Reviewer's report

Title: Sexual Behavior and Vulnerability to HIV Infection among Seasonal Migrant Laborers in Metema District, Northwest Ethiopia: A Cross-Sectional Study.

Version: 3
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Reviewer: Loraine Townsend

Reviewer's report:

BACKGROUND
This section is not well developed. While the authors do touch on the broader implications of migrant populations for the spread of HIV and the possible reasons why this might occur, there is little about what other studies have found in relation to high risk sexual behaviour among migrant labourers.

Major revisions:

1. I would suggest that the authors introduce the studies in India, U.S., Kenya, South Africa and their findings with respect to risky sexual behaviour/s in this section. They are currently cited in the Discussion.

2. The authors need to explain what they mean when they state: “Fernandez [6] suggests that isolation leads to increased sexual needs due to differing behaviors while away.” I cannot follow this argument. Perhaps the sentence should read: …isolation leads to increased sexual needs AND differing behaviours while away? Also reference [6] should be placed at the end of the sentence (minor essential revision).

3. Please expand a little on the statement “Social control in migrant communities is often limited, and sexual relationships that are prohibited at home are often possible abroad [4].”

4. STI should be spelled out the first time it is used (3rd para in introduction) (minor essential revision).

5. There is something wrong with this sentence: “With the number of migrants who are at risk of HIV infection continuing to rise, and with the epidemic spreading to rural areas throughout their origin, these issues are all the more timely and important.” Should it possibly read “…throughout their places of origin…”?

6. The following sentence is particularly long and confusing, and the authors are encouraged to revise it. “However, no studies have investigated the mobility patterns of male seasonal migrant laborers, the changes in sexual behaviors accompanying migration, the implications of seasonal migration for the spread of HIV infection, and HIV risk among migrant workers has not been studied despite the potential for migrant workers to rapidly transmit HIV to other populations.”

7. The authors refer to “spouses” in the 3rd and 4th paragraphs of the background. I think a more accurate description would be “spouses and regular
sexual partners”.

METHOD

On the whole this section is well written and clear. I would suggest some clarity and additional information as follows:

Study setting

Major revision: Please indicate in what way HIV prevalence in Metema is elevated compared to where/what other prevalence data referred to in this sentence “Ethiopian Ministry of Health [17] found an elevated prevalence of HIV infection in Metema hospital (7.5%).”

Minor essential revision: Also, place reference [17] at end of the sentence.

Questionnaires

Major revisions: A little more detail is required. For example, give an example of what is meant by “it was modified for the local context”. How many questions comprised the questionnaire?

Major revision:

I suggest the authors include a sub-heading: “Procedures”. This section would use pieces currently in “Data Quality Control” and “Ethical Considerations”, and should include how people were approached, what they were told and by whom about the study, how verbal informed consent was obtained, how many people refused to participate, how the questionnaires were administered and by whom, how long did questionnaire administration take, what level of training was provided to administrators, the venues where questionnaires were administered (issues such as privacy etc.), what measures were employed to try to ensure honest reporting (given the sensitivity of the questions)?

Study variables

Discretionary revision: The authors state that “Dependent variables were risky sexual behaviors [multiple sexual partners in 6 months, unprotected sexual intercourse in most recent non-marital sex] and vulnerability to HIV infection.” Rather state the dependent variables as 1) condom use at last sex, and 2) multiple partners (>2) in past 6 months, which is in line with Tables 3 and 4.

Operation Definitions

Discretionary revision: I don’t believe this heading adds anything to one’s understanding of the variables/data. I would delete this paragraph.

Data analysis

Major revisions:

1. What confounders were controlled for and what was the rationale for including the confounders in the multiple logistic regression models?

