Author’s response to reviews

Title: Morbidity burden of respiratory diseases attributable to ambient temperature: a case study in a subtropical city in China

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Dear editors:

Thank you for your letter and advice on our manuscript entitled "Moderate hot rather than extreme hot is mainly responsible for temperature-related excess outpatient visits for respiratory diseases: a case study in a subtropical city of China" (ENHE-D-18-00434), which is currently under revision. 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 raised by the editors and the amendments are highlighted in red in the revised manuscript. We hope that the revision is acceptable and look forward to hearing from you soon. The point to point responds to the editors’ comments are listed as following:

Comments from the editors:
There is insufficient information on the geographic area from which the municipal hospital drew cases and where the air pollution monitoring stations were located with respect to these areas.

RESPONSE: Thanks very much for your comments. We have added the information of the municipal hospital in the revised version and depicted the location of the municipal hospital and air pollution monitoring stations in Figure S1.

Further, summarizing the air pollution data over five days could estimate exposure to such an extent that it could over-estimate the strength of the association between respiratory admissions and temperature.

RESPONSE: We didn’t summarize the air pollution data over five days. We only used the average air pollutants from five fixed air monitoring stations per day during the study period to control the confounding effects.

Because temperature and humidity are often correlated, controlling for humidity in the analyses could create spurious results.

RESPONSE: Thanks for your valuable comments. We conducted a pearson correlation analysis between temperature and humidity, the correlation coefficient is 0.26, which is not very high. Furthermore, the sensitivity analysis showed that our findings were generally insensitive to control of the humidity in the model.

Cold and hot temperatures should be analyzed separately because of the differences in lag structures.

RESPONSE: Your comments are helpful for us to improve our manuscript. Because it is difficult to compare the relative risk and attributable risk due to cold and hot temperatures if we use different lag structures, separately, we used the identical lag days for hot and cold effects. However, according to your comments, in order to balance the differences in lag structure for cold and hot temperatures, we used 7 days as the maximum lag to assess the effects of cold and hot effects on hospital outpatient visits in the revised manuscript. The analysis strategy is also found in several previous studies (Tian et al., 2016; Yang et al., 2016; Gasparrini et al., 2015).

We tried our best to improve the manuscript and made some changes in the manuscript. These changes will not influence the content and framework of the paper. And here we did not list the changes but marked in red in revised paper. We appreciate for Editors’ warm work earnestly and hope that the correction will meet with approval. Once again, thank you very much for your comments and suggestions.

References:
