Reviewer's report

Title: Breastfeeding and childhood asthma: a six-year population-based cohort study

Version: 1 Date: 13 August 2007

Reviewer: Simon Francis Thomsen

Reviewer's report:

General

This longitudinal study of ~2500 Finnish children, reports on the association between breastfeeding and later risk of asthma and respiratory symptoms. The main conclusion is that the nature of association between infant breastfeeding and asthma is U-shaped, explaining why earlier studies of the subject have yielded conflicting results, i.e. some find a positive association while others find a negative association.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Was data on breastfeeding collected in 1991? I presume it was but it should be stated more clearly.

It should be mentioned if the study was part of a multidisciplinary survey on other health attributes or whether it only addressed asthma.

Under covariates it is stated that ‘…all the potential determinants of the outcome according to current knowledge were considered as potential confounders.’ This statement should be modified since the authors did not include for example early life respiratory infections, use of antibiotics, day care attendance, family size, and birth anthropometry, which are known determinants of asthma.

It should be specified during what study wave covariates were collected. Apparently some were collected in 1991 whereas some were collected during follow-up.

Why were the children who had missing information on asthma not omitted from the analysis? It is said that they were scored as not having asthma. If this number is high it could have biased the results.

Under validity of results it is stated that ‘The prospective study design minimizes information bias.’ This is perhaps true but many of the variables still rely on parental recollection increasing the chance of recall bias. This should be addressed.
In table 2 ‘risk’ should be specified as percentage (essentially it is the cumulative incidence proportion). This should be addressed in the results section as well.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

On page 7, top paragraph the word ‘multivariate analyses’ should be substituted with ‘multivariable analyses’.

The last three paragraphs of the results section, i.e. from ‘The risk of asthma was elevated...’ to the end of the results section could be minimized considerably. The text merely states what can be already read from the tables and figures.

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Discretionary Revisions (which the author can choose to ignore)

To support the argument that the association between breastfeeding and the risk of asthma was similar in non-atopic and atopic parents the authors could consider including an interaction term between parental atopy and breastfeeding. The authors could also consider citing another Finnish study on that topic:

Did the authors collect data on hay fever or eczema and were similar results obtained for these outcomes?

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests