Reviewer’s report

Title: Differences in sexual behaviour and practices of adolescents in Nigeria based on gender and HIV status

Version: 1 Date: 19 June 2014

Reviewer: Method Kazaura

Reviewer’s report:

Minor essential revisions
(a) Title: It is important to add “reported” before HIV. BUT, condom use is the main question that must be reflected in the title.
(b) Abstract: the background only states the objective. There is a need to begin with the actual background of the study (use of condom, etc)

Results: There are brackets with missing data (proportions of p-values)
(c) Background: This reviewer thinks that this section is missing important (enough) facts and known facts about condom use (the main question for this study), rather than sexual practices.

Major compulsory revisions:
(a) Methods:
(i) The second sentence on page 4, looks unimportant.
(ii) From the design perspective, it was not important to limit adolescents who are HIV-positive, HIV-negative, rather adolescents REPORTING their HIV status.
(iii) What was the rationale to classify age of the ‘partner’ below and above 10 years?
(iv) The practice is to (a) to include ALL variables (whether significant or not) in the binomial logistic regression IF these variables are empirically sound (b) to include variables in the model if the p-values is less than 0.2.
(b) Results:
(i) The second paragraph, number do no match (may be to swap 825 with 749) or recalculate the percentages.
(ii) The third paragraph: as stated earlier, there is no need to have adolescents reporting their HIV status AND their status as reported by parent/guardian.
(iii) Use of alcohol/psychoactive drugs: There is no need to find combinations of substances used.
(iv) “Sexual health profile of respondents” (Page 9): It is not clear by this reviewer the meaning of ‘sexual health’. Probably authors intended to write ‘sexual practices’.
(v) Age at sexual debut: The third line, numbers are NOT correct (“15.4 yrs vs
14.yrs”). First, 15.4 is not less than 14 and second, Table 1 does not support these figures.

(vi) Knowledge of HIV transmission and prevention: The classification was “Good” and “Poor”. It is not right to introduce “better knowledge”. Furthermore, there are comparisons that are going beyond the Table 1. For example, the last two sentences on this sub-section.

(vii) It is very surprising to learn that ONLY about 60% of the adolescents in Nigeria are aware (heard or seen) a condom. Nevertheless, if this is the case, then if 212 know the source to get the condom, it must be 21.8% (212/972).

NOTE: A serious note on Table 1 (may be even Tables 2 and 3): Percentages are WRONGLY calculated. Authors are comparing sex groups (males and females). Therefore, percentages MUST be column rather than total percents. The current calculation of percents is leading to wrong interpretations.

(viii) Reasons for sexual debut: Authors can try to collapse responses to bring meaning on board. The second and third sentences “Twelve (0.05%) male…” are leading to analysis within the table. A reader would use too much energy to find source of these results from Table 2. This problem is persistent in many tables.

(ix) Multiple concurrent sexual partnership and forms of sexual practice: Refer to the above comment (viii). What are the sources of p-values?

(x) History of sex and sexual behaviour in the last 12 months: Probably authors are intending to describe “sexual practices and sexual behaviours”. Comparisons in this section and all sub-sections below might be correct but the layout of the table does NOT allow the reader to see these results. Otherwise, this is what we call ‘data torturing’.

(xi) Predictors of use of condom during the last vagina sexual act: This reviewer thinks this section must have been the heavy credit for this manuscript. There are several pitfalls in this section:

** It was wrong for authors to select ONLY vagina sex. Why leave out anal sex?

** Wrong selection of the reference categories for easy interpretation

** What was the model? This is important because on page 13, it is very difficult to comprehend having two independent variables that look like opposite (“being HIV negative” AND “being HIV positive”. The best model must be SIMPLE and EASY to explain.

(c) Discussion: Generally, the discussion does not flow and lack backing evidences (only 8 references).

(d) Conclusion: “…young age of sexual debut and the experience of forced sex may be a likely risk factor for HIV infection in female adolescents…” If this is a key message, then my hypotheses are wrong!

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

The reviewer declares that they have no competing interest.