Reviewer's report

Title: Relationship between segmental trunk control and gross motor development in typically developing infants aged from 4 to 12 months: a pilot study

Version: 1 Date: 27 May 2019

Reviewer: Eloísa Tudella

Reviewer's report:

The manuscript is important for children’s motor development area. The authors have accepted many of the suggestions that have been given, however, some are still necessary to make the manuscript suitable for publication. Following is the request for a few more modifications. The justifications presented are not very consistent. I request to argue better in the manuscript the texts below:

"we understand that head control emerges around 2 to 3 months of age but from the gross motor development perspective, these young infants do not demonstrate too many motor milestones".

"This experience has also been supported with our present data that the relationship between segmental trunk control and gross motor development became more significant when the study infants reached 8 months of age".

Methods

This study is part of a larger study, informing in the manuscript how the 20 infants were selected. In the manuscript, indicate the minimum of evaluations for the infant to remain in the study.

Page 6, line 7: please include the following information in the manuscript:

"the SATCo indeed divides the head and trunk into 6 segments as listed by the reviewer. The "7" represents a child who is learning to control his full trunk i.e. is learning independent sitting balance. This includes the control of the pelvis. This control of pelvic position is additional to the 6 named segments. Since "7" represents a child who is learning full trunk control, this necessitates a number "8" to denote a child who has gained full trunk control i.e. has assured trunk control in independent sitting".

Page 6, line 14-19: I agree with the justification of the authors; but should change the word OR to AND at the end of the sentence below.

"Head/trunk control is dichotomously credited segment by segment if a vertical upright sitting posture can be maintained under three conditions: at rest (static control), during head OR arm movements (active control) and after external perturbations (reactive control)".
Page 6, line 56: justify in the manuscript because this study was considered a "pilot study" despite having a sample of 20 infants.

Page 7, statistical analysis: I agree that for intervention studies effect size is indispensable, however, the presentation of such data would make the study stronger.

Discussion

It would be more appropriate to remove the word "emerging" from the sentence: "our present study investigated emerging segmental trunk control development in typically developing infants from 4 months of age and the correlation with their gross motor development."

As asked before, it is required for you to detail which one of the static, active and reactive levels of trunk control were found at 10 months of age, as described at 11 months.

The results of the good correlation between trunk control and prone posture at 8 months of age still deserve further discussion.

The following sentence is confusing, explain in the manuscript what is meant by "reclined positions of supine and prone are we refer…"

The question "Why was there no correlation observed before 8 months? What explains the fact that 6-month old infants are able to sit with anterior hand support and this has not been correlated with the level of trunk control?" was not answered by the authors. It needs to be better discussed in the text to convince readers.

Add in the limitation of the study the inclusion of infants with under the recommended 5% cut-off from AIMS.
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.

No

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 recommend additional statistical review

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Please indicate the quality of language in the manuscript:

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