Author's response to reviews

Title: Factors associated with HIV counseling and testing behavior among undergraduates of universities and vocational technical training schools in Tbilisi, Georgia

Authors:

Mamuka Djibuti (mdjibuti@isph.ge)
Tamar Zurashvili (tzurashvili@hotmail.com)
Tamar Kasrashvili (tkasrashvili@yahoo.com)
Carla J Berg (cjberg@emory.edu)

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Author's response to reviews: see over
January 7, 2014

RE: MS 1273151280148872 - Factors associated with HIV Counseling and Testing Behavior among Undergraduates of Universities and Vocational Technical Training Schools in Tbilisi, Georgia - Response to review comments

Dear Dr. Minichiello:

Thank you for reviewing our manuscript entitled “Factors associated with HIV Counseling and Testing Behavior among Undergraduates of Universities and Vocational Technical Training Schools in Tbilisi, Georgia.”

We would also like to thank both reviewers for their critical comments, which helped us in improving the quality of the manuscript.

As requested, below we have provided a point-by-point response to the comments provided by the reviewers. We have also addressed additional editorial request by making the following changes:

- We have revised competing interest section;
- We have also formatted the text to make sure that the revised manuscript conforms to the journal style.

A modified version of our manuscript is also included with this revision.

If you or the Reviewers have further questions or concerns, please contact me at your convenience.

Sincerely,

Mamuka Djibuti
(on behalf of the authors)
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<th>Reviewer's Comment</th>
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<td><strong>Reviewer: Dr. Irma Kirtadze</strong>&lt;br&gt;1. Page 7, lines 194-196: it is difficult to understand how the answer on a question &quot;If a relative of yours became infected with the HIV, would you want to be kept a secret&quot; measures the stigmatizing attitude, and why only this single question was used. Authors need to cite any relevant literature to support this approach and/or provide rational explanation.</td>
<td>The current study is a secondary data analysis of the 2010 USAID-funded Georgia HIV Prevention Project Behavioral Surveillance Survey among School and University Students in Tbilisi, and as such, we used the measures used by the parent study. To the best of our knowledge, there is no standard international instrument for measuring stigmatizing attitudes towards people living with HIV [PLHIV] among youth, and thus, these measures were newly developed to succinctly assess this phenomenon. In the data collection instrument used by the parent study, there were three scenarios included to measure stigma &amp; discrimination towards PLHIV among Georgian students:&lt;br&gt;“Thinking of what could happen ...&lt;br&gt;1. If a member of your family became sick with HIV, would you be willing to care for him or her in your household?&lt;br&gt;2. If you knew a vendor was infected with HIV, would you buy fresh vegetables or fruits from him/her?&lt;br&gt;3. If a relative of yours became infected with HIV, would you want it to be kept a secret?”&lt;br&gt;The proportion of respondents answering “Yes” to the 1st, 2nd and 3rd questions were 86%, 35%, and 62%, respectively. Thus, we choose question 3, as it divided our study sample more evenly, perhaps indicating a more subtle level of stigmatization.&lt;br&gt;In the revised version of the manuscript, we have made relevant changes and included additional clarification, respectively (page 8, lines 202-207).</td>
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<td><strong>2. Page 4, line 88: In “There was just one study from Ethiopia, 87 which found that perceived stigma was significantly associated with utilization of HCT “ it is not clear whether this means that individuals who perceived an HIV as stigmatizing disease were more likely to utilize HCT, or the opposite – they were less likely to utilize it. It would be helpful to provide definition for “perceived stigma”.</strong></td>
<td>In this Ethiopian study, perceived stigma associated with the positive test result was significant predictor of low utilization of HCT; hence, we made respective change in the revised version of the manuscript (page 4, line 88; page 9, line 253-254).</td>
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<td><strong>3. Page 4, line 105: “..the location of the highest number of HIV/AIDS cases – Tbilisi..” might be confusing for readers that are not familiar with epidemiology of HIV in Georgia. Please clarify what is actually meant – location with highest prevalence, or with highest number of occurrence of infection.</strong></td>
<td>In the revised version of the manuscript, we added the word “reported”; now it reads “...the location of the highest number of reported HIV/AIDS cases – Tbilisi...” (page 4, line 105)</td>
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<td><strong>4. Page 7, line 199: It is not clear why the question relates to fiction literature specifically, and not any other type of literature. It would be useful to have explanation for that.</strong></td>
<td>As already mentioned above, the current study is a secondary data analysis of the 2010 USAID-funded Georgia HIV Prevention Project Behavioral Surveillance Survey among School and University Students in Tbilisi, and as such, we used the</td>
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measures used by the parent study. In the data collection instrument used by the parent study, this was one of the questions asking about involvement of youth in various activities (we can only assume that the group of Georgian experts who worked on the development of the original survey questionnaire was probably based on the assumption that reading science fiction is popular activity among Georgian students). In the discussion section (page 10, lines 270-271), we do also mention the relatively limited scope of factors included in the original data set.

5. Page 10, line 258: “Regarding practice, practitioners should understand the relationship between other substance use and HCT and systematically monitor health behaviors in clinical encounters”. It is not clear how authors come up with this statement. Please provide either reference, or indicate how the study results support this statement. In the revised version of the manuscript we have removed “substance use” and included “other behaviors”, and it now reads as: “Regarding practice, practitioners should understand the relationship between other behaviors and HCT and systematically monitor health behaviors in clinical encounters” (page 10, line 274).

6. Line 31-32 - The abstract indicates that “the specific aims of this study are to explore the role of HIV knowledge and level of stigmatizing attitudes towards HIV/AIDS”. However, results related to HIV knowledge are missing from the abstract. We have revised the text in the abstract, which now reads as “The specific aim of this study is to explore the role of stigmatizing attitude towards HIV/AIDS alongside factors such as HIV knowledge, substance use, sexual behavior, and involvement in various social activities including having access to internet and printed media in relation to probability of having HIV counseling and testing.” Similar change was made on page 4, line 95.


8. Page 4, line 93: reference should be to the source15 instead of 14. This is now corrected.

9. Page 5, lines 120-122 and lines 124-129 provide similar information. Suggest deleting lines 120-122. We have deleted lines 120-122.

10. Results section would benefit from narrative description of the sample. Details on actual sample achieved were included (page 8, lines 223-227).

11-15. various mistakes and typos We have corrected all the mistakes/typos as indicated in points 11-15.

Reviewer: Peter Barss

1. Greater clarity in abstract, rather than one long sentence with main issue near the end. Introduction is long and too many citations (now 14 – suggest perhaps 3) which could be better addressed in the discussion. We have revised the first sentence of the abstract to read: “Stigmatizing attitude towards HIV/AIDS alongside other factors such as HIV knowledge, substance use, sexual behavior, and involvement in various social activities (e.g., internet use, exposure to media) may be related to likelihood of having HIV counseling and testing (HCT). Thus, we examined these associations among 18-24 year old post-secondary school students in Tbilisi, Georgia.” In addition, we have also reduced the length of the introduction, which is now less than one and a half pages long.
2. Difficult to discern sampling methodology. First stage institutions, but then what? Who were the 99% who accepted, were they members of randomly selected classes, or what? Without such information it is unclear whether sampling was haphazard. It appears that it was not random, and one then wonders about relevance of statistical calculations.

We do understand that secondary data from previous surveys do not always adequately address main study issues. However, in a country with limited resources like Georgia, secondary data analysis may still be considered as an important tool for generating research evidence, which can be used for shaping future research needs as well as informing health policy and practice.

We did our best to address sampling issue and, in the revised version of the manuscript, added more details on the sampling strategy used by the parent study (please see the revised text on page 4 and 5, lines 108-128).

Without sampling details, difficult to say. Furthermore, while the total sample is 857, the sample size having received HCT is very small, 39, and who do we generalize this to giving lack of clarity in sampling? When reporting on many variables as in this analysis, there is a risk of finding significance or a lack thereof that may not be real. Since this comparison of receiving or not is the main basis for the paper, the study perhaps needs redoing on a more balanced population including adequate numbers, with and without HCT, if this is to be the main comparison factor. Are statistical test meaningful in the absence of random sampling?

As mentioned above, we did address sampling issue by including more details on the sampling strategy, namely, that the parent study used commonly accepted sampling strategy – i.e. a stratified two-stage cluster sample design, with universities selected with probabilities proportional to their size at the first stage, and with a random selection of students stratified by gender in each of the participating university at the second stage (please see the revised text on page 4 and 5, lines 108-128).

The first table includes two different types of data, and should be divided into two tables. All of the yes no data could be simplified by showing the proportion of interest only, whether it be the yes or the no. The other data could be more clearly explained in a separate table or figure. Table titles should include the year of the study. In the second table, showing p values to three decimals is one way of changing a 0.05 to a 0.049. On the basis of this, will you recommend stopping people associating with neighbours and friends? Or should people stop reading fiction?

Table 1 is designed in order to concisely present participant characteristics as well as the results of bivariate analyses examining differences between participants who received HCT versus who had not during their lifetime. Besides, alongside with "yes" and "no" data, means and standard deviations are also presented for both groups, which allows reader to get a better sense of the bivariate results.

We have included the year of the parent study in Table titles.

We have revised the format, and all p values are now reported to two decimals. The p value for the variable "Pass time with neighborhood friends/neighbors" is now reported as 0.05. However, this variable is still referred to as significant predictor based on its OR (1.35) and corresponding 95% CI (1.01-1.82).

As for interpretation of the results on activity involvement, please see discussion section, page 10, lines 262-268.

Small numbers in the HCT positive group regarding stigmatizing attitudes may not justify the conclusion, given sampling limitations. Rather long discussion given the small subsample size and unclear nature of the sample

We believe that, given the clarification we have provided on sampling, the results of this study may still be used to justify the following conclusion: "Intervening on HIV stigmatizing attitudes may be a critical prevention or HCT promotion strategy, which may have important policy implications for Georgia."
| Methods in abstract does not document sampling. Results do not show actual numbers for samples in the two groups | In the revised version of the manuscript, namely in the abstract, we have documented the sampling strategy used in the parent study. Details on actual sample achieved were also included (page 8, lines 223-227). |