

Supplementary Information

Title: The reporting of study limitations and hedging in articles with and without causal diagrams

Taísa Rodrigues Cortes^{*1}, Ismael Henrique Silveira², Michael Maia Schlussek³, Guilherme Loureiro Werneck^{1,4} and Claudio José Struchiner^{1,5}.

1. Institute of Social Medicine, State University of Rio de Janeiro, Rio de Janeiro, Brazil.
2. Institute of Collective Health, Federal University of Bahia, Salvador, Brazil.
3. UK EQUATOR Centre, Centre for Statistics in Medicine, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford, Oxford, Oxfordshire, UK.
4. Institute for Public Health Studies, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil.
5. School of Applied Mathematics, Getúlio Vargas Foundation, Rio de Janeiro, Brazil.

File S1 Details of the search strategies

Table S1 Hedge terms and context rules

File S2 Causal models

Figure S1 Study limitations and potential biases reported by the authors.

Table S2 Sensitivity analysis

File S3 Examples of the reporting of study limitations for each bias category

File S3 Some Examples of the reporting of study limitations for each bias category.

Measurement:
Misclassification, measurement errors, definition or operationalization of variables
A limitation of this analysis is the use of <i>self-reported</i> body size measures.
The use of <i>proxy interviews could also be a source of bias</i> , although these counted for only a small portion of our study sample (<8%)
In addition, data were obtained through an interviewer administered questionnaire which may be limited by <i>recall or social desirability bias</i> .
We were also unable to adjust for daily activities patterns. Some women may spend most of their time outside their residential home; (...) However, we have no reason to believe that this lack of adjustment results in <i>differential misclassification</i> . Therefore, this discrepancy is likely to bias our results toward the null.
The infants' HIV status was defined based on samples that obtained at 6 weeks and/or 18 months of age. <i>This means that a small number of infants may have been misclassified if this is so then our result, although striking may have underestimated the adverse effect of HIV positivity in the child.</i>
Confounding: residual, unmeasured
We could not adjust for <i>unknown or unmeasured social and biological factors that may explain some of the increased risk</i> .
Because the exposure and covariates were collected using a self administered questionnaire, there is a possibility that misclassification of these variables may be correlated with each other and lead to dependent misclassification <i>and residual confounding</i> . <i>Residual confounding may contribute to the observed decreased risk of SAB among taller women.</i>
Selection bias:
sample selection/restriction, collider bias, missing data, lost to follow up, non-participation
We observed two types of <i>non-response effect</i> : non-response at baseline and loss to follow-up that could introduce bias in the association, and influence the generalisability of the findings However, loss to follow-up was not associated with the CRP levels
Our results are <i>conditional on survival past 1 year, which would bias results</i> if a disproportionate amount of potential CP cases, as compared with children without CP, do not survive 1 year condition that at present cannot be confirmed
Transportability
this study population, featuring a relatively high prevalence of breastfeeding and of caries, <i>might not be representative of the breastfeeding-caries relationship in all historical, geographical, and socioeconomic contexts.</i>
The majority of our study population was of European descent, and <i>findings may not be applicable to other ethnicities.</i>
Sample size/power
Fourth, the <i>unstable result</i> of the incidence study reflects <i>lack of power</i> .
<i>The small number of exposed cases for some of the strata limits interpretation of the findings.</i> Small strata and wide CI in this subanalysis affect our ability to know if other associations are present that could help clarify underlying associations between maternal infections in particular trimesters and CP.
Other limitations
Unclear type, unmeasured variables (non-confounders), non positivity, directionality
Our results <i>are limited by the number of compounds measured and included in the analysis and should be, therefore, interpreted in light of these limitations.</i>

Other limitation of our study is its *design*. While *cross-sectional studies* can determine prevalence, they cannot establish causality between drug use and the other variables considered, especially family support.