PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Breastfeeding and the Weekend Effect: An Observational Study
AUTHORS	Fitzsimons, Emla; Vera-Hernandez, Marcos

VERSION 1 - REVIEW

REVIEWER	Lydia Furman MD Rainbow Babies and CHildren's Hospital, and Case Western Reserve University School of Medicine, Cleveland OH USA
REVIEW RETURNED	24-Sep-2015

GENERAL COMMENTS	Please include your sample size in the abstract as well as the source of your data if possible since many readers focus on the abstract only. The main challenge with the results is that the difference you found was for Saturdays but not Sundays. The explanation provided is not completely convincing since one would expect some effect if the "weekend" phenomenon is real. Please consider if any additional analyses would permit understanding of this issue (do you have LOS data that could confirm or deny your explanatory hypothesis?) Please clarify if your hypothesis was that the educational level of the mother would be the most important variable, or if this was found in the bivariate analyses. Although age at school leaving seems to be a good descriptor for educational level, please acknowledge that it is a proxy for health literacy not a measure of same. What do you believe would be helpful policy changes? Should all educational materials be provided at a lower grade level, should hospitals work to alter staffing, should mothers with early school leaving be proactively identfied to receive additional education prenatally? Please note that theanalysis would be strengthened by inclusion of prenatal feeding intention data- was this available in the survey? Were any other variables available in addition to those noted (e.g. marital status)?

REVIEWER	Diane Spatz United States
REVIEW RETURNED	10-Oct-2015

GENERAL COMMENTS	can not recommend publication of this manuscript. Most of the references are over 5 years old and many are over 10 years old. Also, the research does not really add anything to clinical practice in is current form. A mother can not control what day of week she will deliver.

This article as currently written contribution nothing to clinical care. Women can not choose what day of week that they deliver. What may strengthen the research is an understanding of current models of care in the UK. For example, what is routine staffing for labor & delivery and post-partum units? In the U.S., AWHONN has staffing guidelines. Is staffing different on weekend versus week day? Do your hospitals employee IBCLCs? Is staffing for IBCLC different on weekend versus weekday? Are your hospitals BFHI accredited? See the study by Hallowell and colleagues that links staffing and nurse education with human milk and breastfeeding outcomes. Additionally, there are so many great articles that address how nursing care improves human milk/breastfeeding outcomes (I have included just 2 examples).

This article would have to be significantly re-framed to be publishable!

Hallowell, S. G., Spatz, D. L., Hanlon, A. L., Rogowski, J. A. & Lake, E. T. (2014). Characteristics of the NICU Work Environment Associated with Breastfeeding Support.
Advances in Neonatal Care, 14(4), 290-300. doi: 10.1097/ANC.0000000000000102

Fugate, K. Hernandez, I., Ashmeade, T., Miladinovic, B, & Spatz, D.L. (2015). Improving Human Milk & Breastfeeding Practices in the NICU. *The Journal of Obstetric Gynecologic & Neonatal Nursing*.

Spatz, D. L., Froh, E. B., Schwarz, J., Huong, K., Brewster, I., Myers, C., Prince, J., & Olkkola, M. (2015). Pump Early-Pump Often: A Continuous Quality Improvement Project. *Journal of Perinatal Education*.

REVIEWER	Craig B Borkowf
	Centers for Disease Control and Prevention (CDC), USA
REVIEW RETURNED	29-Nov-2015

GENERAL COMMENTS	General comments for the authors.
	This paper raises an interesting question. Among the children of less educated mothers, does being born on the weekend (here Friday and Saturday) decrease the chances of being breastfed?
	I have one major statistical concern about the methods. It seems that the authors picked the weekday with the highest breastfeeding rate (Wednesday, 62.55%) and compared that to the weekend day with the lowest breastfeeding rate (Saturday, 56.59%). Given the post hoc multiple comparisons issue, it seems that some adjustment like Bonferroni's would be appropriate. I suspect that after making some adjustment for multiple comparisons the p-value would rise above the magic 0.05 level. Also, what to make of Sunday (64.75%), a weekend day, with the highest breastfeeding rate?
	Another way to test for weekday vs. weekend effects would be to construct a logistic regression model with an indicator variable for Friday and Saturday, and then to test if that indicator variable was significant.
	Even if you could convince the readers that the observed difference between weekdays and weekends was statistically significant, you'd still need to convince them that the difference was practically significant. Frankly, 5.96% = 62.55% - 56.59% doesn't seem that

practically significant.

One challenge with the data available is that (a) a child born at 12:01 am on Sunday is treated the same as (b) a child born at 11:59 pm on Sunday, and not the same as (c) a child born at 11:59 pm on Saturday. Yet, (a) and (c) will spend a full weekend day in the hospital, as compared to (b). Without time of birth, the effects of day of birth are blurred.

By the way, were there differences in response rates to the survey based on the day of the week on which the child was born?

Specific comments for the authors.
Page 6.
Abstract.
Odds ratios are not an intuitive way to present the results. Better to present proportions.
The authors state: "Further research is needed to ascertain the reason for this finding." It seems likely that there are fewer resources available to mothers who deliver over weekends, as the authors note in the paper.

Page 5.
Introduction.
What does "due to programming" mean?

Page 7.
Methods.
Why did the logistic regression analysis not adjust for length of hospital stay? What was the distribution of length of hospital stay by (say) half days?

Page 10.
Discussion.
Note that "1.40 times larger" should be "1.40 times as large as."
How was "12.2%" calculated?

The authors state: "Data on date of birth was missing for 1,469 children in the 2010 Infant Feeding Survey, although there is no reason to believe that they are not missing at random." This point is debatable, and if the assumptions about being missing at random were violated, it would seriously undercut the study.

Good luck with your revisions!

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Lydia Furman MD
Institution and Country: Rainbow Babies and CHildren's Hospital, and Case Western Reserve University School of Medicine, Cleveland OH, USA.

Please include your sample size in the abstract as well as the source of your data if possible since many readers focus on the abstract only.

Thanks for this suggestion. The design section of the abstract now reads:
"Retrospective database study using 16,508 records from the 2005 and 2010 Infant Feeding Surveys."

The main challenge with the results is that the difference you found was for Saturdays but not Sundays. The explanation provided is not completely convincing since one would expect some effect if the "weekend" phenomenon is real. Please consider if any additional analyses would permit understanding of this issue (do you have LOS data that could confirm or deny your explanatory hypothesis?)

We appreciate this concern but we are quite limited by the data at hand. A shortcoming of the data is that time of birth is not available, so it is not possible to ascertain when a baby was discharged, even if we have data on length of stay. If we focused on very short stays, the sample size is quite small. For instance for Sunday, the sample of children of low educated mothers comprises 556 children, but only 88 of them have a length of stay of 12 hours or less. Only 136 children born on Sunday stayed less than 24 hours, hence the majority of children (420=556-136 out of 556) born on Sunday were certainly still in hospital on Monday. Moreover, it is likely that some of the 136 children stayed in hospital for at least some part of Monday also. Ultimately, there are few Sunday births that are not exposed to Monday hospital services, and this might be the reason why we do not observe an effect on Sunday.

We have included this in the discussion section of the article.

Please clarify if your hypothesis was that the educational level of the mother would be the most important variable, or if this was found in the bivariate analyses.

We have clarified this by including the following sentence in the statistical analysis subsection:

"Given stark differences in breastfeeding by maternal education, we hypothesised that the effect of timing of birth on breastfeeding might vary by education status. We investigated this by entering an interaction term with education. The interaction term was significant at $P<0.05$."

Although age at school leaving seems to be a good descriptor for educational level, please acknowledge that it is a proxy for health literacy not a measure of same.

Many thanks for the suggestion. We have inserted the following sentence, just before the results section, to address this:

"Although education is not a direct measure of health literacy, it is a proxy for it, and is also correlated with the mother's ability to access different sources of breastfeeding support."

What do you believe would be helpful policy changes? Should all educational materials be provided at a lower grade level, should hospitals work to alter staffing, should mothers with early school leaving be proactively identified to receive additional education prenatally?

Currently in the UK there is a very controversial debate around whether "weekend effects" are due to lack of staffing or not. We want to be very careful in drawing conclusions about staffing levels, because another potential explanation for our findings is that friends and relatives might be more inclined to pay visits over the weekend, and this might distract mothers and/or make it more difficult for staff to work with mothers and achieve standard outcomes (we note this in the discussion section). Moreover, despite extensive searches, we are not aware of data available on staffing levels by day of the week in maternity services. We have made this more explicit by inserting the following in the discussion section:

"Current policy to promote breastfeeding in the UK should take account of these disparities by day of delivery, especially for low educated mothers. Subsequent research should investigate whether these disparities are caused by differences in staffing across the week and/or differences in the number or

composition of visits paid by friends and relatives."

Educational materials and prenatal education that mothers have access to should be unrelated to the day of birth, so they are unlikely to be behind the differences in breastfeeding rates between Saturday and Monday-Thursday births. Although there is probably room to improve services in these dimensions, we feel that they are more likely to explain why low educated mothers breastfeed less, rather than the question that we tackle in this article.

Please note that the analysis would be strengthened by inclusion of prenatal feeding intention data- was this available in the survey? Were any other variables available in addition to those noted (e.g. marital status)?

We chose a parsimonious selection of covariates because of the evidence (Table 1) that maternal and child characteristics are very similar across days of week of birth. Although the IFS is quite rich in the information reported, it is collected retrospectively and hence bias might emerge if respondents are trying to justify their choices, and also because of missing values. However, we also appreciate that it is reassuring if the results are robust to the inclusion of more covariates.

In light of your comment, we have reviewed the questionnaire and identified the following variables that might be additional good predictors of breastfeeding: prenatal feeding intention, attendance at prenatal check-ups and classes where feeding was discussed, whether the mother was informed of the health benefits of breastfeeding, whether the baby was in special care and/or under a lamp for jaundice, whether the mother was married or cohabitating, and length of stay (as solicited by the third reviewer). We run logistic models including these covariates in addition to the original ones. We found the results to be very similar to the original results, but please note that due to missing values in these additional covariates the sample is reduced by 327 children in the sample of low educated mothers, and 1088 in the sample of highly educated mothers. Because the missing values could bias the findings, we have inserted the following paragraph in the discussion section:

"To explore the robustness of the findings, the covariates of the logistic models were expanded to include additional variables: a binary variable indicating whether the mother was married/cohabitating, prenatal feeding intention (binary variables for exclusive breastfeeding and any breastfeeding), prenatal care that included infant feeding discussions (binary variables for check-ups and attendance at prenatal classes), a binary variable indicating whether the mother was informed of the health benefits of breastfeeding, binary variables as to whether the baby was in special care and whether the baby was put under a lamp for jaundice, and length of stay in hospital. Results were similar to the main results reported in Table 3: the odds ratio on Saturday is 0.57 (CI = 0.37 - 0.89, Bonferroni adjusted P-value = 0.036) for low educated mothers and 0.92 (CI = 0.70-1.22, Bonferroni adjusted P-value > 0.1) for high educated mothers. However, the sample sizes were lower (3,487 for low educated mothers and 11,606 for high educated mothers) due to missing values in the additional covariates included."

Reviewer: 2
Reviewer Name: Diane Spatz
Institution and Country: University of Pennsylvania, United States.

This article as currently written contribution nothing to clinical care. Women cannot choose what day of week that they deliver.

The objective of the article is not to contribute to clinical care but rather to highlight differences in breastfeeding rates by timing of birth. We agree that this article is not a direct contribution to clinical care but it is in line with the recent literature exploring weekend effects in different medical specialties. We also believe that our findings will trigger further research to understand why these disparities emerge.

Compared to other research on weekend effects, the fact that women cannot choose what day of the week they deliver is in fact advantageous, as it shuts down any selection/confounding effects: therefore differences in breastfeeding by day of the week cannot simply reflect differences in maternal characteristics.

What may strengthen the research is an understanding of current models of care in the UK. For example, what is routine staffing for labor & delivery and post-partum units? In the U.S., AWHONN has staffing guidelines. Is staffing different on weekend versus week day? Do your hospitals employee IBCLCs? Is staffing for IBCLC different on weekend versus weekday?

The question of staffing differences by weekend/weekdays is something we looked into very carefully in conducting the research, given how relevant it is to the findings - unfortunately, after extensive searches, we concluded that there is no data available that would allow us to check whether and how staffing is different by weekend and weekday. We can therefore only postulate it as one potential explanation behind our findings and hope that further research will investigate this.

Are your hospitals BFHI accredited?

According to the 2010 IFS report, 9% of births in England took place in a BFHI accredited hospital, and 34% in Wales. However, the BFHI information was not included in the 2005 IFS survey so we cannot use it in the analysis.

See the study by Hallowell and colleagues that links staffing and nurse education with human milk and breastfeeding outcomes. Additionally, there are so many great articles that address how nursing care improves human milk/breastfeeding outcomes (I have included just 2 examples).

Thank you for these additional references, which we have included in the paper, alongside the range of others evidencing that some mothers benefit from the support of hospital staff to initiate and successfully establish breastfeeding (see 32-45). We note that we have also included two other recent references on the topic.

Hallowell, S. G., Spatz, D. L., Hanlon, A. L., Rogowski, J. A. & Lake, E. T. (2014).

Characteristics of the NICU Work Environment Associated with Breastfeeding Support. Advances in Neonatal Care, 14(4), 290-300. doi: 10.1097/ANC.0000000000000102

Fugate, K. Hernandez, I., Ashmeade, T., Miladinovic, B, & Spatz, D.L. (2015). Improving Human Milk & Breastfeeding Practices in the NICU. The Journal of Obstetric Gynecologic & Neonatal Nursing.

Spatz, D. L., Froh, E. B., Schwarz, J., Huong, K., Brewster, I., Myers, C., Prince, J., & Olkkola, M. (2015). Pump Early-Pump Often: A Continuous Quality Improvement Project. Journal of Perinatal Education.

Reviewer: 3 (stats/ methods reviewer)
Reviewer Name: Craig B Borkowf.
Institution and Country: Centers for Disease Control and Prevention (CDC), USA.

This paper raises an interesting question. Among the children of less educated mothers, does being born on the weekend (here Friday and Saturday) decrease the chances of being breastfed?

I have one major statistical concern about the methods. It seems that the authors picked the weekday with the highest breastfeeding rate (Wednesday, 62.55%) and compared that to the weekend day with the lowest breastfeeding rate (Saturday, 56.59%). Given the post hoc multiple comparisons issue, it seems that some adjustment like Bonferroni's would be appropriate. I suspect that after making some adjustment for multiple comparisons the p-value would rise above the magic 0.05 level. Also, what to make of Sunday (64.75%), a weekend day, with the highest breastfeeding rate? Another way to test for weekday vs. weekend effects would be to construct a logistic regression model with an indicator variable for Friday and Saturday, and then to test if that indicator variable was significant.

Many thanks for the constructive comment. We appreciate this is a very important concern and have changed the way the statistical analysis was done to be able to address it. Now, we compare Friday, Saturday, and Sunday (three different indicator variables) against Monday to Thursday combined. Hence, we test three different hypotheses: Friday vs. Monday-Thursday, Saturday vs. Monday-Thursday, and Sunday vs. Monday-Thursday. We carry out Bonferroni corrections (multiplying the unadjusted P-value by 3) to take into account the fact that we are testing the effect for three different days: Friday, Saturday, and Sunday. We also thought of simply pooling together Friday and Saturday, as you suggest, but felt that the approach above was more transparent. The paragraph describing the main results now reads:

"Table 3 shows unadjusted and adjusted odds ratios for day of the week of delivery from a logistic regression with incidence of breastfeeding as the dependent variable, separately by education status. The regression compares separately births taking place on Friday, Saturday, and Sunday with births occurring on Monday to Thursday. For the high educated, the odds ratios are very close to 1 across the week and not statistically different from 1 in any case. For the low educated, on the other hand, the adjusted (unadjusted) odds ratio on Saturday is 0.742 (0.759), the standard P-value is 0.013 (0.018), and the Bonferroni P-value adjusted for testing three different days is 0.039 (0.054)."

Even if you could convince the readers that the observed difference between weekdays and weekends was statistically significant, you'd still need to convince them that the difference was practically significant. Frankly, 5.96% = 62.55% - 56.59% doesn't seem that practically significant.

The absolute increase of 5.96 percentage points constitutes an approximate 10% decrease in the probability of breastfeeding. We believe this is of considerable practical significance, comparing well with estimates of the effects of specific interventions that have tried to improve breastfeeding rates. According to the article by Bartington and co-authors, the UNICEF Baby Friendly Initiative increased the probability of breastfeeding initiation also by 10%. We have inserted a sentence in the discussion that reads

"This effect is of practical significance, its magnitude being similar to the effect of the UNICEF Baby Friendly Initiative, a breastfeeding-focused intervention that increased the probability of initiating breastfeeding by 10% (34)."

One challenge with the data available is that (a) a child born at 12:01 am on Sunday is treated the same as (b) a child born at 11:59 pm on Sunday, and not the same as (c) a child born at 11:59 pm on Saturday. Yet, (a) and (c) will spend a full weekend day in the hospital, as compared to (b). Without time of birth, the effects of day of birth are blurred.

We completely agree with this comment. Given data limitations, the only thing that we can do about it

is to note it as a limitation in the discussion section. We also note that if we had time of birth, the estimated effects would probably be larger because the effects would not be blurred anymore. We have inserted the following paragraph in the discussion:

"Another limitation of our study is that our data does not contain time of birth. This blurs the effect of day of the week because children born at the end of Saturday are more likely to still be in hospital on Monday than children born early on Saturday, yet this study treats them the same way. We hypothesise that should we have had access to data on time of birth, the day of week effect would have been larger."

By the way, were there differences in response rates to the survey based on the day of the week on which the child was born?

Unfortunately, this information is not included in the survey reports, and we cannot compute it ourselves because we do not have access to the entire sample that was contacted to participate. Mothers who did not return the questionnaire did not consent to participate and hence their records do not form part of the publicly available datasets.

Specific comments for the authors.

Page 6.
Abstract.
Odds ratios are not an intuitive way to present the results. Better to present proportions.

We have presented both – the proportion and, in parentheses, the corresponding odds ratio and confidence interval. We hope we interpreted this comment correctly.

The authors state: "Further research is needed to ascertain the reason for this finding." It seems likely that there are fewer resources available to mothers who deliver over weekends, as the authors note in the paper.

An alternative explanation for our findings (that we now indicate more explicitly in the discussion section) is that the volume and/or composition of visits paid by friends and relatives is different between weekdays and weekends, and that these visits make it harder for the mother to focus and for the staff to work efficiently. Because of this alternative explanation, we want to be conservative in our conclusions, particularly given the very controversial debate in the UK regarding whether "weekend effects" are due to lack of staffing or not.

