Author’s response to reviews

Title: Infant and young child nutritional status and their caregivers' feeding knowledge and hygiene practices in internally displaced person camps, Somalia

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Author’s response to reviews:

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Dear editor, Andrea Deierlein
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Thanks for yours and the reviewers assessment and valuable input. They have raised a number of points which we believe have improved the manuscript and we hope this may allow the revised version to be published in BMC Nutrition.

Please find below the point-by-point response to the comments, describing the revisions. The changes to the manuscript are indicated in the text by yellow highlighting. I am so thankful to the reviewers and to you. The review comments really made me see the issues, for instance with the design and informed consent.

Regarding the authorship order. The reason why I changed the order of the authors from first submission to second submission was that I did not manage to register Mr Mohamed Khalid as the first author without being corresponding author and me, Kerstin Erlandsson being the last author and being the corresponding author. I hope I can continue to be the corresponding author and the last author and Mohamed the first author. The form has been filled and submitted together with the other required documents.

I have used the best language editor I could find and she has been editing for 12 hours. I humbly hope the actions taken will result in a positive response after your review. Mohamed will have his half time control of his research studies in October and it would mean a lot if we could get this manuscript accepted or published before his half time control. Many thanks for giving us the opportunity to make this manuscript improve.
Best regards,

Kerstin Erlandsson
PhD, Associates professor Dalarna University

Response to Technical Comments:

Reviewer reports: Response Siddika Songül Yalçın (Reviewer 1):

Title of manuscript should be shortened.

Response: Thanks for your valuable comments, time and efforts. The title has been shortened accordingly. It now reads: Infant and young child nutritional situation and their caregivers’ hygienic practices, breastfeeding and complementary good in internally displaced persons camps, Somalia.

Sample size and power should be given.

Response: All 2370 children enrolled in a nutrition program provided by Save the Children in 2017 in all 1655 households were included. Power calculation and sample size is not relevant for the design. I have tried to delete the word sample as this is the reason for the confusion and it is now clearly stated. Birth order and effect of it on malnutrition should be given.

Response: In the next study this will be included. Good point. I have made it a weakness in the limitation section page line 329-332 page 14.

Method section stated IYCF indicators were asked. Food Consumption & Household Dietary Diversity should be added and compared with knowledge of caregivers.

Response: Food consumption and Household dietary diversity will be compared with knowledge of caregivers in a forthcoming study of this research project with four parts. This is my doctoral student’s first study out of four on this material and we want the design of this study to be descriptive with simple statistics, jet providing a valuable picture of the situation in which this project takes place.

Articles below can be added in discussion;


Response: Thanks for valuable references. They have all been utilized in the discussion and background section. Page 3 and 5 in the background and 11-14. Please see yellow parts. Generally, some language revisions are recommended; some sentences have no verb. In abstract: "First to explore the nutritional situation of all children aged 6-59 months enrolled in a nutrition program provided by Save the Children in 2017 in internally displaced people's camps in Somalia."

Response: Thank you, this now reads as suggested. A professional proof reader has been working with this document for 12 hours so I really hope it has improved to set standards.
Reviewers reports: Response Hasina Rakotomanana, M.S. (Reviewer 2): I would like to take the time to thank the Editor-in-Chief and the authors for the opportunity to review this manuscript. General comments

The study was carried out in Somalia and these results provide much needed information in a region with frequent humanitarian crises. Thus, such data can be helpful in documenting and prioritizing actions to deal with the rising child malnutrition rates in Somalia. This manuscript should provide highly needed data but it needs to be strengthened and extensively edited to meet standards of peer-reviewed journal articles.

Response: Thanks for your positive response and valuable comments.

There are major grammatical mistakes in the manuscript. For example, check the sentence on lines 127-128 and lines 81-83.

Response: This has been done accordingly and a professional proof reader has worked 12 hours with improvements of grammar, spelling, and flow. I hope you like it now.

The flow is hard to follow sometimes. I would recommend the authors to work with a native English speaker or a professional editor to fix such problems.

Response: Thanks, the proof reader has worked hard on this issue with the flow. There are also few technical terms that were used wrongly making it hard to understand what was done. For example, check the sentences in lines 135-136.

Response: Thanks for your valuable suggestion. It now reads Moderate Acute Malnutrition (MAM), Severe Acute Malnutrition (SAM), Global Acute Malnutrition (GAM).

Title
Please consider shortening the title. Removing the second part would make it short. Also, "knowledge, attitudes, and practices" are commonly used terms in Global Nutrition so consider rewording the title accordingly.

Response: The title has been shortened accordingly. It now reads: Infant and young child nutritional situation and their caregivers’ hygienic practices, breastfeeding and complementary good in internally displaced people’s camps, Somalia.

Abstract
In the results, consider removing the numbering. Also, the presented results should be clear and concise. When the authors talk about "severe or critical malnutrition", what indicators were assessed? How many children (what proportion) were suffering from malnutrition?

Response: I have clarified the result section. There were Severe (12.1%) and Global (19.9%) Acute Malnutrition among 2370 children in IDP camps in Somalia in August 2017.

The word critical has been removed but also explained as we still wanted to use the term, valuable point thanks.
Page 7, line 160-163.
Background
This section has several good information but it needs to be edited to emphasize more on the need and
the rationale of the study.

More nutrition information and data, preferably from peer-reviewed journal articles need to be included
in this section.

Results from this study will be used for what purposes? Including those in this section will strengthen
the rationale of the study

Response: Thanks, we have worked on the problem statement in the background. Please see the yellow
parts.

Page 3 and 5 yellow parts.

Lines 70-71, this statement is important but the reference is not appropriate. The references has all
been checked and should now be in perfect order.
Line 72 needs reference.

Response: This has been arranged accordingly.

Materials and methods

Needs detailed information about how data were collected.

Response: This has been worked on and the data collection section has been improved. Please see the
data collection section. It is all in yellow.

Page 8-9, line 172-217.
How were the participants chosen? Any sampling technique used? Why 1655?

Response: All 2370 children enrolled in a nutrition program provided by Save the Children in 2017 in
all 1655 households were included. I have tried to delete the word sampling as it leaded you on the
wrong track. So sampling techniques are not relevant not even sampling, sorry for this confusion.

Why were 2 children included in the study?

Response: This was because children 6-59 months were included in the Save the Children nutrition
programme even if they were living in the same household.
Lines 135-143, this needs editing, not clear.

Response: For clarification this section now has the abbreviations spelled out in full regarding MAM,
SAM, GAM and it makes it clearer. The section has been simplified and clarified. Page 7 line 157-160

How was consent obtained?

Response: Verbal consent was obtained, this has been added. Please see what is written in participant
and data collection section. Page 8 line 184-190
Results and discussions

Table 4. These look like beliefs rather than practices.

Response: The language editor has fixed it, should now lead your thoughts in the right direction.

How was household hunger assessed? Did the data collectors ask if the household experienced hunger? Over what time period?

Response: Yes, the data collectors assessed the hunger among the members in the household by asking the caregivers if they experienced hunger in the household often, rarely/sometimes or never during the past months/30 days. Page 9 line 197-200

Reviewers report  Response Tinku Thomas (Reviewer 3): The authors have presented the burden of undernutrition in 3 districts of Somalia and explored certain risk factors of undernutrition. Although there is very little data from this region which has a high burden of undernutrition and the therefore the data presented in the paper is valuable, there are several points that need to be addressed.

Thanks for the comment this has been added in the paper.

Can the title be shorted?

Response: The title has been shortened accordingly. It now reads: Infant and young child nutritional situation and their caregivers’ hygienic practices, breastfeeding and complementary good in internally displaced people’s camps, Somalia.

Abstract:

1. The authors state the study design to be descriptive cross-sectional prospective study. A study can be either cross-sectional or prospective but not both at the same time.

Response: The study now describe the study rather than defining it as this might lead the reader in the wrong direction. Thanks for a valuable point. Page 5 line 114-123

2. The detail of data transfer to server is not essential in abstract. However, the classification of the nutritional status of children and the standard used for the classification should be clearly stated.

Response: How data were transferred to the server has been deleted and the classification added. 3. Severe or critical malnutrition need to be defined in abstract as this is not standard terminology Global Acute Malnutrition (GAM) is prevalent when prevalent in 15% or more of a population, at which point malnutrition is said to be at a critical level. Page 7 line 160-163

4. What groups do 12.1% and 19.9% correspond to? For what comparison is the p value presented? Just stating p values is no use unless the comparison groups, the outcome of comparison and the magnitude of difference are clearly stated.

Response: The result section in the abstract reads more clearly: 1) There were Severe (12.1%) and Global (19.9%) Acute Malnutrition among 2370 children in the IDP camps in Somalia in August 2017 and more frequently in the age group under 24 months of age compared to the age group above 24 months (p<0.01).
Material and design

5. Line 93: the same problem stated in point 1 above

Response: The study is now described instead of defined and the reason for this is that a definition might lead the reader into a different direction. It is better to read what we actually did. Page 5 line 114 and onwards.

6. The sentence starting in Line 141 is not clear

Response: It now reads more clearly. The language editor has helped out.

7. Lines 135 to 137 what do the different percentages mean?

Response: This has been clarified. I have tried to remove what is unclear.

8. The reference given for precision of anthropometric measures is ref 16 (Food and agriculture organisation of the United Nations. (FSNAU). Information for better livelihoods dataset/nutrition. 2017. Food Security and Nutrition Analysis Unit-Somalia). Is this correct?

Response: All references have been checked and mistakes have been corrected.

9. The precision of the instruments used should be mentioned

Response: I have read many studies and it vary so now I wrote that it vary.

Page 7 line 163-169

10. In line 158, instead of saying approached households, its clearer to say made house visits.

Response: It now reads more clearly as per suggestion from the language editor.

11. Please elaborate on how the natural observation was done

Response: We have elaborated on the naturalistic observations and how they were done. Please see the data collection section yellow marked. Page 8 line 193-197

12. The manuscript mentions many p values, but there is no mention of any statistical test that was performed. Please specify what statistical tests were performed in the statistical methods section

Response: The statistical test has now been included in the analysis section. Page 9-10 line 115-121

Reviewers report Response Chythra Rao (Reviewer 4): A very pertinent research question has been addressed by the authors.

Response: Thanks for the positive comment.
The title needs to be reworded. It is absolutely fine to have 2 objectives, but it is better for a single aim of the study to be reflected in the title rather than all the objectives

Response: The title has been shortened accordingly. It now reads: Infant and young child nutritional situation and their caregivers’ hygienic practices, breastfeeding and complementary good in internally displaced people’s camps, Somalia.

Critical malnutrition is not a standard term. It would be helpful to define it & also to follow standard nomenclature used in literature.
Response: Thanks for this valuable comment. The word been explained as it is not a standard term and also removed to some extent to not mislead the reader. This has been done in collaboration with the language editor. Thanks for this valuable comment. Page 7 line 160-161

Material and methods - Design of the study - why would the authors want to use all the three terms - In a descriptive, cross-sectional and prospective study [12]?

Response: Thank you, we choose to describe what we did rather than defining this study. Thanks.

Naturalistic observations of hygiene practices were performed by the data collectors. The naturalistic observation has been elaborated on.

In addition, 2370 children aged 6-59 months in 1655 households were measured with anthropometric measurements - statements require rephrasing.

Response: This section as well as the entire document has been edited by a professional language editor and rephrased accordingly throughout.

It would be better to define naturalistic observations in the methods.

Response: The naturalistic observations has been defined and is elaborated on in the method section as per your suggestion. Page 8-9 line 193-196.

Why was written informed consent not obtained from participants?

Response: Sorry, this is a misunderstanding. Informed consent was actually obtained both from caregivers and for the children and this has been elaborated on in the participant and data gathering section. Please see page 8 line 184-190

MAM, SAM, GAM - needs to be expanded, the first time it is being used in text, although the same has been mentioned later in abbreviations.

