Author’s response to reviews

Title: Validation of a roadmap for mainstreaming nutrition-sensitive interventions at state level in Nigeria

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Response to Reviewer reports:
Preamble: The authors have tried to integrate the recommendations form the reviewers. Given that there was a minor and major decisions, the comments of reviewer 2 were integrated fully. This resulted in major restructuring of the manuscript, while taking into consideration the comments from reviewer one.
The changes in the manuscript has been highlighted in yellow.

The specific responses are as follows:

Reviewer #1:
Overall an important paper on stunting in Nigeria and how to intervene for improvement at state level by comparing two states. One state with extremely high level of stunting and the other with relatively low level of stunting. There is a need for better description of the quantitative analyses but the qualitative part was well described and explained. There are also minor editing I recommended:
The article has been restructured to focus on the development and validation. Thus, the detailed description of the previous phases are no longer required.
Page 3: Line 28 to 30: Seems to me that there are too many keywords. Maybe prune it to 6.
The keywords has been pruned
Page 4:
Line 33. Instead of ‘level’ change to ‘rate’.
Line 37. Instead of ‘all over’ use ‘across’
These changes have been effected
Page 5:
Line 63. Sentence starting with Indeed should be reworded to “Indeed, one of the problems of implementation science is the realization that well-thought out interventions become ineffective when implemented in the field, especially when government actions and bureaucracies come into play.”
This has been corrected
Page 6:
Line 100. Should be “North-East and South-South geopolitical regions of the country”
This line has been entirely deleted, given that the sampling section was rewritten
Page 7:
Line 109: deleted everything after the end of the parenthesis.
Line 114: ranking of Anambra state not given so why give that of Kebbi. It seems the comparison here in general of the two states is not on equal footing with more information on Anambra than Kebbi. Author needs to do more research on Kebbi demographics and information.
Line 116: Remove the other ethnic group names which are sub-groups and just add percentages of Hausa and others or just say all are Hausa speaking even if minor ethnic groups. This and the preceding comment no longer applies because of the rewritten methods section
Page 8:
Line 139. “permission was obtained from all the ministries” to “permission was obtained from the two ministries”. There also needs to be an explanation for why an IRB approval was not obtained in Nigeria in addition to the South African one. It is standard practice to do so if your institution is not local.
We did obtain permission from all the ministries used in the study – four ministries in both states. The Nigeria Code of Health Research Ethics mentions 3 sites across the country as needing ethics approval for multisite. In lieu of this our state permissions were thought to suffice.

Line 146 to 156. It wasn’t until I looked at the Table 1, that I saw that the data for the SAE was from the Nigerian Demographic and Health Survey. This should be part of the text here. In general the quantitative part of this paper was not well described and explained and doing so will make the paper better.
This section has been entirely deleted
Page 12:
Line 240. Add ECD in parenthesis after Early Childhood Education.
This was corrected
Last paragraph under heading of “Political commitment summary”.
Line 261. There should be a brief explanation on a possibility of why institutional commitment was lower in Anambra state either here or later in the paper. It should be expected because they have less issue with stunting and undernutrition so priority shifts to other problems that the state is worse in, as is normal. This is a major reason for creating different roadmaps in the first place since Anambra should not be doing the same things as Kebbi which clearly has a bigger problem with stunting and undernutrition.
Given the restructuring, this no longer applies
Page 14:
Last paragraph under the heading “State variations in the mainstreaming nutrition sensitive programs roadmap”. This section should better explain differences and similarities between the 2 states in the findings.
This section has also been entirely deleted

Page 15:
Line 318. Change to “The importance of context to implementation of HIV/AIDS interventions has been established ….”
This has been changed
Line 321 change ‘HIV and AIDs” to “HIV/AIDS”
This has been changed
Line 327 to 330. Remove the whole paragraph. It is not unnecessary, and doesn’t add any new pertinent information and explains nothing.
Instead of deletion, this sentence on trade-offs was strengthened and moved to the discussion.
Line 332 to 333. Change to “….., the study used data from NDHS conducted in (year) as epidemiological input to document the burden of stunting at the LGA level in each state.”
This sentence would imply that we used the NDHS data verbatim, but in reality we applied methods to generate LGA estimates.

Page 17:
Delete line 363 to 373. The whole paragraph is badly worded and unclear and actually confusing.
The following two paragraphs conclude the paper nicely.
This has been deleted
Line 384. Last sentence, Remove “in all its forms.” From the end of the last sentence. And change to “….with the onus to reduce malnutrition.”
This has been changed

Reviewer #2:
Thank you for the opportunity to review this manuscript. Both the topic and the methods/tools presented in this manuscript are timely and important. The process and findings will be of wide interest among policy makers, advocates and policy scientists working to advance nutrition aims and multi-sector strategies in low and middle income country contexts.
The approach appears to be rigorous and there is a lot of detail presented by authors. The challenge is that it is not well presented in a way that make it possible for the reader to follow. There is quite a bit of repetition and some inconsistency. In light of this statement I recommend that the following major revisions be made - I have deferred from making too many minor revision comments as they may not be applicable once the major revisions are addressed.
Major recommendations

* In lines 142-144 it says that the focus of the article is on PHASE 4 development and validation of the roadmap as "other outcomes have been reported elsewhere". This focus on Roadmap tool development and validation should be stated clearly in Lines 72-75 in the introduction. The authors need to more clearly state the specific aims of phase 4 - and overall the manuscript should focus its methods and results more clearly on Phase 4.
  ○ As written I'm actually confused about whether the focus of the manuscript is on development of the roadmap itself or development and application of the tool to validate the roadmap?
  The focus is on how the assemblage of the roadmap and the validation of the roadmap
  ○ I assume that these "other outcomes" refer to what in the previous paragraph are described as Phase 1 (SAE for LGAs), Phase 2 (qualitative interviews & site visits for socio-economic context and to develop program impact pathways), and Phase 3 (political commitment analysis). However the manuscript proceeds to describe methods and results from Phases 1-3 in a fair amount of detail in the subsequent sections and there are no citation for where these have been reported elsewhere.