Page 5.
Introduction.
What does "due to programming" mean?
This term is sometimes used to denote a process whereby a stimulus or insult at a critical period of development has lasting or lifelong significance (Lucas 1991). But your comment made us realise that this concept might not be widely known to the reader and as the sentence remains meaningful if we drop it, we have deleted it.

Page 7.
Methods.
Why did the logistic regression analysis not adjust for length of hospital stay? What was the distribution of length of hospital stay by (say) half days?

We now show histograms for length of hospital stay (by half days) in Figures 1 and 2.

Initially, we did not adjust for length of hospital stay for three reasons. First, it raises a concern about reverse causation – for instance length of stay maybe a function of breastfeeding if it affects when mothers are discharged. Second, it is missing in 7% of the records. Third, Figures 1 and 2 make us suspect that there is substantial measurement error as there are very few records between 49 and 60 hours.

Having said that, and also in the light of some comments by Reviewer 1, we have checked the robustness of our results to the inclusion of a wider set of covariates, including hospital stay. In the discussion section, we have now inserted the following paragraph:

"To explore the robustness of the findings, the covariates of the logistic models were expanded to include additional variables: a binary variable indicating whether the mother was married/cohabitating, prenatal feeding intention (binary variables for exclusive breastfeeding and any breastfeeding), prenatal care that included infant feeding discussions (binary variables for check-ups and attendance at prenatal classes), a binary variable indicating whether the mother was informed of the health benefits of breastfeeding, binary variables as to whether the baby was in special care and whether the baby was put under a lamp for jaundice, and length of stay in hospital. Results were similar to the main results reported in Table 3: the odds ratio on Saturday is 0.57 (CI = 0.37 - 0.89, Bonferroni adjusted P-value = 0.036) for low educated mothers and 0.92 (CI = 0.70-1.22, Bonferroni adjusted P-value > 0.1) for high educated mothers. However, the sample sizes were lower (3,487 for low educated mothers and 11,606 for high educated mothers) due to missing values in the additional covariates included."

Page 10.
Discussion.

Note that "1.40 times larger" should be "1.40 times as large as."

Many thanks for pointing this out. We have amended this. It now reads

"We find that for low educated mothers who deliver their baby on Monday to Thursday, the odds of initiating breastfeeding are 1.35 times as large as the odds for low educated mothers who deliver their baby on Saturday."

Note that it is now 1.35 instead of 1.40 because we have changed the way that we perform the statistical analysis (as noted already, by pooling Monday to Thursday).

How was "12.2%" calculated?

We use the logistic model to compute the predicted probability of breastfeeding for those children born on Saturday, as well as what their probability of breastfeeding would have been should they have been born Monday-Thursday (so we switch the Saturday indicator variable to zero when doing this prediction). To clarify this, we have inserted the following

"Using probabilities computed with the logistic model" in the sentence "Using probabilities computed with the logistic model, we estimate that for this group of mothers, delivering on Saturday versus Monday-Thursday decreases their probability of initiating breastfeeding by 12.3%."

The authors state: "Data on date of birth was missing for 1,469 children in the 2010 Infant Feeding Survey, although there is no reason to believe that they are not missing at random." This point is

debatable, and if the assumptions about being missing at random were violated, it would seriously undercut the study.

In light of your comment, we thoroughly analysed the pattern of missingness, which seems consistent with the assumption of missing at random, at least for low educated mothers. We have inserted the following paragraph in the discussion:

"Data on day of the week of birth was missing for 1,469 children in the 2010 Infant Feeding Survey. However, the percentage of missing records for women with high education is very similar to that of women with lower education (14.5% vs. 15.2%). Amongst mothers with lower education, the percentage of missing records is very similar for mothers with vaginal vs. non-vaginal deliveries (15.35% vs. 14.93%), as well as white vs. non-white ethnicity (15.35% vs. 14.93%); nor was maternal age associated with the presence of missing day of week of birth amongst mothers with lower education (P=0.51). Amongst mothers with higher education, the pattern of missing records is similar to that exhibited by lower educated mothers, with the exception that white mothers have a smaller likelihood of missing records (13.6% vs. 18.83%), which is statistically significant at 5%. Hence, our results for higher educated mothers should be interpreted with extra caution."

Good luck with your revisions!
Thank you. We also appreciate your very useful comments.

VERSION 2 – REVIEW

REVIEWER	Lydia Furman MD University Hospitals Rainbow Babies and Children's Hospital, Cleveland, OH USA
REVIEW RETURNED	07-Jan-2016

GENERAL COMMENTS	Thank you for your revisions. A couple of minor comments: In the description of Table 3 a sentence reads, "...separated by educational level" and I suggest the word "stratified" instead of "separated." The paragraph in the Discussion that "explores the robustness of the findings" should likely go into the Results section, and make sure this excursion is addressed in the Methods section. When you describe how those included versus excluded due to missing data, this could be placed in a table and summarized in 2 sentences (no difference for lower educational level, there is a difference for higher)- this might streamline for the reader. It occurs to me belatedly that you have addressed "any breastfeeding" and not "exclusive breastfeeding" during the hospital stay- if the information is available and it is possible to look at, this exploratory analysis might be interesting. I believe there will be a fair amount of discussion about these results since they have implications for nursing staffing, patient education and health disparities.

REVIEWER	Craig B. Borkowf U.S. Centers for Disease Control and Prevention (CDC)
REVIEW RETURNED	08-Feb-2016

| GENERAL COMMENTS | General comments for the authors.
This paper raises an interesting question. Among the children of less educated mothers (who left school at age 16 or before), does being born on the weekend (here Friday and Saturday) decrease the chances of being breastfed?
One concern on reading this paper is that the authors put too much stock in statistical significance and not enough on practical significance. Consult a local statistician about this point. For example, breastfeeding frequency is lower for children born on both Friday and Saturday, although only Saturday is statistical significant compared to Monday through Thursday. Is 57% really that different from 60%-65%? The absolute difference of about 5% is relatively small, even if the relative difference is (reportedly) 12.3% (although a rough calculation suggests that it should be about 8.7%).
It is also important to reiterate that proportions (and ratios or differences of proportions) are much easier to interpret than odds ratios. The authors should consider carefully which statistics they choose to present based on the public health message.

Specific comments for the authors.
I have sent back a copy of the paper with suggestions and comments noted in tracked changes. Some of these comments are below.

Abstract/results:
I have concerns about how this statistic (12.3%) was calculated. See below.