Response: Valuable point. Now it is explained already in the abstract section.

Was data collected on smart phones?

Response: The smart phone sentence has been removed as one of the other 6 reviewers suggested it to be deleted. However to answer your question it was a smart phone and when internet access this data was sent to the online server at Save the Children.

Why were severely ill children excluded?

Response: They were not excluded but brought to hospital for treatment. This has been described in the participant section.

Page 6 line 136-137.

Results

175 For data on caregivers (n=1655) and households (n=1655) see table 1.-statement needs to be reworded

Response: It has been reworded by a professional language editor.
They reported "rarely/sometimes hunger in the households giving the impression of underreporting of hunger in the household and not fully in concurrent with child anthropometry (n=2370) illuminating the nutritional situation (table 2).- complicated statements to be avoided

Response: In the limitation section we address it and it has been removed from the result section to avoid it as per your suggestion. Page 14 line 317-325.

Response: The full document has been proof read by a professional proof reader working 12 hours on getting it all right so I hope you find that the manuscript has improved regarding flow. The hygienic practices and observations (n=1655) were under what can be considered hygienic practices (table 3). - rephrase the statement

Response: In abstract this has been rephrased as a professional language editor has got it all through. Discussion can be improvised with references to relevant literature addressing different aspects of the results - malnutrition prevalence, hygienic practices, awareness etc

Response: This has been done accordingly in the background and discussion section as per your suggestions. Please see the yellow parts. Limitations section needs to reworked on. Strengths have also been combined & different types of validity interspersed with other limitations & strengths needs to be simplified for better readability.

Response: Thanks for this important suggestion. The limitation section has been reworked by a professional language editor. Page 5, line 97 to 111

Conflict of interests to be declared, especially the role of funding agency

Response: There is no conflict of interest. Dalarna University Sweden is responsible for the study in terms of research design, process and publishing. Save the Children is the development organization serving the IDPs with a wish to know more of how effective interventions can be set up and improved. We work independently so to speak with strict professional borders and no conflicts of interest. Table titles to be improvised. Need to be stand alone, self explanatory titles.

Response: The title has been shortened accordingly. It now reads: Infant and young child nutritional situation and their caregivers’ hygienic practices, breastfeeding and complementary good in internally displaced people’s camps, Somalia. Number n (%) to be written in column headings rather than in the first row in the tables. This has been arranged within the tables. What statistical analysis was performed - needs to be mentioned in data analysis section. What does the p value depict - needs to be interpreted in the results section.

Response: Analysis; The statistical analysis method used is added and what p value depict is now described in this analysis section (yellow marked). Page 9 line 215-221

When the knowledge was poor & faulty hygiene practices were observed, was any effort made to correct them or give them proper advice? This can be mentioned in the manuscript.

Response: It was without providing advice to the caregiver. Page 8 line 195.

Some minor grammatical errors are needed & english language editing is recommended for better readability of the manuscript.
Response: A professional language editor has worked for 12 hours focusing grammar, spelling, and flow. Your recommendation has been followed to improve the manuscript.

Reviewers reports Response Barbara Stoecker (Reviewer 5): I commend the authors for undertaking this large cross-sectional study among an under-investigated and at-risk population group. The information on gaps in the caregiver's knowledge, attitudes and practices about hygiene and feeding practices should be very helpful in designing future educational programs for the caregivers.

Response: Thanks for the encouragement.
As a cross-sectional study, there is no control group expected, but the sampling frame is critically important to obtain representative data. Also, use of the rapidly developing literature on WASH, on behavior change communication for caretakers with limited education, and on maternal depression and stress will help with designing the best programs for caregivers in the future.
Response: As the term cross-sectional might lead the readers to more questions we have chosen to remove the term cross-sectional and instead describe what was done. Your suggested comments regarding WASH has been added in the discussion section. Many thanks.

TITLE: Shorten
Response: The title has been shortened accordingly. It now reads: Infant and young child nutritional situation and their caregivers’ hygienic practices, breastfeeding and complementary good in internally displaced people’s camps, Somalia.

