Reviewer’s report

Title: Gender difference in the characteristics of and high-risk behaviours among non-injecting heterosexual methamphetamine users in Qingdao, Shandong Province, China

Version: 2 Date: 16 November 2012

Reviewer: Robert Heimer

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This manuscript is much improved and makes a significant contribution to the literature on methamphetamine abuse and sexual risk among heterosexual populations. Several clarifications are needed, however, before the manuscript accurately presents the data. Many of these are merely editorial, but two issues do need to be addressed with more than changes in grammar or syntax. I will list these first and then enumerate (with page numbers) the minor grammatical and syntactical points.

First, all but four of the 110 women recruited into the study report behaviors that would lead them to be classified as sex workers. Therefore, the sample tells us little or nothing about methamphetamine use and related knowledge, attitudes, and risk behaviors in the broader population of women who use methamphetamine without injection. This is a limitation to the study that needs to be added to the Discussion.

Second, since almost all of women could be classified as sex workers, almost all the men (277 of 288) reporting obtaining the services of sex workers, and since almost all of them report multiple partners while using methamphetamine whereas only 85 of the 110 women engaging in such activity, it suggests that many sex episodes involve one man and more than one woman. This needs to be explained in the Discussion and might even lead the authors to suggest some form of intervention specific to these kinds of sex encounters.

As for specific editorial changes:

1. In the Abstract, the numbers for age and duration and frequency of methamphetamine use could be reduced to one significant digit after the decimal point.

2. In the Background (line 2 page 2), I am not sure why the parenthetical “(amphetamine and methcathinone)” follows methamphetamine since the two compounds/drugs mentioned in parentheses are not methamphetamine. The parenthetical should be deleted.

3. Background, page 3: It should be noted that the study that found that methamphetamine enhances HIV infectivity in macrophages was conduct in vitro; thus its relevance to in vivo infectivity is speculative. This should be noted in the text.
4. Background, page 3: In the phrase, “...non-injecting heterosexual MA users feature significantly higher numbers of sex partners...”, the word “feature” should be replaced by “report”.

5. Background, page 3: In the sentence, “MA users were more likely to be inconsistent with condom usage and have syphilis.”, “inconsistent with” should be changed to “inconsistent in”. The former phrase suggest dissonance between MA use and condom use whereas the authors clearly mean the MA were more likely to use condoms inconsistently.

6. Background, page 4: In the phrase, “…drug trafficking and abuse have become increasingly popular in the city over the last ten years.”, “popular” should be changed to “common”.

7. Background, page 4: More information needs to be given about what “Iceland” means.

8. Background, page 4, last sentence of section 2.1: Authors need to explain what KTVs are.

9. Methods, page 4: Regarding the sentence, “Community outreach workers visited these venues, approached potential study subjects, and made friends with them in person.” I am not sure that the outreach made friends with the study subjects. The sentence should probably read, “Community outreach workers visited these venues and made the acquaintance of potential study subjects.”

10. Methods, page 5: In the phrase, “the remaining female participants were girlfriends or sex partners of male participants.”, I think it would be clearer if the sex partners were referred to as “casual sex partners” to distinguish them from girlfriends who are regular partners.

11. Methods, page 5: The last two sentences of section 2.3 should be revised to read, “Each topic area was covered by several variables, each in the form of a question. Those diagnosed with STDs were given free and appropriate treatments.”

12. Results, page 6, last sentence of Section 3.2: The authors use the phrase “were willing to abstain from MA” here, but in the appendix that lists the translations of the relevant question, the text reads, “Did it occur to you to abstain from MA?” The meaning of the two phrases is different and the authors should use as the wording in the Results the wording as it appears in the questionnaire.

13. Results, page 7, Section 3.4: A phrase in the first sentence reads, “…most of the male and female respondents used MA only...” This is too non-specific. It should read, “…most of the male and female respondents reported MA as the only drug they used...”

14. Table 5: Some p-values are reported as “0”. They may be vanishingly small, but they are not zero. It would be acceptable for the p-values to be reported a p<0.001.