Introduction.
Re: "63% amongst those who were 16 or under when they left full-time education." Later on, the value given is 60.9%.

Statistical Analysis.
Re: "The final sample size is 16,508." Please clarify how this number (16508) was obtained. 19848*0.62 = 12306 and 30760*0.51 = 15688, so the total sample size should be much larger.

Results.
Re: "Rates of the incidence of breastfeeding amongst those mothers with low education are 60.9%, compared to 84.4% amongst those with high education." Earlier, this number was 63%. Why did the authors break down education as low, medium, and high in the introduction, but only as low and high here? Were there differences between the medium and high groups?
Re: "Also according to Figures 1 and 2, the distribution of length of stay is very similar across days of week of birth." Note that these figures also reflect the fact that babies tend to be born at night and mother tend to be discharged during the day.
Table 1 and 2: For clarity, consider using only one decimal place in these tables.
Re: "Data other than length of hospital stay are n (%) or frequency (%)." Clarify that this is mean length of hospital stay.
Re: Bonferroni. Perhaps I was a little unclear in my previous comments. The Bonferroni adjustment affects the significance level (alpha), not the p-value itself. The new significance level is 0.05/3 = 0.0167.

Discussion.
Re: "We find that for low educated mothers who delivered their baby between Monday and Thursday, the odds of initiating breastfeeding |

are 1.35 times as large as the odds for low educated mothers who delivered their baby on Saturday." This number does not appear in Table 3, but 0.742 (= 1/1.35) does.

Re: "Using probabilities computed with the logistic model, we estimate that for this group of mothers, delivering on Saturday versus Monday-Thursday decreases their probability of initiating breastfeeding by 12.3%." Again, how was this done? It is not clear how the logistic model can be used to extract overall probabilities or their ratio. The authors should consult a local statistician about this point. In any case, this point estimate needs a confidence interval. Using the numbers in Table 2, one obtains 1 – 56.59%/62% = 8.7%, a much lower value.

Re: "nor was maternal age associated with the presence of missing day of week of birth amongst mothers with lower education (P=0.51)." By what statistical test?

Re: "Amongst mothers with higher education, the pattern of missing records is similar to that exhibited by lower educated mothers, with the exception that white mothers have a smaller likelihood of missing records (13.6% vs. 18.83%), which is statistically significant at the 5% level." By what statistical test? P-value?

Re: "However, the sample sizes were lower (3,487 for low educated mothers and 11,606 for high educated mothers) due to missing values in the additional covariates included." If a covariate was not significant a single predictor or adjusted model, then it could be left out, so its missing data would not affect the other covariates in the model.

Re: "An effect was not found on Sundays." The authors should also discuss Fridays.

Re: "Amongst mothers who left full-time education aged 16 or under, the incidence of breastfeeding was 12.3% lower amongst babies born on Saturdays compared to those born between Mondays and Thursdays." AND Fridays. Borderline statistical significance?

Good luck with your revisions!

The reviewer also provided a marked copy with additional comments. Please contact the publisher for full details.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Lydia Furman MD
Institution and Country: University Hospitals Rainbow Babies and Children's Hospital, Cleveland, OH USA
Competing interests: None declared

Thank you for your revisions. A couple of minor comments:

Many thanks for reading the paper again, and providing us with these useful comments.

In the description of Table 3 a sentence reads, "separated by educational level" and I suggest the word "stratified" instead of "separated."

Many thanks, this has been incorporated.

The paragraph in the Discussion that "explores the robustness of the findings" should likely go into the Results section, and make sure this excursion is addressed in the Methods section.

Many thanks for this suggestion. We have now inserted the following paragraph in the Methods section:

"To explore the robustness of the findings, additional logistic regressions were estimated including an expanded set of covariates: a binary variable indicating whether the mother was married/cohabitating, prenatal feeding intention (binary variables for exclusive breastfeeding and any breastfeeding), prenatal care that included infant feeding discussions (binary variables for check-ups and attendance at prenatal classes), a binary variable indicating whether the mother was informed of the health benefits of breastfeeding, binary variables as to whether the baby was in special care and whether the baby was put under a lamp for jaundice, and length of stay in hospital."

And the following paragraph in the results section

Results of the logistic regressions estimated using an expanded set of covariates were similar to the main results reported in Table 3: the odds ratio on Saturday is 0.57 (CI = 0.37 - 0.89, P-value = 0.012) for low educated mothers and 0.92 (CI = 0.70-1.22, P-value = 0.576) for high educated mothers. However, the sample sizes were lower (3,487 for low educated mothers and 11,606 for high educated mothers) due to missing values in the additional covariates included.

When you describe how those included versus excluded due to missing data, this could be placed in a table and summarized in 2 sentences (no difference for lower educational level, there is a difference for higher)- this might streamline for the reader.

Many thanks for your suggestion. We really liked the idea of it, and have inserted Table 4 accordingly. We did not manage to cut it to 2 sentences, but it certainly helped to streamline the paragraph.

It occurs to me belatedly that you have addressed "any breastfeeding" and not "exclusive breastfeeding" during the hospital stay- if the information is available and it is possible to look at, this analysis might be interesting.

We agree that this would be interesting to look at, and there is indeed relevant information on the survey about it. However, there are two issues: the first one is that the information is missing for 1073 mothers. The second one, and probably most important, is that it would have implications for the statistical power of the analysis. Reviewer 3 rightly asked us to adjust the level of statistical significance to correct for multiple hypothesis testing. With only one outcome variable (any breastfeeding) and three days (Friday, Saturday and Sunday), the adjusted level of significance is 0.05/3=0.016. With two outcome variables, the adjusted significance level would be 0.05/6=0.0083, which means that the statistical power of the analysis would be greatly reduced.

I believe there will be a fair amount of discussion about these results since they have implications for nursing staffing, patient education and health disparities.

Many thanks for your comments. They have really helped to improve the paper.

Reviewer: 3
Reviewer Name: Craig B. Borkowf
Institution and Country: U.S. Centers for Disease Control and Prevention (CDC)
Competing interests: none declared.

Many thanks for reading the paper again, and for the very detailed and thoughtful comments. Without doubt, they have greatly improved the paper.

This paper raises an interesting question. Among the children of less educated mothers (who left school at age 16 or before), does being born on the weekend (here Friday and Saturday) decrease the chances of being breastfed?

