Reviewer's report

Title: Prevalence of cardiovascular disease and risk factors among rural Chinese in Beijing: a population-based survey of 58,308 residents

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Reviewer: Chiara Donfrancesco

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This manuscript reports CHD, stroke and some risk factors prevalence from a population-based cross-sectional study conducted among adults aged above 40 years registered inhabitants in Fangshan District, a rural area of Beijing, China. The importance of these data arise from the consideration that few recent population-based studies concerning CHD and stroke prevalence are available for Chinese population, taking also into account that with China’s economic growth, population aging, nutritional transition and urbanization, the pattern of CVD and its major risk factors might have been changed.

Major Compulsory Revisions

Abstract
In this study number of women are higher than number of men, since men and women have different level of CHD and stroke risk, CHD and stroke prevalence should be reported separately for men and women.

Statistical Analysis
It is not clear if the age distribution used in the age-adjustment is the same for men and women, and for different geographic areas. In order to compare men and women, and geographic areas, avoiding age influence, means and prevalence should be age-adjusted using the same age distribution.

Results
Prevalence of CHD and stroke in persons over 65 years and below 65 years are reported for men and women together. Since men and women have different level of CHD and stroke risk, as well as different level of risk factors, and in this study number of women are higher than number of men, results should be reported also for men and women separately.

Differences between men and women and among geographic areas reported in the Results paragraph, table 1 and Figure 3 could be affected by different age distribution (from tables 1 is clear for examples that mean level of age in men is higher the mean level in women). In order to compare men and women, and geographic areas, avoiding age influence, means and prevalence should be age-adjusted using the same age distribution.

No data are reported on mean age in the geographic areas.
Authors declare that CHD and stroke prevalence decrease and obesity increases from mountainous, hill and plain area. In the text it is reported the p-value of the chi-squared test considering the three areas all together. From figure 3 seems that CHD and obesity prevalence are not significantly different in hill area and plain area. This aspect should be reported in the text.

Authors declare that in diabetics CHD risk is higher than stroke risk, but don’t specify that the difference is not statistically significant as shown in table 3.

Discussion

Authors report data of stroke prevalence trend in China, but they don’t report data for CHD prevalence trend. Data on CHD trend should be reported if available. If not available, this should be specified in the text.

Authors report that hypertension prevalence in mountainous area is lower than in the other two areas, but from Figure 3, prevalence seem to be similar.

Since men and women have different level of CHD and stroke risk, as well as different level of risk factors, and in this study number of women are higher than number of men, authors should prefer to report, compare and interpret data for men and women separately.

Minor Essential Revisions

Tables

Definition of hypertension, diabetes, overweight and obesity should be reported as footnotes.

Discretionary Revisions

Data collection

Data collection follows standardized procedures.

International Diabetes Federation indicates that more than 50% of diabetics didn’t know to be diabetic, then using diabetes definition based on self reported current treatment could give a underestimated prevalence of diabetes. This should be more taken in consideration in the interpretation of results.

Results

Comparison between InterASIA 2000-2001, Suburban Beijing 2007 and this study are presented in Figure 2 and commented in the Results paragraph. If available, it could be also interesting to know if differences are statistically significant or not.

Comparison among geographic areas are reported considering men and women together. If the size of men and women samples stratified by geographic areas
allow separated estimation, could be interesting to know if trends are similar in men and women.

Discussion

A diabetes definition based on self reported current treatment could give an underestimated prevalence of diabetes. This should be more considered for the interpretation of results, moreover in order to have a better interpretation of results, it could be interesting to report and consider the definition of diabetes used in previous studies used in this paper to evaluate the diabetes prevalence trend in China.

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

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests