PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Effect of a web drama video series on HIV and other sexually transmitted infection testing among gay, bisexual and queer men: study protocol for a community-based, pragmatic, randomised controlled trial in Singapore – the People Like Us (PLU) Evaluation Study
AUTHORS	Tan, Rayner Kay Jin; Koh, Wee Ling; Le, Daniel; Tan, Avin; Tyler, Adrian; Tan, Calvin; Banerjee, Sumita; Wong, Chen Seong; Wong, Mee-Lian; Chio, Martin; Chen, Mark I-Cheng

VERSION 1 – REVIEW

REVIEWER	Jeb Jones Emory University, United States of America
REVIEW RETURNED	09-Oct-2019

GENERAL COMMENTS	This is a well-written protocol of a pragmatic trial of a video-based HIV/STI prevention intervention. The primary limitation that needs more thorough discussion is the issue of contamination. The protocol specifies that "participants will be asked if they ever watched a web drama series by Gahyealth.sg or AFA launched in the past year without naming the actual series to avoid further contamination." The lack of specific information provided to participants is likely to lead to under-reporting of viewing the web series, which would lead to undetected contamination. It would be good to include a brief discussion of this.

REVIEWER	Kimberly Green PATH, US and Vietnam
REVIEW RETURNED	08-Dec-2019

GENERAL COMMENTS	This is an interesting paper that defines a protocol to measure impact of a web-based drama series on HIV and STI testing uptake among young gay, bi and queer men in Singapore. Introduction: 1) There is a significant focus on interventions and evidence related to HIV testing uptake among young gay, bi and queer men (GBQ) outside of Singapore (Australia, US, Peru). It would help to ground the rationale for this study by citing what HIV testing demand generation efforts among young GBQ that have been applied and evaluated in Singapore. 2) There is reference to a regional study but no data on HIV testing uptake, and the first 90 gap, among young GBQ in Singapore. Please add this data/information if it is available. 3) Similarly, it is not clear what HIV testing services are in place in Singapore (only facility-based?) and what barriers exist in terms of

	young GBQ individuals in accessing these HIV testing services and how is it theorized that the web-based series will help to overcome these barriers. 4) Page 8, Line 6-12: Please consider description of social media campaigns. There have been and are a number of social marketing campaigns focused on HIV testing among MSM in Asia. These are not the general population campaigns that are defined on page 6 and 8. These are targeted campaigns (Eg I Test. Do you? In Vietnam; APCOM's TestBKK, TestJakarta etc campaigns in several localities, and many more); Page 8, Line 13-19: Please add a citation that underpins this statement. 5) Page 8, Line 29. Suggest including a link to the first series of People Like Us so readers have the option of learning more about it. 6) Limitations: Not being able to confirm that a study participant actually had an HIV or STI test as a result of the intervention is indeed a significant limitation. Is there any way to partner with GBQ-friendly health facilities to confirm HIV and STI testing uptake of those that opt to test there?

REVIEWER	Javier Mariani Hospital El Cruce. Argentina
REVIEW RETURNED	21-Dec-2019

GENERAL COMMENTS	Authors report the protocol of a randomized controlled trial to evaluate the effects of a wed-based videos series on the attitudes toward HIV testing among negative HIV gay, bisexual or queer mens in Singapur. Comments: -Outcomes will be ascertained using some validated instrument or were the questions designed ad hoc? -Change the term RR for IRR (incidence rate ratios) as Poisson regression models results. -Add the p value that will be considered as statistically significant and if there will be some adjustment for multiple comparisons.

REVIEWER	Eleni Verykouki Aristotle University of Thessaloniki
REVIEW RETURNED	01-Jan-2020

GENERAL COMMENTS	This is a study protocol for a randomised controlled trial to evaluate an online video series developed by a community-based organisation in Singapore for GBQ men. The protocol is quite clear and well organized, however the following comments should be considered. p13, line 29: Block randomization is not appropriately described. Block size should be divisible by the number of groups. See eg article in International Journal of Environmental Research and Public Health 2011, 8(1) 15-20. p16, line 24: Poisson regression is not appropriate for binary data. RR can be estimated through logistic regression, see for example BMC Medical Research Methodology, doi: 10.1186/1471-2288-12-14. Minor Comment: The authors should mention the software used for the sample size calculation and the software that will be used for the statistical analysis.

