Reviewer's report

Title: Factors influencing the quality of preconception healthcare in China: Applying a preconceptional instrument to assess healthcare needs

Version: 3 Date: 23 July 2014

Reviewer: Joel Ray

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1. Abstract, Background: Give that this is a cross-sectional study design, I would change “may influence the” to “associated with”.

2. Abstract, Methods: Please mention that 2806 women had completed questionnaires, a rate of 87.6%.

3. Abstract, Results: “Statistical significance was obtained for …” is not meaningful enough. Please tell us that you compared and what statistical methods were used. Also, this should be in the Methods section.

4. Abstract, Results: “maternal age, body mass index, education, occupation, pregnancy complications, immunization status, and need for preconception care.” First, this belongs in the Methods section. Second, what is the timing of these variables: Pre-pregnancy or during pregnancy? What if a woman had never been pregnant before – how can you capture “pregnancy complications” unless you mean that it applies to a current pregnancy? This may seem trivial, but it is not, as the abstract should be clear and variable expression should reflect the timing of the variable.

5. Abstract, Results: There are no data presented on the findings of the survey.

6. Abstract, Conclusions: “the centralized guideline for standardized preconception healthcare may not be suited for all populations” – this is the first time that this centralized guideline is mentioned. It appears that you are then testing whether a centralized approach to preconception care works in different locations within the country. Hence, I would change the Abstract, Background to the following: “China has a centralized guideline for standardized preconception healthcare (IF THIS IS TRUE). We determined whether there is variation in the quality of preconception healthcare services in distinct southeastern and northeastern populations in China, and what factors are associated with such variation.”

7. Main paper, Background, last sentence: “We conducted this study to compare preconception risk factors …” # risk factors for what? Risk factors for pregnancy planning, for adequate pre-conception measures, for pre-pregnancy health, or risk factors for an adverse pregnancy outcome. Please be clear here.

8. Methods: “A questionnaire we developed earlier as a preconceptional
The instrument was based on the common risk factors for pregnancy complications and couples’ needs.” # Is there a reference for that instrument or an online link?

9. Methods: Why were the couples accessed through hospitals, rather than through their homes or non-hospital centres? At the time of the survey they are not pregnant, so why are they coming into contact with a hospital?

10. Methods: Was the questionnaire self-administered in paper form or otherwise? Did the woman and man both complete it, or just the woman? What if she could not read?

11. Results: How many couples were asked to participate, and how many agreed? It would be worthwhile to know the response rate.

12. Results: “Of these participants, 287 (28.4%) had had an abortion;” # By abortion, do you mean a medical termination of pregnancy (i.e., NOT a spontaneous abortion/miscarriage)?

13. Results: Women’s pregnancy history and outcomes # All of this should be put in a single table (which I would call “Table 1”), with a column for each province

14. Results: Family history of genetic conditions for prospective parents # I do not understand why this is here, and think that it should be removed

15. Results: “The differences in BMI between the two provinces’ participants were assessed with the Mann-Whitney test, and the results showed significance (u = 13.590, P = 0.000).” # This testing is not even mentioned in the Methods section.

16. Results: General health indicators # Too many details given. I would just add the current to the Table 1 that I proposed above, and keep the text much more brief.

17. Tables 1-3 are too many variables and little relevance to the hypothesis being tested. I think that Tables 1-3 can almost be removed.

18. Table 5 finally arrives at the most important material from the survey, and might be now called “Table 2”.

19. Table 5 should have statistical testing in the form of a rate ratio and 95% CI for each variable being compared between Jiangsu and Hebei. I would remove the chi-square testing and corresponding P-values.

20. Most of the Discussion section is a re-iteration of the Results, and I think it needs to be re-written.

21. Discussion: “The results suggest the following. First, the existing preconception health care service is effective.” # Please explain how you have shown that the service is effective? This is a cross-sectional study design.

22. Discussion: “Second, more intensive education and training are required for both reproductive-age women and doctors, to raise the public’s awareness and
increase its knowledge and to ensure the quality of the service provided by the doctors.” # Is that not the opposite of what you said just above?

23. Tables 1-3 do not have chi-square testing, but Tables 4 and 5 do. This is inconsistent.

24. Figure 1 is not needed. It is not informative.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests