Reviewer's report

Title: HIV/AIDS awareness and risk behavior among students in Kazakhstan: a cross sectional study

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Reviewer: Ademola Ajuwon

Reviewer's report:

Main points of the manuscript

This paper presents findings from a survey on HIV/AIDS knowledge and risky behaviors among students in Kazakhstan. The paper adds important data to what is currently known about HIV-related behaviors among young persons from this part of the world. However, there are four major problems with the manuscript. First, the introduction did not provide sufficient background information to justify the focus on young Kazakh. Secondly, many components of the methods of data collection are not clear. Thirdly, it is difficult to understand the results because of the style of presentation. Although data were collected through self-completed questionnaire and face-to-face interviews, no such distinction is made in the data presented. Finally the discussion of the major findings is too long. I have provided specific suggestions on how the authors can address these issues such that the paper can be accepted for publication. The details about my suggestions for each section of the manuscript are provided below.

Major Compulsory Revisions

Introduction

1. Many of the statements in this section are vague and need to be revised. For example, the authors should put into context the time-frame being referred to with respect to the first sentence. Secondly, evidence should be provided to support the claim that “since 2000 … the growth rate of the epidemic has been fastest in the world…” page 3

2. Does the statement ‘although injecting drug use is still the most significant route of HIV transmission …’ refers to the situation in Kazakhstan or elsewhere? Please clarify.

3. There is need to provide some research evidence to support the claim that young persons are the gateway through which HIV will spread to the general population. Have there been previous studies confirming that young Kazakh participate in risky activities that elevate their risk of infection to HIV? Please clarify

Methods

1. This is the weakest component of the paper. Many aspects of the methodology
are not clear. For example, how many of the 600 respondents are medical students, other university students and high school students? How were these students approached for the purpose of recruitment into the study?

2. It will be helpful to describe the social context in which this study was conducted. I suggest that the authors create a section to describe the study area so that readers have a sense of the social and economic context in which the study took place.

3. The description of the questionnaire used for data collection in the second paragraph of page 4 is confusing. What do the authors mean by ‘general questions” and “personal questions’? It is better to simply specify the types of questions asked.

4. How were the interviews being referred to in the third paragraph of page 4 conducted? Who conducted these interviews?; how were the interviews documented? and how were the data processed and analyzed?

5. The sentence ‘to find students to participate in the interviews we asked in the classes … and set a time for later same day in an undisturbed room’ is not clear. Are the authors saying that students who participated in the interview were recruited from the same classes where respondents for the questionnaire were selected? If this is the case then is it possible that a student would have completed both the questionnaire and be interviewed at the same time? Please clarify

Results

1. The results section needs to be reorganized. Since there are three categories of students involved in the study the results should be presented such that the responses for each category of respondents are shown.

2. I suggest that a table should be created to describe the demographic profile, (age, sex, religion), of the students using the format already suggested.

3. It is difficult to understand the results because of the style of presentation. For example, one is not sure which data sources are being reported; there is need to clarify this.

4. Many of the sub-headings created to present the data are vague. For example, what do titles such as ‘family’, protection, testing, sexuality, homosexuality, buying sex’ mean? I suggest the authors create about four major titles including knowledge, attitude towards testing for HIV, sexual behavior and use of drugs. Issues relating to homosexual practices, buying and selling of sex could come under the section of sexual behavior.

5. There are several unsubstantiated statements which need to be revised; for example instead of saying ‘some of the students stressed...’ page 7, it is better to state the actual % of students; other examples of such statements are ‘very few students answered that they had sexual relations ...’ page 10; ‘many talked
about drug use as a route of HIV transmission in Kazakhstan’ page 12.

6. There is inconsistent use of the words ‘responders” and “respondents’. It is better to use the latter and be consistent throughout the manuscript.

7. It will necessary to describe in greater details the profile of the 32% of the men who reported they had bought sex; for example what is the mean age of these students; how many of this category of students are medical students and how many are high school students?

Discussion

1. The discussion is too long and need to be edited to make it concise. The discussion should be reorganized such that all relevant issues on sexual behavior are discussed in the same paragraph rather than having them scattered. For example, all issues relating to sexual behavior including sexual experience, prostitution and homosexuality should be discussed possibly in one or two paragraphs.

2. The authors claimed in third paragraph of page 15 that more males reported having more sexual partners than females because of the ‘greater acceptance of male sexuality …’ but did not specify whether this acceptance applies to Kazakhstan or elsewhere.

3. How is stigmatization of homosexual people a risk factor among students of Semey? Please clarify

Minor Essential Revisions

Title
I suggest a slight change in the title of the paper namely ‘HIV/AIDS knowledge and risk behavior among students in Semey, Kazakhstan’. This title is more appropriate given the fact that the survey was limited in scope to students from one city, Semey in Kazakhstan.

Abstract

1. The results presented in the abstract are scanty. It will be helpful to present more data on sexual behavior. For example, it is necessary to present the % of students who had had sex before indicating the number involved in purchase of sex.

2. The conclusions drawn are not based on the data presented in the results section. For example, the authors stated that the main risks for HIV spread among young persons are prostitution and intravenous drug use, yet there is no data to support this claim in the results section. This should be addressed.

Ethical Issues

3. With respect to the ethical issues involved in the study, it is not enough to say that participation in the study was voluntary and that students could drop out of the study at any time. The authors need to state whether or not the study was
approved by any Ethics Review Committee, they also need to clarify whether students completed an Informed Consent Form before their enrollment into the study.

4. There are contradictory statements in the conclusion. The statement ‘… knowledge concerning ways of transmission and protection is good, although this is superficial’ is contradictory. How can knowledge be said to be good and superficial at the same time?. Please edit this.

Discretionary Revisions
None

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

**Quality of written English:** Acceptable

**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