

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form ([see an example](#)) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Opportunities and challenges for enhancing preconception health in primary care: Qualitative study with women from ethnically diverse communities
<b>AUTHORS</b>	Kai, Joe; Tuomainen, Helena; Cross-Bardell, Laura; Bhoday, Mandeep; Qureshi, Nadeem

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Dr. L. Henneman, Associate Professor EMGO Institute VU University Medical Center the Netherlands  Conflict of interest: reviewer has (had) cross-country collaboration with last author of manuscript
<b>REVIEW RETURNED</b>	29-Apr-2013

<b>THE STUDY</b>	<p>This paper describes the awareness and attitudes of women from ethnically diverse communities toward preconception health in primary care. In many countries, as in the UK, preconception health care is not well established. This paper provides more insight in the opportunities to improve preconception care in primary care.</p> <p><b>Abstract:</b> It is not exactly clear from the abstract how many women participated in (n?) focusgroups and how many women were interviewed. Please add that women were interviewed by telephone.</p> <p><b>Background:</b> One of the barriers in the delivery of preconception care -besides the high number of unplanned pregnancy among women in most countries-, is the fact that women do not come forward for preconception counselling because of lack of knowledge about the aim of preconception counseling. This has for example been described by Hosli et al., Comm Genet 2008 (Women's motives for not participating in preconception counseling: qualitative study), perhaps also include this work here.</p> <p><b>Methods</b> This is a qualitative research paper, no statistical details needed.</p> <p>It is not clear what information was presented to the women (e.g. goal of the study) when they were recruited. Moreover, women were shown "areas of preconception health assessment [...] on a draft questionnaire" (see appendix) and apparently this questionnaire was also discussed in the focus groups (page 9, 4/P4) but it is not exactly clear when and how this was presented to the women and whether women also completed this questionnaire.</p>
------------------	--

	<p>It seems that some women were telephoned again after the focus groups. This aspect (and motive for this) is not exactly clear. How many women participated in each focus group?</p>
<p><b>RESULTS &amp; CONCLUSIONS</b></p>	<p>Result:  The results section could benefit from more structure. Especially the presentation of the quotes (e.g. with and without boxes; in the text; parts of whole discussions) makes it difficult to read.  It also seems that some parts of the results section could be presented together e.g. in the part on “Preconception health opportunities in primary care” also some of the challenges are presented (e.g. with regard to confidentiality), while (some of these) challenges are also presented in a paragraph with another heading “Challenges for promoting preconception care”) (e.g. Box 3).  Moreover, some quotes are not very clear (e.g. first quotes in Box 1).</p> <p>It is not clear what the numbers in the quotes refer to (5/P3??). Please explain in the methods section.</p> <p>The quotes illustrating the first topic: “Preconception health awareness and attitudes” are all from women with white ethnicity. Did women from other ethnicities express similar attitudes?</p> <p>The women (again) discussed the PHA questionnaire in box 1. Online preconception questionnaires have been developed (e.g. Landkroon et al., Publ Health Genomics 2010). Did women also discuss the possibilities for an online version?</p> <p>Discussion:  More on strengths and limitations could be presented: e.g. validity, selection/recruitment.  Was a translator present in the focus groups? If yes, how could this have influenced the discussions?  Some women were recruited from pre-existing social groups of women. How could this have biased the study? Some women may not feel free to talk or express another opinion? Any evidence for that?</p> <p>The study presents different views (women from different ethnic background); it is expected that women from different backgrounds have different opinions with regard to pregnancy planning and reproductive decision making. Any evidence for that? (across groups). How did the authors achieve saturation (was saturation achieved?)</p> <p>The authors describe that “work in other countries ...has similarly found.. etc.” perhaps some additional findings/context can be presented here?</p> <p>How many of the pregnancies (%) in the UK are “unplanned”? Any information on this number?</p>
<p><b>REPORTING &amp; ETHICS</b></p>	<p>Some more detailed information on the methods could be described, see for example the QOREQ checklist by Tong (Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007) to use as a guidance in describing the methods section).  BMJ also has a checklist for authors on qualitative research: <a href="http://www.bmj.com/about-bmj/resources-authors/article-types/research/editors-checklists">http://www.bmj.com/about-bmj/resources-authors/article-types/research/editors-checklists</a>.  Not sure if this has been used, but the methods sections could</p>

	provide more information (e.g. recruitment, setting)
<b>GENERAL COMMENTS</b>	Page 4: Approachs=approaches

<b>REVIEWER</b>	Ruth Bell Clinical Senior Lecturer/Honorary consultant in Public Health Newcastle University UK  No competing interests
<b>REVIEW RETURNED</b>	02-May-2013

<b>THE STUDY</b>	This is a qualitative study and the questions about outcome measures and statistical methods are not relevant.
<b>REPORTING &amp; ETHICS</b>	I am not aware of a reporting statement or checklist relevant to this study design
<b>GENERAL COMMENTS</b>	<p>This paper reports qualitative data from focus groups and interviews with an ethnically diverse sample of women, to elicit their views on preconception care. It addresses an area of potential public health importance, where existing knowledge is sparse. Young women with children are a challenging group to access and involve in research, particularly those from minority ethnic groups, and the data presented are interesting and relevant.</p> <p>I have a few comments and suggestions:</p> <ul style="list-style-type: none"> <li>•‘preconception care’ is something of a catch-all phrase which may not be widely understood or have a common meaning. (as evidenced by the general lack of resonance of the concept with the women interviewed). Although this is to some extent acknowledged in the paper, I feel this issue could be elaborated further. For example, the introduction could unpack the definition a little and identify that effective preconception care is likely to involve a range of specific interventions, both therapeutic (e.g. immunisation or prescription of folate) and behavioural (e.g. smoking cessation, weight loss); some of these have a robust evidence base of cost-effectiveness in improving health outcomes, and others do not. Caution needs to be exercised in assuming that a general ‘package’ of ‘preconception care’ will realise the health benefits anticipated from evaluations of single component interventions. Further, most preconception research has been exclusively focused on physical health with relatively little consideration of broader issues of mental health and social support.</li> <li>•The introduction states that there are no national guidelines for preconception care; whilst this is true for the general population, there are NICE guidelines for preconception care for women with diabetes and for women who are obese (and there may be other examples). This should be acknowledged. Reference could be made to studies in women with diabetes, which show the challenge of preparing for pregnancy even in a group with very high risk and well-established benefits of preconception advice – less than half of women typically attend for preconception advice.</li> <li>•The authors describe their study population as both ‘socially disadvantaged’ (p5) and ‘socially diverse’ (p15); whilst it is clearly an ethnically diverse population, the only socio-economic variable presented is maternal education. It would be helpful to either present more information about the socio-economic characteristics of the sample or to clarify what is meant by ‘disadvantaged’.</li> <li>•It would be helpful to elaborate further in the methods section the reasons for choosing both focus groups and interviews. Why was this done, and was it planned from the outset? How were women</li> </ul>

	<p>selected for interviews? What was the response rate? What topics were explored in the interviews (it would be helpful if topic guides for the interviews and focus groups could be included as supplementary material). Did the interviews reveal new themes not arising in the groups? It would be helpful to identify the characteristics of those interviewed in table 1.</p> <p>•Some further detail in the reporting of methods and results would be helpful. For example, how many women were in each focus group? Were the focus groups all homogeneous with respect to ethnicity (as implied on p6) – and if so was this deliberate or coincidental? What about the women of mixed ethnicity? How many focus groups and interviews were conducted in languages other than English? Were there distinct themes arising in different ethnic/cultural groups? Some further detail of the analytic approach and process would also be useful .</p> <p>•The conclusions and implications section highlights possibilities for when preconception advice or awareness might be raised with women, but there is little discussion of what it might consist of or how it should be delivered in order to realise the health benefits anticipated. Is there evidence that a structured questionnaire delivered in primary care is effective per se; what sort of difficulties in implementation might be anticipated; would there also need to be access to specific behaviour change interventions (e.g. referral for smoking cessation support ); or, are there alternative models or approaches with evaluating? More specific discussion of the kind of intervention development work now warranted, perhaps with reference to MRC guidance on complex intervention development and evaluation, would be useful.</p>
--	--

### VERSION 1 – AUTHOR RESPONSE

Reviewer: Dr. L. Henneman, Associate Professor  
EMGO Institute VU University Medical Center  
the Netherlands

This paper describes the awareness and attitudes of women from ethnically diverse communities toward preconception health in primary care. In many countries, as in the UK, preconception health care is not well established. This paper provides more insight in the opportunities to improve preconception care in primary care.

RESPONSE: Thank you for positive assessment of the paper's value, and helpful comments.

Abstract:

It is not exactly clear from the abstract how many women participated in (n?) focus groups and how many women were interviewed. Please add that women were interviewed by telephone.

RESPONSE: Number of groups and telephone interviews are now stated in abstract in addition to in the paper itself.

Background:

One of the barriers in the delivery of preconception care -besides the high number of unplanned pregnancy among women in most countries-, is the fact that women do not come forward for preconception counselling because of lack of knowledge about the aim of preconception counseling. This has for example been described by Hosli et al., Comm Genet 2008 (Women's motives for not

participating in preconception counseling: qualitative study), perhaps also include this work here.