One concern on reading this paper is that the authors put too much stock in statistical significance and not enough on practical significance. Consult a local statistician about this point. For example, breastfeeding frequency is lower for children born on both Friday and Saturday, although only Saturday is statistical significant compared to Monday through Thursday. Is 57% really that different from 60%-65%? The absolute difference of about 5% is relatively small, even if the relative difference is (reportedly) 12.3% (although a rough calculation suggests that it should be about 8.7%).

First, let us apologize because part of the confusion comes from the fact that the figures that used to be reported in Table 2 were not weighed (while the logistic regressions were). Table 2 now reports weighed data. Using the new numbers from Table 2, the incidence of breastfeeding Monday to Thursday is now 0.637, and 0.571 for Saturday. The absolute difference is 0.066, and the relative difference 10.3%= 1-0.571/0.637.

To provide guidance to the reader as to the magnitude of the effect, we compare it with the estimated impact of the UNICEF Baby Friendly Initiative, which has been taken up by a considerable number of hospitals in the UK. The last sentence of the first paragraph of the discussion reads:

"Although this effect is not very large, it is comparable to that of the UNICEF Baby Friendly Initiative, a breastfeeding-focused intervention that increased the probability of initiating breastfeeding by 10% (34)."

Although we do not say it in the paper, another way to gauge the importance is by converting it to number of children. There are around 730,000 births annually in England and Wales. So, the effect that we are considering would be affecting around ((730000)/7)* 0.066=6,882 children every year.

It is also important to reiterate that proportions (and ratios or differences of proportions) are much easier to interpret than odds ratios. The authors should consider carefully which statistics they choose to present based on the public health message.

Based on your comment, we have re-written the first paragraph of the discussion to emphasize ratios and differences of proportions. The paragraph now reads:

"We find that 63.7% of low educated mothers who deliver their baby between Monday and Thursday initiate breastfeeding, compared to 57.1% if they delivered their baby on Saturday. Hence, for low educated mothers, delivering on Saturday versus Monday-Thursday decreases their probability of initiating breastfeeding by 10.3%."

Specific comments for the authors.

I have sent back a copy of the paper with suggestions and comments noted in tracked changes.

Some of these comments are below.

Let us express our gratitude for such thorough reading of our article, and your detailed comments. They have very significantly improved the article.

Abstract/results:
I have concerns about how this statistic (12.3%) was calculated. See below.

We will respond to this comment when it is raised again below. In any case, this number has now been changed to 10.3%.

Introduction.

Re: "63% amongst those who were 16 or under when they left full-time education." Later on, the value given is 60.9%.

Apologies for the confusion caused. The figure of 63% referred to 2010, while 60.9% is of the sample that we use in the analysis, and which pools 2005 and 2010. In the introduction, we wanted to emphasize the social gradient in breastfeeding in a straightforward way, so we thought that the easiest was to cite (and provide the figures of) the 2010 official report.

Note also that we have replaced the 60.9% by 62.7% because now we always use sampling weights including for Table 2 (before we only used them in the logistic regression).

Statistical Analysis.

Re: "The final sample size is 16,508." Please clarify how this number (16508) was obtained. 19848*0.62 = 12306 and 30760*0.51 = 15688, so the total sample size should be much larger.

Many apologies for the confusion, we realize that we have been clear here. Thanks very much for catching this.

Previously, we had already mentioned that we would use the analysis using England and Wales (this is common because Wales was the country that most recently acquired health care competences, so its health service is supposed to be most similar to the English one) but we only gave the sample size for the UK (and not for England and Wales). We have now added the second sentence to this following sentence:

"The analysis uses data from the 2005 and 2010 surveys for England and Wales. Of the 13287 (18990) mothers sampled in England and Wales in 2005 (2010), 8,210 (9,969) completed the Stage 1 questionnaire, a response rate of 61.7% (52.5%)."

Hence, the total sample should be 8,210+9,969 = 18179. However, as we mention in the text:

"We excluded from the analysis 1,469 babies whose day of the week of birth was not available in the 2010 survey, 170 whose mother's education status was not reported, 24 whose mother's age was not known, and 8 whose breastfeeding status was not known. Our final sample size is 16,508."

So: 8210+9969-1469-170-24-8 = 16508

To avoid confounding the reader, we have deleted the sample sizes for the entire UK, and focused all

along on England and Wales.

Results.

Re: "Rates of the incidence of breastfeeding amongst those mothers with low education are 60.9%, compared to 84.4% amongst those with high education." Earlier, this number was 63%. Why did the authors break down education as low, medium, and high in the introduction, but only as low and high here? Were there differences between the medium and high groups?

Many thanks for your comment. The figure of 60.9% refers to the pooled sample of 2005 and 2010, which is what we use for the analysis. The figure of 63% given in the introduction refers to 2010, which is the most recent survey. In the introduction, we wanted to emphasize the social gradient in breastfeeding in a straightforward way, so we thought that the easiest was to cite (and provide the figures of) the 2010 official report, which uses three education groups: (1) left full-time education over 18, (2) left full-time education aged 17 or 18, and (3) left full time education at age 16 or under.

We have replaced the 60.9% by 62.7% because now we always use sampling weights (before we only used them in the logistic regression). For the same reason, 84.4% has been replaced by 85.2%.

Thanks to your comment, we have realized that hour terminology was confusing because we were not defining the terms low and high clearly enough. In the fourth paragraph of the statistical analysis subsection, we have inserted the following sentence (and updated Table 1 accordingly):

"The subsequent analysis splits by education status, where low education includes those who left full-time education aged 16 or under, and high education includes those who left full-time education aged 17 or over."

In relation to your last question, the estimates for group (2) and group (1) are very similar.

Re: "Also according to Figures 1 and 2, the distribution of length of stay is very similar across days of week of birth." Note that these figures also reflect the fact that babies tend to be born at night and mother tend to be discharged during the day.

Many thanks for this comment. We have incorporated the following sentence:

"Also according to Figures 1 and 2, the distribution of length of stay is very similar across days of week of birth, likely reflecting the fact that babies tend to be born at night and discharged during the day, and that hospital discharge policy does not vary by day of the week."

Table 1 and 2: For clarity, consider using only one decimal place in these tables.

Many thanks. This is now done.

Re: "Data other than length of hospital stay are n (%) or frequency (%)." Clarify that this is mean length of hospital stay.

