Reviewer's report

Title: Different risks for childhood stunting according to the level of food insecurity in the household: a cross-sectional study in a rural community of Southeastern Kenya

Version: 2
Date: 27 December 2014
Reviewer: Alemayehu Worku

Reviewer's report:

Major Compulsory Revisions:

1. Is there any scientific way of determining sample size used? Is the sample adequate enough to address the objectives of the study? The assumptions and the procedures used to determine the sample size need to be described well.

2. Moreover, the adequacy of the sample size for further sub-group analysis by food insecurity level is important. The study will lose power by doing so, mainly for non-sever food insecure group (n=108). Sample size could be one of the reason for some of the non-significance of known factors for stunting. Hence, interpretation of the results should be with caution.

3. Data quality issue is very important. About 12 children are flagged in the analysis i.e. children with more than +/- 4 SD. There is a need to document well about the quality of the data and how measurement errors were minimized. Why 12 children have values beyond the expected limit? Did the authors standardized the data collectors for taking anthropometric measurements? If so, what was the agreement level? It is good to describe well how the inter and intra-observer errors have been minimized.

Minor Essential Revisions:

4. Since the study design is a cross sectional design, risks may not be able to estimated. Better to revise the title to associated factors instead of different risks.

5. How were the sample children selected? Well description of the sampling procedure is important for external validity of the study.

6. Describing well the time of measurement of the anthropometric measurements in the HDSS cohort and the additional survey conducted is important to link the outcome with the exposure. It is also important to describe how frequent information is collected in the HDSS?

7. The possible explanation given for result on food intake and stunting : children who had tea/porridge with milk in the previous 24 hours had 1.65 times higher stunting compared with those who did not have tea/porridge with milk is very, is not convincing. If information on the feeding habit of those children who did not get tea/porridge is now collected, the explanation given in the discussion section
will be very week. Lack of adequate information on feeding habit shall be documented well as one limitation of the study.

8. Instead of interpreting odds ratios as risks, it is important to interpret it as the odds. The two are different and the current study employed a cross sectional sudsy design, where risks can not be computed.

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

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no competing interests.