PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	The association between breastfeeding support on breastfeeding rates in the UK: A comparison of late preterm and term infants
AUTHORS	Rayfield, Sarah; Oakley, Laura; Quigley, Maria

VERSION 1 - REVIEW

REVIEWER	Pat Hoddinott University of Stirling, UK
REVIEW RETURNED	24-Jul-2015

GENERAL COMMENTS	It is good to see a paper undertaking secondary analysis of the UK National Infant Feeding Survey, which has now been discontinued. The authors correctly identify that few studies have compared breastfeeding outcomes for late pre-term and term infants. However there are problems with choosing these subgroups to compare, most importantly the imbalance between the two sample sizes: 623 late pre-term infants compared to 14567 term infants (Table 2). I have several concerns about this paper: 1. The generalisability of the findings 2. The justification for selection of some variables and not others from the large number of questions asked in the National Infant Feeding survey and the balance in how they have been reported. A flow chart would be helpful and closer adherence to STROBE reporting guidelines. 3. Some findings are counter to Cochrane Review and other evidence. 4. This leads me to question the design of the study and the assumptions underpinning this study. Why were women who reported “no problems” included in the analysis when the focus of the analysis is on types of support? Could sensitivity analyses be done excluding these women? . Going through the paper I have made some comments relating to the above: Throughout the paper - including the abstract and tables 1. Numbers should be provided wherever % only are given. 2. It should be made clear that it is perceived (rather than actual) support/help received and information. This is clearly stated in the discussion section - but could be incorporated particularly in the results section to minimise any misinterpretation. Abstract The difference in size of the samples at baseline needs to be clearly

	stated along with any significant differences. The presentation of the findings could be more balanced. Article summary The list of bullet points focuses on the strengths and in my opinion should be balanced by more bullet points covering limitations, particularly the generalisability and sources of bias. In particular the 51% response rate to the survey. Can this really be described as nationally representative? The difference in the sample sizes is a limitation. Bullet point 3 is vague. More specification of the confounders and known socio-demographic associations would be helpful. Introduction P5 Lines 4-8. The authors state that the majority of studies evaluating the effects of breastfeeding support are restricted to term infants. The authors should highlight that there is also a substantial body of work that investigates breastfeeding support in the Neonatal Unit particularly for premature infants. This is relevant because more infants in the late pre-term group were admitted to NNU - where the support for breastfeeding differs particularly in relation to promoting the use of breast pumps to express milk, as detailed in the UNICEF Baby Friendly Guidance. For international readers, it might be helpful to describe the UK breastfeeding usual care context including the role of health visitors and transition from midwife to health visitor care and the availability of peer support, 3rd sector support etc.. Line 13. The objective does not refer to breastfeeding outcomes. Were there any a priori hypotheses? Study design The full questionnaire should be provided as a web appendix so that readers can see how the questions are presented. (A web supplement is mentioned in the text but was not submitted and I was not clear what the authors intend to include in this). In the main text, the number of questions/ pages in the questionnaire should be mentioned - as it is very long. The 51% of women who return the questionnaire are likely to differ in many ways from those that don't and response bias is a real concern with this survey. The over-sampling from more deprived areas and weighting is an attempt to address this-but the reasons for non-response are likely to be more complex. In particular the cognitive overload of long questionnaires and low time availability for parents with a new baby. Measures A fuller justification should be provided for why some variables have been included and others not. Could the authors explain why they have omitted how the mother herself was fed as a baby, as this is an important predictor of feeding outcome reported in the previous infant feeding surveys. If the woman's own mother breastfed and provides support - this is a potential confounder. It would be helpful to know the split between emergency and elective caesarians as a confounder - as they have different impacts on breastfeeding outcomes. Statistical analysis I have insufficient expertise to comment on the statistics. I would like to see justification for why antenatal feeding intention and peer feeding were included in the regression model regardless of p-value.

