**Author’s response to reviews**

**Title:** Anthropometric and clinical correlates of fat mass in healthy term infants at 6 months of age.

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EDITORIAL AND REVIEWERS COMMENTS

**Technical Comments:**

1. Title Page - Please note that the order of authors in your manuscript file differs from the order of authors entered within the submission system - please correct so they are consistent with each other.

   - The order of the authors was already changed since the last version submitted.

2. Please change ‘Introduction’ heading to ‘Background’ in the manuscript body.

   - “Introduction” heading was already changed to “Background” since the last version submitted, both in the abstract and the manuscript.
Editor Comments:

Please incorporate text to reflect your responses below (2 is a limitation, and I think 3 would clarify the rational for the methods you used) to reviewer 2:

2. Anthropometrics at birth was not correlated with fat mass.

Unfortunately, we were not able to measure fat mass at birth. The PEAPOD was not available in the hospital area, only in the research facility, where we followed-up the infants. Therefore, we have no data to correlate in this stage.

3. It is interesting that the skinfold sum was not described as the best method for the evaluation of FM, as the model shows exactly the same values than TS itself.

We decided to include new general linear models with Fat mass index (FMI) as the outcome, in order to account for variations in body size. In line with this, we considered length as a variable in the FM% models. The new results showed Skinfold sum (together with waist circumference) as the strongest models for FM% and FMI. We changed the manuscript accordingly (results and discussion).

- The information regarding Q.2 and Q.3 (reviewer 2) was incorporated to the text as part of the limitations (line 228-229) and to clarify the rational for the methods (line 135-136), respectively.

Elisabet Forsum (Reviewer 1):

General

The paper is based on reporting of correlations. An important problem with correlations is that they are very much influenced by the material in which the data are collected. This should be discussed.

- We performed general mixed linear models (GMLM) because it allows to estimate one dependent variable on the basis of other variables. This type of model considers the effect of factors and co-variables on the dependent variable. It is not a simple correlation, that will only let us know the association or the absence of association of two variables X and Y, and if they “move” together or not. We believe that using GMLM strengthens our study and our results.
Abstract.

The conclusion "Type of feeding and sex should be taken into account when assessing FM in this age group" is quite vague. A reader would want to know why this is needed and how it should be done.

- We changed the sentence to be more specific regarding type of feeding (Line 31).

Lines 145-6. I assume these values are at birth, but this should be clearly stated. And I think that too many digits are given.

- The words “at birth” were added to the sentence (Line 146). Digits regarding infants’ mean weight at birth were reduced (Line 147).

Discussion

This section is too long and contains many unclear statements.

Lines 172-3. This is unclear to me.

- We rewrote the sentence in order to clarify the idea (Line 174-5).

Lines 177-9. It is unclear what the authors have in mind. Please explain and describe the requirements needed to make this happen.

- We rewrote the sentences and explained why we consider FM measurement should be the basis for obesity diagnosis and how this may occur. Lines 180-4.

Lines 188-9. Unclear statement. “Indicators of body proportionality, such as BMI, have been proposed as complementary tools to assess growth and nutritional status.”

- Lines 185-7 were rewritten to clarify the use and limitations of BMI.
Lines 237-8. Unclear statement
- We decided that technically it was not a limitation, but part of a detailed methodology (line 112-4), since Fomon’s body density values are generally used with body composition assessment (PeaPod). We eliminated this information from the limitations and added it to the Method section.

References

The number of references is very high. Several of them could probably be removed.
- We have removed some of the references.

Table 1

I think infant length at 6 months should be added.
- We added this information in Table 1

Table 2

You do not have to show both FM % and FFM % since they are the same.
- We eliminated this information from Table 2.