VERSION 1 – AUTHOR RESPONSE

Reviewer #1

Comment from Reviewer #1
This is a well-written protocol of a pragmatic trial of a video-based HIV/STI prevention intervention. The primary limitation that needs more thorough discussion is the issue of contamination. The protocol specifies that "participants will be asked if they ever watched a web drama series by Gahyealth.sg or AFA launched in the past year without naming the actual series to avoid further contamination." The lack of specific information provided to participants is likely to lead to under-reporting of viewing the web series, which would lead to undetected contamination. It would be good to include a brief discussion of this.

Response:
We thank the reviewer for the thoughtful comment on the risk of under-reporting of viewing the web series among participants. We have added a short paragraph in the section 'pragmatic nature of trial' to describe how all participants will get to view the actual videos at a certain point during the study period (for treatment group, at the point of receiving the intervention package; for the control group, at the end of the study period), and subsequently get to answer a survey about the specific episodes that they already watched prior to, or during the study period.

Reviewer #2

Comment from Reviewer #2
There is a significant focus on interventions and evidence related to HIV testing uptake among young gay, bi and queer men (GBQ) outside of Singapore (Australia, US, Peru). It would help to ground the rationale for this study by citing what HIV testing demand generation efforts among young GBQ that have been applied and evaluated in Singapore.

Response:
We thank the reviewer for the comment. We agree that there is a lack of discussion on HIV testing demand generation efforts in Singapore. While there have been community-based testing demand generation efforts, this is the first published study to evaluate such efforts in Singapore. In our revised manuscript, we have included a short description of this and addressed the lack of evaluation studies in the present context in the 'Study Setting' section of the manuscript (first paragraph).

Comment from Reviewer #2
There is reference to a regional study but no data on HIV testing uptake, and the first 90 gap, among young GBQ in Singapore. Please add this data/information if it is available.

Response:
We thank the reviewer for pointing out this omission. There is little published data on the first 90 gap in Singapore, with only a single reference available from a recently published study that provided this estimate across the general population in Singapore, instead of a GBQ-specific estimate. We have added this reference alongside some published data by the Ministry of Health on late diagnosis specifically among GBQ men in the 'Study Setting' section of the manuscript (first paragraph).

Comment from Reviewer #2
Similarly, it is not clear what HIV testing services are in place in Singapore (only facility-based?) and what barriers exist in terms of young GBQ individuals in accessing these HIV testing services and how is it theorized that the web-based series will help to overcome these barriers.

Response:

We thank the reviewer for the comment. HIV testing is only available through facility-based testing, without any options for self-testing or home-based testing at this point in time. This information has been added to the revised manuscript in the 'Study Setting' section of the manuscript (second paragraph).

Several studies have investigated these barriers to testing among GBQ men and this study attempts to address some of these barriers. This information has been added to the revised manuscript in the 'Study Setting' section of the manuscript (third paragraph).

Comment from Reviewer #2
Page 8, Line 6-12: Please consider description of social media campaigns. There have been and are a number of social marketing campaigns focused on HIV testing among MSM in Asia. These are not the general population campaigns that are defined on page 6 and 8. These are targeted campaigns (Eg I Test. Do you? In Vietnam; APCOM's TestBKK, TestJakarta etc campaigns in several localities, and many more)

Response:
We thank the reviewer for the comment and appreciate the suggestion to include the stated examples from Asia in the stipulated section of the manuscript. We have added and cited some of these examples in our revised manuscript.

Comment from Reviewer #2
Page 8, Line 13-19: Please add a citation that underpins this statement.

Response:
We thank the reviewer for pointing out this omission. We have added a citation to support the statement.

Comment from Reviewer #2
Page 8, Line 29. Suggest including a link to the first series of People Like Us so readers have the option of learning more about it.

Response:
We thank the reviewer for the comment. A link to the first series of 'People Like Us' has been added to the manuscript.

Comment from Reviewer #2
Limitations: Not being able to confirm that a study participant actually had an HIV or STI test as a result of the intervention is indeed a significant limitation. Is there any way to partner with GBQ-friendly health facilities to confirm HIV and STI testing uptake of those that opt to test there?

Response:
We thank the reviewer for the comment. While participants may self-report if they had tested for HIV or other STI for each survey, we are unable to link their details to GBQ-friendly health facilities at this point for several reasons: Firstly, due to ethical concerns posed by the ethics board (i.e. to separate all personal identifiers from survey data), as well as other practical concerns (i.e. the only community-based clinic conducting anonymous testing does not collect personal identifiers from clinic attendees, including contact numbers). Furthermore, as all anonymous test sites are state-sanctioned, and all other facility-based testing services are required to collect personal information and report any HIV-positive results, the study team has no avenue to procure its own HIV or other STI testing kits in a legal manner, at least not until HIV self-testing is approved.

To address this concern, we have added a paragraph on this limitation in the section on the "Pragmatic nature of trial".

