Author's response to reviews

Title: Porn video shows, local brew, and transactional sex: a risky combination for HIV infection among youth in Kisumu, Kenya

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Author's response to reviews: see over
Dear Dr Olufunmilayo Fawole

Thank you very much for giving us the opportunity to resubmit our paper entitled “Porn video shows, local brew, and transactional sex: a risky combination for HIV infection among youth in Kisumu, Kenya” (MS: 1677634364526859) to your journal. We also want to thank the reviewers for their valuable comments.

Below you will find a detailed account of how we have addressed the two reviewers’ comments in the revision of our paper. We have addressed all of the first reviewer's comments and most of the second reviewer's comments. The second reviewer’s requests for statistical analyses are difficult to address, as they are not applicable to our qualitative research design.

We hope that this time you will find our paper suitable for publication.

Yours sincerely, also on behalf of my co-authors,

Carolyne Njue

**Reviewer #1:** Catherine Pirkle

*Suggested Revisions:*

**Major revisions:**

1) This paper devotes a lot of attention to female vulnerabilities. This is important, but it is also important to discuss how prevailing norms on masculinity influence risk in both men and women. Findings from this study point strongly to the role of men in perpetuating the local epidemic (forcing sex, gang rape, multiple concurrent relationships). Additional discussion needs to be given to male gender roles (the discussion section focuses almost exclusively on young women while the conclusions do a better job at discussing men and male gender roles).

We have included a paragraph (page 12) in the discussion on male gender norms and their role in perpetuating the local epidemic:

“Our findings point to gender-related power differences that expose young girls to HIV risk. Power-related differences manifest themselves not only in relationships, but also in the belief and structure of society [23]. For example, pre-marital and multi-partner sex, while typically portrayed (in Kisumu and elsewhere) as a breach of social norms, is also said to be a fundamental dimension of gendered social organization [24]. Men in settings like Kenya generally are expected to conform to a range of behavioural norms that confirm the hegemonic masculinity [25]. People consider it as a right and
necessity, and part of the tradition, that men have more than one partner [26]. Pressure to be sexually adventurous and aggressive to prove manhood is quite pervasive in Africa. These norms allow men to have more sexual partners than women, encourage older men to have sexual relations with younger women, and increase the acceptance and justification of violence against women. It is not surprising therefore that our findings show that male partners force sex, perform gang rape, and have multiple concurrent relationships. Such norms and societal power relations consistently tend to disadvantage young women, as evidenced by the high incidence of transactional and coerced sex in many sub-Saharan countries [27]."

2) The conclusions to this paper are too far reaching for the results presented. The first part of the conclusions appears to be a laundry list of suggestions. This section could be more focused.

We have made an attempt to make it more focused, and confined the suggestions to three of the most concrete ones (page 14-15):

“Our findings have important implications for youth interventions. First, intervention strategies should engage young men in HIV prevention. Men in settings like Kenya generally control the terms and conditions of sexual relationships. Thus, we need better strategies to engage men, and effective interventions to change their attitudes and behaviours related to power and control in relationships. Interventions should promote more positive and safe actions like having respect for women, having one sexual partner, using condoms, and knowing their HIV status. Second, young girls should be empowered in several ways. They should be taught how to negotiate safe sex as part of the transactions in transactional sex. Their poverty should be addressed, e.g. through income generating activities or programs that keep them in school. For example, there are indications that programs which give loans to young women or youth groups, such as the Youth Enterprise Development Fund by the Kenyan government, are reducing the number of young women who have to exchange sex for money or who become teenage mothers [50]. Third, the government should regulate and monitor video shows and local brew dens, to prevent the exposure of young adolescents to pornography, drugs and alcohol. Legal action should be enforced on video hall and local brew den owners who promote pornography and/or alcohol consumption to youth. Instead, risk-free leisure activities should be developed for youth.”

Minor revisions:
1) In the background, in paragraph 2 (page 3), sentence three is superfluous and does not add to your overall point, which is to help explain the rationale for studying the sexual interactions of adolescents. This information is better placed in the discussion section on page 10, paragraph 3, when you discuss that many youth were orphans.

We have moved it to the discussion section (page 13)

2) In the last paragraph of the method’s section, disco funerals are discussed. I do not think that this is the appropriate place for this paragraph. It is confusing here. Disco funerals should be defined in the results section when they are first mentioned. If the authors deem it important, they could perhaps further discuss disco funerals in the discussion.

This was adapted in the paper. We have removed disco funerals from the Methods and defined disco funerals when they first appear in the Results and added a short paragraph in the Results:
“Even among young men with a steady partner, it was common to have brief sexual encounters on the side, for example while at the video halls or attending a disco funeral. These ‘disco funerals’ are parties held by the relatives of a person recently deceased, in order to raise funds for the funeral. The disco funerals are characterised by loud music, singing, dancing, bidding games and risky sexual behaviour. Because we have described these events (in which Kisumu youth engage in risky sexual behaviour) in a separate paper, we do not elaborate on it here [20].”

3) Do you know the average age of the adolescents interviewed in this study? It would help with the interpretation of the results. For example, the importance of the finding that 49% of women have ever had sex is different if the average age of women studying is 15 versus 19.

We have now included the average age of adolescents interviewed in this study in the first paragraph of the results (page 6):

“The average age of adolescents interviewed in the study was 17.5 among boys and 17.0 among girls.”

Discretionary revision
1) Shorten title- For example, instead of stating “porn video shows,” replace with pornography. Shortening the title will help to make the article more catchy to potential readers.

We agree making it shorter would be better. However, we think that ‘pornography’ is quite general and different from ‘porn video shows.’ The phenomenon of porn video shows has not been previously discussed in literature. As such, we propose to rename it: Porn video shows, local brew, and transactional sex: HIV risk among youth in Kisumu, Kenya

Reviewer #2: Ayo Adebowale
Major Compulsory Revision
1. Introduction
The introduction gives quite a bit of detail and a good overview of HIV and sexual behaviour among youths. However the introduction could probably be better structured and should definitely be more focused around some of the key issues, which are currently slightly “buried” in the text. Perhaps it could be structured as follows:
# What do we know about youths and sexual behaviour and what is the transmission risk for HIV in this context?
# What do we know about the local context?
# Why do we need a study on this and what are our expectations?
# What are the aims and objectives of this study?
# Why are the target variables viz-a-viz porn video shows, local brew and transactional sex selected for the study? Insights should be given on these variables.
All these should be made clear from the onset.

We shortened the introduction and tried to adapt it according to the suggestions of the reviewer, to give it more focus (Page 3-4).

As for the last point, we would like to clarify that these topics were not “selected”, but these themes emerged from the qualitative analysis as important factors in the sexual experiences of youth that may
further clarify the HIV epidemic. They were not ‘target variables’ which is a term more appropriate for quantitative research. Such ‘emerging’ topics are common in qualitative research - a researcher does not always know a priori which topics/areas are important for the study’s objective. Ref: Strauss, A. and Corbin, J. (1990) Basics of Qualitative Research: Grounded Theory Procedures and Techniques. Thousand Oaks: Sage. In the paper we added:

“Data analysis of the in-depth interviews, FGDs and observations followed grounded theory principles, which allows analytical themes to emerge during the process of (re)reading transcripts and exploring and coding responses [17]. This approach is based on inductive analysis and consists of carefully reading/rereading interviews and observations, exploring and coding responses, and allowing new themes, issues and questions to emerge during the process.”

2. Methods:

The authors stated that they used convenience sampling to select 75 boys and 75 girls aged 15-20 years who were interviewed at their households. I don’t think this is appropriate for a cross-sectional survey. Simple scientific and probabilistic approach could have provided a better and reliable result. This is a critical part of the study design and needs more detail and clarification.

Maybe the term cross-sectional study confused the reviewer, as it is also used in quantitative research that studies prevalence. However, many qualitative studies also use the term to indicate that a cross-section of the population under subject is being studied. We now skip the term in our revision, to avoid confusion. We used purposive quota sampling: this means quota samples are collected using a set of a priori criteria (in our case: age, gender, socio-economic status, educational status, residence). The objective of this purposive sampling was to obtain ‘maximum variation’ of potential participants. The quotas for each criterion were chosen in a random manner: interviewers picked households at random intervals, and checked whether the household included a participant fitting our quota criteria. When consent was obtained, that participant was interviewed. The next participant was recruited from a new household. So we did use a probabilistic approach, embedded in purposive sampling, which is common for qualitative studies. Qualitative studies do not use representative samples like quantitative surveys: qualitative studies aim to explore the variety of experiences related to a particular study topic, in our case adolescent sexuality. In studying these experiences, it is key that all (sub)groups are heard, even when they are minority groups. The number of participants sampled was fairly high (total of 150), as this would ensure that we reach data saturation, i.e. the number of participants will be sufficient to explore all possible experiences. Therefore we have used quota samples of different criteria (age, gender, social economic and educational status, residence), to make sure that young, low SES and out-of school youth were equally heard as older, higher SES and in-school youth.

