Reviewer’s report

Title: Use of commercial infant cereals as complementary food in infants and young children in Ghana

Version: 0 Date: 18 May 2017

Reviewer: Getahun Ersino

Reviewer’s report:

This study generally explores, in a cross sectional design, the use of commercial infant cereals (CIC) and its contribution to micronutrient adequacy of infants and young children. However, it seems there are major conceptual and methodological issues that prevent this reviewer to accept the conclusion the authors made. Authors do well in considering the following comments/questions to put the manuscript in proper context (some may overlap, order doesn't show importance):

1. To start with, commercial food products are not the preferred way of promoting good nutrition in infants and young children (IYC), unless in some very difficult circumstances. Authors seems to argue the that use of commercial products are common strategies to complement the diets of IYC and use older references (in the 1990s and 2000s) to support their argument. This is problematic because recent WHO guidelines/indicators for infant and young child feeding practices suggest age appropriate meal frequency with minimum dietary diversity as way of ensuring nutrient adequacy in these groups. The paper fails to provide any practical evidence on such in the context the study occurred.

2. How is it that the authors conclude CIC significantly contributes to micronutrient adequacy of infant and young children without proper control diet/group?

3. Do the CIC meet the Codex Alimentarius Standard for infant foods?

4. Authors depended on the nutrition information provided by the product manufacturers without making sample lab analysis of their own, instead they assumed the products contained the claimed nutrients and that the children also consumed all the reported amounts without (which may be unlikely). This doesn't support the conclusion of the paper.

5. As stated above, if the intent of the paper was to explore contributions of CIC to micronutrient adequacy, proper control group (that depend on just the regular diet) should have been in place. It is problematic to make such a claim of benefit with just a cross-section study. What if children with regular diets were better in terms of their nutrient intakes? What if the use of CIC was discouraging caregivers from providing other nutritious foods to IYC because of the false sense of assurance that CIC superior and sufficient?

6. Let one assume that the study had a proper control group and caregivers accurately recalled amount consumed: How is that the prevalence of [risk of] inadequacy [or the associated
probability of adequacy] for a given nutrient calculated just from a one day recall CIC consumption by the IYC, even assuming CIC was all that was consumed? This not correct. It's likely that children had eaten other foods and/or breastfed. Your results as presented do not show these distinctions. Probability of adequacy should be calculated on usual intake (intakes that represent all days of the week), including the contribution of other foods/breast milk, which you don't seem to have.

Other Concerns:

-authors did comparison of intakes of nutrients between older age groups and younger ones which didn't make sense to me. Obviously older children are expected to have higher intake (CIC plus other foods)..I don't see the rationale of doing such comparison;

A realistic story this cross-sectional study can tell is really:

a. to assess the prevalence of CIC use among caregivers in a given location and season;

b. to assess why caregivers opt CIC instead of enriching regular local foods (eg. why not improve diet diversity and meal frequency, consistency, etc.)

c. explore whether the use of CIC is displacing regular family foods, giving a notions to caregivers' that the CIC is meeting the children's nutrition requirements;

d. which demography is likely to depend on CIC and why--what might be the driving factor?

e. what is the cost of CIC as opposed to other local IYC foods?

Adjust your paper considering these comments and focus your discussions accordingly--your discussions can be a lot shorter and more focused.

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.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No
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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