Reviewer’s report

Title: Determinants of malnutrition in children and the uptake of interventions to prevent the condition

Version: 2 Date: 29 July 2015

Reviewer: Sukumar Vellakkal

Reviewer’s report:

This study addressed important aspects of child nutrition. I also commend the authors for using interesting data of children of both mal-nutrition and well-nutrition. The nutrition measures, based on the WHO z score, used by the authors are robust one. Before publication, major revision is required.

Major Compulsory Revisions

1) The major concern I have with this study is on the selection of sample of children with mal-nutrition and well-nutrition. As the authors have not provided any socioeconomic data on both samples, and the way the samples were identified, it seems that both samples are systematically different. It's possible that the mal-nutrition children are coming from poor and less educated family back grounds and the control group seems to be from relatively well-to-do backgrounds. Thus, comparing the healthcare seeking and health outcomes look too simplistic. I think that the healthcare seeking and health outcomes are, in principle, correlates of the socioeconomic back ground of the children. Please provide more details on the socioeconomic backgrounds (income, education, occupation etc)

2) The study lacks focus. Better to skip the first objective, i.e. the determinants (The authors don’t have many relevant variables on the determinants. For e.g. in Table 2, of the 10 variables included, the last 5 variables are related to the second objective of the study (uptake of intervention) ). I would suggest the authors to focus more on the second objective; this one can be a value addition to the literature. Add as much analysis (even it can be some kind descriptive) and discussion on this. If the authors have access to the socioeconomic variables, then the data analysis can be under different socioeconomic backgrounds and so the results too can be discussed between households of poor and better socioeconomic backgrounds

3) Please revise the tables. The descriptive statistics parts (mainly percentages) of the Table 2, 3 and 4 may put in Table 1. Since the authors are giving the N in the table, why do put actual number of sub-samples in each table, these numbers don’t add anything, please just provide the percentage only.

4) The authors are using several variables on the uptakes of the intervention (on the second objective of the study). It seems that the authors have collected several variables and just putting everything in this study. The rationale for using these variables is not clear. Please support with literature on the reasons for
including these variables, and have stronger conceptual and analytical framework. Then also in the discussion section, please discuss your finding with the existing literature. Also discuss the factors determining the nutrition status among the poor in developing countries including efficient public nutrition programs, food shortage, and Food price rise during the global recession of 2007-08 etc and likely implications on the poor. I am not convinced on the current discussion section of the paper, I feel many are not relevant.

5) In the Discussion section, the authors are discussing each and every finding. Instead just summarize the main findings, highlight the limitations, discuss the findings with available literature, current global nutrition scenario and government policies, and then suggest policy measures.

6) Please provide subtitles for important findings (in the result section).

7) Please clarify the samplings, the current description is insufficient.

8) Please provide more the specification for the Logistic regression models. Its unclear what all variables are included in one model. Is it simple regression or multiple? Whether robustness checks performed or not?

Minor Essential Revisions

1) Table 1 title: ‘Baseline characteristics’ means what? I understand that it is ‘Description of the study sample’

2) Providing more footnotes to Table 2,3, 4 will be helpful to understand the models and variables used by the authors (what all other control variables)

3) Figure 1: Please be consistent on the digits after decimal (some places 1 digit but 2 digits in other instance)

**Level of interest:** An article of limited interest

**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