Author's response to reviews

Title: Perceptions of postnatal care: factors influencing primiparous mothers perceptions of postnatal communication and care

Authors:

Julie M McLellan (juliemclellan@rocketmail.com)
Anita H Laidlaw (ahl1@st-andrews.ac.uk)

Version: 2 Date: 7 June 2013

Author's response to reviews: see over
Dear Sir / Madam

Thank you for your comprehensive review of our research article entitled: ‘Perceptions of postnatal care: factors influencing primiparous mothers perceptions of postnatal communication and care’. We have made amendments following the useful comments of the reviewers and would like to resubmit the article for submission in your journal. We believe this article is of great interest to many of those involved in the support and care of new mothers and their babies and also to individuals who carry out research into the care and support offered to new mothers. The changes suggested by the reviewers have improved the accuracy and clarity of the manuscript considerable and we appreciate the time they have spent and their useful suggestions.

We highlight the following changes after considering the reviewers comments:

**Reviewer: Birgit Reime**

**Introduction:**

*Page 1, 2nd paragraph:* Studies from cancer research may not be suitable for a comparison to a postnatal care setting.

We agree with the reviewers that cancer patients may not have the same care requirements as new mothers, however there are few studies examining this issue in postnatal care, and this study population bear some similarities such as a period of high anxiety. We have amended the second paragraph of the introduction to highlight this difference between study populations: “There are few studies which examine the interactions of personality with postnatal care satisfaction, however cancer patients with high trait anxiety and low self-esteem, were more likely than patients without these characteristics to perceive the communication they received as being insufficient and ambiguous, suggesting unmet needs [10]. Such finding, although in a different patient population, could prove to be particularly pertinent to primiparous mothers when it is considered that between 10% and 15% of postpartum women meet the criteria for postnatal depression [11].”

*Page 2, 1st para:* The average reader of BMCPC may not be familiar with the “Big 5” concept in research on psychological traits.

We have added to the following to the text in the introduction: “...has shown a link between the big five personality traits (a psychological personality inventory of openness, conscientiousness, extroversion, agreeableness and neuroticism) [13] and depression,......”

*Page 2, 3rd para:* The authors state that the first research question is to determine the relation between demographic factors and satisfaction but this question lacks an adequate operationalisation in terms of demographic variables applied.
The methods section relating to the description of the demographic questions has been altered to describe the rationale for including the questions. It now reads as follows: “Some demographic questions were included such as maternal age and the number of months since they had given birth as they would potentially affect satisfaction [26].”

Page 2, 3rd para: There is a sentence missing saying that eventually the aim is to determine the relative impact of each factor on satisfaction with care (tested in the multiple linear regression models).

The final sentence of the second last paragraph of the introduction now reads: “This study therefore aims to examine the relationships between maternal personality, mental health, perceptions of the communication they receive in the postnatal period from midwives and health visitors and their satisfaction with postnatal care and to explore the relative impacts of these factors.”

Methods:

I like the first paragraph that describes the (statistical) model of the study briefly.

The power calculation reveals that the sample size (n=71) enables the inclusion of only eight predictors at one time.

We agree that the power calculation with the sample size of 71 enables the inclusion of eight predictors within the final regression, as shown in Table3.

3rd para: Please explain the concept of “Big 5”.

The concept of the big five personality traits is now explained within the introduction, it did not seem necessary to duplicate this within the methods. Please advise if this is acceptable.

The tool used to measure satisfaction with healthcare providers was a broad scale developed in another setting and it is unclear why the authors did not use one of the many tools developed satisfaction with postnatal care. The authors report reliability data from another study (Lubeck). Please report the Cronbach’s alpha from this sample, too.

When searching for previously validated scales we found it difficult to locate one which was suitable for exploring the views of mothers on the postnatal care they received at home, rather than their immediate postnatal care, often received in hospital. This limited our options and resulted in our decision to use this scale which was generic enough to suit the needs of the study. Please do let us
know if this needs to be clarified within the text. We have also now reported the Cronbach alpha for this sample as follows: “In this study the Cronbach alpha was higher, at 0.935.”

Page 4, last sentence: “Demographic questions included ...” Breastfeeding is not a demographic question. Demographic characteristics that would have been highly relevant for this study such as level of education (one of the strongest predictors for breastfeeding or bottle feeding) are lacking. Also, occupational status and marital status are lacking.

Thank you for your comments. The results section has been amended as follows: “Some demographic questions were included such as maternal age and the number of months since they had given birth as they would potentially affect satisfaction [26]. Whether they had breastfed, and if so, for how many months was also recorded.”

The lack of some demographic information is acknowledged and we have added the following to our limitations section within the discussion: “Although the data suggests the current sample were fairly representative of the population of primiparous mothers in the U.K, the sample is relatively small (although statistical power was achieved) and some demographic information which may be relevant, such as level of education, was not collected.”

Results:

Descriptive results and data on reliability of the tools are lacking (normal distribution of variables, range, Cronbach alpha etc.). Therefore, it cannot be assessed whether the parametric tests used were correctly used or whether a non-parametric tests (e.g., Man-Whitney-U-Test instead of t-test) should have been used. Many of these variables such as depression and satisfaction mostly are not normally distributed.

The following sentence has been added to the results section: “The data was tested for normality and although some slight deviations were found these were not large enough to impact on the data, therefore the data was not transformed.”

Bivariate analysis on depression and communication perception: How were the three groups of depression divided? HADS-depressive symptoms may not have been normally distributed in a sample of first time mothers, usually it is skewed. How was this problem solved?

HADS scores were grouped according to the cut-off scores recommended by the original authors [21]. These categories are outlined in the method section. These were entered into the analysis as categorical data.
It is interesting that agreeableness, emotional stability and conscientiousness are related to satisfaction with communication but extraversion and openness are not. Are there any studies that tested extraversion and satisfaction with healthcare communication to compare these results?

There is very limited previous evidence suggesting an association of extraversion with perceptions of communication within a healthcare environment, we have included a brief statement to this effect within the discussion which reads as follows: “Given the limited previous literature of any association between extraversion and patient perceptions of health care communication [38], the lack of any significant relationship in this study was unremarkable.”

Pearson correlations should be Spearman correlations as the scales are ordinal rather than interval.

Pearson correlations were used for this particular analysis as the values used were total scores of the scales were used. Such total scores are arguably either ordinal or interval and therefore either Pearson or Spearman could apply. We were expecting linear relationships between the variables and therefore the Pearson correlation test was deemed most appropriate.

Multiple linear regression analysis: My question concerns the distribution of the variables. Were they transformed into log before entering them, due to e.g. non-normal distribution? The result of $R^2>0.7$ is impressive.

As noted in response to a comment above regarding the normality of the data, we did not transform the data. Indeed, we were surprised by the scale of the variance accounted for by these variables. This is one reason why we believe it is important to ensure those involved in the care and support of new mothers are alerted to the results of this study.

Discussion:

I disagree with the authors regarding the representativeness of the sample.

We have amended the final sentence of the first paragraph in the discussion to read: “Therefore, overall it would appear that the sample of first time mothers who completed this survey were comparable, but in no way a complete representation of, the general population in the U.K.”

It is always difficult to discuss the results of bivariate analyses as they may have been confounded by underlying factors. Nevertheless, the result that communication is strongly associated with satisfaction in postnatal care supports previous studies in this field. It would have been interesting to learn more about the question how and whether the other variables were related to satisfaction in previous studies, that is how they support previous studies or not.

We have altered the first sentence of the discussion paragraph relating to the role of communication in satisfaction with care to further explore previous work in this area and how this related to the
current study. “The results of this investigation confirm that the effect of poor communication on satisfaction with care noted in doctor – patient relationships [40] extends into the field of postnatal care, as suggested by previous researchers who have reported that various aspects of interactions with health care providers, such as concerns being taken seriously or health care providers appearing rushed, were predictive of satisfaction with early postnatal care [4] [5] [6].”

The paragraphs on limitations of the study highlight the shortcomings such as sample size and recruitment adequately. The only thing I missed relates to the study design because a cross-sectional study cannot identify causal pathways as the term “impact” may suggest but rather statistical associations.

