Author's response to reviews

Title: Hemoglobin levels and anemia evaluation during pregnancy in the highlands of Tibet: a hospital-based study

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Version: 2 Date: 12 May 2009

Author's response to reviews: see over
Dear Editors,

On behalf of my co-authors, I am submitting the manuscript entitled “Hemoglobin levels and anemia evaluation during pregnancy in the highlands of Tibet: a hospital-based study” for possible publication in BMC Public Health. The study was funded by the China Medical Board of New York Inc. and the National Natural Science Foundation of China.

The paper explores the distribution of hemoglobin and prevalence of anemia in pregnant women living in highlands of Tibet using a sample of 380 pregnant women. We find that hemoglobin levels during pregnancy in the Tibetan high-altitude population differ by ethnicity, that prevalence of anemia was lower than that we had anticipated, and that current hemoglobin-altitude correction methods might higher evaluating the prevalence of anemia for pregnant women in Tibet. These findings have important policy implications for recommendations on the criterion of anemia in Tibet as well as in other high-altitude areas. The present study is the first research based on larger sample on the topic issue in Tibetan high-altitude population and I believe that the paper would be particularly interesting to the readers of the BMC Public Health.

This is our second submission to BMC Public Health. In the process of first time submission, three reviewers respectively gave relatively positive comments on our manuscript. And two reviewers suggested that part of the contents of the article need to be further revised. We deeply appreciate your comments in letter in reply on our manuscript. We would also like to thank the reviewers for their constructive and helpful comments and suggestions with our selection methods. We agreed with the majority of the reviewers’ comments and have made further revision on our manuscript accordingly.

We certify that we have participated sufficiently in the work to take public responsibility for the appropriateness of the experimental design and method, and the collection, analysis, and interpretation of the data. To the best of our knowledge and belief, this manuscript has not been published in whole or in part nor is it being considered for publication elsewhere.

Thank you for considering our manuscript.

Best regards and thanks for your consideration.

Yours sincerely,

Professor Hong Yan

Professor and Dean of the College of Medicine
Deans’ Office
Xi’an Jiaotong University College of Medicine
Our response to reviews
Reviewer's report

Title: Hemoglobin levels and anemia evaluation during pregnancy in the highlands of Tibet: a hospital-based study

Version: 3 Date: 16 December 2008

Reviewer: Salvador Villalpando

Reviewer’s report:

Although the manuscript has improved there are many uncertainties about selection bias of the sample, the accuracy of the determinations performed and the interpretation of the data. Many odd findings opposed to what have being reported in tehg literature. A lar speculative discussion with little scientific support. As for instance the assumption that population that moved almost 60 years ago to that altitude have a different adaptation level to low oxygen concentration

We have revised the description of sample selection process in order to clarify the reader's understanding of the process. The process in manuscript now appears as follows: “This study was a cross-sectional, hospital-based study with randomly selected pregnant women who lived in Lhasa. During one-year investigating period, we randomly selected 2 days a week considering seasonal variation, on which all the pregnant women who sought antenatal care in the obstetrical department of Lhasa People’s hospital were selected as study subjects. They were interviewed face-to-face by trained professional interviewers and their Hb levels were measured at the same time….” L98-L112

According to reviewer’s advice, we have made some more prudent speculate on part of the contents of result, deleted the part with less rigorous inference. As follows: “…As per the above adaptations, we suggested that Tibetans have an improved capability for accommodating the low-oxygen circumstances without having an increased concentration of hemoglobin. However, most of the non-Tibetans in the region were immigrants whom from low-lying areas and their physiological adaptation might be different from the Tibetan counterparts, which could contribute to the ethnic differences in Hb level and prevalence of anemia to some extent. Such results need further investigation.” L225-L237

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: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests
Reviewer's report

Title: Hemoglobin levels and anemia evaluation during pregnancy in the highlands of Tibet: a hospital-based study

Version: 3 Date: 12 December 2008

Reviewer: Gunnar Tschudi Bondevik

Reviewer's report:

My original criticism has to a large degree been answered in the revised manuscript.

I have a few additional comments:

Methods: I still have some problems with the selection. The authors state that they recruited 396 pregnant women who were admitted to the hospital (line 119). However, most pregnant women would generally be seen as out-patients in the antenatal clinic, and not being admitted. Why were all these pregnant women admitted? Also, we should know the size of the background population, i.e. 396 out of ? pregnant women.

We have revised the description of sample selection process in order to clarify the reader's understanding of the process. The total number of women seeking antenatal care in the obstetrical department of Lhasa People’s hospital was about 1200 per year. The process in manuscript now appears as follows:

“This study was a cross-sectional, hospital-based study with randomly selected pregnant women who lived in Lhasa. During one-year investigating period, we randomly selected 2 days a week considering seasonal variation, on which all the pregnant women who sought antenatal care in the obstetrical department of Lhasa People's hospital were selected as study subjects. They were interviewed face-to-face by trained professional interviewers and their Hb levels were measured at the same time....” L98-L112

Table 1: It should be stated that this is a multiple linear regression, and which variables the authors have adjusted for. Are the variables gestational age, maternal age and income analysed as continuous variables in the model?

Thanks for the suggestion. We have revised as suggested. The variables gestational age and maternal age were analyzed as continuous variables in the model. Annual income=0 if annual income<1800 Yuan RMB and 1 otherwise income. L152-L157

Table 2: The authors should consider to omit this table, and include the important information in the text.

Table 2 has been omitted as reviewer suggested and important information was included in the text as follows:

“Used one-sample t-test, we found that means of all parameters (RBC:3.89; HCT:0.37; MCV:87.37; MCHC:334.70; RDW-CV:0.15) were within the range of sea level's reference
values except for MCH (34.70pg). Mean of MCH was higher than that of the sea level pregnancy groups (P<0.01).”

Table 3: It should be stated that this is a multiple logistic regression, and which variables the authors have adjusted for. For variables with more than 2 categories, the authors could consider using the first category as reference category, and give the adjusted odds ratio (95%CI) + p-value for each of the other categories in the table.

Change made as indicated by the reviewer.

Figure 1: The number of Tibetan and non-Tibetan women should be given in the Figure/legend.

Done.

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests
Reviewer's report

**Title:** Hemoglobin levels and anemia evaluation during pregnancy in the highlands of Tibet: a hospital-based study

**Version:** 3  **Date:** 8 December 2008

**Reviewer:** Per Bergsjø

**Reviewer’s report:**

The authors have revised the manuscript according to my suggestions. I consider it now worthy of being published without further changes

*Review has no suggested changes for the manuscript.*

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

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'