Reviewer's report

Title: Male circumcision for HIV prevention - A cross-sectional study on awareness among young people and adults in rural Uganda

Version: 2 Date: 9 September 2009

Reviewer: CL Mattson

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In general, I think this is an interesting paper that addresses awareness of an important HIV prevention strategy in rural Uganda. The study objectives are clearly stated; however, more information must be provided to clarify the sampling methodology and to confirm that the statistical analyses are appropriate.

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- Major Compulsory Revisions

1) Based on the description of the study population, I am concerned that the analyses may not be appropriate given the sampling methodology. The design was described as follows:

"Purposive sampling was used to select sub-counties from the districts where the survey was conducted. Multi-stage cluster sampling was used to select parishes and then villages. In the villages, houses were randomly selected to recruit participants from the age group of youths between 14 and 24 years of age and adults above the age of 24. For the adults, three subgroups were recruited: parents, teachers, 'Sengas' and 'Kojjas.'"

Although I am not a sampling expert, my understanding of cluster sampling is that because it departs from the assumption that each individual has an equal probability of selection, generally the standard errors are greater than they would be had they been drawn using a simple random sample. As a result, weights need to be applied and the data should be analyzed using statistical software that can account for the weighting (e.g., via procedures that generate statistics for complex surveys, which are available in STATA, SUDAAN, and now using special survey procedures in SAS). If complex survey data are not analyzed with appropriate weights, the point estimates and standard errors may be biased, which can call the results into question.

In addition, it seems that the authors stratified participants according to age - youth and adults, which adds another layer of complexity to the sampling design. If the standard errors are biased, the comparisons between the adults and the youth may be biased.

Perhaps I have misunderstood the section on sampling, but if the objective was to generate a probability-based sample that could be generalizable to the larger...
population and was, in fact, a multi-stage cluster design, I encourage the authors to consult a statistician to obtain guidance on analytic procedures that can account for the survey weights. Otherwise, I see this as a major limitation to the study.

If the objective was not meant to produce nationally representative data, I suggest re-working the methods section to clarify this and then adding a statement to the discussion section to re-iterate that the data are not meant to be representative, which limits the generalizability of the results.

2) Were sample size calculations performed? If so, please include them.

3) On page 5, please provide the exact name of the local health authorities that provided ethical approval. Also, did the Institute for Social Medicine in Berlin provide an ethical review? If so, please state this.

4) On page 7, under basic characteristics, please include the response rate.

Was any information available about non-respondents? For example, age, sex, etc? If this information is available, it would be helpful to perform an analysis to evaluate possible differences among respondents and non-respondents.

5) In the section on statistical methods, the authors neglect to describe their model building strategy (also known as model selection procedures). Was everything put in the model? Were all variables kept regardless of statistical significance? Did they use specific selection procedures such as forward, backward, or stepwise? What was the p-value used as a cut off point for inclusion in the model? I believe this information must be included in order to fully understand the results.

6) The fact that education was associated with more awareness of MC as a preventative measure for HIV among adults and less among youth is difficult to understand. Given that not all of the youths have had the opportunity to complete all educational levels, I don't believe this is a fair comparison. This variable may be inadvertently measuring age. Did the authors run analyses to check if age and education are co-linear? Regardless of whether the two variables are co-linear, I'm not sure that it makes sense to include the education variable in the regression model for youth.

Did the authors analyze the results to question Q7? If so, did the responses provide any additional insight?

- Minor Essential Revisions

7) Was the survey back-translated or was the accuracy of the translation verified by some other means? Is Luganda the national language? If so, do all tribes speak and understand it well? On page 7, it is reported that participants were from 26 different tribes so I think it is important to clarify whether any participants might be excluded from participation if they do not understand Luganda.

8) On page 6, there is a typographical error, "Ors", should read ORs"
9) On page 8 and in the logistic regression analysis tables, the "other socio-demographic factors" that the authors reportedly adjusted for in the model should be explicitly stated.

10) On page 8, the sentence that begins "...and the subgroup of men for circumcision status in univariate analysis" is awkwardly worded. Does this mean the circumcision status was not associated with awareness of MC for HIV prevention?

11) In table 1, only % are provided. I think it would be helpful to put in the frequencies to aid in interpretation.

- Discretionary Revisions

12) On page 9, the authors mention "protection from child sacrifices." This practice may not be familiar to the general audience so further discussion might be helpful.

13) On page 7, the sentence beginning as "a bit more than half of participants' sons..." is confusing. Please consider re-wording and/or breaking it into two sentences.

14) On page 10, under reasons not get circumcised; the results are presented in an inconsistent format. Sometimes the comparative percentages and p-values are provided, but not always. Presenting the results consistently will assist the reader in comprehending the information.

15) I suggest the authors consider the following relevant references for possible inclusion in the background and discussion sections:


Specifically, with respect to men's preference for male circumcision and the belief that male circumcision confers protection from STIs and HIV, the role of education, and mothers beliefs about circumcision their children.

What next?

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