INTRODUCTION:
The introduction (and discussion) would be strengthened by adding information from other studies conducted among internally displaced persons in East Africa.

Response: Many thanks for this valuable suggestion and for the references. Most of them are added in the introduction and discussion and in the reference list. Please see yellow text parts. Some suggestion include (but are not limited to): (1-9)


Response: Many thanks for this valuable suggestion and with references.

Response: I have printed them all out, read them and inserted most of them in background and discussion section. You find them in the reference list.

METHODOLOGY:

The sampling strategy has not been described. How, besides having a child 6-59 months old, were the 1655 households chosen for the survey. How many households does Save the Children reach in these three camps?

Response: Sorry for not being clear. It was all households and all children meeting the inclusion criteria and one caregiver in each household included. It was those involved in the Save the Children nutritional programme that were involved. It is misleading with the word samplings, cross sectional etc. I have now tried to describe what has been done instead of misleading the readers with this term and the other that are not relevant for this study.
Of households invited to participate in the study, what % agreed to participate.

Response: The data collectors invited and asked all caregivers to the appointment at set time and place and they brought 2370 children that met the inclusion criteria of 6-59 months and who were enrolled in the Save the Children nutrition programme. Percentage on how many who agreed to participate is hence not relevant in this study. When in the process was the study explained and the consent given? Before or after the home observation?
Response: Before the data gathering began. Please see data collection and participant section in the method yellow text.
This has been clarified already in the abstract.

Techniques for anthropometric measurements have not been described. Also, because MUAC clearly was an important component of this study, describe briefly how the measurement was taken. MUAC and anthropometric measurements are described.

Response: Thanks for your valuable comment.
Page 9, 204-210.

Were infants and children less than 24 months measured in the recumbent position? Response: Recumbent position can be used for sick and weak children. In that case they should lay still in other cases the arm should hang freely.

Page 9, line 204-210.
What clothes were children wearing for weight measurements?
Response: No shirt, they wore pants, skirt, cloths around them.
Page 9, line 204-210.

Mention the software used to convert anthropometric measurements to Z scores.
Response: To make this paper easier to read I removed the Z score relating to weight for height so no need to mention in this paper when focusing MUAC. I have told in the limitation section that in the next paper weight for height and MUAK should be presented for the sake of better reliability.
Or, was MUAC the only measurement done for the research project? If length/height and weight were measured, why are they not included in a table?

Response: There are so much data that could be presented in this study. With a try to describe this in a manner of “small, simple and beautiful” it is considered to be enough data in this study as it is my doctoral student’s first paper I have chosen not to include more. L. 139-141.

I assume the statement that these measurements do not change much with age refers to MUAC, not to weight and height which are also mentioned.

Response: The weight for height has been removed. I added that MUAK vary it is told in some documents to be trustworthy and I found figures up till 97 percent but I cannot write that as I need to be humble, so better write it vary. In the limitation section I am a bit more positive about the MUAK as an instrument in research.

L. 141-143.

What is meant by this sentence? Comparing with existing MCH records might identify the
"plausibility" of a certain MUAC measurement but not actually the accuracy.

Response: This sentence has been deleted with my mission to try to make this manuscript easy to read rather than complicated.

L. 159-161 - not quite clear. Did the data collectors collect the observational data when they visited the household to give the appointment time and place? Had the participant already given consent at that point? How was the research and consent process explained to participants?

Response: Thanks for the question, yes the participants had already given the approval before they were observed, and yes they gave the appointment time and place at the same visit as the observations were done. The study aim and design was described before the consent was provided. This has now been clarified in the data gathering section please see yellow text.

Response: Page 8-9, line 184-220
Line 170-172 describes how descriptive data were compiled. Specifically, what tests were used to analyze the data?

Response: This has been addressed in the analysis section.
Page 9 line 115-121
The Household Hunger score methodology seems to be drawn from the Household Food Insecurity Access Scale, but that methodology has not been cited.