# Sample size: A justification for the chosen sample size (n=150) should be given, ideally in the form of a sample size calculation. Although, this may not appear in the final write up but will provide useful information for the reviewer. Also, the authors should justify the rationale behind the selection of 4 FGDs and 48 observations.

Because this is a qualitative study, sample size calculations are not possible. These are only possible if you have one primary outcome, for which you want to be able to distinguish groups (in a comparative study) or improvements (in an intervention study). In qualitative studies, sample sizes are determined in several ways, depending on the study design. In our case, we wanted to have maximum variation and thus aimed for a high number of in-depth interviews (75 girls and 75 boys), as this would allow us to reach data saturation (i.e., more, additional interviews would not produce new data, but only confirm the data found in previous interviews). This number allowed for a good reflection of the population studied.
which is youth in general). The selection was done in a probabilistic manner, going to random households in the selected neighbourhoods (with random intervals between households) and verifying if the household includes a youth that fits our quota criteria. We did the same for FGDs and observation samples and conducted FGDs and observations to the point where a new FGD/observation did not produce additional, new information (data saturation). Ref: Koerber, A. and L. McMichael (2008). "Qualitative Sampling Methods." Journal of business and technical communication 22(4): 454-473.

# The authors tried to minimize information and response bias by training the interviewers and pre-tested the instruments. However more details should be given on the actual interview process. Was this standardized? Were respondents allowed to self-complete the questionnaire? or was this a closed interview (the answers may be very different, depending on the mode of completion and an anonymous self-completion questionnaire may elicit more “honest” answers).

Since these were in-depth, qualitative interviews, the issue of respondents’ self-completing a questionnaire does not apply here. Our qualitative interviews aimed to solicit an open-ended conversation, on sexuality-related topics. By using multiple, trained interviewers and pre-testing our open-ended questions, we aimed to reduce both interviewer bias and response bias. In open-ended questions, the respondent is not directed to respond in any way, unlike closed questionnaires where the respondent has to choose a particular answer from a fixed list. We hope that this is clear from our description/methods. The training of interviewers (which included role-playing) focused on a thorough understanding of the qualitative interview process and, in particular, how the interviewer’s role may influence this process (by verbal and non-verbal behaviours) and how to minimize this influence. Contrary to what the reviewer writes, questionnaires do not necessarily produce more "honest" answers. Plummer et al (2004), shows that in-depth interviews produced more honest answers about sexuality. She also stated that participant observation was the most useful method to understand "the nature, complexity, and extent of sexual behaviour." Ref: Plummer, M. L., D. A. Ross, et al. (2004). "A bit more truthful": the validity of adolescent sexual behaviour data collected in rural northern Tanzania using five methods." Sex Transm Infect 80 Suppl 2: ii49-56

# How did the authors recruit the in-school participants? Were they selected on sight or in their schools? This is necessary as some out of school youths can claim to be in-school. This has the tendency to distort the results when making comparison between the two groups.

Being in school or not was self-reported information. We have described the recruitment (sample selection) in previous answers, and in the article’s method section. We asked respondents’ personal claims of educational status (sometimes validated by other household members during the recruitment process), which is a standard research practice. The reviewer seems to suggest other methods should be used to verify educational status, but this is not commonly done. Even in quantitative studies (and large scale DHS surveys), respondents are not asked to supply (physical) proof of educational, marital status, and other demographic information. Furthermore, information on educational status was not all that important in our analysis.

# Using observation method for a study like this is quite wrong. Yes, it is agreed that data can be collected by observation, however, using the method can bias the results as individual behaviors can be affected by numerous psychosocial and bio-demographic factors other than the one been investigated. The authors should explain how they accounted for these possible confounding variables. Authors should also note that, estimating an individuals’ age by observation is very unlikely to produce good
result as age is a fundamental variable in this study. The study is age specific. The authors should address this.

The reviewer uses terms like confounding variables which are not really appropriate for our type of study. We would argue that observational methods are highly appropriate for our study: if a number of our young respondents reveal in interviews that they attend porn video shows or frequent local bars, doing observation of those sites is a valid way to proceed. Interviewers visited these sites anonymously, and recorded their observation notes after the visit.

Referring to Plummer et al (2004), the method of triangulation of FGD, interviews and observation is a strong point of our study, instead of a weakness. It is a widely used approach in qualitative research. Many youth discussed video halls and local bars in the in-depth interviews, and this is why we did observations in those sites, to learn more about what is happening – strengthening our research. Observations were done by multiple observers at different sites, without disclosing their observer status, at random and varied times, all aimed at reducing observer bias. They were instructed in note-taking to focus on objective description of the setting and activities - what they see and hear -, and avoid personal judgments of observed behaviours. Nonetheless, it is true that age is difficult to estimate from observation. We have included this in the paragraph on weaknesses of this study: “Age was difficult to estimate from observation.”