2. The Tables (3 and 4) should have footnotes to explain what the AOR were adjusted for.

RESULTS

Major revision: The authors state under the “Strengths” sub-heading that – “some
respondents did not provide actual information about their sexual behavior and practice, a hidden discourse.” How many did not supply information about which sexual behaviours and practice/s? Was any sub-analysis done to see whether those who did not supply this information were perhaps systematically different from those who did? For example, were they consistently older men, men who were married etc. I would suggest that such an analysis is done and reported briefly.

Table 2:
Discretionary revision: Am I reading the information in this Table correctly?: 582 had non-marital sexual partners in past 6 months. Of those only 397 provided responses to using alcohol during sex, number of partners, type of partner, condom use. In other words 32% refused to / did not provide further information. If I am correct, then I suggest it would be a good idea to include this number in the reporting in the Table I (where relevant). For example:
Type of non-marital sex partner (n=397; 185 (32%) did not answer)
Commercial sex workers 293
Girlfriend/casual partner 104

Migration-related characteristics

Minor essential revision: Two-thirds (499(66%)) should read: Two-thirds, 499 (66%)

Risky sexual behaviors of seasonal migrant laborers

Major revisions:
1. What is the difference between having sex with a CSW and having transactional sex? My understanding is that payment is exchanged in both relationships.
2. Where the authors state: “Further, 296/397 (74.6%) respondents had consumed alcohol at their last sex with CSWs”, do they not mean that X% had consumed alcohol at their last sex with non-marital partners?
3. These statements: “Further, 296/397 (74.6%) respondents had consumed alcohol at their last sex with CSWs. Moreover, 283/582 (48.6%) of the respondents had sex with a paid partner in the preceding 6 months (Table 2)” would be more clearly stated as “Further, 296/397 (74.6%) of respondents who had non-marital sex in the previous 6 months had consumed alcohol at their last sex with ….. Moreover, 283/582 (48.6%) of the respondents who had ever had sex had sex with a paid partner in the preceding 6 months (Table 2).

Factors associated with condom use at last non-marital sexual intercourse

Major revisions:
The reporting of findings about condom use is disjointed and confusing. Some issues needing clarity are:
1. Authors state: “Marginal significant variation in condom use was observed among seasonal workers who did not pay when having sexual intercourse with
CSWs (AOR=1.48, 95% CI:0.95, 2.31).” Please explain how it was possible that seasonal workers were able to have sex with CSW without paying.

2. Authors state: “Respondents who paid for sex were less likely to use condom at last non-marital sex (Table 3).” Please explain here (and perhaps elsewhere) what the difference is between having sex with CSW and paying for sex?

3. It is less confusing if authors consistently frame their discussion in the same way that the results are reported. For example, here authors state: “Indeed, more than half of sexually active respondents reported they usually did not use a condom during any sex episodes.” However, when reporting this in the Results, authors states that “42.4% of the seasonal migrant laborers had ever used condoms during any sexual intercourse.”

DISCUSSION

Major revisions

1. Where comparisons to studies done in India, North Carolina and California are made, authors need to provide a rationale for choosing these studies for comparison. (If these studies are referred to in the Background, as suggested, it might become clearer). Were/are there no studies from sub-Saharan Africa that might be equally or more relevant for comparative purposes? I also question use of findings from a study among high school youth and a study among in- and out-of school youth in Ethiopia as comparisons. These youth are not equivalent to the current study’s population. There is some confusion when authors speak about sex with CSW (in India), and also state “Hence, seasonal migrant farm workers engage in high-risk behavior with CSWs.” I am not sure whether the authors are referring to sex with CSW or sex with non-marital sex partner in their own study.

2. Please explain / expand this statement: “In addition to this, the seasonal migrant workers’ personal characteristics or social environment itself may lead to risky sexual activity and initiation of multiple sexual partners [24,32,34].”

3. When discussing condom use, authors state as a possible explanation – “It may be that newer arrivals lack social support or are affected by the new social environment.” This statement needs further explanation. In what way could social support and/or the social environment impact on condom use?

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:

I declare that I have no competing interests