

Peer Review Report

Review Report on The kids are alright (?). Infants' development and COVID-19 pandemic: a cross-sectional study.

Original Article, Int J Public Health

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EVALUATION

Q 1 Please summarize the main findings of the study.

104 healthy term-born infants aged 5-9 months were assessed according to the level of development using GSCD scores. Two groups pre-pandemic (N=34) and COVID (N=70) were compared. Linear regression was estimated.

Q 2 Please highlight the limitations and strengths.

The development of the child in the first months of life should be the subject of screening, and proven tools implemented in different countries can support planned interventions. The article has the merit of presenting such tools, not only the GDS scale, but also family involvement. I fully support the idea of comparing pre-Covid and Covid groups, despite the small sample size. I do think that obtaining a larger sample was feasible. However, the strong emphasis on the impact of the level of restriction raises too many methodological questions. I think the paper should be thoroughly reworked, having removed this thread. Firstly, 14 days before the interview was taken into account. Child development is a process from birth (if not before), and the effect of earlier pandemic restrictions may be delayed. The results were probably influenced by the cumulative effect of the pandemic and the psychological state of the parent (respondent), and the burden of restrictions in the period before the interview may have affected the assessment of child development. Secondly, introducing an ordinal variable into a linear model and interpreting the beta parameter as the effect of a change per unit is an unacceptable simplification. Nowhere is the distribution of the sample by level of restriction shown either. There are very few cases in group five at the figure and they affected the significance of the result because the GDS values were low. Thirdly, the figures show a trend over time with periods of lesser and greater restrictions and the mentioned cumulative effect of living in a pandemic. The colours do not matter. It was sufficient to mark with vertical lines the period of change in the level of restriction. This is a fundamental point, although the article also has more limitations and ambiguities. I have the impression as if proving the relationship with the level of restriction was given the status of a scientific discovery (the only result highlighted in the abstract), the method and results indicate over-interpretation.

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Main concerns about: small sample; not clear methodology and overestimation of the restrictions effect as described in Q2.

Other comments:

- 1) The study design was described as cross-sectional, but the Authors suggested that families were included at the time of baby birth. This would be a longitudinal study and data could be collected at the start point as well. The timing of the invitation to the study needs to be precisely defined.
- 2) The sample size is very small, especially in the pre-COVID group. Despite the planned study at 6 months, a significant proportion of children were at other ages. A range of 5-7 months seems reasonable (a dispersion of

ages in days can be given), but in the COVID group there were 14.3% of children aged 8–9 months, from whom it was probably a shame to drop out.

3) The description of the sample was omitted from the methodology section, which is against the rules for writing articles. The sample size only appears in the results (in the abstract too).

4) Research tools are described in a chaotic manner.

5) Averages are analysed, but there is no information on how many children had clear deviations from the norm. Only data at figure 1 are presented as DQ which is difficult to interpret.

6) The interview procedure is poorly described (also in terms of duration), as well as the description of the tools refers mainly to the literature and the appendix, where they are included, without any rules for interpreting the result.

7) The figures are probably in reverse order, as the first one contains fewer points, suggesting the exclusion of online interviews.

8) All figures should have a scale from zero

9) It would be useful to include the number N in the titles of the tables.

10) Unclear whether the month of the survey was entered into the regression model, which would be more reasonable than the level of restriction. Here the terms cross-sectional survey and trend analysis are in opposition.

11) Table 2 contains only the parameter estimation for the restriction level ordered variable, the one I am most doubtful about. The analyses were adjusted for about six variables without reporting the results. The R2 coefficient seems to apply to the whole model. The change in R2 after the addition of each variable, or groups of variables, should be given, especially after the addition of the restriction factor. Often the parameter is significant and the effect of the variable itself marginal compared to others.

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

Attractive but not supported by results

Q 5 Are the keywords appropriate?

yes

Q 6 Is the English language of sufficient quality?

I don't feel an expert

Q 7 Is the quality of the figures and tables satisfactory?

No.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

yes

QUALITY ASSESSMENT

Q 9 Originality



Q 10 Rigor



Q 11 Significance to the field



Q 12 Interest to a general audience

Q 13 Quality of the writing

Q 14 Overall scientific quality of the study

REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Reject.