Many thanks. The note now reads "Data other than mean length of hospital stay are n (%) or frequency (%)"

Re: Bonferroni. Perhaps I was a little unclear in my previous comments. The Bonferroni adjustment affects the significance level (alpha), not the p-value itself. The new significance level is 0.05/3 =

0.0167.

Many thanks for your clarification, and apologies that we misinterpreted your initial comment. We have now changed the sentence (as you suggested) to:

For the low educated, on the other hand, the adjusted (unadjusted) odds ratio on Saturday is 0.742 (0.759), the P-value is 0.013 (0.018), which falls below (slightly above) the Bonferroni-adjusted significance level of 0.0167.

We have also changed the meaning of the "*" in Table 3. The notes to Table 3 now reads Significance levels include Bonferroni corrections. ** P-value< 0.05/3=0.0167, * P-value<0.1/3=0.0334.

Discussion

Re:"We find that for low educated mothers who delivered their baby between Monday and Thursday, the odds of initiating breastfeeding are 1.35 times as large as the odds for low educated mothers who delivered their baby on Saturday." This number does not appear in Table 3, but 0.742 (= 1/1.35) does.

We have deleted this sentence, given your previous suggestion to emphasize ratios over odds ratios. In the revised version, odds ratios are only given in the results section.

Re: "Using probabilities computed with the logistic model, we estimate that for this group of mothers, delivering on Saturday versus Monday-Thursday decreases their probability of initiating breastfeeding by 12.3%." Again, how was this done? It is not clear how the logistic model can be used to extract overall probabilities or their ratio. The authors should consult a local statistician about this point. In any case, this point estimate needs a confidence interval. Using the numbers in Table 2, one obtains 1 – 56.59%/62% = 8.7%, a much lower value.

Your comment made us realize that extracting overall probabilities from the logistic model is not that common in the field. It is used quite extensively in econometrics (and STATA has a command called "margins" which computes it automatically, see for instance: http://dss.princeton.edu/training/Margins.pdf). However, given the type of article that we are writing, we think it is important that the methods are accessible to the most usual reader. So we have deleted the 12.3% number. Instead, we are using the ratio computed from the raw probabilities (those from Table 2). As previously mentioned, Table 2 now reports weighed estimates (in line with the regressions), so the 8.7% has been replaced by 10.3%

Re: "nor was maternal age associated with the presence of missing day of week of birth amongst mothers with lower education (P=0.51)." By what statistical test?
Re: "Amongst mothers with higher education, the pattern of missing records is similar to that exhibited by lower educated mothers, with the exception that white mothers have a smaller likelihood of missing records (13.6% vs. 18.83%), which is statistically significant at the 5% level." By what statistical test? P-value?

We used to use a F-test in a regression, but we have changed it to a Pearson's chi-squared test, which we believe is more common. Hence, the P-values has changed a little

Reviewer 1 asked us to report these figures in a Table, so we have inserted Table 4 containing this information. The new paragraph describing Table 4 reads as follow:

"Data on day of the week of birth was missing for 1,469 children in the 2010 Infant Feeding Survey.

However, the percentage of missing records for women with high education is very similar to that of women with lower education (14.5% vs. 15.2%). Table 4 reports on the statistical association between records with missing day of birth and other variables, stratified by education. Using Pearson's chi-squared test, no statistical significant associations were found for low educated mothers. Amongst mothers with higher education, white mothers have a smaller likelihood of missing records and younger mothers might be more likely to have missing records. Hence, our results for higher educated mothers should be interpreted with extra caution."

Re: "However, the sample sizes were lower (3,487 for low educated mothers and 11,606 for high educated mothers) due to missing values in the additional covariates included." If a covariate was not significant a single predictor or adjusted model, then it could be left out, so its missing data would not affect the other covariates in the model.

Reviewer 1 suggested the additional covariates in her first report. Hence, we feel that if we correct this, we would be failing to do what Reviewer 1 recommended us to do. In any case, please note that these are not the regressions used for the main results, but additional regressions for robustness analysis.

Re: "An effect was not found on Sundays." The authors should also discuss Fridays.
Re: "Amongst mothers who left full-time education aged 16 or under, the incidence of breastfeeding was 12.3% lower amongst babies born on Saturdays compared to those born between Mondays and Thursdays." AND Fridays. Borderline statistical significance?

Many thanks, this was a clear omission. We have added the following paragraph:

"Friday is the day with the second lowest breastfeeding incidence amongst low educated mothers. Children born early on Fridays might benefit from services available during weekdays, which would attenuate the weekend effect for those born late on Fridays. Hence, the difference in breastfeeding incidence between children born on Fridays and children born Mondays-Thursdays did not reach statistical significance."

Please, note that we did not say "borderline significant" because the adjusted odds ratio P-value is 0.23, and the Bonferroni adjusted threshold is 0.0167.

Good luck with your revisions!

Many thanks for your thorough reading and detailed comments. They have very significantly contributed to improve the paper.

VERSION 3 - REVIEW

REVIEWER	Craig B. Borkowf U.S. Centers for Disease Control and Prevention (CDC), USA
REVIEW RETURNED	07-Apr-2016

GENERAL COMMENTS	General comments for the authors. I'll just repeat two main points from my previous review. (a) It is also important to reiterate that proportions (and ratios or differences of proportions) are much easier to interpret than odds ratios. The authors should consider carefully which statistics they choose to present based on the public health message. (b) There is a difference between statistical significance and

practical significance. Ideally, results will be both statistically and practically significant. In reality, there are some results that are borderline statistically significant but practically (potentially) very significant, and there are some results that are "highly" statistically significant but practically uninteresting. It is both a science and an art to interpret the results in these cases.
Please take both of these points into consideration as you make your final revisions to the paper.

Specific comments for the authors.
I have sent back a copy of the paper with suggestions and comments noted in tracked changes. Some of these comments are below.

In your response to my comments, you mention 730,000 births annually in England and Wales. This fact belongs in the paper for context.

Statistical Analysis.
Please consider elaborating on how the proportions, odds ratios, 95% confidence intervals, and p-values were calculated from the weighted logistic regression model. Just a sentence or two, based on your response to my comments.

Results.
I advocate reporting the estimated weighted proportions WITH 95% confidence intervals in Table 3 along with the less interpretable odds ratios. You should be able to extract this information using STATA, according to the reference you supplied (http://dss.princeton.edu/training/Margins.pdf).

Discussion.
The percentages (presented in the first paragraph of the discussion) need to be presented in the results section, before the discussion.

Good luck with your revisions!

