PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Combining parenthood with a medical career: questionnaire survey of the UK medical graduates of 2002 covering some influences and experiences
AUTHORS	Lambert, Trevor; Smith, Fay; Goldacre, Michael

VERSION 1 - REVIEW

REVIEWER	Heather Osborn Massachusetts Eye and Ear Infirmary Harvard Medical School Boston, MA USA
REVIEW RETURNED	27-Mar-2017

GENERAL COMMENTS	Thank you for a very interesting article on an important topic. 1. You state that you assessed physicians 12 years after graduation, because at this point they were at peak childbearing age. The median age at that point was 35.4 years. In my opinion this seems high to be considered peak childbearing age, and moreover, you are then asking people to look back 12 years to consider their reasons for speciality choice, with all the issues of recall bias. Can you provide more clarity as to why you chose this particular cohort (why not 5 years or 10 years after graduation?) and what the limitations of this are? 2. When you discuss differences between your male and female cohorts, such as the likelihood of having a spouse, a medical spouse, or children, statistical significance is not mentioned. Are these significant gender-based differences? 3. While the discussion section reiterates the results in a more readable format, it does not detail comparison to other recent literature, or discuss the utility of these results or how they could be applied. Only a single vague comment is made about possible policy changes. An expanded discussion to help us to understand the place of these findings in the larger body of literature and the importance and utility of this work is essential. 4. There is a significant body of literature on this topic, and I believe that this paper would benefit from a much more thorough review of the pre-existing literature and further development of the comparison with existing literature. 5. Please expand the limitations to include issues of recall bias and outcome bias (people who have children now may be more likely to remember children as being an important factor)

REVIEWER	Prof. Dr. Hendrik van den Bussche Emeritus Director, Institute of Primary Medical Care, University Medical Center Hamburg-Eppendorf, Germany
REVIEW RETURNED	06-Apr-2017

GENERAL COMMENTS	The topic is of great actuality, not only in the UK. Therefore, I think that the study could improve in the following ways: 1.The paper covers two topics (although there title only mentions one): a) influence of children on careers; b) relationship between parents and the NHS. Both questions are not well interrelated, neither in the background nor in the discussion sections. In view of my comments below, the authors should consider to produce two shorter papers. 2. Both the background an the the discussion sections are tiny in substance and eclectically structured. One is left a bit helpless after reading the paper. Especially, the discussion repeats the data and refers to few (Swiss) studies (without discussing possible social differences for employed persons), although there is a plethora of reviews on the topic, also in an internationally comparative perspective. A gender- and parent-desegregation perspective is lacking. Both sections need thorough overwork. The conclusion should give a perspective of what should be done, at least in the UK. The text in the results section could be largely reduced by introducing tables and mentioning only the striking results. 3. Interrelations between the four leading questions (not three!) are completely lacking. Example: If a discipline is family-friendly or nor not depends a) on peculiarities of the discipline itself (e.g. no night work for psychiatrists) and b) on the specific working conditions of the physicians (possibly different by gender) and c) on the actual (and previous) laws in the country. This interrelation is absent in the paper. 4.minor. a table 4 on return to work is missing. 5. minor: The data are presented in 4 groups overwork of disciplines. The authors should consider that non-UK-readers might not know what exactly "hospital medical specialities" are (apart from internal medicine). 6. minor: Why no multivariate analysis on family-friendliness (Appendix 2)

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: HA Osborn
Institution and Country: Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA, USA

Thank you for a very interesting article on an important topic.

1. You state that you assessed physicians 12 years after graduation, because at this point they were at peak childbearing age. The median age at that point was 35.4 years. In my opinion this seems high to be considered peak childbearing age, and moreover, you are then asking people to look back 12 years to consider their reasons for speciality choice, with all the issues of recall bias. Can you provide more clarity as to why you chose this particular cohort (why not 5 years or 10 years after graduation?) and what the limitations of this are?

RESPONSE:
UK doctors have children at older ages than the general population. Five years after graduation only a small percentage of doctors have children, as indicated in our 2012 JRSM paper 105:390-9 which is referenced in the paper and shows that only 13% of women doctors in that graduation year had children by the age of 28. We preferred to get the views of the cohort at a career stage at which the majority would have children and would therefore be able to respond from their own experience as parents to questions about the family friendliness, or otherwise, of the health service. We already allude to this in our Strengths and limitations section but we have slightly enhanced the explanation given in the previous draft. In the event twelve years was the timing used. It has been our practise to ensure so far as possible that we survey cohorts at 1, 3, 5, 10 years and for operational reasons this particular survey was a little later than is our norm.

