Author’s response to reviews

Title: Prevalence of Anemia among Under-5 Children in the Ghanaian Population: Estimates from the Ghana Demographic and Health Survey

Authors:

Joycelyn E Ewusie (ewusieje@math.mcmaster.ca)
Clement Ahiadeke (clemahia@live.com)
Joseph Beyene (beyene@mcmaster.ca)
Jemila S Hamid (jhamid@mcmaster.ca)

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Dear Editor,

We would like to thank you for your constructive comments and giving us the opportunity to submit a revised version of our manuscript. I would also like to state that we had no prior knowledge of the 2011 MICS report and take responsibility for not incorporating/comparing the findings from this report with the findings in our document.

The following comments have been duly addressed:

1) “the title needs to remove the dramatic word alarming”

We have removed the word alarming from the title of the article and the new title reads, “Prevalence of Anemia among Under-5 Children in the Ghanaian Population: Estimates from the Ghana Demographic and Health Survey”.

2) “the decline from 2008 is important making one wonder the utility of reporting on 2008 data since these have been superseded?”

This is a very good observation/question and we agree after reading the document that the estimates from the 2011 in a sense supersede some of the findings from the 2008 dataset especially since it is more recent.

As already mentioned, we were not aware of the MICS data and we used the 2008 DHS dataset. We understand that this data was collected 5 years ago, however this is the latest GDHS carried out in the country. We plan to analyse data from the 2013 GDHS which is currently underway to examine the trend in the prevalence of anemia over the period.

Needless to say, the MICS report gives estimates that are lower than the estimates from the 2008 data, which may be the result of survey structure with respect to the coverage of the population, but most importantly the decrease may be due to the interventions that have been introduced since the 2008 survey, which is discussed in the discussion section of our manuscript. This decrease admittedly is a positive sign. One important thing we noted however was that these estimates are at national and regional level which shows an overall decline but does not show trend within subgroups within national or regional levels and thus increases the likelihood of concealing deviations from the general trend. And this brings to light the contribution of our article, where we considered several subgroups within region and socio-economic status.
First, in our paper we investigated the prevalence across determinants such as birth weight, incidence of diseases and breastfeeding status. We also disaggregated the data into socio-demographic strata (age and/or gender) within each of the 10 regions and also within each locality (urban/rural). The reason for the disaggregation is due to previously published findings indicating that anemia prevalence in children usually varies by factors such as age and gender.

Secondly, we plan to investigate the trend in prevalence over the 5 year period, when the 2013 data becomes available. This makes it easier for government and non-governmental organisations to monitor progress being made and also informs them on whether or not interventions are reaching the target population or areas that need intervention most.

Thirdly, the current analysis serves as a ground work for future studies, where we plan to use logistic regression modelling to identify the risk factors associated with anemia in Ghanaian children. Since determinants which have been identified as significant at the national level may not be significant within the socio-demographic or regional subgroups, it is imperative that we perform subgroup analysis.

With regards to 2011 MICS, we would like to point out that we have requested for the dataset from the Ghana Statistical Service. We plan perform further investigations by examining the similarities and differences between the two surveys. We would also compare the differences in prevalence of anemia between the 2011 MICS and the 2008 DHS across the various subgroups that have been analysed in this current study.

Thank you for your consideration.

Sincerely,

Corresponding Author:
Dr. Jemila S Hamid, PhD
Department of Clinical Epidemiology and Biostatistics
Joint member Pathology and Molecular Medicine
Associate member, Mathematics and Statistics
McMaster University
Hamilton, Ontario
Canada