Reviewer’s report

Title: Blood pressure and hypertension prevalence among oldest-old in China for 16 year: based on CLHLS

Version: 1 Date: 22 Jun 2019

Reviewer: Chenkai Wu

Reviewer's report:

The authors have improved the manuscript substantially; however, some of my comments have not been adequately addressed.

1. The authors stated in their response to my first comment that they decided not to include the analyses of hypertension awareness and control rates. However, the results were still presented in Table 2 and S7.

2. Although the authors considered not having information on use of anti-hypertensive medication is a limitation, I would encourage the authors to elaborate on this more. At least, the authors could discuss approximately how large the bias could be for the estimate of hypertension prevalence in the absence of information on medication use.

3. The authors defined isolated systolic hypertension as SBP >=140 mmHg and DBP<90 mmHg. I was wondering how did the authors deal with persons who reported a physician diagnosed hypertension but having a measured SBP <140 mmHg.

4. The authors did a sensitivity analysis focusing the first measurement of BP of the CLHLS participants. I have two additional comments on this. First, I think it is more appropriate to focus on these persons in the main analysis instead in the sensitivity analysis. Typically, multiple cross-sectional survey does not include the same person more than once. Second, there were appreciable differences between the results of the sensitivity analysis and those of the main analysis. For example, the prevalence of hypertension is 62.3% in 2014 in the sensitivity analysis, while the prevalence is between 55.3% and 57.4% in the main analysis.

5. Another interesting pattern is that the prevalence was lower 1998 than in 2005 (Table 1) while the mean SBP was substantially higher in 1998 than 2005 (Figure 1). Similar seemingly conflicting results were observed in the sensitivity analysis: the average SBP and DBP were both higher in 1998 than in 2005 (148.5 vs. 130.6 & 84.4 vs. 82.1), while the prevalence of hypertension was lower in 1998 than in 2005 (43.1% vs. 47.1%). Any explanations?

6. The authors did not address my third comment. They need to conduct an additional sensitivity analysis restricting the sample to those with a remaining life of at least 1 or 2 years.
The authors mentioned in the discussion that persons living in nursing homes were not included in the CLHLS. Actually, a non-negligible amount of CLHLS participants lived in nursing homes.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

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Yes

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Dr. Chenkai Wu provides paid consultant services to HealthKeeperS, a health data analytics start-up company in China.

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