Response: It has now been cited. Thanks for your valuable suggestion.

Response: Page 6 line 143-145.
L. 194-196 and Table 5. Table 5 reports on caregiver knowledge and attitudes about foods that "should be" introduced to an infant in addition to breast milk. Lines 194-196 mentions each food as "was introduced". Unless the foods mentioned are specifically provided for children in IDP camps, I find it unlikely that all under 5 children were eating foods like egg, meat, fish and poultry with any regularity.

Response: Table 5 is about knowledge and attitudes so I agree that it is not likely the children ate all that food. The word should has been changed to could and the language editor has made sure it is the right way of telling what we try to say. Thanks for the valuable comment.

L. 231-232. An upcoming study is mentioned. It might be useful to consider some of the standardized questionnaires released recently for Water, Sanitation and Hygiene assessments.

Response: Thanks we will consider your valuable suggestion for an upcoming study and this is now in the discussion section.

LIMITATIONS
In our experience, social-acceptability bias may be a problem with some of these questions. For example, mothers answered that they always washed their hands before preparing food or before a meal, but when day-long household observations were conducted, this washing was not happening.

Response: Thanks a lot for an extremely valuable suggestion. It is now included in the limitation section and I fully agree that social-acceptability bias may be a problem.

Why were statistical analyses not used to see if there were correlations across the data.
Response: The answer is that we wanted to do something small, simple and beautiful as Mohamed is a doctoral student it is a learning process to tell others with descriptive statistics compiled in a way conveying to the world what you did. In the next papers we will increase the correlations across data and the level. In this situation I took the decision to discuss among ourselves and make it a description of the situation still interesting enough to make it worth to publish. I hope you understand.

L. 260-262. The extent to which recommendations from this study can be generalized to other ID children and their caregivers in Somali and other similar IDP settings elsewhere is quite dependent on the original sampling strategy. For example, we consistently find that households closer to health centers participate in more of the available maternal trainings. Thus, random, rather than convenience, sampling is important.

We fully agree on the weakness in the design of this study. It could be biased.
Response: Thanks for your valuable point. Regarding generalization it could be generalized with caution. Thanks for your valuable suggestion. This has been included in the limitation section yellow text. Page 14 line 329-332.
L. 288 - Publication of data for an individual child would be very unusual. Is that what you intended to say?

Response: Line 185-190. Page 8. Verbal consent was obtained from the caregivers included confirmation from the guardians to publish data on the children. I hope it is now clear that no data should be published to disclose an individual child.

Response: During the visit data collectors provided verbal information about the twofold aim of the study, the design and assurances that participants could withdraw from the study without consequences at any time. No data published should disclose an individual participant. The data collectors gaining consent from guardians of the children. Informed consent was thus obtained from all 1655 caregivers and consent for the children involved before the data gathering began

OTHER COMMENTS:

It appears that women married later in Baidoa than in the two other camps……..Do you know if they also went to school longer?

Response: Unfortunately we did not find any correlation and chose not to present this.

Careful formative research with key informants in Baidoa and in a quite different camp would likely provide important insights for future programming.

Response: Thanks for encouraging us. This is what we thought. This has been included in the study.

Reviewers reports Response Antonis Zampelas (Reviewer 6): The aim of the present study was to investigate the nutritional situation of all children aged 6-59 months enrolled in a nutrition program provided by Save the Children in 2017 in internally displaced people's camps in Somalia and to identify gaps in the caregivers' hygiene and feeding practices in the planning phase of education targeting the caregivers. I found thje paper very interesnting and very easy to follow. I think it gives valuable information for future programs in a very troubled ans suffering area. Some minor comments
Response: Thanks, many thanks. How wonderful you found it easy to follow!

1. In the method section it would be nice to have one section on questionnaires and another for anthropometrics

Response: Your suggestion has been followed. Thanks, you find anthropometrics under a separate heading. Page 7 line 156.

2. A detailed section on statistical analysis is needed

Response: Your suggestion has been followed. Please see the analysis section. Thank you so much. Page 9 line 270-220.