Reviewer’s report

Title: NUTRITIONAL VALUE OF SCHOOL MEALS AND THEIR CONTRIBUTIONS TO ENERGY AND NUTRIENT INTAKES OF RURAL SCHOOL CHILDREN IN ENUGU AND ANAMBRA STATES, NIGERIA

Version: 0 Date: 04 May 2017

Reviewer: Margaret Miller

Reviewer's report:

This is an important study to provide hard data for policy guidance to this and other program planners and providers. I offer the following comments for your consideration to enhance the paper.

Introduction

* A reference is desirable for the sentence L30-40.

* L64. When did the school feeding programme collapse, and how does the time frame relate to the findings of under nutrition outlined in L65-76

* Did all schools studied receive the same menu and training?

Research question

* The aim of the reported study is to evaluate the nutritional value of meals provided to school children at 3 schools in Enugu and Anambra States of Nigeria and to determine the contributions they make to the recommended daily energy and nutrient intakes of children.

Methods

* Other than those foods with data available from food composition tables, samples of cooked foods were collected for 5 consecutive days and analysed for key nutrients. Methods are adequately described and meet expected standards.

* Portion size of foods eaten was determined by weighing plates of foods before and after eating. Whilst this is an accepted method suitable for this study, It is not clear how many
children and days were involved. Please describe if this procedure was used with all children on all days?

* This is a descriptive study in three schools without need for a control group.

Analysis and Statistics

Simple descriptive statistics were appropriately used in data analysis.

Presentation of results

* Table 1: Add sample sizes for each age group for each school. State that data are presented as means and standard deviations. The accuracy of portion size measurement would not justify standard deviations expressed to 3 decimal places. Depending on journal policy, data expressed to one decimal place would de-clutter the table (same applies in Tables 2,3,&4).

* There is some inconsistency in the text in use of none, one or two decimal places when reporting results (see lines 189 to 203). In general none or one decimal place is justifiable.

* Were portion sizes served and/or consumed different between schools? As well as knowing portion size consumed it would be interesting to know what portion sizes were served for each age group and what proportion of the food served was consumed. This would help to determine if low energy intake was because not enough food was served (as stated without justification L290) or not enough of what was served was eaten.

Discussion of results

* Link sentences better to explain why FAO recognises cowpeas and groundnuts (L237-241)

* Please provide a reference for the statement that school meals should provide one third of RNI (L274-276).

* Please indicate the countries in which referenced studies occurred (L279-286)

* Please comment on the differences found between schools. Is there an explanation for nutrient composition and portion size differences reported?
The policy significance of the recommendation to increase milk and yoghurt (L292-294) and eggs (L310-312) would be strengthened if the amount needed to reach the minimum calcium and iron needed (1/3 RNI) was presented and feasibility discussed. Would this also address energy and fat % energy intake requirements?

Several references are made in the paper to recent changes in menus at the schools (L81-82, L295-296) without describing these changes. Since no data are provided on the previous menu and nutritional composition the statement made in L295-296 is not justified and should be removed. Also the Cummings study quoted L296-299 seems out of place in the context of this study.

Conclusions are appropriate based on the results

Recommendation on L310-311 is appropriate. The recommendation about milk eggs and yoghurt could be strengthened as suggested above.

Abstract: The abstract is an accurate and concise representation of the paper.

Quality of written English

Some minor changes will improve English expression and readability, including appropriate use of plural and singular words and 'a' and 'the' in various places. Other general comments include:

* L31-Delete 'off' in 'triggered off'

* L41-43. This sentence seems out of place. Perhaps reword or delete.

* L54 Change 'With hunger' to 'When hungry'

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

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

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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