These manuscripts have been submitted and are under review and to be published in methodology adequate journals.
  ○ This manuscript would be a lot more effective if instead it kept only brief description of other phases in a single location in the manuscript. If allowed by journal, consider making a panel or box that describes - in only the level of detail needed to understand Phase 4 for both the methods (lines 121-137, 147-156, 165-170) and the key findings (lines 220-262) from these other phases. (ie adaption of current Table 1) Need to clearly reference the sources where the methods and results have "been reported elsewhere".

Table 1 has been improved to include the methods used in the other phases.
  ○ As currently written there is a lot of repetition of ideas which can cause confusion. For example - in describing the methods for Phases 1-3 there is both the language used in lines 121-137 which does not mention MINA and then again under the "MINA framework" in 147-156. Lines 165-170 also appear to be restating the same things. This needs to be more clearly integrated into a single coherent section.

Repetitions has been deleted and sections coherently redrafted

* Line 90 - Why is stunting alone the endpoint of focus? Need to provide a clear justification.
  Stunting is the malnutrition indicator that presents growth failure over a long time. Seeing as it was a long term indicator and a better reflection of the impact of nutrition-sensitive sectors, the study focused on stunting.

* Lines 159-217 This entire section needs to be the focus of the methods and much more clearly laid out. Need to make it clearer who was involved in 1) development of the roadmap 2) development of the roadmap validation process/tool) 3) the validation exercise itself. And how these sub-steps relate to your current use of "expert review", "pre-testing of validation instrument" "feasibility validation"

* Lines 194-195 refer to a framework that was used as starting point for validation; a lines 181-182 suggest experts were also involved but its not clear who/what else was involved in step 1 vs. step 2

* The aims of the validation (lines 205-210) need to be stated clearly in the article background and in the methods it would be helpful to more clearly articulate at the start of the section what specifically is being validated (lines 209-210)
* Separate the current "validation results" section (starting with line 263) more clearly as suggested above into 1) development of the roadmap 2) development of the roadmap validation process/tool 3) the validation exercise itself.
* Is the conceptual framework reference in line 280 appears to be under step 1?
* Line 284-286 - where do these "political economy" factors come from/relate to? Are they part of Step 1?
* As written it's not clear whether the "10 stakeholder" referenced in line 264 were involved in both development and validation of the roadmap or just validation? Also not clear if the All above input lay emphasis on a restructuring of the paper to focus on the steps from development to validation. This major restructuring has been done, taking all above into consideration. Thus the article has focused on the process of getting the initial draft of the roadmap through experts, piloting the validation tool and validating the roadmap.
* Lines 318-326 seem more appropriate for discussion These lines have been moved to the discussion section
* Lines 328-330 are very unclear - but once clarified also seem to be more appropriate for discussion These lines of thought have been moved to discussion
* Discussion section: It's not clear how the overall discussion is being framed. Is this trying to highlight the strengths/weaknesses of the validation process or of the roadmap document itself? Lines 344-357 appear to be about the roadmap itself however my understanding is that the article is focused on the validation process and therefore I'd expect more discussion of the validation.
* The discussion has been rewritten to highlight and discuss validation results
* Lines 358-362 - I'd expect the lack of responsiveness during the pilot phase to be a limitation? And generally the methods of using written feedback for validation? A section on study limitations has been added to address all possible limitations to the study.
* Lines 363-373 appear to be more appropriate for the introduction section
* Line 374 - need to be clear that this paper is focused on only one aspect of this development - not the entire process so the conclusion should be more about the validation The conclusion has been rewritten to concentrate on the development and validation process.

* Table 1 / Figure 1 are potentially useful but currently the methods and results in each do not clearly map clearly/directly to the MINA framework or Phase 1-4 language used elsewhere in the manuscript. Please update these figures/table so they are more coherent & consistent. Both the table and figure are not necessary to summarize Phases 1-3. Suggest using the table for summary and using the figure to more clearly articulate the substeps in Phase 4 - including involvement of different experts and a clearer understanding of "Versions". This has been effected. A table to highlight findings and a figure to illustrate steps for validation of the roadmap.
* Table 2 is difficult understand without more detail (iei statement 'Need for a generic table") - and likely unnecessary as the feedback does not appear to be very substantive and could be summarized in a couple sentences. This has been deleted.
* Minor (incomplete - assume that major revisions will happen first)
* Line 35 - "harder to scale" relative to what?
* Line 41 - "always seem detached" from whose perspective? Suggest avoiding this sort of unqualified language
* Lines 173-176 belong in a discussion section on strengths of the study
The minor revisions has been made

Compiled by:

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