Reviewer’s report

Title: Regional differences in diabetes prevalence and awareness between coastal and interior provinces in China: a population-based cross-sectional study

Version: 2 Date: 18 November 2012

Reviewer: Feng Ning

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The current study compares the prevalence and awareness of diabetes in two different geographical areas in China. Regarding as the preliminary results, prevalence of type 2 diabetes is alarming increase in a developed and developing area. The rate of diabetes awareness is relatively higher in costal than in interior provinces. The risk factors related to diabetes prevalence and awareness were also estimated. Some comments on study design and result indicate as below.

Methods

1. As show in some collaborative studies, waist circumference is more strongly associated with diabetes than BMI, do you have waist measurements in your data. In addition, income level and occupation was also needed to be control in the multivariate model.

2. Please define the OR in the statistical analysis part.

Results:

1. Given that this is all presented in table 1 it is not necessary to describe every difference. I would suggest important differences are picked out.

2. Please modify the serial number of tables in the table part.

3. On the second paragraph of this section, the rate of diabetes awareness is not statistically significance in female not in male between the two provinces.

4. The contribution of the college education and cigarette smoking is unexpected in Fujian and Shannxi, respectively. The performance of education is substantially different between urban and rural areas in previous reports, particularly in China. Can you give the sex- and urban-rural specific multivariate model for diabetes prevalence? Additionally, family income or personal income also needs to be considered in the model. If not available, should state as limited part in the discussion.

5. Age difference need to be considered in the diabetes awareness, have you add to the final model as categories variable instead of continuous one, for example age < 50 and age >=50? In addition, I wonder the BMI as a continuous variable included in the multivariable model.

6. Please give the result of the chi-squared log-likelihood ratio test on the table 5, BMI, to show the magnitude of the model when metabolic risk factors and family
history of diabetes were further adjusted.

Discussion

1. The DNS is a cross-sectional study, you should clarify the limitation of design fault in disease causality in the discussion part.
2. If no info on income and occupation related physical activity was available in the current data analysis, you should state them.

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.