RESPONSE: This further helpful point and reference has been added (last para of Introduction)

#### Methods

This is a qualitative research paper, no statistical details needed.

It is not clear what information was presented to the women (e.g. goal of the study) when they were recruited. Moreover, women were shown “areas of preconception health assessment [...] on a draft questionnaire” (see appendix) and apparently this questionnaire was also discussed in the focus groups (page 9, 4/P4) but it is not exactly clear when and how this was presented to the women and whether women also completed this questionnaire.

RESPONSE: Further information added – information on study goal (data generation, first para); and when and how questionnaire presented/completed (Data generation, third para)

It seems that some women were telephoned again after the focus groups. This aspect (and motive for this) is not exactly clear. How many women participated in each focus group?

RESPONSE: Reason for follow up telephone interview is further explained (Data generation, third para); numbers in each focus group are specified (Results, first para).

#### Result:

The results section could benefit from more structure. Especially the presentation of the quotes (e.g. with and without boxes; in the text; parts of whole discussions) makes it difficult to read. It also seems that some parts of the results section could be presented together e.g. in the part on “Preconception health opportunities in primary care” also some of the challenges are presented (e.g. with regard to confidentiality), while (some of these) challenges are also presented in a paragraph with another heading “Challenges for promoting preconception care”) (e.g. Box 3).

RESPONSE: Presentation of quotes has been revised to place more of these in boxes to be easier to read (two new boxes, now 1 and 5, added) rather than in the text. Note the quotes in original Box 1 are now in Box 2.

The issue of confidentiality in general practice (for younger people) is presented in the ‘preconception opportunities’ section in relation to the opportunity to therefore undertake this in other community settings such as sexual health clinics or schools. This is separated from the ‘challenges’ section which refers, for example, to the differing and wider issue of sensitivity about trying to conceive.

It is not clear what the numbers in the quotes refer to (5/P3??). Please explain in the methods section.

RESPONSE: This is explained (methods, last para)

The quotes illustrating the first topic: “Preconception health awareness and attitudes” are all from women with white ethnicity. Did women from other ethnicities express similar attitudes?

RESPONSE: Additional sentence with data on this point inserted in this section

The women (again) discussed the PHA questionnaire in box 1. Online preconception questionnaires have been developed (e.g. Landkroon et al., Publ Health Genomics 2010). Did women also discuss the possibilities for an online version?

RESPONSE: This was not raised or discussed by women

Discussion:

More on strengths and limitations could be presented: e.g. validity, selection/recruitment. Was a translator present in the focus groups? If yes, how could this have influenced the discussions? Some women were recruited from pre-existing social groups of women. How could this have biased the study? Some women may not feel free to talk or express another opinion? Any evidence for that?

RESPONSE: Strengths and limitations are discussed in two paragraphs. We note that, as a qualitative study, the findings may not be typical of other women, and must be interpreted with regard to the purposeful sample as described.

No translator was present in the focus groups. As noted in Methods, members of the research team themselves were bilingual. We have added further information that one focus group was conducted in Punjabi, co-facilitated by a researcher herself fluent in this language.

We note the way in which women being familiar with each other in a pre-existing social group may be a perceived advantage in discussing potentially sensitive issues. Study design then also included opportunity for one to one follow up interview specifically to capture opinions or views that women may not have felt able to express in the group setting.

-----  
The study presents different views (women from different ethnic background); it is expected that women from different backgrounds have different opinions with regard to pregnancy planning and reproductive decision making. Any evidence for that? (across groups). How did the authors achieve saturation (was saturation achieved?)

RESPONSE: The study presents the range of views emerging from the diverse sample in a more socially disadvantaged context but was not designed to offer robust evidence of differences between women of different backgrounds. We have added in the Methods that data generation continued until no new themes were emerging (data analysis).

The authors describe that “work in other countries ...has similarly found.. etc.” perhaps some additional findings/context can be presented here?

RESPONSE: Additional findings/context have been inserted (Comparison with existing literature)

How many of the pregnancies (%) in the UK are “unplanned”? Any information on this number?

RESPONSE: This is now added in Introduction (last para)

Some more detailed information on the methods could be described, see for example the QOREQ checklist by Tong (Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007) to use as a guidance in describing the methods section). BMJ also has a checklist for authors on qualitative research: <http://www.bmj.com/about-bmj/resources-authors/article-types/research/editors-checklists>. Not sure if this has been used, but the methods sections could provide more information (e.g. recruitment, setting)

RESPONSE: The latter checklist was used. We are conscious of guidance on word length but more information under Methods, as requested above, and also in response to reviewer #2 below, has been inserted.

