Reviewer’s report

Title: Characterizing the sexual life-course of women prior to self-reported entry into sex work in south India from a cross-sectional survey: implications for STI/HIV prevention programming

Version: 1 Date: 24 May 2012

Reviewer: Monica Malta

Reviewer’s report:

General

The authors conducted a cross-sectional study with female sex workers (FSW) from India and present an analysis of their sexual behaviors before participants self identified themselves as FSW. Although the authors’ idea is quite original, there are several flaws in their study design. This study is not robust enough to conclusively ‘reconstruct FSW sexual trajectories’. This paper does not meet BMC Public Health standards, but could be resubmitted to another journal (most probably as a short report)

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Major Compulsory Revisions

1. The authors dichotomized their sample into “devadasi” and “non-devadasi”, however it is not clear why they did it. Are devadasi more at risky for HIV/AIDS and other sexually transmitted infections? If so, they need to explain why. Also, the sample was initially dichotomized, but all analysis were conducted using all participants. Its very confusing, is it important or not for a FSW to be considered a ‘devadasi’? and if this group is important somehow, then all analysis should compare devadasi and non-devadasi... for instance, the abstract present percents for all participants, there is not a single result comparing devadasi vs. non-devadasi FSW...

2. Key study assumptions are just too flaw... to ask a FSW exactly when she started considering herself a sex worker is a very complex question, each participant can define ‘sex work’ in a different way. For instance, some might say that since they started receiving gifts, drugs or money for sex, they became sex workers. Others might only consider sex work when they started receiving money. Others could even not consider sex work when their clients are ‘regulars’, therefore, perceived as stable/long-term partners...Its just impossible to standardize this. The research question is very important, but seems more suitable to be answered using a hybrid study design that includes qualitative data.

This reviewer strongly recommend authors to conduct multivariate analysis,
percents and exploratory analysis are interesting, but completely inadequate for a scientific paper based on cross sectional study...

INTRODUCTION: Please include one paragraph describing the Devadasi tradition and why it increases FSW vulnerability into HIV/AIDS and other STI.

INTRODUCTION, 2nd paragraph: “21% of FSWs are HIV positive before their second year in sex work” - please include here more info about this data, is it based on a representative sample of FSW? If that’s the case, how the study was able to collect representative data from a hard to reach and hidden population such as FSW?

INTRODUCTION, 3rd paragraph: “until they self-identify as sex workers, they will not have direct access to established HIV prevention programs”. Please explain this statement. Only sex workers have access to HIV prevention programs in this region? What about women (non-sex workers)? there is no intervention in place targeting this group?

METHODS, 1st paragraph: Is registration into preventive programs compulsory? If not, how is it reinforced among FSW from this region? According to authors, “An estimated 20,493 women practice sex work across the three district” - please explain how this estimative was reached, and how reliable it is.

METHODS, 1st paragraph: “We used conventional cluster sampling with probability proportional to size of the enumerated FSW population in each village within the three districts.” The authors included ONLY FSW engaged in some HIV prevention program, is this correct? If that’s so, the sample is completely biased towards those with access to NGOs and/or health facilities, and this must be acknowledged.

METHODS, statistical analysis, 1st paragraph: Please include the time period for condom use (lifetime? last month? last 6 months?).

METHODS, statistical analysis, 2nd paragraph: “partnership status at time of self-reported entry into sex work.” - this variable needs to be explained. What if a FSW has several sexual partners, some regular clients and other not. Regular clients were considered long term partnerships? It seems confusing to consider a regular client to be a stable relationship..., how was it recorded?

Why the authors considered “sample size within categories was greater than 10”? Please explain.

RESULTS

Is there any information about those who refused to participate (almost one-quarter of your sample size)?

My key concern here is that authors conducted only exploratory data analysis, not robust enough to underscore any research hypothesis at all... Table 1 and 2 are informative, as well as the figures... My criticism here is about the research question and how it was measured. If the key point was to better understand the
so-called ‘transition period’ from sexual debut into engagement into sex work, a clear time point should be provided to all participants. For instance, the authors could explain that sex work engagement will be measured as any sexual contact where one received money, gifts or drugs. Since the authors let each participant to consider ‘sex work engagement’ according to their own perception, the variable was not measured in a standardized manner. What was considered by one sex work as engagement in commercial sex, could be considered by another women as receiving a ‘gift’ from her partner... This confusion makes all analysis less reliable and, therefore, conclusions not sound enough...

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

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'