Reviewer #3

Comment from Reviewer #3

Outcomes will be ascertained using some validated instrument or were the questions designed ad hoc?

Response:
We thank the reviewer for pointing out this omission. While the references for the validation studies of these scales have been included in the previous manuscript, we have since explicitly stated that these scales have been validated among GBQ men in other settings under the section 'Secondary outcome measures'.

Comment from Reviewer #3
Change the term RR for IRR (incidence rate ratios) as Poisson regression models results.

Response:
We thank the reviewer for pointing out this error. We have since opted to use logistic regression instead for our analysis and have amended this accordingly to odds ratios or OR.

Comment from Reviewer #3
Add the p value that will be considered as statistically significant and if there will be some adjustment for multiple comparisons.

Response:
We thank the reviewer for pointing out this omission and have added the p value that will be considered as statistically significant. We have opted to not adjust the p-value as while we have stated three primary outcomes, each of these measures are unique endpoints and do not characterize a single outcome.

Reviewer #4

Comment from Reviewer #4
p13, line 29: Block randomization is not appropriately described. Block size should be divisible by the number of groups. See eg article in International Journal of Environmental Research and Public Health 2011, 8(1) 15-20.

Response:
We thank the reviewer for pointing out this error. The block size should be blocks of 6 with a 1:1 ratio to ensure even allocation between both the treatment and control groups. This has been amended accordingly in the manuscript.

Comment from Reviewer #4
p16, line 24: Poisson regression is not appropriate for binary data. RR can be estimated through logistic regression, see for example BMC Medical Research Methodology, doi: 10.1186/1471-2288-12-14.

Response:
We thank the reviewer for the constructive comment. We have revised the protocol accordingly to use logistic regression instead.

Comment from Reviewer #4
The authors should mention the software used for the sample size calculation and the software that will be used for the statistical analysis.

Response:
We thank the reviewer for pointing out this omission and have added the name of the software for sample size calculation and statistical analysis.

VERSION 2 – REVIEW

REVIEWER	Jeb Jones Emory University United States of America
REVIEW RETURNED	17-Jan-2020

GENERAL COMMENTS	The authors have adequately responded to my concerns.

REVIEWER	Javier Mariani Hospital El Cruce, Argentina.
REVIEW RETURNED	14-Jan-2020

GENERAL COMMENTS	The authors submitted the revised version of the protocol and addressed the comments made, however there is an additional comment for this revised version. Comments: -There are changes in the "Statistical analyses" section. Authors state that "For binary or count outcome variable evaluation, logistic regression models will be used to compute the crude odds ratios (OR) and adjusted odds ratios". The logistic regression are useful for outcomes with binomial distribution but not for counts (were Poisson or negative binomial regression could be more appropriate).

REVIEWER	Eleni Verykouki Aristotle University of Thessaloniki
REVIEW RETURNED	27-Jan-2020

GENERAL COMMENTS	The authors have revised the manuscript adequately. These is only one comment that should be considered. page 18, line 8: Logistic regression is not appropriate for count outcome variables. The authors should be more specific on the statistical methods that will be used for the data analysis depending on the type of the outcome variables.

VERSION 2 – AUTHOR RESPONSE

Reviewer #3

Comment from Reviewer #3
There are changes in the "Statistical analyses" section. Authors state that "For binary or count outcome variable evaluation, logistic regression models will be used to compute the crude odds ratios (OR) and adjusted odds ratios". The logistic regression are useful for outcomes with binomial distribution but not for counts (were Poisson or negative binomial regression could be more appropriate).

Response:
We thank the reviewer for pointing this out and we apologize for the oversight. We have amended the sentence to clearly state that logistic regression would be used for binary outcome data, while Poisson regression for count outcome data instead.

Reviewer #4

Comment from Reviewer #4
page 18, line 8: Logistic regression is not appropriate for count outcome variables. The authors should be more specific on the statistical methods that will be used for the data analysis depending on the type of the outcome variables.

Response:
We thank the reviewer for pointing this out and we apologize for the oversight. We have amended the sentence to clearly state that logistic regression would be used for binary outcome data, while Poisson regression for count outcome data instead.

VERSION 3 – REVIEW

REVIEWER	Javier Mariani Hospital El Cruce, Argentina
REVIEW RETURNED	10-Feb-2020

GENERAL COMMENTS	The authors addressed the comments.

REVIEWER	Eleni Verykouki Aristotle University of Thessaloniki
REVIEW RETURNED	07-Feb-2020

GENERAL COMMENTS	The authors have corrected the manuscript as recommended. I have no further comments.