Observation also cannot account for outside variables that may affect behaviours but this does not invalidate the method. Observation is also commonly used in psychological research to assess psychological factors. When our team visited these sites, observation sometimes did reveal psychological factors, when people who are being observed verbally express their feelings and emotions or react to situations in particular ways. We acknowledge that there is a potential observer bias but this does not invalidate observation.

3. Results
These are few comments on this section;
# The section is quite descriptive. Research worldwide has gone beyond using reporting study results without p-value (statistical significant). This is necessary to justify the integrity of your major findings.

P-value is not applicable to the aims of our type of qualitative research, which was to describe particular aspects of young people’s experiences with sexuality. The reviewer seems to want us to do statistical analyses (p-value, multivariate analysis, etc. which are relevant for quantitative survey data) on qualitative data. This is not the purpose of our type of qualitative research.

# The results should be better explained with tables so as to see the distribution. Two or more frequency tables and cross-tabulation should be included by putting them into context to provide an overarching picture.

Adding frequency tables would be confusing as it might give the impression one is doing quantitative research which this is not. Furthermore, some topics arose in some in-depth interviews, but not in others, which makes it impossible to give frequencies. We do report numbers of youth interviewed who display certain behaviours or characteristics in order to show how frequent this behaviour/characteristic is mentioned in our sample. This is common in presenting qualitative research findings.

# Report your results in percentages; avoid using statements like; over half, about a third, a few, many and so on.
We have given percentages where possible.

# The results from the in-depth interview could be analysed with Chi-square and other statistical models. A multivariate model is equally suggested. This will not only make the write up a novel, but will magnify its quality.

As discussed in previous responses, our qualitative research aims to describe behaviours, situations, experiences, not to generalize at population level. We aim to provide a detailed, in-depth description of these situations: one cannot do multivariate analysis on this type of data. What would be needed for multivariate analysis are standardized answers to a quantitative survey of a large, random population sample.

# The authors should learn on how FGDs results are interpreted using tables. For instance, assigning + or - to responses to questions in FGD guide.

Once again, while this is possible in certain types of qualitative research (e.g., market/opinion research) and mixed-method (qual-quantitative) research, this was not our objective for the FGDs.

# The researchers should not focus only on availability of local bars, brew dens and pono video but on number and percentages of young men and women that their patronage of these centers had influenced their decision on having sex.

We have quantified the number of adolescents who report to attend local brew dens/porn video shows and who report to be influenced by it, and we mention these numbers in the revised paper: “A third of the youth interviewed (49) report porn video shows either from personal attendance or as an influence on youth sexuality.” “During interviews over a third (56) of youth interviewed (mostly boys) said they have gone to drink in these local dens.”

Minor Comments
# A large part of the discussion repeats some of the main results. This could be shortened. Some results may be omitted. Instead more focus should be given to contextualize the meaning of the main findings within the available literature.

We have tried to adapt the discussion section according to the suggestions of the reviewer. We have reduced the paragraph summarizing the results and avoided repetition in the discussion.

# There is no discussion of the strengths and weaknesses of the study. This is essential, particularly in view of some of the methodological issues raised above (e.g. possible selection, observer and information bias, issues of generalizability). The authors should try to quantify biases as much as possible and report how they tried to minimize them and what effect they think this may have on the main results.

Our original paper did have a paragraph on limitations (page 11), which also discussed generalizability and possible biases.

There are a number of limitations that should be considered when interpreting the results. Because we used purposive quota sampling, it cannot be concluded that our results are fully representative for the total Kisumu youth population. Age was difficult to estimate from observation. We relied on
participants’ self-reports and there is a possibility of social desirability bias particularly among girls who may have underreported sexual experiences. Caution is also suggested when generalizing our findings to other settings and populations, because the urban environment may have influenced youth norms regarding sexuality. Despite these limitations, the study was able to generate rich, descriptive data obtained through method triangulation, including new knowledge on a previously unstudied aspect of HIV risk- pornographic video shows. The high number of interviews held and the use of quota sampling ensured that the views of diverse youth (both girls and boys, in and out-of-school, in different SES) were incorporated.

The reviewer’s suggestion to quantify bias is one that applies more to quantitative, large-scale survey research, but is not done in qualitative research.

# The conclusion should be clearer and more targeted – i.e. what can we learn from this study.
This was adapted in the paper.