Page 4: Approachs=approaches

RESPONSE: corrected

-----

Reviewer: Ruth Bell  
Clinical Senior Lecturer/Honorary consultant in Public Health  
Newcastle University

This paper reports qualitative data from focus groups and interviews with an ethnically diverse sample of women, to elicit their views on preconception care. It addresses an area of potential public health importance, where existing knowledge is sparse. Young women with children are a challenging group to access and involve in research, particularly those from minority ethnic groups, and the data presented are interesting and relevant.

RESPONSE: Many thanks for this positive feedback and helpful comments.

I have a few comments and suggestions:

- ‘preconception care’ is something of a catch-all phrase which may not be widely understood or have a common meaning. (as evidenced by the general lack of resonance of the concept with the women interviewed). Although this is to some extent acknowledged in the paper, I feel this issue could be elaborated further. For example, the introduction could unpack the definition a little and identify that effective preconception care is likely to involve a range of specific interventions, both therapeutic (e.g. immunisation or prescription of folate) and behavioural (e.g. smoking cessation, weight loss); some of these have a robust evidence base of cost-effectiveness in improving health outcomes, and others do not. Caution needs to be exercised in assuming that a general ‘package’ of ‘preconception care’ will realise the health benefits anticipated from evaluations of single component interventions. Further, most preconception research has been exclusively focused on physical health with relatively little consideration of broader issues of mental health and social support.

RESPONSE: We are conscious of guidance on word count, but more elaboration to underline these points has been added in the Introduction (first and second paras)

- The introduction states that there are no national guidelines for preconception care; whilst this is true for the general population, there are NICE guidelines for preconception care for women with diabetes and for women who are obese (and there may be other examples). This should be acknowledged. Reference could be made to studies in women with diabetes, which show the challenge of preparing for pregnancy even in a group with very high risk and well-established benefits of preconception advice – less than half of women typically attend for preconception advice.

RESPONSE: This exploratory study concerned a general population where little is known about relevant attitudes, rather than those with particular clinical risks. The former point on guidelines for those with diabetes/obesity has been acknowledged and added in the Introduction.

- The authors describe their study population as both ‘socially disadvantaged’ (p5) and ‘socially diverse’ (p15); whilst it is clearly an ethnically diverse population, the only socio-economic variable presented is maternal education. It would be helpful to either present more information about the socio-economic characteristics of the sample or to clarify what is meant by ‘disadvantaged’.

RESPONSE: Educational level was sought and reported as a key descriptor for two reasons - it is strongly associated with maternal and child health outcomes, and was also seen in piloting to be less sensitive and intrusive than seeking other social descriptors such as employment or income in the communities concerned.

We have changed the one reference to 'socially diverse' in the Discussion to the less ambiguous 'ethnically diverse'. We have added (under Methods) that the socially disadvantaged communities from which women were recruited were in wards in the lowest quintile for Index of Multiple Deprivation (IMD) for the UK (with IMD referenced).

- It would be helpful to elaborate further in the methods section the reasons for choosing both focus groups and interviews. Why was this done, and was it planned from the outset? How were women selected for interviews? What was the response rate? What topics were explored in the interviews (it would be helpful if topic guides for the interviews and focus groups could be included as supplementary material). Did the interviews reveal new themes not arising in the groups? It would be helpful to identify the characteristics of those interviewed in table 1.

RESPONSE: The reason for group interviews in 'natural' settings is indicated in Methods, and why follow up one to one interviews were planned and undertaken is now further spelled out (e.g. opportunity to discuss issues if too shy or inhibited to discuss in group).

We have added to Methods that all women were invited to participate in the latter telephone interviews, and those who wished to do so were interviewed (half of sample as indicated). The broad topic areas explored in the focus groups are listed in the Methods, noting this included areas of preconception health assessment shown on a PHA questionnaire (provided in full as supplementary appendix). The telephone interviews also invited views on the latter but these findings are not the focus of this paper and are not reported here.

The characteristics of those focus group participants who also participated in the telephone interviews have been added as a new column in table 1.

- Some further detail in the reporting of methods and results would be helpful. For example, how many women were in each focus group? Were the focus groups all homogeneous with respect to ethnicity (as implied on p6) – and if so was this deliberate or coincidental? What about the women of mixed ethnicity? How many focus groups and interviews were conducted in languages other than English? Were there distinct themes arising in different ethnic/cultural groups? Some further detail of the analytic approach and process would also be useful .

