Reviewer's report

Title: Prevalence of risky sexual behavior in Men Who Have Sex with Men Recruited Online Versus Offline: A meta-analysis

Version: 1 Date: 6 April 2014

Reviewer: Darrel Higa

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Major Compulsory Revisions
1. The authors should consider including a clear rationale why they only included studies that recruited online and offline. Are the online and offline samples mutually exclusive within these studies?

2. The authors should consider not using the term “population” to describe subgroups in Tables 2 and 3, and in the limitation section of the Discussion. The term “population” generally refers to all persons who are represented in a category or has connotations of using large scale or population-based data. Maybe use the term “subsample” instead?

3. The authors may need to consider expanding Table 1 to include more details on how the samples from the primary studies were recruited offline and online. This will help readers to understand the differences in recruitment that may contribute to heterogeneity. Please see Liau (2006), Table 1 as an example.

4. According to the PRISMA statement (Liberati, 2009), meta-analyses should include at least one full electronic search strategy for at least one database, including any limits so it can be repeated.

5. Please provide more details about the search. The authors state they searched for studies published prior to December 2012, but did not include a start year. What was the date of the last search? Again, please see (Liberati, 2009) as a guide.

Minor Essential Revisions

1. In the same paragraph, the authors included oral sex as a “risky sexual behavior.” Although oral sex is not risk free, the risk of HIV transmission is still low compared to unprotected anal sex. I realize that the authors are citing findings from previous research, but including oral sex as a risky behavior seems a little outdated.

2. The last sentence in the background is unclear. Are the authors saying the studies are limited because offline sampling misses MSM who do not go to these venues because of the fear of discrimination and some HIV-positive MSM do not go to these places?

3. Be consistent when referring to the Internet. It should be capitalized throughout the paper.
4. Last sentence in second paragraph of background has a typo – “who seeking”

5. The third paragraph is confusing and written awkwardly. In the first sentence, “such as self-identified sexual orientation” should follow socio-demographic profiles.” In the second sentence, is this finding from one study? It’s not clear which online based sample the authors are referring to and consider using “offline” instead of traditional. Epidemiological studies are performed “with” not “in.” Studies cannot observe but can show increase in the prevalence of UAI. It is not clear what differences the authors are referring to here and how this will lead to further increasing of HIV infection.

6. Word choices in next paragraph: fundamentally different with… use from instead of with; made a meta-analysis… use conducted?

7. It may be suffice to say the findings are inconsistent rather than saying findings “are not always consistent and show some conflicting or inconsistent results.”

8. In the methods section, under the data extraction paragraph, the authors state they extracted the data independently “using the standard protocol.” Do you mean a standardized protocol? How were data extracted? Did the authors use coding forms?

9. In the next paragraph of the methods, there are a few awkward sentences. Instead of “In each study, for the meta-analysis,” the authors may want to say, “for each study, we recorded…” In the next sentence, “risky sexual behavior in UAI” does not make sense and “either” should not be used here because there is more than 2 options.

10. In the Discussion section third paragraph, consider using the word “broader” instead of “wider.” There is also a typo in the sentence that starts with “the study was provided us …”. Mentioning that the current study’s results are similar to Liau’s results are appropriate in the discussion, but the rest of the text that refers to the Liau paper may be better suited in the introduction.

11. In the paragraph that starts with “MSM who were recruited online…” needs to be qualified a bit more. Perhaps, saying “our study found that MSM who were recruited online…” Also, need to include the comparative group (offline MSM). “Anonymized” is not a word (at least in Webster’s Collegiate Dictionary, 11th edition) and may not be completely accurate to describe Internet networks.

12. Typo in the paragraph that starts with “the results of this meta-analysis …” “online’s MSM.” Also, the authors can be more specific in recommendations other than stating the HIV prevention staff need to pay more attention to this population. This is an opportune time to recommend specific Internet related interventions that may be helpful for online MSM.

13. The conclusion section ends the paper on a weak note. Consider deleting or strengthening it.

14. Table 1: Not sure ethnicity is the most appropriate heading here. Region may be better and not use “European,” “American,” and “Asian.”

Discretionary Revisions
1. Please consider not using “traditional” to describe MSM who seek offline partners. The term “traditional” has several meanings and in this context, does not seem appropriate. The sentence would read just as well without it.

2. In the discussion section, in the paragraph starting with “MSM who were recruited…” the last 2 sentences can be reworded to be clearer.

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

**Quality of written English:** Needs some language corrections before being published

**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.