Reviewer’s report

Title: Impact of migration origin on individual protection strategies against sexual transmission of HIV in Paris metropolitan area, SIRS cohort study, France.

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Reviewer: Janni J Kinsler

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The objectives of this paper were to investigate whether relationships exist between country of origin and (1) intention to protect oneself against HIV and (2) use of condoms among a cohort of individuals in Paris, France.

This paper addresses an interesting and important topic in HIV prevention research. However, a lot more work is needed to fix grammatical errors/sentence structure and awkward wording. Better organization is also needed, especially in the methods and results sections.

Major Compulsory Revisions

Introduction

In general, the Introduction needs a lot more work. Please see specific comments below.

1. I understand what the authors mean by “migration origin,” but this is a strange term. How about using “country of origin?”

2. The first paragraph includes some unnecessary information. I would suggest shortening the first paragraph and just focus on the main problem you are addressing (i.e., the high migration rate of individuals from different countries in Sub-Saharan Africa/Africa, middle East, etc. to France AND the high rate of HIV. You could probably combine paragraphs 1 and 2.

3. Paragraph 3 needs more elaboration. More discussion on what is known/not known about this problem (HIV among foreign born in France) is needed. I would think HIV prevention practices are influenced by social values as well as cultural norms, structural barriers to care, acculturation (as pointed out in your discussion), religion, education, etc. You could briefly provide examples of how these factors might impact HIV prevention practices. There is a lot of literature from other countries on this topic. While literature may be lacking on this topic in France, you include a few references. You could briefly state what is known from the literature you reference.

Methods

1. Study Sample (Paragraph 1). The description of the primary sampling units is not clear to me. Were there a total of 2595 eligible census blocks in Paris (2,000 inhabitants per census block), and then 50 of the 2,595 census blocks were
randomly selected for this study?

2. Covariables (Paragraph 5). Why did the authors decide to control for age in model 1 only? Also, did the authors first run a bivariate model (unadjusted odds ratio) looking at the association of country of origin and all covariates with intention and condom use before running the five multivariate models with the covariates?

3. Statistical analyses (Paragraph 6). It would help if this section was presented in chronological order (for example, we first assessed the prevalence of intention and condom use by country of origin and all covariate using univariate analyses—percentages/proportions--; next, we examined the unadjusted association between country of origin and covariates with intention and condom use; then, we developed a series of multivariate models—were they stepwise models--?; finally, we conducted a series of mediation analyses to assess……., etc.). According to this section, no univariate or bivariate analyses were conducted prior to the multivariate analyses. However, univariate results are presented in the results section.

Results

The results should also be presented in chronological order as described in the methods section (descriptives/univariates, bivariate analyses, multivariate analyses, mediation analyses, etc).

1. Paragraph 3 (Univariate analyses). Are these the results for the unadjusted association between country of origin and covariate with intention and condom use?

2. Tables 2 and 3- Should be confidence Interval (CI) not IC.

3. Table 3- Some of the confidence intervals look a bit strange. For example, the variable “number of sexual partners during the last 5 years” has odds ratio of 0.00 and CI of 0.00-0.00 which is significant at p <0.001. This doesn’t seem right.

4. Table 3 (Model 2)- What happened to the <=5 years ago category for condom use? I would suspect there might be some collinearity given the dependent variable is condom use. Also, why is the voluntary HIV testing variable missing in this table?

Discussion

1. Paragraph 5 (discussion of covariate findings). There is mention of a mediation analysis, but there was no mention of this in the methods section. I would suggest adding a discussion to the methods (data analysis section) of the mediation analyses that were conducted.

**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.