We agree with the comments of the reviewer and have altered the final sentence of the second paragraph of the limitations section to read: “The findings relating to personality need to be interpreted with the same caution, and more research is required to understand the basis of the associations highlighted in this study between patient personality, healthcare and communication.”

Reviewer: Annette Bernloehr

Overall, the questions asked by the authors are well defined and relevant. The paper makes interesting reading and is of relevance for health professionals involved in maternity care, as well as for researchers in the field. It is interesting to see that a non-midwife and non-physician decided to investigate into this subject. However, the manuscript has some flaws that need alleviation before publication can be considered.

Introduction

1) Discretionary revision: Overall, the subject is introduced well and arguments for its importance are provided. It might have been a good idea to address the (potential) impact of maternal satisfaction and wellbeing on health and wellbeing of the entire family, as well as on the development of the infant.

The first sentence of the instruction has been amended to read: “…child bearing experience [1] and wellbeing of the whole family [2].”

2) Major compulsory revision: Especially in the introduction, outdated references are cited. If there are no more recent references, this needs to be acknowledged and the lack of research in this field
made clear. Otherwise, more recent references need to be cited here. In addition to that, there might be more research-oriented references available. A look at the subject from the midwifery perspective might bring some results.

Thank you for your comments regarding referencing, we agree some references were published a considerable time ago. There is a paucity of recent research in this general area, but we have updated references where appropriate.

3) Minor essential revision: After citing reference No. 9 and the new sentence starting with “Pryun [sic!], Rickman...” a space needs to be introduced. At the beginning of the section, the influence of communication on satisfaction is discussed. In the latter part, the influence of personality traits on communication patterns and perception of communication are discussed. These two concepts need to be clearly distinguished.

We hope we have clarified these two concepts and their mode of impact by altering the first sentence of the second last paragraph of the introduction to read: “Therefore, evidence indicates that there could potentially be direct (via differences in perceptions of the communication occurring) or indirect (via differences to the actual communication occurring) effects of personality and psychological functioning on perceptions of communication and subsequent satisfaction with healthcare throughout pregnancy and labour.”

Methods

4) Minor essential revision: The chosen methods are appropriate, but at times insufficiently, or imprecisely described. The sample was labelled as “mothers who had given birth vaginally in U.K. within the last 12 months”. Later on it becomes clear that the sample was recruited either through the internet (across the entire UK?), and from groups in Scotland. Being from central Europe I would not dare to interfere with UK affairs, but I thought that Scottish people are proud of being different. It might be that the sample is not representative for a) including only mothers who engaged with additional services, such as postnatal groups or internet platforms, b) including women mainly from Scotland, c) opportunistic recruitment. Some of these limitations are acknowledged by the authors.

We agree the recruitment strategy employed would not result in a random sample of UK mothers who had given birth within the last 12 months. We had highlighted this within the limitations section of the discussion as follows: “The sample is also limited by recruitment methods, via postnatal support groups or online social media forums, with the majority of participants being located in central Scotland.”
5) Minor essential revision: In addition, the specification of recruitment “within the last 12 months” is not very clear, as the reader does not know how long it took to analyse the findings and to write the draft. Please state month and year to define the period, such as “recruitment / the study took place between May and September 2011”.

We appreciate the reviewers comments regarding clarity of when the study took place and have revised this section in the methods to read: “This cross sectional survey took place between March and July 2011 First-time mothers who had given birth vaginally in U.K. within the 12 months prior to completing the questionnaire after 37 weeks gestation completed the survey which had independent variables including....”

6) Major compulsory revision: From the manuscript it does not become clear at which time points within 12 months postpartum measurement took place. Did the women participate at any point in time within this time span? If this was the case, the analysis needs to address the potential influence of the time evolved between giving birth and participation in the study. If not, this needs to become clear from the text.

We agree that time since birth could be associated with participation within the study. However, the mean time since birth of participants was 7 months with a standard deviation of 3 months. This is considerable variation within the sample, suggesting little impact on likelihood of participation. Please advise us if further additions to the manuscript are required on this point.

**Results**

7) Minor essential revision: In the results section, information is missing, such as how many women were approached, but declined to take part in the study, or how many data sets were incomplete.

