Reviewer’s report

Title: Dietary diversity and associated factors among children aged 6-23months in Sinan Woreda, Northwest Ethiopia, 2016: cross-sectional study

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Reviewer: Yuan Lin

Reviewer's report:

Temesgen et al. aimed to investigate dietary diversity of children in Sinan Woreda, Northwest Ethiopia, and at the same time identify the factors associated with it. They conducted community based cross-sectional study among 740 randomly selected children aged 6-23 months using data on those children's dietary diversity in the last 24 hours. They found that optimum dietary diversity was observed in 12.8% children, which is quite low. Several factors, e.g. availability of media sources at household, women's involvement in decision-making at household level, institutional delivery service utilization, and meal frequency being four and above were positively associated with dietary diversity. To some extent, the current study provided some suggestions on improving optimum dietary diversity practice to children in Ethiopia based on evidence. However, several concerns need to be addressed while it is considered for publication:

1. In the abstract, the authors mentioned that strengthening women involvement at household decision making Maternal and improving health care utilization could contribute for optimum dietary diversity practice to children aged 6-23 months. However, from their results, more than these two factors were significantly related to dietary diversity, and these two factors were not even with the strongest effect size. I would suggest the authors modifying their conclusion in the abstract.

2. Page 4 line 12, "Place of residence, age of the child, low level of the mother's education .... were some of the factors which determine minimum dietary diversity ", should be considered to change to "level of the mother's education".

3. I am wondering if the authors performed any quality control to the collected data, e.g. repeating the interview using randomly selected subjects to validate the data they collected.

4. In Table 1, mother's occupation was missing.

5. In Table 3 what dose HEWs mean?
6. In the results, the authors only reported that children who fed four or more food items within 24 hours preceding data collection were 12.8%. I would suggest they report the rates of children who fed 0, 1, 2 and 3 food items, respectively.

7. When describing the results, I would suggest to always clarifing the direction of the association to make it clearer.

8. The authors found that women who live far away from the health center were more likely to feed their children with optimum dietary diversity. And they discussed the possible reason might be due to frequent visit by health extension workers that is nearer to health post than health centers. I am wondering if they collected the data on the frequency of vising by health extension workers, or if there is any evidence could support this point.

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.

Unable to assess

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

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