Reviewer’s report

Title: Concurrent sexual partnerships and associated factors: a cross-sectional population-based survey in a rural community in Africa with a generalised HIV epidemic

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Reviewer: Warren Parker

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Concurrent sexual partnerships and associated factors: a cross-sectional population-based survey in a rural community in Africa with a generalised HIV epidemic

1. The article outlines findings made utilizing recently recommended measures of concurrency in relation to HIV seroprevalence in Uganda. A main finding is that there was a wide proportional gap between males and females who reported concurrency.

The results are clearly and concisely presented and are logically organized. The methods are appropriate and well described and the data is sound.

2. [Discretionary] The background highlights general information relating to concurrency and HIV. It would be useful to add a few references to the variations in epidemic patterns in sub-Saharan Africa – in particular patterns found in southern Africa in comparison to east Africa. Important differences include marital prevalence, polygamous marriages and age at first marriage.

3. [Discretionary] Discussion on setting: While this is concise, one could leave out non-pertinent information such as “whose staple diet consists of matooke (cooking bananas) with groundnuts”… “the main income-earning activities are growing bananas, coffee and beans, and trading produce including fish”.

4. [Discretionary] In the presentation of results/discussion there was a linking of HIV status of spouses “eg. There was no evidence of an association between concurrency and HIV prevalence among spouses”. This is not adequately addressed in ‘data collection’ methods.

5. [Discretionary] In the statement below, the reference to sub-Saharan Africa, preceding the statement about ‘one third’ polygyny, makes it appear as if this is generalizable to the region. It would be useful to say ‘a third of concurrency in men IN OUR STUDY (or IN THIS AREA OF UGANDA), is accounted for by polygyny.

“So far as we are aware it is the first population-based survey to measure the prevalence of concurrency in sub-Saharan Africa using the new standards. Secondly, we examined polygyny as a separate and important form of concurrency, finding that a third of concurrency in men is accounted for by
polygyny, and polygynous men are significantly less likely to report extramarital partnerships or non-spousal concurrency than are monogamous men."

6. [Discretionary] There appears to be a contradiction between the following discussion statements:

“Our findings are therefore in keeping with the hypothesis that concurrency is not associated with an increased risk of HIV infection in an individual who has concurrent partners, but of increased transmission to that person’s partners [20].”
and

“However the lack of evidence in our study of an association between concurrency and higher HIV prevalence among spouses may be due to the limited ability to assess HIV transmission using cross-sectional data.

7. [Discretionary] Although a main conclusion below is that ‘deep rooted social, economic and cultural determinants of gender dynamics’ underpin concurrency, there is very little in the article that elucidates or validates this point (which mainly seems to relate to relationships between older males and younger females). For example, elsewhere it is mentioned that behavioural factors associated from males and females were the same – (young age at first sex, increasing lifetime partners, and a casual partner in thepast year).

“The HIV prevention efforts in many countries in sub-Saharan Africa now include campaigns aimed at encouraging people to avoid concurrent partnerships (“get off the sexual network”). Our findings emphasise the importance of framing these HIV prevention efforts in the context of the deep-rooted social, economic and cultural determinants of gender dynamics.”

8. [Discretionary] It should be highlighted that one limitation of studying concurrency in surveys is that exposure to a concurrent partner is not readily measured, and this has an important bearing on associated HIV prevalence data. Additionally, the difficulties in using cross-sectional HIV prevalence data with respect to the temporality of HIV incidence should be mentioned as a limitation that makes it difficult to draw conclusions between measured HIV positive status in a survey and associated current behaviours/practices.

9. [Discretionary] The conclusion: “Our findings provide a baseline from which to measure concurrency and HIV incidence in future surveys” would appear to require a methodology that links sampled respondents over time. It is unclear whether the present data involves linking of respondents over time.

10. [Discretionary] With regard to Bertrand et al., suggesting moderate effects or no change from mass media campaigns, it is important to note that DHS and other national survey data illustrate increases in key HIV prevention behaviours (eg. condom use) and practices such as HIV testing over time. Such changes are related to national responses to the epidemic that include mass media communication, but are not readily demonstrated as a product of requiring

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests'