Reviewer’s report

Title: Prevalence and Predictors of 6-Month Exclusive Breastfeeding among Canadian Women: A National Survey

Version: 1 Date: 20 November 2009

Reviewer: Giovanni Radaelli

Reviewer's report:

General comment

0. The paper describes a large population-based observational study conducted in Canada and aimed to estimate the six months prevalence rate of exclusive breastfeeding and determinants among mothers who delivered a singleton birth. Data were obtained in 2006 by a source reliable and believable. The text is flowing and pleasantly readable. Matter is of possible interest for the reader of BMC Pediatrics, and epidemiological studies are welcome and potentially instructive. However, the information reported in the manuscript is unfortunately scanty and makes it of limited interest. Indeed, there is a missed opportunity here to apply survival analysis methods to analyze these data and appropriately consider also mothers of infants who failed to achieve six months of age at the time of the interview. Taking into account for this possibility and some other issues would strengthen the paper. In my opinion, the Authors should revise the manuscript at least including as primary outcome measure the time at stopping exclusive breastfeeding, and re-analyze the data accordingly.

Major Compulsory Revisions

1. No definition of initiation of breastfeeding is given. Indeed, while there is not at present a standardized definition, it is commonly indicated in most of literature that initiation occurs when breastfeeding starts within 48h after delivery. The Authors have to specify their adopted definition.

2. As pointed out above in the general comment, there is a missed opportunity here to apply survival analysis methods (e.g. Kaplan Meier, Log rank test, Cox-regression,...) to analyze the data. Evaluating determinants of exclusive breastfeeding rate at six months only appears to be not sufficient. The Authors are therefore recommended to consider also/or the time at stopping exclusive breastfeeding as primary outcome measure. In such a case, mothers interviewed when the infants were under six months of age at the time of the interview might be included in the analysis considering the status of exclusive breastfeeding at that time and observations as possibly censored.

3. Some attention in the manuscript to the covariates used in the analyses and how they were defined is also warranted. I found the covariates listed at page 7 but, for example, no clear definition is given for alcohol intake during pregnancy.
or smoking (number of cigarettes?). Why was “smoking” after the first trimester of pregnancy not considered?

Additionally, whether available, pre-pregnancy maternal body mass index, birth weight and gestational age of the infant should be considered too as these variables have been recognized to affect initiation and/or duration of breastfeeding and/or exclusive breastfeeding.

4. Page 6, last two lines. It not clear the rationale of having posed at 26 weeks the cut-point. Please justify and/or add adequate reference.

5. Page 6, bottom to line -10. Correctly, the Authors used the WHO definition of exclusive breastfeeding and considered exclusive breastfeeding as the main outcome of the study. It would be better measured by the time at stopping exclusive breastfeeding (duration of exclusive breastfeeding) than by a dichotomized variable at a time-point. Anyway, it would be not necessary to introduce any additional concept when studying exclusive breastfeeding. Use of the three additional variables introduced by the Authors at points i) ii) and iii) to categorize exclusive breastfeeding is redundant at this stage, potentially incomplete because use of formula milk is not mentioned, and may be further conceptually confusing. Indeed, these variables while relate indirectly to exclusive breastfeeding express different notions: i) represents the infant’s age at introduction of liquids; ii) represents the infant’s age at introduction of solid foods; iii) represents the infant’s age at stopping breastfeeding.

6. Based on the sentences written at page 6, bottom to line -10, and page 7, line 1, I may suppose that the Authors had available full information about the age of the infant at introduction of fluids, solid foods, stopping breastfeeding, and maybe also about introduction of formula milk, if any. To strengthen the manuscript and benefit the reader it is desirable that they report at least in the Results section some essential results about predominant breastfeeding, as well the time at introduction of solid foods and formula milk. In particular, I wonder about the size of difference in the rates of exclusive breastfeeding and full (exclusive/predominant) breastfeeding.

