Reviewer’s report

Title: The prevalence of sexually transmitted infections among female sex workers from different categories of sex work venues in China

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Reviewer: mario cruciani

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The study is an epidemiological survey in a difficult-to-reach population. Despite limitations in the study design (a convenience sampling), it provides valuable information. I have few points to address, as specified below

MAJOR POINTS

For syphilis diagnosis, the Authors use an ELISA screening test and a non-treponemal test (TRUST). However, a case definition of syphilis requires positive treponemal and non-treponemal tests and consistent clinical and physical findings. Actually, a positive treponemal test alongside a positive non-treponemal test could represent an active disease, latent infection, prior treated infection, or a serological scar. The main limitations of non-treponemal tests are their reduced sensitivity in primary syphilis and late latent syphilis, false-positive results due to cross-reactivity, and the potential for false-negative results due to prozone reactions. In the current study, it is not completely clear how were syphilis cases defined. Were both the screening test and non-treponemal test required for a case definition? In this case the reduced sensitivity of non-treponemal test may have underestimated the actual prevalence of positive syphilis tests. By contrast, the treponemal screening EIAs test and the treponemal tests generally remain reactive for life, and this could be misleading in individuals who no longer have active disease. Thus a diagnosis of active disease require nontreponemal and treponemal tests positivity and clinical signs of active disease; while latent syphilis is diagnosed when nontreponemal and treponemal tests are positive in the absence of symptoms or signs of active syphilis.

The current study doesn’t provide the results of the confirmation test (the treponemal test). This limit needs to be acknowledged and discussed. Moreover, if possible, the authors should provide more information on stage of disease and previous penicillin treatment of the FSWs with positivity of syphilis test.

What happened to subjects that tested positive for HIV, syphilis or other STD? Were they addressed to a clinical centre in order to receive treatment and follow up? Please, give some information about the post screening management of FSWs

Table 2:

Independent factor: Being 21-25 yrs old in footnote B. There is logical
incompatibility between the category “being 21-25 yrs old” and the reference group of FSWs aged 25 yrs or younger. Actually, for a multi-level categorical variable, the reference category cannot overlap the category under examination (“independent factors”)

Minor Points

ABSTRACT: AOR: when used for the first time in the text abbreviations should be clearly defined

Table 2:
NS: I suppose is the abbreviation for not significant. The current sentence (is not the factor....) doesn’t make sense.

Level of interest: An article whose findings are important to those with closely related research interests

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' below