Reviewer's report

Title: Prevalence of developmental delays in early infancy: results from a regional population-based longitudinal study

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Reviewer: Beth McManus

Reviewer's report:

Thank you for the opportunity to review the manuscript entitled “Prevalence of developmental delays in early infancy: results from a regional population-based longitudinal study.” This manuscript measures the rates of developmental delays at 4, 6, and 12 months in young children in Norway. The paper is well-written and organized and will likely be of interest to the BMC Pediatrics readership. I have a few comments and suggestions that I hope will help strengthen the paper.

Background

The authors provide a helpful overview of the context of early child healthcare in Norway. They also suggest an important reason to estimate developmental delay prevalence rates is to engage in program planning and policy development for early intervention. To this end, it would be helpful for the authors to provide some context for early intervention service delivery in Norway – who is eligible? How are services provided and financed?

Methods

It would be helpful for the authors to address the attrition of participants and how this might have influenced the results. For example, it appears that a relatively large proportion of the babies <2500 grams did not complete ASQ’s at each timepoint.

Results

Tables 2 and 3 are difficult to read. It would be helpful to streamline the results and perhaps only present the prevalence rates and an asterisk to correspond to p-values (Table 3). For table 2, perhaps the actual cut-off values aren’t needed. Perhaps this can be presented in an Appendix to make Table 2 easier to read.

Also, I’m wondering if the authors considered examining rates of infants who had delays in more than one area. To this end, the rate of children who scored at or below the cut-off in one area differs from the distribution of individual delays suggesting a need to investigate this further.

Moreover, how many children who had delays at 4 months also had them at 6 and 12-months? This would be important for EI program planning.

Later in the manuscript, the authors discuss that their sample is predominately higher income and well-educated. This seems to have very important implications for interpretation of the results (especially comparisons to US norms) that should be addressed more explicitly in the paper.
Discussion
On page 11, lines 287-291 and page 12, lines 292-298 the authors compare their findings to similar studies, I found this section confusing because it wasn’t clear at times which study the authors were referring to (theirs or a different one). And, as written, seems to undermine the robustness of their findings. I would suggest revising this section.

On page 12, lines 299-310, the authors address the issue of a high prevalence of gross motor delay. I’m wondering what some plausible explanations for this finding are. Assuming the rate is actually far less than the US, are their culture differences (e.g., more tummy time or floor time) that could explain this? A discussion explaining these findings would be helpful and probably more relevant that the presentation of motor delays in older children in the US.

Finally, given that the authors wanted to learn more about rates of developmental delay to assist with EI, I’m wondering what the implications of the findings are for EI in Norway? Are the results valid? Should they be used to determine EI eligibility?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
I declare that I have no competing interests