Reviewer’s report

Title: Physical growth: is it a good indicator of development in early childhood in low- and middle-income countries?

Version: 2 Date: 02 May 2019

Reviewer: Aisha Yousafzai

Reviewer’s report:

Overview

This is a useful paper critically examining the role of linear growth as an indicator for child development. It uses a multi-country population level data sets. My comments relate specifically to the Background, potential review of analyses and additional helpful information for readers to have in the Discussion

Specific Comments

* Introduction:
  o Paragraph 1: It is important to note that the 43% figure representing children globally who are failing to meet their developmental potential is based on stunting (and poverty) as proxy indicators.
  o Paragraph 2: The authors can elaborate on the debate and challenges that emerge with the association of linear growth (and stunting specifically) and early child development outcomes?
  o Paragraph 4: It is worth examining in the previous literature and meta-analyses whether concurrent height or prior (predictive) child height has been used to examine associations with children's early development?
  o In general, some explanation about the theoretical/potential pathways between linear growth, nutrition and child development should be expanded upon.

* Analysis:
  o Adjusted analysis:
    • Was any analysis conducted to examine correlation after also adjusting for early learning opportunities based on indicators available in the MICS (e.g. access to formal/informal
early childhood care and education services, or children who had at least 4 or more early learning opportunities in the last 3 days)?

- Was maternal education considered a confounder (along with child sex, child age, and household wealth).

- Adjusting for these variables, which have sound theoretical and empirical evidence, will likely influence the final results.

Discussion:

The limitations of these data and analyses are not discussed. It will be useful to include a brief section describing the study limitations.

The final paragraph highlights the role of integrated interventions targeting multiple child outcomes. I suggest this is rephrased to discuss complex interventions given the current evidence on combined nutrition and parenting interventions has limited benefits on nutrition/growth outcomes.

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

Yes

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
Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal.