Author's response to reviews

Title: The prevalence of sexually transmitted infections among female sex workers from different categories of sex work venues in China

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Author's response to reviews: see over
REPLIES TO COMMENTS FROM TWO REVIEWERS

Reviewer One:
The authors have done a respectable job on responding to the reviewer comments and improving the manuscript. A few extra comments below:

1. I would like the authors to note that the second comment concerns the relative transmissibility of the various STI's, not just the interplay between them. The manuscript would be greatly improved by at least a cursory acknowledgement of the synergistic effects among these STI's and the clinical and public health implications vary across the various combinations of co-infection.

REPLY:
Based on the literatures, the transmission probability per partner for STIs rather than HIV is around 60% [Epidemiologic and microbiologic correlates of Chlamydia trachomatis infection in sexual partnerships. JAMA 1996;276:1737–42. The Natural History of Syphilis. Implications for the Transmission Dynamics and Control of Infection. Sex Transm Dis 1997;24:185-200. The risk of transmission of genital Chiamydia trachomatis infection is less than that of genital Neisseria gonorrhea infection. Sex Transm Dis 1980;7:6-10]. There are some evidence on synergistic effects between HIV and other STIs but data about synergistic effects among STIs rather than HIV are limited. Regarding the clinical and public health implications, we added two sentences: Considering the synergistic effect of STIs on HIV infectivity and susceptibility, effective control of NG and CT is not only important for avoiding the complications caused by these infections but also for prevention the transmission of HIV infection. A high co-infection of CT among FSWs infected with NG further supports the presumptive treatment of the patients with NG for CT.

2. Second, I do not believe the amendment to the sentence concerning sex workers addresses my point about the epidemiological or social credibility of referring to sex workers as "drivers" of the HIV epidemic.

REPLY:
We changed the term of “HIV epidemic” to “STI epidemic”. It is true that FSWs are one of key populations for spread of syphilis, chlamydial and gonococcal infections although the HIV prevalence among this population is still low.

3. Third, the edit in response to my point about the 95% confidence interval overlap is quoted in the response (“As shown in Table 1, compared with that in age group of 15-20 years, older age groups had a significantly higher prevalence of syphilis but lower prevalence of NG or CT.”) but can be found nowhere in the actual text.

REPLY:
We omitted the data of syphilis and HIV because these data were reported elsewhere already. However, considering the comments from Reviewer 2, we added the data of the four STIs (HIV, syphilis, NG and CT) with emphasis to CT and NG. Therefore we only included NG and CT in logistic analyses of risk factors. In response to the comment about overlaps in 95% CIs, we added “as compared with ...” in order to clearly indicate the reference group to be used for the AOR estimation.

4. Regarding format of the responses, it would be helpful if the authors included the text of the actual edits in their responses instead of statements such as "we revised this in the manuscript."

REPLY:
We appreciate this comment.

Reviewer Two:
The revised version of the manuscript looks as another study compared to the first submission.

1. My main concern was on the reliability of syphilis data, since the availability of screening test and non-treponemal test results only are not sufficient to identify persons with active infection from those with previous treatment for syphilis and persons with untreated or incompletely treated syphilis. I suppose that the authors have no access to additional clinical and anamnestic data; therefore, acknowledgment of this limit could have been enough for the purpose of this epidemiological report (e.g., to estimate the disease burden at population level). So, I’m really surprised to see not only the syphilis data omitted, but also the HIV data.

REPLY:
The current study was a laboratory-based estimation of STI prevalences among female sex workers and we did not have an access to clinical and anamnestic data to determine clinically active cases although all the FSWs serologically positive for syphilis were referred to clinics for further evaluation. We omitted the data of syphilis and HIV because these data were reported previously. In the currently revised version, we added the data of HIV and syphilis but reworded the statement as “…high prevalences of syphilis and HIV infections among this population and differences in these two infections between FSWs recruited from different categories of sex work venues were reported elsewhere [9.10],” in the revised manuscript.

2. I have not particular concern about the current paper, but don’t understand why all
these data were removed, since they provide valuable information in a large number of FSWs. So my suggestion is to present yet again the HIV and syphilis data, with the suggested changes or comments, giving a particular emphasis to CT and NG data.

**REPLY:**
We value this important comment and added the data of the four STIs with emphasis to CT and NG.

3. Minor point: AOR in the abstract is still not defined

**REPLY:**
It means adjusted odds ratio. We added this term in the text.