Reviewer's report

Title: Driving Force of Condomless Sex after Online Intervention among Chinese Men Who Have Sex with Men

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Reviewer: LaRon Nelson

Reviewer's report:

The scientific premise of the study appears to be flawed. The secondary analysis aims to test what factors may attenuate or optimize the effectiveness of two online HIV risk-reduction interventions for Chinese MSM. Here are some key points that informed my assessment that the manuscript should be rejected:

1. It is not established in this paper that either of the interventions were effective. The paper only presents evidence that there was no difference between the crowdsourced video and social marketing video on reducing condomless anal sex. This is not the same as establishing that both interventions are effective.

2. The paper presents that condomless sex in the interventions decreased to 52.1% and 49.6% in each of the interventions. It is not clear whether these were statically significant reductions in condomless sex from baseline.

3. The finding that people who were community engagement in sexual health at baseline was associated with reductions in condomless anal sex at follow-up seems to suggest that the intervention may not be responsible for the effect on condomless anal sex.

4. The community engagement tool is described as a scale. It will be important to present specific information about its validation with Chinese MSM and its basic psychometric properties.

5. A further important flaw in the design is that there is not a comparison group to determine whether the reductions in condomless anal sex are due to the online interventions. This cannot be overlooked given that the authors have proposed this paper as investigating the impact of specific
factors on intervention effectiveness, without first establishing that the interventions are effective.

6. Table 1 included transgender as a sexual identity. It is a gender category, not a sexual identity. It would be acceptable for their study to have included transmen who have sex with men; but, this conflicts with the inclusion criteria which indicates that participants were biologically male at birth. This leads me to conclude that perhaps transwomen were in the study sample. Either way, this further limits my confidence in the study methods, results and interpretation.

Overall, the design and methodological weaknesses of the paper render it unsuitable for publication.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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