Reviewer's report

Title: If [we] get the disease, she will see 'pepper... and we will call it quits": HIV/AIDS Stigma and Utilization of Voluntary Counseling and Testing in Nigeria.

Version: 2 Date: 24 December 2012

Reviewer: Marinda Kotze

Reviewer's report:

The revisions suggested below are considered to be minor but essential:

1. Research Question

1.1. The research question is clear. Although the link between HIV-stigma and VCT access and usage has been explored in the past, it seems that there is a need for more research on this topic in Nigeria. The research is therefore of importance.

1.2. The main focus of this paper is on the access and use of VCT services and its relation to HIV stigma. However, throughout the paper the author sometimes refers to HIV/AIDS prevention services or care, treatment and support services instead of VCT services. There are slight differences between these services. Consequently it is suggested that the author keeps to the term VCT throughout the paper in order to avoid confusion.

2. Background

2.1. When discussing the background of the research topic, the author could include a short discussion on VCT access and usage in Nigeria. Also include a discussion on the findings from recent similar studies in other African countries and internationally. (Of special interest to you may be: Kalichman, S.C., & Simbayi, L.C. (2003). HIV testing, AIDS stigma, and voluntary HIV counselling and testing in a black township in Cape Town, South Africa. Sexually Transmitted Infections, 79, 442-447. And: Visser, M.J., et al. (2009). HIV/AIDS stigma in a South African community. AIDS Care, 21(2), 197-206).

2.2. To improve the flow of the discussion it is suggested that the author moves the last two paragraphs under the heading 'Background' upward (perhaps it could fit between paragraphs 5 and 6). In this way the section will end with the specific description of the study and research problem statement which flows into the methodology.

3. Methodology

3.1. Throughout the paper the two ethnic groups from which the sample is drawn, Igbo and Yoruba, are contrasted with each other. Although you mention (under the 'Background' heading) that “…it is important to know which social groups are most likely to experience stigma and its adverse consequences so that limited public resources can be used in the most effective way” I still feel that you must discuss why you chose those two groups and why you contrast them in your
study. In particular, please provide some background information on each group and how they may differ. These differences may help to explain the differences in stigma/HIV beliefs between the groups.

3.2. Upon reading the paper for the first time the reviewer found it difficult to understand exactly how data for the quantitative and qualitative analyses where collected. It is suggested that the author makes a clearer distinction between the quantitative data collection and analysis and the qualitative data collection and analysis. This can be done by separating the sections with sub-headings.

3.3. Please indicate the total number of interviews and focus groups that were held as well as the total number of participants who took part in the interviews and focus groups.

3.4. In the second paragraph under the heading ‘Recruitment and data collection’ the author notes that “The size of the focus groups ranged from 6 to 9 of each category selected”. Please clarify how many participants attended each focus group and whether the groups were heterogeneous or homogeneous.

3.5. Why did the author choose to use both interviews and focus groups? Using focus groups as a data collection method for HIV stigma may be a bit problematic, considering the context and sensitive nature of the issue. Could it have been possible that some focus group participants did not feel comfortable to voice their beliefs/opinions if it differed from the majority of the group? Were the focus groups open enough for less dominant voices to emerge in the groups? How was the issue of social desirability and power addressed within the group?

3.6. In the context of this study, what was the difference between an in-depth interview and a key informant interview? It seems that both included similar participants. Please make the distinction between the two clear.

3.7. In the second paragraph under the heading ‘Recruitment and data collection’ the author mentions that the research assistants were trained in methodologies involving triangulation. Please discuss what triangulation entailed within the context of this study.

3.8. Please indicate how the participants were chosen (for the interviews and focus groups) and invited (for interviews, focus groups and surveys).

3.9. It is suggested that the term ‘survey’ or ‘home visitation survey’ is used throughout the paper to refer to the quantitative data collection procedure, as this will help to clarify how the data was collected.

3.10. In paragraph five under the heading ‘Recruitment and data collection’ it is mentioned that although 1200 respondents were expected only 987 were interviewed. Why were only 987 participants interviewed?

