Reviewer’s report

Title: The assessment of developmental status using the Ages and Stages questionnaire-3 in nutritional research in North Indian.

Version: 1 Date: 9 January 2013

Reviewer: Anneloes van Baar

Reviewer’s report:

Minor Essential Revisions

This report describes the translation and adaptation of the ASQ 3 in India and the procedure for use ‘at home’ (i.e. not in a professional institution) by field workers, not trained as psychologists. Purpose is to evaluate if this assessment is feasible for use with large groups of children and if the psychometric characteristics are sufficient.

1. The conclusion in the abstract is formulated stronger than in the text:
   Abstract:
   The translated and adjusted ASQ-3 “home procedure” shows promise as an easily administered and cost efficient assessment tool for the collection of reliable data on the developmental status in infants and young children in large epidemiological studies in low and middle-income countries, although particular care is needed to obtain satisfying alpha values in all subscales, and to ensure variability in all items when transferred to a given cultural context.

   Text:
   Our results are promising in terms of the possibility of effectively train examiners to collect reliable data in a large study, although for future utility in a North Indian research setting, particular attention must be held to adjustments of items in order to enhance internal consistency and ensure variability in all items. The report underlines the significance of close awareness to cultural adjustments when transferring an assessment tool to a new cultural context, both in terms of translation and adaptation of items and in terms of cultural appropriate administration.

2. In my opinion the conclusion should be that the procedure was found to be feasible, but also that the ASQ should be adjusted further, for instance by deleting non-varying items from the scales, or regroup items age appropriately for Indian children, in order to improve the alpha’s of the scales (not of the items, as it says in the text).

3. The information may become more interesting for the readership of this journal if some information was also presented regarding the subgroups in relation to the physical growth data – but perhaps the authors want to present this information more extensively in a different paper.
But the authors should provide some information on the % of children that showed developmental delay, as an illustration to what extent the assessment used here indeed identifies children with developmental risk or delay.

4. The authors describe that they needed to adapt the ASQ; they explain that the mirror item needed to be adjusted as mirrors are not used daily in this part of India. Nevertheless they still continue to use a mirror as one of the materials. Also, a zipper is not familiar in this area, but instead a board with magnets is used to assess comprehension of ‘up and down’; is this material familiar to the children?

Do the authors recommend further adaptation in this regard? Did they study the alpha’s without the adapted items?

5. It is also described that the children were given time to practice with some of the materials before the assessment was done; would it not have been better if materials were used that were already familiar to the children so that practice time would not be needed?

6. In the results correlations are described of subscale results with the total score; it is unclear to me if the subscale score was excluded from the total score before doing so.

Discretionary Revisions

1. Should it not be India in stead of Indian in the Title?

2. In general the manuscript is somewhat long with repetition of several remarks, e.g. page 13 rule 14 and page 16 rule 1 concerning noting of observation of skills or scoring based upon information; or description of difficulties with the mirror items at page 11 and 19.

3. Page 5: rule 5 and 7: offers should be offer.

4. Page 6, rule 10; how high was that correlation? Rule 17; interventional, should be intervention

5. Page 14, rule 11; suddenly a gold standard is introduced; this later turns out to be the trainer (main author); please clarify.

6. Page 17, last rule; please describe the items that cause the negative average

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'