levels.

8. Abstract: Line 7: suppress "Utilization of universal iodized salt is the most cost-effective..." and begin directly with "Universal iodized salt is the most cost-effective...")

Answer: Thank you. The comment is accepted

9. Background: last sentence: impossible to understand: there is a word lacking: "... were consuming more iodized salt compared to other regions." in lace of "... were utilized iodized salt compared to other regions".

Answer: Thank you. The comment is accepted

10. Methods: describe in more detail the administrative place of HDSS in Ethiopia: is I an official administrative institution? Is there a central office of IDD in Ethiopia? If not, is it coordination between the various actors implied in IDD in Ethiopia?

Answer: The HDSS site is included 13 randomly selected kebles in different geographical location and they are assumed to be representative of the northwest part of the country. The site has around 28 data collectors, 8 supervisors and one coordinator.

As it is describe in the government endorsed mandatory salt iodization since 2011 and started to established centralized iodization facility but not yet functional. In addition, there is also salt mining association in the country and other non-governmental organization like UNICEF and Micronutrient Initiative work with the government to ensure utilization of adequately iodized salt.

The above statement is described in the introduction section of the manuscript.

11. Results: page 8 line 10: "higher among respondents who had good knowledge..." in place of higher among respondents had good knowledge..."

page 8 line 14: "who" lacking after "respondents"
12. Discussion: Line 35: Please, give the values of iodized salt consumption in the references cited for Ethiopia and India: no reader will go back to these papers just to obtain these points of comparisons. Moreover, change "Ethiopia" with "West Ethiopia", otherwise, it becomes impossible to understand.

Answer: Many thanks!!! The values of iodized salt consumption for Ethiopia is cited
In addition, the value of iodized salt consumption for Kenya was missed rather than India and is also cited in the main document. Also the word Ethiopia is changed to west Ethiopia.

13. Reference 31 concerns Gondar town, Northwest Ethiopia: I guess Gondar is a "big" city as compared to the 4 Kebele's surveyed. Is seems not a paradox that iodised salt is better available in a big city.

Answer: Thank you very much! But, it doesn’t seem a paradox because the study in Gondar is conducted at 2013, immediately after endorsement of mandatory salt iodization in Ethiopia. In addition, currently the government gives much attention to utilization of iodized salt through media promotion.

14. Discussion p 8 line 55: Change "However, the finding was lower than the study..." with "However, the coverage of iodized salt consumption was lower than the one observed in India..."

Answer: Thank you. The comment is accepted

15. Conclusions: replace "idiometric" with "iodometric"

Answer: Thank you. The comment is accepted

16. Reference: reference 21 and reference 23 are the same!

Answer: Thank you. it was right and corrected
17. Table 2: distance expressed in minutes... Seems strange. Please specify: for example, "less than 60 minutes walking" "Greater than 60 minutes walking" Answer: Thank you! The comment is accepted

Reviewer #2

Comments and responses

1. P2L13: could you be more specific about the "associated factors".
Answer: Dear reviewer, thank you very much for your detail and critical comments!!! Concerning P2L3, it states about the general objective of the study and there is no list of risk factors

2. P2L32 "In the final model, variables with a P-value of <0.05 were considered statistically significant." You don't have to explain that in the abstract.
Answer: The comment is accepted

3. P2L49 "Place of residence » : area or residence (urban/rural)?
Answer: Thank you for your suggestion and the word is changed to ‘residence’ and corrected in the main document

4. P3L20 "it is incriminated as the causes", this should be reformulated
Answer: Thank you very much!!! The comment is accepted and corrected

5. P4L33 Please be more specific about the "associated factors"
Answer: Thank you for your suggestion and we tried to summarize the factors

6. Could you cite a reference for the method of determination of the salt iodine content?
Answer: Thank you. Appropriate reference is cited in this version
7. P7L23 "and giving the response rate of 98.7%." Please reformulate.
Answer: Thank you. It was revised.

8. P7L55 "To see the effect of the selected" Please reformulate, to assess for example.
Answer: Thank you for your suggestion and the sentence is reformulated.

9. This part of the manuscript should be edited for English style and content. You may want to discuss how to ensure iodine sufficiency (such as the introduction of mandatory salt iodization) in that region rather than compare with other countries… Is there any study about the iodine status of the population of Ethiopia? Also, please try to cite first hand citation.
Answer: Thank you for your concern. Studies in Ethiopia (among school children and pregnant women) showed that the population iodine deficient based on prevalence of goiter, urine iodine concentration, and utilization of adequately iodized salt.
We also add duties expected from the policy makers to ensure iodine sufficiency.

10. P8L22 "Assessing the availability of adequately iodized salt in the community indicates the ongoing activities to eliminate IDD of the given area (27, 28)." Please reformulate, such as Assessing the availability of adequately iodized salt is essential to avoid IDD.
Answer: Thank you very much! The comment is accepted.

11. The current report is in line with the findings from Tigray (33%), and Amhara (33%) regions of Ethiopia, and India (32.9%) (13, 26, 29). It is not clear why you would mention India in this sentence… Why would you compare Ethiopia and India?
Answer: Thank you. We also believe this sentence may not add value and omitted. Because the finding is similar and we want to focus on different study findings and why they are different.

12. P8L33 "But the finding is higher than the study conducted in Ethiopia (30, 31) and Kenya (32)." Please reformulate and explain what their findings are?
Answer: Thank you. The findings were included in the main document and tried to reformulate.

Response to Comments of the Editor-in-Chief

Comments and responses

1. As mentioned by reviewer #1, the problem is not new. Therefore the discussion and solution should go into more depth on the policy actions to take, given the fact that after so many years only one third of the households have iodized (≥15 parts per million) salt. See also the very high percentage of I don’t know in table 3

Answer: Thank you very much!!! Yes, the problem is not new in Ethiopia. There is also one universal strategy, “utilization of adequately iodized salt,” to prevent IDDs globally. Ethiopia also accepts this recommendation. But, much efferent is needed from policy makers to ensure utilization of adequately iodized salt. Therefore, it is important to assess utilization of iodized salt before determination of current iodine status.

Finally, based on your comments we incorporate things which are expected from policy makers

2. Presentation of table 4 should be revised as only a fraction of the variables in the table remain significant in the multivariable model

Answer: Thank you dear editor for your concern. Of course you are right regarding the number of variables in the tables. But, still I believe that the information included in the tables is very Crucial which makes difficult to omit. We fitted variables in to multivariable logistic regression using back ward LR methods. Then, we put all variables which are fitted in to the models to show the readers which variables were entered in to the final model. As a result, I preferred to maintain all variables in the tables

3. The design is unclear. I was expecting that final unit in the sampling would be the household as the availability and use of iodized salt is at the level of the household. However in the methods it is suggested that all women involved in cooking were selected. If more than one person of the same household is interviewed, it is unclear how the clustering was accounted for.

Answer: Thank you! We were using a stratified multistage sampling in this study. First, kebeles were stratified into urban and rural. Then, four kebeles (one from three urban and three rural from ten kebeles) were selected from the total kebeles in HDSS site. Second stage, households were selected from the selected kebeles based on proportionate-to-the household size.
Finally, women who were responsible for purchasing food items and mostly involved in food preparation in the selected households were selected as respondent

4. Other features of the sampling such as the multistage stratified sampling should be considered

Answer: Thank you. As it is explain above we are used stratified multistage sampling

Thank you very much!!!