3.11. Also in paragraph five under the heading ‘Recruitment and data collection’ the author notes that residents from the area were recruited as research assistants. Did these research assistants do the interviews/visit the households to complete the surveys? If so, were they remunerated? Were they trained in research methods and ethics? Would respondents feel comfortable to discuss HIV stigma (a sensitive issue) with a fellow community member? If the research assistants and respondents knew each other this could potentially have had an
influence on the respondents’ answers.

3.12. It is suggested that the author move the second and third paragraphs under the heading ‘Analysis of quantitative data’ upward so that they fall under the heading ‘recruitment and data collection’. This is suggested because the paragraphs focus on the survey structure and content.

3.13. The author notes that central analysis was used to analyse the qualitative data. Please provide a short description of the technique and explain why this specific technique was chosen.

3.14. The author notes that logistic regression analysis was used to analyse the quantitative data. Please provide additional information on how the regression model was developed.

4. Data

4.1. Table 1 seems to only include the demographic information of the survey respondents. It is suggested that the author also include similar information for the participants who attended the interviews and focus groups. In addition, the last three categories in Table 1 (frequency of reading newspapers, listening to the radio and watching TV) may be omitted as the data does not form part of further data analysis. (Note: under the heading ‘frequency of listening to the radio’ the ‘don’t know’ option does not have a percentage).

4.2. The mean age of the participants are reported to be 32 years with a standard deviation of 12.9. This indicates that the participant sample differed greatly in terms of age (possibly more older participants?). The issue of age and its role in HIV stigma beliefs may need to be discussed a bit more in the paper.

4.3. Table 2 refers to the participants ‘beliefs’ of HIV transmission. It is suggested that the author consider referring to it as ‘HIV knowledge’ as the information gathered from the survey seems to reveal more about their knowledge of HIV than their general beliefs. How one believes HIV is transmitted is more an indication of one’s knowledge of HIV than one’s personal opinion. Similarly, consider changing the word ‘misconception’ about HIV/AIDS to ‘lack of knowledge’ about HIV/AIDS.

4.4. Table 2 contains two percentages at the top: awareness of HIV/AIDS and awareness of HIV prevention. Please indicate how these percentages were calculated.

4.5. Table 2 has an extra open line at the bottom that can be removed.

4.6. It is suggested that Table 4 should be adjusted slightly. Separate the lower and upper confidence levels into difference columns so the distinction is more clearly visible. The second column should include the regression coefficient (B) as well as the Standard Error.

5. Data interpretation

5.1. As mentioned in this revision under the heading ‘Methodology’ the distinction between the two ethic groups needs to be considered carefully. The difference in their results could be the result of differences in education and available HIV-awareness resources as well as cultural beliefs, religious beliefs,
HIV-prevention initiatives present in the different communities and participant age. These differences must be explored more closely in the paper’s interpretation of the data.

5.2. The author uses the words ‘consensus’ and ‘common agreement’ in some instances to refer to the observed unanimous agreement of participants on a particular issue. This is problematic as a researcher can never be truly certain that 100% of one’s participants agreed on a particular issue. How can this be verified? It is suggested that the author rephrase such statements.

5.3. It is suggested that the author links the findings with previous academic findings and theories that may help to explain the present study’s findings. Consider how the findings are similar and/or different from existing literature and theory.

5.4. Under the heading ‘Support for coercive policies’ paragraph 5, the author discusses the inconsistency between respondents’ answers regarding having an infected relative’s name in public and the public display of infected people’s names. This inconsistency could be explored further. It is suggested that the reason for such an inconsistency could be that, as noted in social psychology theory (in-group out-group bias), the rules that apply to the ‘out-group’ do not necessary apply to the ‘in-group’. It may be seen as acceptable to display the names of HIV-infected ‘others’ but not the names of those that is considered to be an insider/a member of the ‘in-group’ (such as a family member).

5.5. Apart from the differences in ethnic groups, the findings also reveal noteworthy gender differences. It is suggested that the author explore these gender differences in more depth. What could explain these differences? What are the implications of these differences? The finding that female respondents were less likely to use VCT services compared to men contrast previous literature. Discuss this contrast in more depth.

5.6. The quote in the last paragraph under heading ‘negative/affective feelings towards PLWHA’ does not have the necessary information on who said it.

5.7. Under the heading ‘Stigma and utilization of VCT services’, paragraph two, the author writes that: “Respondents who are single were 2.3 times more likely to express intention to use VCT services than the married.” This interpretation is not technically correct. The 2.3 refers to the interval with which the likelihood to use VCT services increases, but it does not mean that a single person is 2.3 times more likely to use VCT services compared to a married person.

5.8. Under the heading ‘Stigma and utilization of VCT services’, paragraph two and three: the results can be written up in a more concise way by grouping the results into two categories, namely those who were more likely to use VCT and those who were less likely to use VCT. For example, “Respondents who were more likely to utilize VCT were more educated, did not report avoidant behaviours, etc…”.

5.9. Under the heading ‘Stigma and utilization of VCT services’, paragraph three and four: The transition from paragraph three to four is very sudden. It is suggested that the author creates a link between these paragraphs to aid the flow of the discussion. Consider adding a sub-heading before paragraph four or
adding a linking paragraph/sentence.

5.10. It seems that one of the key findings to come out of this paper is that a significant number of people still associate HIV with sexual promiscuity, which drives stigmatic beliefs around HIV/AIDS and health care services related to the disease. This could be reiterated in the conclusion as a way of framing the recommendations that are based on the findings of the study.

5.11. In the first paragraph under the heading ‘conclusions’, the author could add that based on the result that less media access is associated with less access and usage of VCT services, the role of the media as a means of educating the public and creating awareness about VCT services is vital and should be explore further. Ways of informing the public that involves other methods should be investigated.

5.12. In the second paragraph under the heading ‘conclusions’ the author could add that the present study found that some religious leaders expressed the willingness to become more involved as peer educators and that religious leaders must be used as a resource in communities.

5.13. In the fifth paragraph under the heading ‘conclusions’ the author could add that the present study found that many people still lack adequate HIV-knowledge which may contribute to HIV-related stigma. Also, please elaborate on the recommendation that the gender dimensions of stigma should be addressed. Present ways in which gender-related issues can be addressed in the context of HIV stigma.

6. Limitations

6.1. The only limitation that the author notes is that the two areas that were selected do not constitute the representative areas of Yoruba and Igbo ethnic groups and that this may have cause a biased results (under the heading ‘Stigma and utilization of VCT services’, paragraph nine). It is suggested that the author tends to the limitations of the study in a more formal way, perhaps under a specific heading titled ‘limitations’.

7. Title and abstract

7.1. It is suggested that the author considers omitting the quote from the title as it does not reflect the true message of the study. The study is about the association between HIV stigma and VCT usage, yet the quote was said in the context of a husband who said that he would reject his wife if she tested HIV-positive. Instead, choose a quote that speaks directly to the study’s focus or just use the second part of the title.

8. Writing

8.1. Although the paper is well written it is suggested that it is edited by a professional language editor.

8.2. Check that terms and names that have acronyms are introduced with the acronym in brackets, followed by the consistent use of the acronym (see: HEAP, PLWHA, VCT, IEC).

8.3. When referring to other studies please provide the references to those
studies. For example, paragraph 3 under ‘analysis of quantitative data’ heading: “Studies have shown a correlation between these beliefs and stigma conditions” – kindly add the references.

8.4. When discussing the results it is suggested that the author use percentages instead of saying, “7 out of 10 participants”, as the use of percentages are considered to be more scientific.

8.5. It is suggested that the author finds a smoother way to transition from the discussion to the participants’ quotations as it seems to be a bit abrupt at present. Consider using linking sentences to link the discussion and quotations in a neat way.

8.6. Revise the reference list in accordance with the BMC’s style.

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

**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.