Author's response to reviews

Title: Knowledge and risk behaviors related to HIV/AIDS, and their association with information source among Men who have sex with men in Heilongjiang province, China

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Author's response to reviews: see over
Response to the Editor

Dear Editor:

Thank you very much for reviewing our manuscript entitled “Knowledge and risk behaviors related to HIV/AIDS, and their association with information source among Men who have sex with men in Heilongjiang province, China.”

We are sincerely grateful to the Editor and the reviewers for our critical and helpful corrections, as well as helpful comments. We revised our manuscript according to the reviewer’s suggestions and comments as described in point-by-point reply and marked them in red on the responding letter.

Furthermore, we will have some other changes:

1. The address of the first author “Liu Shengyuan” have changed into: Department of Chronic Disease, Shenzhen Nanshan Center for Chronic Disease Control, Shenzhen 518054, China.

2. The author Guo Xiaotong was added in the author list because he made great contribution to collection of data and contact of MSM population.
Response to the reviewer (Han Menghie)

1. We have change the original title into: Knowledge and risk behaviours related to HIV/AIDS, and their association with information source among Men who have sex with men in Heilongjiang province, China
2. In methods, Please be noted that the sample (1353) is not randomized.
   Answer: we have deleted the word “random” in the method part in Abstract
3. Reference(1) seems does not match with sentences/contents quoted in first paragraph on concrete data on HIV/AIDS in China. Please double check it.
4. As suggested above, aim of the study need to define in Heilongjiang province. Actually Heilongjiang province has very low HIV relevance in China, barely represent the HIV prevalence, and knowledge and behaviour among MSM in China. For this reason, should give more information on HIV epidemic in Heilongjiang in the background.
   Answer: we have given information on HIV epidemic in Heilongjiang in the background.
5. It's not clear about the operational definition of MSM for this study. No information on inclusion criteria, screening of the MSM who meet your criteria, recruits did not agreed to participate in the study after interview provided necessary information on this study.
   Answer: we have added the details in method section.
6. Need to elucidate briefly on sample strategies used in the study. What is the population size and location sample? "mean Time and Location Sample(TLS)"? or give more detailed. How did proceed to internet recruitment? Sample strategies been used in four cities? Why only select these four cities? What's the rationale for this selection, how sample size in each city been determined?
   Answer: (1) Because the MSM were a special group and were difficult to contact, samples were collected by population size and location sampling, or "a snowball" sampling to obtain a sample. We firstly selected some geographical regions of each city identified as having a high incidence of homosexuality and selected some “important” MSM. Then let them to contact other MSM for us.
   (2)We are sorry to make a mistake. The internet is not a recruitment place but a place of searching sex partners. We have corrected it.
   (3) The four cities are the top four in area and population size, have good coverage and have more concentrated MSM population in Heilongjiang province, so they are optimal to be objective cities. The sample size in each city was determined by the formula: n= [t^2 * P(1-P)] /d^2
7. In HIV infection, the result shows that only 2 of 23 HIV infected MSM had unprotected anal intercourse in the past 6 months( does mean use condom every time?), what's about the behaviors for unprotected anal intercourse among MSM who were tested HIV negative? seems it’s valuable for analysis.
   Answer: it means that the two infected MSM did not use condom every time (the “unprotected anal intercourse” means no condom use every time in the article) in the past 6 months. In the article, we aim to compare the different status of condom use among all MSM population and will consider the behaviors for unprotected anal intercourse among MSM who were tested HIV negative in the future study.
8. It is not clear enough for the discussion on "the lower education level, the less mean knowledge
score. Does imply the people who only had primary education would be difficult for them to understand the basic knowledge on AIDS (8 question asked)?

Answer: we are sorry to confuse you and we have corrected the sentence.

9. Regarding "The study revealed that Harbin, the capital of Heilongjiang province, had the highest risk behaviour with more than one male sex partner, and that Qiqihar had the most frequent sex behaviour with a male sex partner in the past 6 months, better to show the P value.

Answer: we have added the P value.

10. Rethink the conclusion, the recommendation on reduction in stigma, it's obvious very importance, but it seems less related to results of the study. The conclusion should derive from the study itself. The suggestion on promotion of frequent testing may need to think about role and quality of counseling as opposed to the results regarding more testing the more risk behaviour.

Answer: we have changed the sentence.
Response to the reviewer (Chris Archibald)

1. Table 1 is not necessary as the text summary of the table is sufficient to provide the readers with the demographic information of the sample. That way the reader will focus on the main findings and not get lost in a huge table of mostly meaningless numbers.

Answer: we have deleted the superfluous tables and redundant information, but we can’t delete the “%yes” or “%no” in the table 3 (original table 5) since the %no can not be calculate from %yes.

2. More information should be provided in the Methods section about the cities that were studied. How big are they? Are there any clear differences between the cities in terms of ethnic composition, health services, standard of living, etc? This would help the reader interpret the study findings.

Answer: thank you for your suggestion and we have added the information on the cities in the method section.

3. The writing needs to be clarified in some areas. For example, in the last paragraph of Abstract, why is there a mention of antivirus drugs preventing spread of HIV? This point is not mentioned anywhere in the body of the article.

Answer: thank you for your suggestion and we have changed the paragraph in Abstract.

4. In Table 3, the authors listed four outcomes which the first column (Ever have had anal intercourse with a man in the past 6 months) and the second column (Had anal intercourse with a male sex partner in the past 6 months) are the same. Did the authors mean “Ever have had anal intercourse with a man in their lifetime or in the past 5 years” in the first column. Please clarify.

Answer: we are sorry to make a mistake and we have changed the sentence into: Ever have had anal intercourse behavior in the past 6 months

5. The authors categorized education as “#1 education, 2 education, 3-4 education and #5 education”. Did they mean “Years of schooling”? Please clarify.

Answer: In the article, ≤ 1 education means pre-school education and elementary education; 2 education means junior middle school education; 3-4 education means senior middle school education and post senior middle school education; ≥ 5 education means higher education and post graduate education.

6. For income, please specify if it is per month or per year, and what currency was used here, i.e. RMB or US dollars.

Answer: it is RMB per month and we have added it in the article.

7. The results should not be presented by both yes and no in the tables since the % no can be calculate from %yes.

Answer: we have deleted the superfluous tables and redundant information, but we can’t delete the “%yes” or “%no” in the table 3 (original table 5) since the %no can not be calculate from %yes.
Response to the reviewer (George Rutherford)

1. The manuscript needs to be edited by someone with greater fluency in scientific English. Several of the phrases and words that are used (as example, “propaganda”, “rolling a snowball sample” and “sexy partner”) are poor translations.
   Answer: the manuscript has been reedited by a native English speaker.

2. Abstract Line 8 This was not a random sample but a form of a convenience sample (snowball sample), which calls into question the generalizability of the authors’ results. This needs to be clearly stated in the abstract.
   Answer: we have deleted the word “random” in the method part in Abstract

3. What is the definition of MSM? This needs to be defined clearly.
   Answer: we have added the definition of MSM in the method section.

4. What proportion had had anal intercourse in the past six months?
   Answer: we have added the proportion in the article.

5. Was the condom use question restricted to those who had had anal intercourse in the last six months or was it for all MSM?
   Answer: the condom use question was restricted to those who had had anal intercourse in the last six months.

6. Is this analysis restricted to MSM who had had anal intercourse in the last six months? Ever?
   Answer: this analysis is restricted to MSM who had had anal intercourse in the last six months.

7. What proportion of the overall sample provided serum samples for HIV testing? What proportion was found to be infected (it says 2.3% in the abstract but nothing in the text)? This is a major finding and needs to be highlighted.
   Answer: the overall sample (1353) provided serum samples for HIV testing, 31 of which were found to be infected. We have shown the data in the article (in the paragraph title “HIV infection”).

8. Given the way that this population was sampled and the high likelihood of bias, it is likely an overstatement that prevalence is increasing. This statement needs to be softened.
   Answer: thank you for suggestion and we have softened the statement

9. Abstract Line 1 The number of MSM at risk for HIV in China has likely NOT been increasing but rather official perception of their risk has been increasing. This needs to be restated.
   Answer: thank you for suggestion and we have changed the sentence.

10. Abstract Line 8 The sampling framework (four cities in Heilongjiang Province) is not stated in the abstract and needs to be included.
    Answer: thank you for suggestion and we have added the information.

    Answer: It is RMB per month and we have added it in the article.

12. Abstract Line 23 WHO would consider a most at-risk population like MSM with a prevalence of 2.3% to be a low-level epidemic, rather than a concentrated one. The authors do not use this language (they say “moderate”), but I think it would be clearer to conform to WHO usage.
    Answer: we have corrected it.

13. Page 3 ¶2 Line 3 Why would treatment cater “mainly” to infected men? Wouldn’t they exclusively cater to them?
    Answer: we mean that the antiviral treatment just prolongs the life of patients, but it can not
prevent them from death. And the education programmes may prevent people from HIV or AIDS. We have deleted the sentence because it is superfluous.

14. Were any of these questions validated? Had the instrument been used before?
Answer: these questions were validated and had been used before.

15. How many men were asked to participate? What proportion of men asked to participate does the 1,353 represent?
Answer: Because the MSM were a special group and were difficult to contact, samples were collected by population size and location sampling, or “a snowball” sampling to obtain a sample. We firstly selected some geographical regions of each city identified as having a high incidence of homosexuality and selected some “important” MSM. Then let them to contact other MSM for us. Finally, we contacted 1353 MSM who composed of the study population. For those who did not agree to participate, we did not count in the article.

16. The breakdown of testing history seems wrong. The writing seems to imply that the two categories are those that tested in the last year and those that never tested plus those that tested more than one year ago. Is this correct? It might be clearer to break this into three categories (recent testers, past testers and never testers).
Answer: we realized the ignored mistake by your suggestion. But the original aim of the study was just to investigate the testing history of MSM population in the past one year. We will correct the question in future study.

17. Unit of currency needs to be defined
Answer: it is RMB per month and we have added it in the article.

18. What does education level <1 mean? This needs to be defined.
Answer: In the article, ≤1 education means pre-school education and elementary education; 2 education means junior middle school education; 3-4 education means senior middle school education and post senior middle school education; ≥5 education means higher education and post graduate education.

19. The discussion in general is several paragraphs too long and needs to be more focused and shortened.
Answer: thank you for your suggestion and we have revised the discussion.

20. Tables In general, there are too many tables and not enough statistics in them? Is there a way to combine tables or to omit some of the less important data to make them easier to read?
Answer: we have deleted the superfluous tables and redundant information.