We agree with the reviewers comments that information regarding potential participants should be added to the results section and have included the following sentences at the start of the descriptive statistics section: “During the study 120 questionnaires were given out via baby groups and 40 of these were returned completed (33% response rate). In total 69 individuals accessed the survey online with 31 completing it (45% completion rate).”

8) Minor essential revision: Table 1

The information presented in the lines “number of breastfeeding participants” and “non-breastfeeding participants” is nearly identical. As in this case there is very little difference, presenting one or the other would suffice. If you present both, the numbers in the online group need explanation, as they do not add up to 100%.
We agree with the reviewers comments and have removed the unnecessary line regarding the non-breastfeeding participants.

9) Minor essential revision: On page 7 the reader finds this statement “There were no major differences demographically between the online sub-sample and the parent and baby group subsample”. However, in the online group 7 women were found to be mildly depressed, while only 2 such women were found in the other sub-group. This might be seen as a major difference and requires a critical comment.

We agree that there could be a potential difference between the subsample revealed by the slightly higher number of mildly depressed participants within that sample. We have highlighted this within the results section as follows: “There were no major differences demographically between the online sub-sample and the parent and baby group sub-sample, other than a slightly higher number of mildly depressed participant in the online sub-sample.”

We have also addressed this within the discussion as follows: “Care must be taken when extrapolating these results due to the slightly higher numbers of mildly depressed within the online sub-sample compared to the baby group sub-sample and further work is required to determine whether any of these postulated theories correctly describes the route of impact of depression on communication ratings and satisfaction with postnatal care.”

10) Major compulsory revision: Page 8 (“Does the psychological functioning and/or personality traits of mothers’ impact upon satisfaction with postnatal healthcare?”): please provide the n for the respective groups.

Thank you for your comment, we have inserted the numbers of participants classified into the three categories in the appropriate point in the text.

11) Minor essential revision: Page 9: please provide the actual p-levels.

The appropriate p values are now reported in the text.

Discussion

12) Minor essential revision: Take care to state the names of organisations correctly. The “National Institute of Clinical Excellence” (page 12) should read “National Institute for Health and Clinical Excellence”.

The text has been amended.

13) Major compulsory revision: Limitations with regard to the definition of postnatal period were acknowledged. However, no reference was made with regard to the point in time at which the mothers took part in the study. It does not become clear whether participation was possible
throughout what the authors defined as postpartum period, or at specific times during this period. Moreover, it would have been interesting to see differences in ratings of individual women if they were asked at different time points within the post partum period, e.g. after six weeks, six months and one year. It might be that the view of women shifts over time. If no such data is available, a critical comment is required, which is backed up by scientific evidence.

Time since giving birth was examined as a variable which could have impacted on satisfaction with care and / or perceptions of communication via ANOVA, however it was found to have no association with any of these outcomes. We agree that this should be stated somewhere within the text and have added the following to the results section entitle ‘Do demographic factors impact upon satisfaction with postnatal care?’: “Other demographic factors, such as time since giving birth, had no statistically significant association with satisfaction with care or perceptions of communication.”

Figures

14) Minor essential revision: Figure 3 is not mentioned in the text. Moreover, it is a bit too trivial and should be omitted.

We feel Figure 3 presents the results of this study in a useful and easy to understand model, and highlights the routes of impact of the variable explored in this study suggested by our analysis. However, we appreciate that this was not clear within our original manuscript. We have amended our concluding paragraph to read: “It did not set out to investigate specific factors relating to particular aspects of postnatal care; however it highlights general areas relating to communication, feeding, mental wellbeing, and personality which potentially affect mothers’ satisfaction levels with postnatal care and the potential routes of impact, see Figure 3.”

15) Tables seem to be available twice. Please check for potential duplication.

We have removed the tables from our submitted manuscript file to avoid duplication.

Referencing

16) Major compulsory revision: Generally, referencing needs more attention.

Thank you for your comments regarding referencing, we apologise for the errors in the references and have amended them. We have also sought to move to a more neutral formulation of discussing previous researchers within the text.

Thank you for considering our manuscript further and we look forward to hearing from you.
Best wishes,

Anita Laidlaw and Julie McLellan