Author’s response to reviews

Title: The characteristics of mixing patterns of sexual dyads and factors correlated with condomless anal intercourse among men who have sex with men in Guangzhou, China

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Author’s response to reviews:

Response to Reviewer 1

1. Title section, line 1-2, page 1: the title has been adjusted as “The characteristics of mixing patterns of sexual dyads and factors correlated with condomless anal intercourse among men who have sex with men in Guangzhou, China”;
2. Introduction section, line 52, page 3: the HIV infection rate means the newly diagnosed HIV infection rate in each year;
3. Introduction section, line 56-57, page 3: the first sentence of the second paragraph has been revised as “Recently, the Chinese government implemented aggressive HIV prevention and intervention programs targeting MSM regarding HIV transmission”;
4. Methods section, line 105, Page 6: I have provided reference for the statement "an estimated xxx in 2008". Unfortunately, I have not successfully found any updated information for the official number of MSM in Guangzhou. Actually, this reference was published in 2016, and I have contacted the author who is working for the Center for Disease Control and Prevention in Guangzhou to ask if there is any updated information about it, the answer was no;
5. Methods section, line 113-116, page 6: added the exclusion criteria;
6. Methods section, line 133-42, page 7: the content of the eco-network has been adjusted to be the first part of measures;

7. Methods section, line 192-205, page 9-10: the social network analysis has been moved to the data analysis part. Q value has been be provided for the egocentric network analysis;

8. Methods section, line 149-152, page 7-8: The items were scored on a Likert scale from 1 through 5. In order to better understand the characteristics of distribution of the score by histogram during analysis, we rescaled the score of each item by multiple 2, so the items were rescaled from 2 to 10 at last;

9. Methods section, line 197-205, page 9-10: the mixing matrices has been moved as part of social network analysis;

10. Methods section, line 156-162, page 8: We have provided more detail to clarify how the CAI measured in the study;

11. Methods section, line 168-179, page 8-9, private or public place, internet or non-internet have been introduced in the measures part;

12. We did some qualitative interviews before the questionnaire investigation, the interviewer indicated that they often played different sexual roles with different partners or with the same sexual partner during multiple sexual acts. So, in this study, we did not measure the sexual roles and sexual identities among the MSM.

13. Methods section, line 189-190, page 9, we provided the more information about GEE model: we used the ID number of participants as repeated subject to account for the correlation clusters;

14. Results section, Table 1: the inclusion criterial required the participants must be 18 or older, so there were no participants in the first row of the table. The missing data means the participants did not know the information about their sexual partners, we have revised it.

15. Results section, Table 2: We have provided notes under the table to assist the readers to understand;

16. Results section, Table 3: We have added "(ref)" to the place with 1.00 the concordant mixing group;

17. English language in this manuscript have been improved by American Journal Experts.

Response to Reviewer 2

1. Title section, line 1-2, page 1: the title has been adjusted as “The characteristics of mixing patterns of sexual dyads and factors correlated with condomless anal intercourse among men who have sex with men in Guangzhou, China”;

2. Introduction section, line 51-53, page 3: the year of the sentinel survey conducted from 2003 to 2014, we have indicated it in the text;

3. Introduction section, line 57-60, page 3: We have revised the sentence and provided reference to it: “Although the implementation of HIV prevention interventions in China has
achieved substantial results in recent years, and the proportion of condom use among sexual partners of MSM has increased, adherence to condom using is difficult to achieve”;

4. Introduction section, line 83-86, page 4: We have added the introduction of the role of social network analysis among MSM to make the mention of social network concept in the paragraph 4 more reasonable;

5. Introduction section, line 90-92, page 4: we have revised the long run-on sentence;

6. Methods section, line 105, page 6: we have replace "lived" with "live";

7. The term "sex partner" repeated throughout this document have been replaced with "sexual partner";

8. Discussion section, line 286-288, page 21: we have revised the sentences as "Previous studies have corroborated the conclusion that young MSM have a higher risk of CAI with sexual partners during anal intercourse, however, our study has identified other influencing factors”;

9. Discussion section, line 288-290, page 21: Based on our relative risk analysis, the results of table 3, we have revised our sentences as “Based on our relative risk analysis, frequently, MSM who were approximately 30 years old and chose younger or older (41 years or older) partners were more likely to engage in CAI than those who chose sexual partners of their same age category”;

10. Discussion section, line 320, page 22: we have changed the word “scholarship” as “researchers”;

11. Discussion section, line 335-336, page 23: we have rephrased the sentence as “Therefore, it may be beneficial to inform the public about the HIV epidemic, including the HIV infection rate each year among different subpopulations”;

12. Discussion section, page 23: we have deleted the third limitation.;

13. English language in this manuscript have been improved by American Journal Experts.

Editorial Policies

1. Declaration section: line 364-385, page 24-25: We have added the declaration section to this manuscript.

2. English language in this manuscript have been improved by American Journal Experts.