With regard to the possibility of recall bias in the responses to the question about considerations of having children having influenced career choice, we concede that this is a possibility. However, we think that on such a fundamental lifestyle issue, many doctors will have accurate recall of their rationale and the relevance, or otherwise, of considerations around children. We have added comments on this to the Strengths and Limitations section.

2. When you discuss differences between your male and female cohorts, such as the likelihood of having a spouse, a medical spouse, or children, statistical significance is not mentioned. Are these significant gender-based differences?

RESPONSE:
We have added relevant statistical tests for the gender differences in this section.

3. While the discussion section reiterates the results in a more readable format, it does not detail comparison to other recent literature, or discuss the utility of these results or how they could be applied. Only a single vague comment is made about possible policy changes. An expanded discussion to help us to understand the place of these findings in the larger body of literature and the importance and utility of this work is essential.

4. There is a significant body of literature on this topic, and I believe that this paper would benefit from a much more thorough review of the pre-existing literature and further development of the comparison with existing literature.

RESPONSE:
In response to comments 3 and 4, the paper is over 3,000 words and we did not want to trouble readers with an exhaustive account of other work, but we have made some judicious additions, resulting in the addition of seven further references, and expansion of the background section and the Comparison with existing literature section of the Discussion.

5. Please expand the limitations to include issues of recall bias and outcome bias (people who have children now may be more likely to remember children as being an important factor)

RESPONSE:
Please refer to our response to item 1 above.

Reviewer: 2
Reviewer Name: Prof. Dr. Hendrik van den Bussche Institution and Country: Emeritus Director, Institute of Primary Medical Care, University Medical Center Hamburg-Eppendorf, Germany

The topic is of great actuality, not only in the UK. Therefore, I think that the study could improve in the following ways:

1.The paper covers two topics (although there title only mentions one): a) influence of children on careers; b) relationship between parents and the NHS. Both questions are not well interrelated, neither in the background nor in the discussion sections. In view of my comments below, the authors should consider to produce two shorter papers.

RESPONSE:
Thank you for the suggestion of two papers. We have thought about this comment carefully. We think that it would be difficult to separate discussion of the influence of children on careers from discussion of the health service environment in which the doctors are working. The two are inter-related. If the environment is supportive of the needs of doctors with children, then the consideration of having children, and the reality of having children, is less of a problem for the doctors. So we don't think it would be helpful to produce two papers which told half of a related story, but we have added a substantial paragraph to the end of the Main Findings section of the Discussion to refer more clearly to the linkages between the two issues. We hope that you will find our changes to be satisfactory on this issue.

2. Both the background and the discussion sections are tiny in substance and eclectically structured. One is left a bit helpless after reading the paper. Especially, the discussion repeats the data and refers to few (Swiss) studies (without discussing possible social differences for employed persons), although there is a plethora of reviews on the topic, also in an internationally comparative perspective. A gender- and parent-desegregation perspective is lacking. Both sections need thorough overwork. The conclusion should give a perspective of what should be done, at least in the UK. The text in the results section could be largely reduced by introducing tables and mentioning only the striking results.

RESPONSE:
We have expanded both sections mentioned by the reviewer, adding seven references and additional discussion. We have added a Table 4 (see below) which has enabled us to save some words in Results. In the first section of Discussion (new paragraph) we acknowledge the difficulties of ensuring 'family-friendliness' in some disciplines and in our conclusion, rather than be prescriptive about what should be done, which will vary by discipline and will be multi-faceted, we have identified the wide range of perceptions across the specialties, the first step in addressing the problems being to identify that they exist.

3. Interrelations between the four leading questions (not three!) are completely lacking. Example: If a discipline is family-friendly or nor not depends a) on peculiarities of the discipline itself (e.g. no night work for psychiatrists) and b) on the specific working conditions of the physicians (possibly different by gender) and c) on the actual (and previous) laws in the country. This interrelation is absent in the paper.

RESPONSE:
Please see our response to point 1 above: the new paragraph we have added to the Discussion is designed to address these issues.

4.minor. a table 4 on return to work is missing.

RESPONSE:
Table 4 has been added and the related text in Results shortened considerably.

5. minor: The data are presented in 4 groups overwork of disciplines. The authors should consider

that non-UK-readers might not know what exactly "hospital medical specialities" are (apart from internal medicine).

RESPONSE:
We have listed the specialties included in each grouping in the Methods section, final paragraph.

