Reviewer’s report

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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Reviewer: Bin Yu

Reviewer's report:

1. Abstract: authors used ORs and AOR in the results section, but did not explain. It may be better to remove the numbers, and just describe the findings using the plain text.

2. Introduction: overall, the introduction was not strong, and more work is needed. For example, when authors mentioned the demographic characteristics that were associated with high risk of CAI. More explanation may be needed to clarify why MSM with these factors are more likely to conduct CAI. When authors introduced "however, these studies did not present the social communication characteristics and their relationship to CAI among MSM", what do authors mean by social communication characteristics, maybe more specific.

3. Methods: authors rescaled the STS from 1-5 to 2-10 for better understand the distribution by histogram. I did not see the histogram in the results, and I do not suggest to do the rescaling. At least, the reasons authors provided did not make sense. Condomless anal intercourse used the question "whether they had had condomless insertive anal intercourse xxx", and did authors clarify the MSM to be receptive or insertive in the condomless anal intercourse which may influence the risk of HIV infection. For the occasional sexual partners, it may be better to present the question authors used for the survey. The same question for the private or public place. Authors may introduce the questions they used for data collection instead of the definition of the private or public places. For example, "Do you meet with your sexual partners in private places, including private residence or hotel? With answer options of 1=yes, 0=no". The same for the internet or non-internet. In addition, private or public places, internet or non-internet are not the variable name, and it may be place of first date, methods of making friends, then the options for these questions are private/public, and internet/non-internet.

4. Statistical analysis: "The variables obtained from the univariate analysis were identified as candidates by a Chi square test" did not read good. Maybe just "Chi square test was used for univariate analysis, and variables with p value less than 0.1 were included for further analysis". Since the last table in the paper was the results of regression analysis, I suggest authors to list the statistical analysis by sequence to be consistent with the results.

5. Discussion: MSM who seek sexual partners through internet had lower risk of CAI, and the reason may be that they know the risk of HIV infection, and when they do not know the HIV status of the people on line, they are more likely to use protection. Does that mean the effectiveness of the health education of HIV? More discussion is expected about the young
age of the recruited MSM, and most of them are undergraduate students, does the CDC have any explicit interventions for this special population?

6. Some language and grammar errors, for example page 7 line 143 "by multiply 2" should be "by multiplying 2", page 8 line 151, "seldomly used condoms". A careful review of the language is recommended.

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.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review? If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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Needs some language corrections before being published

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