Reviewer’s report

Title: Vulnerability to HIV infection among Female Drug Users in Kathmandu Valley, Nepal: a cross-sectional study.

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Reviewer: Yong-Tang Zheng

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This study investigated the prevalence of HIV infection and analyzed the associated risk factors for HIV infection among 269 female drugs users in Kathemandu Valley, Nepal. The results showed both HIV and the risk behaviours including drug uses and sexual activities were highly prevalent among those participants. Base on the bivariate and multivariate analyses, the authors found HIV infection were associated with older age, history of school attendance, frequent sharing of injection instruments and unsafe sex practices with commercial or casual partners. This is a potential important paper to understand current situation of HIV prevalence among female drug users in Kathemandu Valley, Nepal. However, there are some issues needed to address.

1. In this study, HIV infection is found to be associated with having education history, and authors stated that “Ever attended school” was the most potent predictor of HIV infection and “higher education history remained strong preditors of HIV infection……” In the tables, “Ever attended school” variable were classified into two subgroups (No and Yes). There were no comparison of education levels, only Yes or No. Therefore, I think the statement for “higher education history remained strong preditors of HIV infection……” is without foundation. Furthermore, it’s reported that adult literacy (age 15+) in Nepal was reported to be 60.3% (female: 46.3%, male: 73%) in a 2010 population census. I found this figure is as high as 81.8% (220/269) in this cohort. This maybe mean education is common in Nepal. Therefore, I suggest authors maybe need to classify the education levels in details, then find out the association with the HIV infection and give a conclusion with caution.

2. The result showed that the pepole who have more condom use are more likely to be HIV positive. Authors gave one possible reason “that participants who were involved in commercial sex and knew their HIV infection before the study might have provided socially desirable answers to our interview, or they were really using condoms to prevent HIV transmission to their clients.” Do author have any data about these paraticipants who have been tested HIV before this study to support this possible reason?

3. In results section, authors found HIV infection was associated with older age groups, and Table 1 indicated this association without stastical difference (p>0.05). On the other hand, variables included in the multivariate models were those significantly associated with HIV infection in bivariate analyses. However, we found age variable not only was invovled in the multivariate analyses and it
was also significant associated with HIV infection. Therefore, I wonder why age variable was still chosen in the multivariate analyses? How to explain these results from two analyses?

Other comments:

1. In the abstract section, the number in this sentence “Nearly half (n=132) of the total participants had shared needles or syringes in the past month” is wrong, maybe n=137 shown in Table 2.

2. In the results section, the context of paragraph 6 maybe need to be stated at the beginning of introduction for Table 2. The logic of context for Table 2 is a little confused.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

no competing interests