

## PEER REVIEW HISTORY

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### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	SMOKING IN THE HOME AFTER CHILDBIRTH: PREVALENCE AND DETERMINANTS IN AN ENGLISH COHORT
<b>AUTHORS</b>	Orton, Sophie; Coleman, Tim; Jones, Laura; Cooper, Sue; Lewis, Sarah

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Polanska, Kinga Nofer Institute of Occupational Medicine, Environmental Epidemiology
<b>REVIEW RETURNED</b>	03-Jul-2015

<b>GENERAL COMMENTS</b>	<p>1) The methods part of the abstract is very limited and need to be extended.</p> <p>2) The methods part of the paper is not easy to follow (although it has subtitles) especially the first part describing the population.</p> <p>3) The strong limitation of the study is related to 56% response rate at follow up visit. There is no information that the differences (regarding sociodemographic data) between these who responded 3 months postpartum and who did not were statistically significant.</p> <p>4) The part of the discussion (page 12 from line 53) pointing the that younger children are especially vulnerable to SHS exposure omitted very important point – breastfeeding which is significant source of tobacco compounds for newborns and infants (and which is not the point for older children).</p> <p>5) The last part of the discussion is indicating that the best way to prevent or reduce smoking in home is to help smoking mothers to quit and maintain smoking abstinence but it is indicated in many studies that majority the mothers who quit smoking in pregnancy relapse into that habit shortly after delivery. So this part of the discussion need to be considered more deeply.</p>
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<b>REVIEWER</b>	Moore, Graham Cardiff University, School of Social Sciences
<b>REVIEW RETURNED</b>	13-Jul-2015

<b>GENERAL COMMENTS</b>	<p>This is an interesting paper which may be worthy of publication. However, as it stands, it needs quite substantial revision to locate the analysis within the existing evidence base more thoroughly. Some of the conclusions drawn are also not fully supported by the analyses</p> <p>Abstract It is stated that “over 50% of English children (aged 4 &lt;15) whose parents are smokers are exposed to SHS in the home”. I couldn't</p>
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	<p>find a reference to this statement in the introduction of the paper?</p> <p>The statement that “Interventions to support smoking mothers to quit, or to restrict smoking in the home, should target attitudinal change, specifically among socially disadvantaged, younger or non-white ethnic group” doesn’t seem to follow from the data. The analyses don’t show that links between socio-demographic factors and smoking in the home are entirely mediated by attitudes (which this conclusion implies). In fact, in the multivariate models in Table 2 (if I have interpreted these correctly) deprivation remains a significant predictor of smoking in the home after adjustment for attitudes. Existing studies point to a range of reasons why some demographic groups may struggle to maintain smoke free environments more than others besides cognitive factors.</p> <p>The background is currently probably the weakest part of the manuscript. It is somewhat brief (two paragraphs) and doesn’t really describe current trends in SHS exposure in the home (which has fallen substantially in recent years, but remains a problem). There are a lot of studies which have examined some of the same socio-demographic predictors of childhood SHS exposure in older populations, which are not well described. Although this is an important topic, the case for the analysis is not fully made at the moment.</p> <p>The method section is generally quite thorough. However, some restructuring to improve readability would be useful. The use of lots of subheadings for each individual sentence at the beginning, followed by separate sections on the questionnaire and outcomes at the moment makes this somewhat difficult. The sections on outcomes and statistical analysis (while describing sound methods) could be made much more concise.</p> <p>The results are clearly described.</p> <p>The discussion session is a little hard to follow at the moment. It is perhaps useful to summarise the key findings of the paper, and link them to the existing evidence base, before going onto discuss strengths and limitations of the study and implications for the evidence base.</p>
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**VERSION 1 – AUTHOR RESPONSE**

Reviewer: 1

1)The methods part of the abstract is very limited and need to be extended.

We thank the reviewer for their comment, and have extended this section of the abstract as recommended. The methods section in the abstract now reads:

"Setting

Primary Care, Nottingham, England.

Participants

Current and recent ex-smoking pregnant women (n = 850) were recruited in Nottingham, England.

Women completed questionnaires at 8-26 weeks gestation and 3 months after childbirth. Data on smoking in the home 3 months after childbirth was available for 471 households.

Primary and secondary outcome measures

Maternal- reported smoking in the home 3 months after childbirth."

2)The methods part of the paper is not easy to follow (although it has subtitles) especially the first part describing the population.

We agree with the reviewer and have reduced the number of subtitles and combined some sections in an attempt to aid clarity.

3)The strong limitation of the study is related to 56% response rate at follow up visit. There is no information that the differences (regarding sociodemographic data) between these who responded 3 months postpartum and who did not were statistically significant.

We have now conducted significance tests using chi-squared tests for categorical variables and t-tests for continuous variables. These are now included in Table 1.

4)The part of the discussion (page 12 from line 53) pointing the that younger children are especially vulnerable to SHS exposure omitted very important point – breastfeeding which is significant source of tobacco compounds for newborns and infants (and which is not the point for older children).

We thank the reviewer for bringing this potential source of SHS exposure to our attention. However, the literature on the risk of SHS exposure through breastfeeding is limited. Whilst nicotine has been found to be present in human breastmilk, there is little research documenting at what level this presents a health risk to the nursing infant.[1 2] Furthermore, maternal smoking is not listed as an absolute contraindication to breastfeeding,[1] and current guidelines recommend that breastfeeding and smoking is likely to be less detrimental to infant health than bottle-feeding and smoking.[1] In line with these guidelines, and in consideration of the lack of a robust evidence base in this area, we feel it would be inappropriate to comment on breastfeeding as a source of tobacco compounds among infants in this manuscript.

1. 母乳营养. The transfer of drugs and other chemicals into human milk. *Pediatrics* 2001;108(3):776-89
2. Dorea JG. Maternal smoking and infant feeding: breastfeeding is better and safer. *Matern. Child Health J.* 2007;11(3):287-91

5)The last part of the discussion is indicating that the best way to prevent or reduce smoking in home is to help smoking mothers to quit and maintain smoking abstinence but it is indicated in many studies that majority the mothers who quit smoking in pregnancy relapse into that habit shortly after delivery. So this part of the discussion need to be considered more deeply.

We agree with the reviewer that postpartum smoking relapse is an important area that needs greater consideration. However, research has not shown any current interventional approaches to be effective in preventing postpartum smoking relapse, and as such this is an important area for future research. This has therefore been emphasised in the discussion section, which now reads:

"The findings highlight that the best way to prevent or reduce smoking in the home immediately after childbirth is to help smoking mothers to quit during pregnancy and stay abstinent after childbirth. However, as a recent systematic review did not find a significant effect of any behavioural intervention approach to prevent postpartum smoking relapse,[35] more research is needed to identify interventions which can support women at this important time."

Reviewer: 2

This is an interesting paper which may be worthy of publication. However, as it stands, it needs quite substantial revision to locate the analysis within the existing evidence base more thoroughly. Some of the conclusions drawn are also not fully supported by the analyses

1)Abstract

It is stated that “over 50% of English children (aged 4 <15) whose parents are smokers are exposed to SHS in the home”. I couldn’t find a reference to this statement in the introduction of the paper?

We thank the reviewer for highlighting this; this has been rectified and the reference updated with a more up to date prevalence figure that has been published since this paper was submitted for consideration for publication.

2)The statement that “Interventions to support smoking mothers to quit, or to restrict smoking in the home, should target attitudinal change, specifically among socially disadvantaged, younger or non

We apologise if this conclusion caused any confusion. We do not claim that the links between socio-demographic factors and smoking in the home are mediated by attitudes; rather that both socio-demographic factors and attitudes were significantly associated with smoking in the home. However, as discussed in the manuscript, socio-demographic factors are not easily modifiable, and so are best used to help identify which infants, parents or families that are best targeted in future interventions. We agree that existing literature points to a range of complex reasons why some demographic groups may struggle to maintain smoke free environments, however we feel that speculating further on these is beyond the scope of the findings of this particular manuscript.

At the moment research has not conclusively demonstrated the effectiveness of any one interventional approach to prevent child SHS exposure in the home; because attitudes towards child SHS exposure were found to be significantly associated with smoking in the home, interventions that incorporate attitudinal change may be beneficial.

To address this comment, and to aid clarity, we have reworded this conclusion to now read:

“Interventions to support smoking mothers to quit, or to help them restrict smoking in the home, should target attitudinal change, and address inequality relating to social disadvantage, younger age and non-white ethnic groups.”

3)The background is currently probably the weakest part of the manuscript. It is somewhat brief (two paragraphs) and doesn’t really describe current trends in SHS exposure in the home (which has fallen substantially in recent years, but remains a problem). There are a lot of studies which have examined some of the same socio-demographic predictors of childhood SHS exposure in older populations, which are not well described. Although this is an important topic, the case for the analysis is not fully made at the moment.

We thank the reviewer for this comment. We have extended the background section to now include information on current prevalence of child SHS exposure in the home in England, which has the greatest relevance to the population in the current study, and describe how although this has reduced in recent years, it remains a substantial problem. The background section now includes the following information:

“In 2008, a study conducted in England reported 52% of children aged 4-15 whose parents were smokers were exposed to SHS in the home.[5] This has reduced in recent years, with a reported 38.7% of children of smoking parents aged 4-15 years being exposed to SHS in the home in England in 2012,[6] however it clearly remains a significant problem. [7][8][9] Similar trends have been observed elsewhere, both in the UK,[7-10] and internationally (e.g. USA;[11 12] Ireland, France, Germany and the Netherlands [13]).”

The previous studies which have examined socio-demographic predictors of childhood SHS exposure in older populations were described in a recent systematic review which was previously referenced in the background section of the manuscript; however, we have now added a summary of the main findings of this review to the background section to aid reader comprehension. The background section now includes the following:

“This review found parental smoking, low socioeconomic status (SES) and being less educated were all consistently independently associated with children’s SHS exposure in the home.[3]”

4)The method section is generally quite thorough. However, some restructuring to improve readability would be useful. The use of lots of subheadings for each individual sentence at the beginning, followed by separate sections on the questionnaire and outcomes at the moment makes this somewhat difficult. The sections on outcomes and statistical analysis (while describing sound methods) could be made much more concise.

As above (reviewer 1, comment 2), we agree with the reviewer and have reduced the number of subtitles and sections in an attempt to aid clarity. The outcomes and statistical analysis sections have also been shortened.

5)The discussion session is a little hard to follow at the moment. It is perhaps useful to summarise the key findings of the paper, and link them to the existing evidence base, before going onto discuss strengths and limitations of the study and implications for the evidence base.

We agree with the reviewer, and the layout of the discussion has been restructured as recommended. We have also reworded part of the first and second paragraph of the discussion to aid comprehension.