Author’s response to reviews

Title: Uptake of maternal care and childhood immunization among ethnic minority and Han populations in Sichuan province: a study based on the 2003, 2008 and 2013 Health Service Surveys

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Title: Uptake of maternal care and childhood immunization among ethnic minority and Han populations in Sichuan province: a study based on the 2003, 2008 and 2013 Health Service Surveys

Dear Editor,

Thank you very much for your feedback on our paper. The reviewers’ comments were very useful. Below is a detailed response to each point raised by the reviewers.
The letter of response and attach files are the same as we submitted last time, because we did not find new comments in the reviewer's comments. Please feel free to contact me if there is any problem.

Yours sincerely,

Carine Ronsmans

Abel Negussie Gebregziabher, MPH (Reviewer 1): Reviewer: Abel Negussie

Minor points:

- How ethnicity can be considered as a single differential of maternal care given that already there is poor socio-economic and literacy status in a population?

Respond:

The factors underlying health inequalities between ethnic minority populations and their counterpart are complex. Apart from the socio-economic and literacy status, the aspects related to healthcare policies and systems, social policies, social structures, health behaviours, and cultural norms are all thought to play a role. In our analyses, ethnicity is a factor that we concerned about, at both individual level (Han populations vs. ethnic minority populations) and geographic level (Han county vs. ethnic minority county). The women’s literacy status, per capita income, age, parity, distance to community/township level hospital and distance to district/county level hospital were controlled as covariates in regression models to see if the effect of ethnicity still exist on inequalities in maternal and children healthcare use. It has indicated ethnic differentials in access to maternal care remained surprisingly large after adjusting for socio-demographic factors and distance to the nearest health facilities. We further discussed about that some characteristics related to ethnicity per se may influence care seeking among ethnic minorities, for example the local beliefs and fears, or cultural inappropriateness of delivery practices in hospital. Ethnicity is an important factor to pay attention when health policy is making (line 21:24, page 17 and line 1:7, page 18).
- What is the significance of explaining ethnic variations in maternal health care utilisation? Include this in the introduction section.

Respond:

We have explained this in the introduction as following:

“In recent years, ethnicity has come to the forefront as an important determinant of poor MCH outcomes in China[11-13]. In a large national study reporting data for 1996 and 2012, children living in some ethnic minority counties had much higher infant mortality rates than children living in majority Han counties[12, 14]. In a study examining variation in maternal mortality between 1997 and 2014, the ethnic composition of the province was an important independent determinant of maternal mortality[2]. Apart from ecological comparisons where the geographically defined groups might be too diverse in ethnic composition to make meaningful comparisons, a recent systematic review also reported individual ethnic groups in China perform far worse than their Han counterparts in MCH outcomes and service coverage[15].” (line 13:22, page 5)

- Why you have selected only some MCH services? Do you think it is comprehensive to assess maternal care status without assessing other components like Post-natal care and family planning services?

Respond:

It is a good point that the analyses could be more comprehensive if post-natal care and family planning services were included. However, the data adopted in our study are all from the National Health Service Survey which is designed at national level to monitor the utilisation of health services among Chinese residents every 5 years. Only the utilisation of antenatal visits, hospital delivery, c-section and childhood immunisation (BCG, DPT and measles) were surveyed by the questionnaire. We have added this comment as one of our limitations and we will look for more data sources in future to get a more comprehensive assessment on maternal care status (line2:8, page20).

“Sixth, the analyses could be more comprehensive to assess MCH status if other components of the care, for instance, post-natal care and family planning services, were included. However, the data adopted in our study are all from the National Health Service Survey which is designed at national level to monitor the utilization of health services among Chinese residents every 5 years. Only the utilization of antenatal visits, hospital delivery, caesarean section and childhood immunization (BCG, DPT and measles) were surveyed by the questionnaire.”
Alice Norah Ladur, MPH (Reviewer 2): This is a well written paper with potential to add to new knowledge in the field. There are a few typo errors to be corrected included in the manuscript and a few areas where the authors need to clarify some concepts to strengthen this research paper.

Respond:

Thank you for all the comments and suggestions, we have revised them by points.

1. provide reference for the 2011 survey:

We added a reference for the survey conducted in 2011.

“…nearly all women with college or higher education[2].” (line 8, page 5)


2. included the different sampling strategy as a limitation.

We added this as a limitation as following, and change the serial number sequentially.

“Second, the sampling strategy between 2013 and the other years are inconsistent. There could be potential difference in selection of population for representation by a four-stage stratified cluster random sampling in 2013 compared to those selected with a three-stage strategy in 2003 and 2008. However, we applied multilevel weighted regression models in the analysis to minimize the difference.” (line 7:11, page 19)

3. clarify if R 3.1 is a statistical package like SPSS or STATA.

The R 3.1 is a statistical computing environment and contains many statistical packages that enables us to process data. We clarified it as following:

“the statistical computing R environment 3.1” (line 2, page 11)
4. the original sentence ”The extremely low caesarean section rates are particularly worrying: rates below 2% suggest an unmet need for life saving surgery, with high maternal mortality as a result” implies that high maternal mortality is a result of low cesarean sections, which may not be entirely correct. Rephrase to reflect the study finding

We rephrased the study finding as following:

“while caesarean section rates cannot be a substitute for the measurement of levels of maternal mortality, research has found that the rate of caesarean section rate was negatively associated with maternal mortality when under 10%[37], and rates below 25% may suggest an unmet need for life saving surgery[38].” (line 7:11, page 16)

5. delete typo from ‘suggests’ to ‘suggest’

We changed it into “suggest” (line 14, page 17).

6. add a few sentences on the ideal/set targets nationally to place the phrase ‘...still fall behind in terms of uptake of antenatal... ’ into context.

We added some sentences on the national/ideal targets as following:

“...in terms of the national targets of uptake of antenatal care, birth in hospital, and DPT immunization, which are 5 times[54], 80%[55], and 95%[56] separately, and behind the reasonable lower level rate of caesarean section at 10% suggested by WHO[37].” (line 13:16, page 20)

7. capitals for journal name

We changed all journal names in the references list into capitals.