RESPONSE: These further details have been added, mostly in three new sentences in the first para of Results. There were no particularly distinct themes differing between groups, though South Asian women spoke more about relevance to men (see Box 5). An additional sentence has been added in Methods (on analysis).

- The conclusions and implications section highlights possibilities for when preconception advice or awareness might be raised with women, but there is little discussion of what it might consist of or how it should be delivered in order to realise the health benefits anticipated. Is there evidence that a structured questionnaire delivered in primary care is effective per se; what sort of difficulties in implementation might be anticipated; would there also need to be access to specific behaviour change interventions (e.g. referral for smoking cessation support ); or, are there alternative models or approaches with evaluating? More specific discussion of the kind of intervention development work now warranted, perhaps with reference to MRC guidance on complex intervention development and evaluation, would be useful.

RESPONSE: We are conscious the existing Discussion already stands at 1000 words, with no suggestions for revision of this section from reviewer 1 (Prof Henneman), but recognise the potentially wide range of issues that could be discussed.

Evidence and experience from studies on the potential promise and effect of using preconception health assessment questionnaires, including a US-based primary care study, is referred to in the Introduction (third para). The current study sought to identify opportunities and challenges for preconception care (rather than develop the questionnaire approach specifically). The concluding sections recognise a broad range of approaches likely to be needed and developed, not only exploiting opportunities in primary care, but also across health care and education over the life course. Specific reference to MRC guidance on complex intervention development and evaluation has been added in the concluding sentence.

Finally, please note nine additional references have been inserted in responding to reviewers' suggestions for further detail or context, as follows:

[5] National Collaborating Centre 2008

[6] NICE 2010

[11] de Weerd et al 2004

[26] Bury et al 2009

[27] Hosli et al 2008

[30] Office for National Statistics 2010

[31] Silverman 2005

[39] Inskip et al 2009

[45] Craig et al 2008

#### VERSION 2 – REVIEW

<b>REVIEWER</b>	Dr. L. Henneman, Associate Professor EMGO Institute for Health can Care Research  Conflict of interest: reviewer has (had) cross-country collaboration with last author of the manuscript.
<b>REVIEW RETURNED</b>	23-Jun-2013

<b>THE STUDY</b>	The paper has improved and gives more clarity (in particular with regard to the methodology that was used).  Still some (additional) comments I would like to see addressed:  For some focusgroups two, three or four participants were included but these cannot be called a focusgroup rather a group discussion (if called "group" at all). Although it is clearly challenging to include women from these backgrounds, it should be clear to the reader (abstract and discussion) that that this was a limitation.  Minor: In the methods it is stated that "Audio-recorded focus groups were convened at a location and time convenient to participants and each facilitated by two researchers". However, three were mentioned: (HT, MB, LCB).  In table 1, GCSE should be explained in a note.
<b>RESULTS &amp; CONCLUSIONS</b>	Part of the quotes are now presented in boxes, which is more clear. However, earlier comments relating to the structure of the results have not been addressed, i.e. in the part on "Preconception health opportunities in primary care" also some of the challenges are presented (e.g. with regard to confidentiality: "A further difficulty for several younger participants was experience of doctors as unapproachable or being difficult to relate to...."). This challenge

	may better suit at the end of the paragraph with heading “Challenges for promoting preconception care”? If not changed please explain.
<b>REPORTING &amp; ETHICS</b>	This is qualitative explorative study. Guidelines are/can be used in a less rigid way. Moreover, the methods section has improved, and is now more in line with existing guidelines

<b>REVIEWER</b>	Dr Ruth Bell Senior Lecturer/Consultant in Public Health Medicine Newcastle University UK  No competing interests
<b>REVIEW RETURNED</b>	03-Jun-2013

<b>GENERAL COMMENTS</b>	Comments have been adequately addressed - no further revisions suggested.
-------------------------	---

### VERSION 2 – AUTHOR RESPONSE

The minor revisions suggested by one reviewer have been tracked on the paper, and are made as follows:

1. The smaller size of some groups is clear to readers in the Results (first paragraph) and is now further highlighted in the Discussion (under Strengths and Limitations).
2. Three field researchers were involved in facilitating the group discussions, with a combination of two of these three facilitating each group. The text has been altered to clarify two of three.
3. 'GCSE' (and similarly 'A' level) have been explained in a note under Table One.
4. The Results section on preconception health opportunities refers to primary care more broadly, rather than general practice alone. The difficulty for younger participants finding GPs unapproachable (and South Asian women preferring female practitioners) are presented as opportunities for promoting preconception health elsewhere in primary care and the community i.e. in sexual health clinics or schools. The text in this section has been amended to make this clearer.