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: 14 December 2014

Reviewer: Foong Ming Moy

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This is a cross sectional study on the household environmental factors on stunting in south eastern Kenya. The authors attempted to describe the factors associated with stunting among children under five years of age. The results will provide information for further action to be taken to rectify the problem of stunting among children under five. However, there are some weaknesses which need to be addressed as below:

• Major Compulsory Revisions

1) The title doesn’t tally with the results. Should be “Factors associated with stunting among children …….”

Methodology:

2) Sampling method is not clearly described – although the authors mentioned that the selected households were within 2.2 km radius, there was no information on the total number of households and what was the response rate. It was also not clear what is the total number of children from those households and what was the response rate.

3) Sample size calculation should be carried out to justify the total sample size achieved (404).

4) The exclusion criteria should be described more in detailed ie: severely ill.

5) Statistical analysis – a) what does “multiple logistic regression clustered by household” mean? b) Why was the analysis stratified by food secure and insecure when the aim of the study was “to examine the influence of household environmental factors on the nutritional status of children”? c) Should present the details of how was household wealth quartile index determined by estimating asset factors through principle component analysis (PCA).

Results:

6) Why was “number of sibling not attending public school” instead of “total number of children in the family” reported?

7) Should not describe the results which were statistically insignificant as though they were significant.

8) The crude OR in Table 1 should be inserted in Table 2 together with the adjusted OR.
9) Not sure which factors were adjusted – should present in the footnote, below the table.

10) As food security was not associated with stunting, the analysis should not be stratified as presented in Table 3.

11) Wrong interpretation of OR – “Children between 2 and 3 years old had about a 3.5 times increased risks of stunting compared with those aged 0 to 5 months (OR: 3.58; 95% CI: 1.33-20.10)” – is not increased risk – should report as “children .. had 3.5 times odds for stunting compared with …”

Discussion:

12) Discussion was not conducted according to results ie:

- results which were not statistically significant were discussed as though significant
- Assumptions made not based on results – ie: assumed up to 2 years old, a caretaker or mother gives mainly breast milk and complementary food to children; last- or next-to-last-born children are less likely to have sufficient meals.

13) Results which were insignificant were reported to be “marginally significant” in the abstract.

• Minor Essential Revisions

The style of reporting needs to be extensively edited.

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

**Declaration of competing interests:**

I declare that I have no competing interests.