The reviewer also provided a marked copy with additional comments. Please contact the publisher for full details.

VERSION 3 – AUTHOR RESPONSE

Reviewer Name: Craig B. Borkowf
Institution and Country: U.S. Centers for Disease Control and Prevention (CDC)
Competing interests: none declared.

Many thanks for reading the paper again, and for the very detailed and thoughtful comments. Without doubt, they have greatly improved the paper.

Many thanks also for the marked-up version of the manuscript. We are also uploading a marked-up version that gives the response to your comments using the comment bubbles. We thought that this was the easier way to see how we had taken them into account.

Please, note that in response to one of your comments, we deleted "A Lottery for Life?" from the title of the paper, as we realize that it was not clear what it meant.

I'll just repeat two main points from my previous review.

(a) It is also important to reiterate that proportions (and ratios or differences of proportions) are much easier to interpret than odds ratios. The authors should consider carefully which statistics they choose to present based on the public health message.

Many thanks for pushing us in this direction, as we also think that differences of proportions are easier to interpret. We follow your advice below, and present the results (Table 3) using differences of proportions estimated using the margins command. This means that the description (wording) of the results section has changed a bit.

(b) There is a difference between statistical significance and practical significance. Ideally, results will be both statistically and practically significant. In reality, there are some results that are borderline statistically significant but practically (potentially) very significant, and there are some results that are "highly" statistically significant but practically uninteresting. It is both a science and an art to interpret the results in these cases.

Your suggestion of providing an estimate of how many babies are affected have helped us greatly in this regard. We calculate that 1,482 babies a year are not breastfed in England and Wales because they were born on a Saturday rather than on Monday through Thursday.

Please take both of these points into consideration as you make your final revisions to the paper.

Specific comments for the authors.

I have sent back a copy of the paper with suggestions and comments noted in tracked changes. Some of these comments are below.

Many thanks, this was extremely useful. We are also uploading a version of the paper with tracked changes that specifies how we have addressed your comments through comment bubbles.

In your response to my comments, you mention 730,000 births annually in England and Wales. This fact belongs in the paper for context.
This is given in the data section: "The number of births was 645,835 and 723,165 in 2005 and 2010 respectively (46,47)."

Statistical Analysis.

Please consider elaborating on how the proportions, odds ratios, 95% confidence intervals, and p-values were calculated from the weighted logistic regression model. Just a sentence or two, based on your response to my comments.

Many thanks. We paragraph now reads:

"Using weighed logistic regression, we examined the relationship between day of week of birth and our primary outcome (ever breastfed). Proportions were obtained using the estimated parameters and the Cumulative Distribution Function of the logistic, averaged across the sample. Breastfeeding incidence takes the value 0 if the mother reports that the "baby has never been given breastmilk or been put to breast" and 1 otherwise. The analysis pools the 2005 and 2010 data sets. Adjusted logistic regression controls for the year of survey indicator (2005 versus 2010); type of delivery (normal versus other); maternal age in categories (under 20, 20-24, 25-29, 30-34, 35 or over), country

(Wales versus England), ethnicity (white versus other). Statistical analysis was conducted using Stata software version 13.1 (48). Proportions, 95% confidence intervals, and p-values were obtained using the Stata margins command."

We hope that this is what you had in mind.

Results.

I advocate reporting the estimated weighted proportions WITH 95% confidence intervals in Table 3 along with the less interpretable odds ratios. You should be able to extract this information using STATA, according to the reference you supplied (http://dss.princeton.edu/training/Margins.pdf).

Many thanks for pushing us in our direction. We fully agree with you that they are much more easily to interpret. The only reason why we had not done it before was because we felt it is not so usual in medical journals. We also report odds ratios in Table 3.

Discussion.

The percentages (presented in the first paragraph of the discussion) need to be presented in the results section, before the discussion.

This has been done.

Good luck with your revisions!

Many thanks for your comments!

VERSION 4 – REVIEW

REVIEWER	Craig B. Borkowf U.S. Centers for Disease Control and Prevention (CDC), USA
REVIEW RETURNED	06-May-2016

| GENERAL COMMENTS | General comments for the authors.
I'm an advocate of reporting proportions or percentages, not difficult-to-interpret odds ratios. Also note, some people find percentages easier to understand than proportions, even though they are essentially the same. If you do report percentages, report absolute differences as "6.7 percentage points," and relative differences as "10.3%." Also, be careful to make clear which kind of differences you are reporting. In addition, be consistent in reporting either proportions or percentages; the current version uses both.

Compare the current text:
Amongst babies of mothers who left full-time education aged 16 or under, the proportion who were breastfed was 0.067 lower, 95% confidence interval (-0.121 to -0.014), for those born on Saturdays than for those born on Mondays through Thursdays.

- with the suggested alternative:
Amongst babies of mothers who left full-time education aged 16 or under, the incidence of breastfeeding was 6.7 percentage points lower, 95% confidence interval (1.4 to 12.1 percentage points), for |

	those born on Saturdays than for those born on Mondays through Thursdays. - which is more consistent with the following text: In the UK in 2010, the incidence of breastfeeding was 91% among babies of mothers who left full-time education when they were over 18, compared to 75% amongst those whose mothers left full-time education aged 17 or 18, and 63% amongst those whose mothers were 16 or under when they left full-time education (22). Specific comments for the authors. I have sent back a copy of the paper with minor suggestions and comments noted in tracked changes. I always recommend sending a paper to a technical editor for polishing, if such an option is available at your institutions. Good luck with your revisions! The reviewer also provided a marked copy with additional comments. Please contact the publisher for full details.

VERSION 4 – AUTHOR RESPONSE

Many thanks for reading the paper again, and for the very detailed and thoughtful comments. We honestly appreciate all the effort that you have put on the paper.

Many thanks also for the marked-up version of the manuscript. We are also uploading a marked-up version that gives the response to your comments using the comment bubbles. We thought that this was the easiest way to see how we had taken them into account.

We have incorporated all the changes that you suggested, but a minor one in which you suggested us to insert "strongly" before "proxy" in the sentence: "Although education is not a direct measure of health literacy, it is a proxy for it, and it is also positively associated with the mother's ability to access different sources of breastfeeding support." We preferred not to include it because we cannot show it with the data, nor can provide a reference to confirm it.

We also had the paper professionally copyedited by the copyeditor of the Institute for Fiscal Studies.

Many thanks for all the thoughts, inputs and time that you have put on the paper!