Reviewer's report

Title: Predictors of HIV prevalence among street-based female sex workers in Andhra Pradesh state of India: a district-level analysis

Version: 1 Date: 26 February 2014

Reviewer: Brigitte Tenni

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Major Compulsory Revisions

1) The aim is posed in the abstract- “We assessed the predictors associated with HIV prevalence among street-based FSWs.” However it is not explicitly stated in the background and then it goes straight into the methods- need to state clearly the aim of the data analysis.

2) Need to use ‘risk’ and ‘vulnerability’ properly. Risk is the behaviour that has a real chance of acquiring HIV- vulnerability is a set of circumstances or the environment that can increase the chance of taking up risk behaviour. The last sentence in the background therefore needs to be changed- ‘particularly vulnerable to risk working on the street’ does not really make sense- are they vulnerable? Are they at risk?

3) Methods
FSWs behavioural data- last 2 sentences..

A total of 3,271 FSWs participated in IBBA survey round 1 and 3,225 in round 2 of whom 1,728 (52.8%) and 2,436 (75.5%) were street-based FSWs, respectively. This difference in proportions is thought to be due to the sampling approaches in the two rounds.

4) Were the sampling methods for the two rounds of IBBA different? They were described as being the same- “A probability sampling method was used in all districts with conventional cluster sampling used to sample the brothel- and home-based FSWs, and time cluster sampling used to sample street-based FSWs.”

If there is a difference in sampling between the two surveys what is it? And if not can you give a reason for the more than 20% increase in the % of street based FSW over a 3 year period.

5) Discussion paragraph 3

“The HIV positivity was significantly higher in districts where high proportion of FSWs was registered with TIs. As TI strategy is based on the premise that prevention of HIV transmission from FSWs to their clients will likely result in lower rates of HIV transmission, it seems probable that many interventions attempt to register or target FSWs who are already infected with HIV or are at high risk of HIV.” I think this needs further discussion- it shouldn’t be difficult to verify whether
this premise is true- does TI target those that are already positive? If not, you need to explore this issue in more depth- as the findings as they stand could suggest that TI make FSW more vulnerable to HIV??

6) According to table 1- HIV prevalence increased in street based FSWs in two of the 8 districts included- Chittoor and Warangal- a big increase in Warangal- this was not mentioned or explored in the discussion- needs to discuss the differences between districts- why were some so successful and others very unsuccessful?

Discretionary Revisions
1) The data methods are appropriate and well described.

2) Only one significant limitation has been stated. There could be more limitations explored- difficulties in estimating the number of street based sex workers? interventions other than Avahan that could have changed behaviour and influenced HIV status? etc.

3) The title and abstract adequately convey what has been found. The writing is acceptable but awkward in parts- some of this has been pointed out in the ‘minor essentials’ section however it would be beneficial if it was edited by a native English speaker.

4) It would benefit from another table that compares round 1 and round 2 for the variables in table 2.

Minor Essential Revisions
1) Need a reference for number 1- this link does not take you to this information

2) First sentence in the last paragraph of background- need to use HIV not HIV/AIDS. The UNAIDS terminology advises to use HIV & AIDS and only when you specifically need to use both- in this instance you should HIV only.

3) Discussion paragraph 3- “The HIV positivity was significantly higher in districts where high proportion of FSWs was registered with TIs.” Should read “HIV positivity was significantly higher in districts where a high proportion of FSWs were registered with TIs.”

4) Reference 12- link does not work

5) Reference 22- this link does not take you to this publication

6) Reference 23- link does not work

7) Reference 25- link does not take you to this publication

There are some edits in the attached article in the form of sticky notes.

**Level of interest:** An article of importance in its field
Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:
I declare that I have no competing interests.