	The authors do not state any a priori hypotheses to inform the analysis plan. Could full tables of all of the variables, their p values and whether they were kept in or dropped for Models A, B and C be included as web supplements. Results Throughout the results sections, could numbers be provided as well as %. Could p vales be added to Table 2. Could the comparator for the Odds Ratios be stated in all cases where they are reported. P10 Lines 8-10. Help at home. It is not clear which question in Table 1 this relates to. Could questions in Table 1 be numbered and the results related to these numbers. Clarity is required as a quick read of this section could result in misinterpretation from the way the variables are described. P10 Lines 34- 39. This finding is important, as it is counter to evidence and yet the Odds Ratio and the comparator are not provided. As this section is for the late pre-term group – the findings for the term group should be moved to the end of the previous section and the odds ratio with comparator reported there. Discussion A fuller discussion of the findings which are counter to evidence is required and the external validity. In particular – women reporting no problems are less likely to be breastfeeding at 10 days and 6 weeks. Should women with no problems have been excluded from the regression model? As the authors point out- some will have stopped breastfeeding - how meaningful is this data for practitioners and women? Similarly, the finding that women accessing professional support were less likely to be breastfeeding at 10 days. This is contrary the Cochrane systematic review evidence (ref 25) and several other systematic reviews which show that additional support increases breastfeeding duration. Could there be other confounding factors operating here? The findings should also should be put into context with other findings from the Infant Feeding Survey, for example a long list of problems like pain, insufficient milk are given by respondents as reasons why they stopped breastfeeding. The justification and any potential bias in the selection of some variables and not others from this long questionnaire requires further discussion. There is a strong emphasis in the paper on receipt of information and attendance at groups, yet this is not discussed in relation to the literature about group support. In particular, the median age of the baby when women attend breastfeeding support groups in a trial was 5 weeks - which is relevant to the findings. Receipt of information requires discussion - as receipt alone has little evidence to support it as a behaviour change technique. The baseline differences between the samples suggests that the mothers and/or babies are likely to have more health problems in the late pre-term group. As most UK postnatal support is undifferentiated and provided by midwives and health visitors who provide holistic care - how useful is this retrospective data? In my view prospective data is required to answer this question.

REVIEWER	Hanne Kronborg Aarhus University, Denmark
REVIEW RETURNED	05-Aug-2015

GENERAL COMMENTS	This paper concerns the impact of breastfeeding support on breastfeeding rates in the UK with concern to late preterm and term infants. Late preterm infants may be weaker and more vulnerable than term infants in those first days following birth where breastfeeding is established. This is a recognized knowledge that needs to be spread - and the reason why this paper is relevant. The study is generally well described with a few exceptions that I will clarify below. Data collection is described as self-reported; but in an insufficient way. Was both the data on breastfeeding duration and breastfeeding support collected by the questionnaires? How the questionnaire was validated, especially the questions to breastfeeding duration and breastfeeding support? The authors write that it is accepted that breastfeeding can take 6 weeks to be fully established. That may be true when we are talking about preterm babies. The initiation of breastfeeding is described but a more precise definition of breastfeeding is missing? I understand this paper is working with any breastfeeding as the outcome variable. It would be more informative to distinguish between exclusive and any breastfeeding. The analysis and results are well described. Description of the analysis in the result section should be removed to the analysis section (page 8, line 55 and 57). The shorter duration of breastfeeding for the preterm infants are not fully explained by socio-demographic factors or breastfeeding support factors included in this study. The discussion need to be clearer about this matter. The retrospective design of this study is a huge problem. Women were asked about breastfeeding support 6 weeks following birth, so the likelihood of breastfeeding duration associated with the breastfeeding support may be biased.

VERSION 1 – AUTHOR RESPONSE

Response to Reviewer 1

1. Throughout the paper:

a. Numbers have been provided in the text whenever % only were given previously and also added to tables 2, 5 and 6 (see further detail below).

b. We have tried to emphasise the fact that it is perceived rather than actual support that was received. We have particularly expanded the text in the method and discussion sections to reflect this.

2. Abstract: We have emphasised the different sample sizes of the term and late preterm infant groups in addition to adding in whole numbers alongside the weighted percentage values.

3. Article Summary: we have expanded the description of confounding factors in bullet point 3, emphasised the potential role of bias in point 5 and added a further bullet point describing another limitation of the study in order to balance out the summary.

4. Introduction: we have commented on the existing literature which exists for breastfeeding support for preterm infants in the Neonatal unit (page 5). We have also added a paragraph on the usual care context for breastfeeding support in the UK (page 5)

5. Study design: We have more fully described the questionnaire itself including numbers of questions (page 6). The questionnaire is now included as a web appendix along with a flow chart of how many

infants were included at each stage of the analysis. We have also highlighted the length of the questionnaire and potential difficulties in answering it for parents of a newborn infant again, and possibility of bias in the discussion section (page 13)

6. Measures: We have expanded the description on why certain variables were chosen (page 7) for inclusion in the analysis. Table 1 (box of breastfeeding support questions) has been numbered with the numbers corresponding to the later results section. We chose not to include how the mother herself was fed as an infant as this is strongly associated with antenatal feeding intention ($p<0.000$) which we did include in the model. It was felt that antenatal feeding intention was more appropriate to include, especially given the increase in breastfeeding rates over the last few decades and in fact only 26% of the mothers in the IFS were fully breastfed.

