Author's response to reviews

Title: The use of annual physical examinations among the elderly in rural China: a cross-sectional study

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Author's response to reviews: see over
Dear Ms Armee Valencia and Prof. Iris Chi,

On behalf of my co-authors, we thank you very much for giving us an opportunity to revise our manuscript again, we appreciate you very much for your positive and constructive comments and suggestions on our manuscript entitled “The use of annual physical examinations among the elderly in rural China: a cross-sectional study”. (ID: 1675565063939602). Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches.

We have studied comments carefully and have made correction which we hope meet with approval. The main corrections in the paper and the responds to the reviewer’s comments are as flowing:

1. **Response to comment**: May be this manuscript needs a more specific topic.

   **Response**: Thanks for the Reviewer’s suggestions. However, our topic focused on health knowledge, health knowledge communication channels and annual physical examination use among the elderly aged 60 or over in rural China. It might be inappropriate to forget the topic “annual physical examination use”. Anyway, we respect the Reviewer’s suggestion.

2. **Response to comment**: Authors should at least control for the socio-demographic data in their multivariate analysis.

   **Response**: Many thanks for the Reviewer’s suggestions. In our manuscript, we have considered the socio-demographic data. First, we use Chi-square and Fisher’s exact tests (whenever appropriate) to explore differences in value of the covariates between user and non-user groups of annual physical examinations to select potential predictors for the regression analysis. The result showed occupation, number of household members, health knowledge level, and means of acquiring health knowledge were selected as dependent variables (Line 511-512). Second, because the bivariate effects of the predictors on the dependent variable were probably confounded by other factors, multivariate logistic regression analysis was further used to examine the predicting effect of each potential predictor identified in the bivariate analysis to adjust for the effects of other confounding variables. And as was showed in Table 3 of the manuscript, occupation, health knowledge level and health communication channels (doctor and bulletin board) were entered into the equation.
3. **Response to comment:** There are some mistakes in reporting the results in the abstract.

**Response:** We are sorry for our mistakes and have made corrections have been made according to the Reviewer’s comments.

The corrections in the results of the abstract are as follows:

The probability for civil servants/retired having annual physical examinations was 2.16 times higher than for farmers. Those who had an average level of health knowledge had a higher probability of using annual physical examinations than those at the below-average level (odds ratio: 2.07). (Line 16-20)

And corrections in the results in the main body of the manuscript are as follows:

The probability for civil servants/retired was 2.16 times higher than for farmers. (Line 207)

4. **Response to comment:** Why is average health knowledge a significant factor while those who had above average health knowledge aren’t?

**Response:** Thanks for the Reviewer’s comments. It is reasonable to expect that those with a below-average level of health knowledge would be less likely to have an annual physical examination, but it is surprising that those with an above-average level were no more likely to have an annual physical examination. This may be explained by the fact that the free annual physical examination provided by the government only covers basic items. Those who have an above-average level of health knowledge may not believe in the value of such a basic examination. They may prefer to self-assess their health status on the basis of their health knowledge or to pay for a more detailed examination. And we had made expiations in the first manuscript (Line 254-261).

5. **Response to comment:** This study has many limitations (not just one) and it is authors' responsibility to list all of them.

**Response:** Thanks for the Reviewer’s comments. In the last paragraph of Discussion part of the manuscript, we have listed more than one limitation (Line 304-311). They were as follows:

One of the limitations to this study is that some predictors found by other researchers (e.g., survey participants’ health status) were not included. Another research limitation
is the use of closed-ended questions in the health knowledge test, which may have allowed participants to guess the correct answer. In addition, we assumed that the demographic and socioeconomic factors selected for this study, together with the selected health communication channels, are likely to be the main factors of influence for annual physical examination use among rural adults aged 60 and over in China, so other possible predictors were not considered.

Once again, thank you very much for your comments and suggestions.
Looking forward to hearing from you.
Thank you and best regards.
Yours sincerely,
Zhanchun FENG