6. minor: Why no multivariate analysis on family-friendliness (Appendix 2)

RESPONSE:
The data of Appendix 2 feature small counts and are not in our view suitable for multivariable modelling. We have added a phrase to say this, in the last sentence of the relevant section in Results.

VERSION 2 – REVIEW

REVIEWER	Heather Osborn Harvard Medical School and Massachusetts Eye and Ear Infirmary Boston, MA, USA
REVIEW RETURNED	13-May-2017

GENERAL COMMENTS	1. I greatly enjoyed reading this nuanced analysis. The statistical analysis appeared to be well-done and comprehensive. 2. As a minor point, further reference to the policy changes that you believe should be considered would be interesting. Moreover, if family concerns are pushing people into general practice, is this actually beneficial if its increases the number of needed PCP in light of a relative abundance of subspecialists?

REVIEWER	Hendrik van den Bussche Dept. Primary Medical Care University Medical Center Hamburg-Eppendorf
REVIEW RETURNED	28-May-2017

GENERAL COMMENTS	The paper has won significantly. I have only the following remarks: 1) Why do you speak about three questions, adding "finally, we asked ...". This means that you asked four questions. I find this a little bit irritating. 2) Why did you not analyzed the association between degree of family-friendly speciality and NHS-friendlyness? as both may be interrelated

VERSION 2 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Heather Osborn
Institution and Country: Harvard Medical School and Massachusetts Eye and Ear Infirmary Boston, MA, USA Please state any competing interests: None

Please leave your comments for the authors below

1. I greatly enjoyed reading this nuanced analysis. The statistical analysis appeared to be well-done and comprehensive.

RESPONSE: We thank the reviewer for her kind comments.

2. As a minor point, further reference to the policy changes that you believe should be considered would be interesting. Moreover, if family concerns are pushing people into general practice, is this actually beneficial if its increases the number of needed PCP in light of a relative abundance of subspecialists?

RESPONSE: We think that the paper makes some relevant points about the need to ensure that work in certain specialties (typically the ones that require acute interventions) is as family-friendly as is possible given the priority demands involved. We say in Discussion

“Concepts such as family-friendliness may be hard to reconcile with the working requirements of certain specialty areas, particularly those in which unanticipated acute conditions may present which require treatment of unknown length or at unsocial times of day or night. The challenge is to manage work in these areas to improve family-friendliness without compromising patient care, at a time when the health service is under unprecedented pressures.”

We don’t think that disregarding the needs of doctors with families (if indeed this happens) is a suitable policy to encourage more doctors into general practice!

Reviewer: 2
Reviewer Name: Hendrik van den Bussche
Institution and Country: Dept. Primary Medical Care, University Medical Center Hamburg-Eppendorf
Please state any competing interests: None declared

Please leave your comments for the authors below

The paper has won significantly. I have only the following remarks:

1) Why do you speak about three questions, adding "finally, we asked ...". This means that you asked four questions. I find this a little bit irritating.

RESPONSE: We have reworded to say ‘these questions’ rather than ‘three questions’.

2) Why did you not analyzed the association between degree of family-friendly speciality and NHS-friendlyness? as both may be interrelated

RESPONSE: There is clearly a substantial difference between the doctors’ views on the NHS as an employer for doctors with children (Table 2, where 40% of men and 44% of women have a positive view) and their views of the NHS as family-friendly employer in their specialty (Table 3, where 57% of men and 69% of women have a positive view).

Further, we have shown that there is no significant variation by specialty in replies to the more general question

“Do you regard the NHS as a family-friendly employer for doctors with children?”

but to the more specific

“Do you regard your specialty as a family-friendly employer for doctors with children?”

the replies are not only more positive overall, the variation by specialty is very large.

We have not analysed this more deeply because in many specialties the numbers involved are relatively small. We have preferred in Discussion to speak about the second question (which applies to the respondent's own specialty) where the replies will be based more closely upon personal experience.

MINOR CHANGES WE HAVE MADE

We think that the title

"Combining parenthood with a medical career: questionnaire survey of the UK medical graduates of 2002 covering some influences and experiences"

Is a little better than the current title, hence we are resubmitting using that title.

Also, we have clarified the aims by saying (at the end of the Background section)

"The main objective of this paper is to report on the self-assessed views of these doctors about the impact of having (or wanting to have) children on their specialty choice. Secondary objectives were to report doctors' views about how family-friendly they felt the National Health Service (NHS) was generally for doctors with children and specifically in their specialty."

Finally, we have made a very small number of other 'tidying up' changes.