Reviewer's report

Title: HIV vulnerability among female sex workers with a non-paying partner: Evidence from southern India

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Reviewer: Maryam Shahmanesh

Reviewer's report:

This is a well written paper using a large representative sample of female sex workers in India. The problem is clearly posed, the methods are well described and appropriate and the data is sound.

However, the problem though well defined, "exploring the association between FSWs non-paying partner and access to HIV prevention", it is not clear to me why this question has been posed and what the findings mean.

Major essential revisions

Importance of the research question

1. One aspect of HIV prevention that the paper focuses on is FSWs condom-less sex with their non-paying partners. This phenomena has been very well described in the context of many sex worker studies as well as the many reasons e.g. distinguishing paying and non-paying sex, wanting to become pregnant etc. This study does nit reference any of these reasons and instead seems to suggest that condom non-use with regular nonpaying partners is a failure of HIV prevention.

Methods

2. There is no evidence in this paper to suggest that condom non-use with non-paying partners is evidence of high risk in this group of women.

3. A vulnerability index was developed, although this is a good idea, it is not clear what the basis of choosing these variables was and how it was validated. moreover this variable had three components, street based sex work, debt and intimate partner violence. The authors acknowledge that intimate partner violence is very prevalent in India and amongst sex workers in particular. The authors then describe an association between having an non-paying partner and having high vulnerability score. this would seem to be a circular argument. intimate partner violence contributes a high proportion of the score and only people with an intimate partner can explain this form of violence, which is ubiquitous.

4. as the IBBA has both STI and HIV data, the authors could have explored some of these hypothesis with biological outcome and it's not clear why they did not

Discussion

5. On the one hand FSWs with non-paying partners seem to access HIV
prevention and community mobilisation services more than those without. This intriguing and important finding that suggests social capital is not explored to any more than this. It would have been interesting to see to what degree this related to having children (this has been found in other studies in India) are there other more proximal structural factors (e.g. education) or sex work related factors that explain greater vulnerability in women who do not have an intimate partner.

6. The second paragraph of the discussion then contradicts the conclusion by discussing the relationship between condom-less sex and vulnerability scores. There are several flaws to this conclusion, a) as discussed above this finding is questionable due to circularity of the relationships b)

7. The most important flaw is that in all the discussion about lack of condom use with regular non-paying partner, and given the available evidence for treatment as prevention and/or Pre exposure prophylaxis and given the authors are making the case that the non-paying partners are a source of HIV risk it is surprising that there is no discussion of expanding access to HIV testing of FSWs and their partners, so they know their status and can make informed choices about condom use, antiretroviral therapy or per-exposure prophylaxis, ... as part of the package of interventions available to protect the FSWs and their partners in discordant partnerships.

8. The authors point out that the women with non-paying partners are overall more likely to access services and be part of a community based organisation and yet they still assume that even more HIV prevention will lead to "universal condom use" even with non-paying partners.

**Level of interest:** An article of limited interest

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I have no competing interests