7. The first reviewer stated that it would be helpful to know the split between elective and emergency caesarean sections – unfortunately this is not possible as this question was not asked in the Infant Feeding Survey, only if the delivery was via caesarean section.

8. Statistical analysis: We have expanded the statement that antenatal feeding intention and peer feeding variables were included as a priori confounders in the analysis, regardless of their p value (page 8). It was suggested that full tables of all of the variables and their inclusion/exclusion at each stage for models A/B/C could be included as a web appendix. However, as there are already 4 sets of analyses presented in tables 5 and 6 (breastfeeding at 10 days and 6 weeks in the term and late preterm groups), it would necessitate adding an additional 4-6 tables to present the results for models A, B and C in each of the 4 sets of analysis. Therefore, on reflection it was felt that this would be presenting a lot of information and would not add anything further to the main findings as the results which were statistically significant are already included in the paper. We have already included 6 tables of results in the main paper and 2 further figures in the Web Appendix and we would not want to include any more information unless it is absolutely necessary. What we have been able to do, however, is highlight in the Results section which of the variables in Table 1 were significantly associated with the breastfeeding outcomes in a univariable analysis (page 10 for term infants and page 12 for late preterm infants).

9. Results (main text): We have restated throughout this section that it is maternal perception of support which was asked by the infant feeding survey. Throughout the results section, whole numbers have been added whenever a percentage is stated and a comparator has been included for each odds ratio. We have expanded the description for those women experiencing no feeding problems to explain that the women who received help for feeding problems either in hospital or at home were a subset of women who had experienced problems initially (page 11). We have moved the findings for the term group (page 10) to the term group section along with the comparator for the odds ratio.

10. Results (tables): p values have been added to table 2 and whole numbers added alongside the percentage values. In addition, whole numbers have been added to tables 5 and 6, alongside the percentage values. These tables now include question numbers which correspond to table 1. It was felt that it was not possible to add the whole numbers to tables 3 and 4 as these tables already contain a lot of data and it would result in an increase from 4 to 8 columns of data, which would impact on the readability of the data. We have however, listed the exact numbers 4 times throughout the paper which will hopefully make the difference in sample size clearer to the readers.

11. Discussion: throughout this section we have now emphasised that this study is looking at the maternal perception of support, rather than a measure of actual support received. We have commented on the sample size discrepancy between the term and late preterm infants (page 13). We have added further context from the infant feeding survey itself, including identified reasons why women stop breastfeeding and support which they felt could have enabled them to continue for longer (page 14). We expanded the discussion of the findings that women accessing support from health professionals were less likely to be breastfeeding at 10 days (page 15). We have also discussed the findings of receiving the contact details for breastfeeding support groups, in the context of a published trial on breastfeeding support groups (page 16).

12. The first reviewer asked if the women in the study who had reported “no problems” should have been excluded from the start. The women who reported 'no problems' were included in the analysis

for reasons of statistical efficiency. It would have been difficult to exclude them from the analysis because it was not the same women who reported 'no problems' to the different questions in tables 5 and 6. Also, a large proportion of women reported no problems (see the new data we have added to tables 5 and 6, as suggested by the reviewer), and this would have meant that all of the models (i.e. all of the adjusted odds ratios in tables 5 and 6) were based on a small sample size. The reviewer suggests doing a sensitivity analysis. However, we do not think this is necessary – instead, we have given a clearer explanation on how to interpret the results. For example, we chose as the comparison group, those women who reported receiving help with their feeding problems. This enabled us to use one model to compare these women with the women who had problems and did not receive help (see adjusted OR 1.07 in Table 5), but also with the women who reported no problems (see adjusted OR 1.57, table 5). We have now clarified this in the text (page 11).

Response to second reviewer
1. We have explained that both breastfeeding duration and breastfeeding support were collected using the IFS survey data (page 3 and page 6)
2. We have increased the description of the IFS questionnaire including how the questionnaire was piloted and therefore validated (page 6).
3. We have expanded on the definition of breastfeeding to emphasise the difference between exclusive and partial breastfeeding (page 7).
4. We have moved the description of the analysis from the results section from page 9 to page 8 as requested.
5. We have emphasised that the sociodemographic factors do not explain the duration of breastfeeding in the late preterm group in the discussion (page 16/17)
6. We have added the fact that this study is retrospective in design as a “limitation” bullet point in the article summary section (page 3).

We hope this revised version of our paper covers all of the points raised by the reviewers. We thank you for your time and look forward to hearing the outcome of this re-submission.