7. Page 9, lines 6-8. The Authors wrote: “During pregnancy, around 10% of the women … Accordingly, breastfeeding initiation rate was high (90.3%)…”. This sentence was not proved here and then it appears not scientifically justified at present. Please justify, reword or omit.

Additionally, the Authors might fit a multivariate logistic regression model to identify determinants of initiation of breastfeeding (and possibly exclusive breastfeeding at hospital discharge) in the population studied.

8. Page 9, lines 8-10 (data also reported in Table 1). The authors wrote : “…more than half of the women remained breastfeeding at 6 months of infant’s age. Nevertheless, the 6-month exclusive breastfeeding rates were low (13.8%)…”. Indeed, based on the WHO recommendations, a rate of breastfeeding at six months of the infant’s age of 53.9% may be considered low, and reasons for early stopping breastfeeding
should be investigated. A six-month rate of exclusive breastfeeding of 13.8% might be or not be acceptable, depending on the real median (mean) age of stopping exclusive breastfeeding. For example, a median age of the infants at stopping exclusive breastfeeding of 2 months or 5 months would have remarkably different meaning. Yet, a rate of exclusive breastfeeding declining from 20% at six months to 5% at seven months, for example, would reflect a more negative behavior of the mothers than a decline from 13.8% at six months to 0% at seven months. It is therefore essential once more that the Authors examine the duration of exclusive breastfeeding rather than merely its prevalence at six months.

9. Page 11, line 3. Based on the results presented it cannot be concluded, from a clinical viewpoint, that a prevalence of 13.8% of exclusive breastfeeding at six months is low.

10. Page 16, line 2. Based on the results presented it cannot be concluded, from a clinical viewpoint, that a prevalence of 13.8% of exclusive breastfeeding at six months is still very low.

11. Page 16, lines 8-10. The Authors wrote: “Finally, promoting the involvement of health professionals to support longer durations of exclusive breastfeeding and advocating for clinical training on breastfeeding counseling is highly warranted.” It this form the statement may be misleading and not educational, and should be reworded. Indeed, in my opinion, while exclusive breastfeeding should be strongly promoted until four months and possibly six months of age, a longer duration of exclusive breastfeeding should be neither promoted nor recommended.

Moreover, based on the observed breastfeeding rate (53.9%) at six months longer duration of breastfeeding should be promoted in the studied population.

12. Table 2 is extensive too much and should be appropriately condensed. Also better, it should be omitted and substituted by a new table reporting significant results from survival analysis.

Minor Essential Revisions

13. Page 6, line 9. Based on the reported data, the participation rate was 75.2%. Although this value is acceptable in large population surveys the Authors should point out the main reasons for non participation, and specify whether any difference occurred between participating and non-participating women with respect to baseline characteristics.

14. Page 7, line 6. The term “independent” is neither appropriate nor necessary. It should be omitted.

15. Page 8, following the last sentence. Please specify the P-value assumed to indicate statistical significance.

16. Page 10, line 5. The term “interestingly” should be omitted in the Results as reflect a comment, and possibly moved in the Discussion.
17. Page 11, lines 4-12. At this stage, the sentences merely duplicate information given in the Results section, and might be omitted.

18. Table 2, page 26. Please specify if $ means USD or CAD.

19. Table 2, page 29. The used unit of measure for the dimensional covariates should be specified.

Discretionary Revisions

20. Page 4, line -3. In accordance with terminology commonly used in the literature “breastfeeding termination” would be better read as “stopping breastfeeding”.

21. Page 10, line 5, line 9, and line 11. The terms “interestingly” and “Similarly”, and the expression “In addition to the above” should be omitted in the Results as reflect comments, and possibly moved in the Discussion section.

22. References. In references 5 and 23 that cite accessibility to WEB documents, the last date of access should be pointed out.

23. The Authors might consider to reword the title of the manuscript after including results about the time at stopping exclusive breastfeeding.

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

**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