Reviewer's report

Title: Modeling Predictors of Drug Use among Male Street Laborers in Urban Vietnam

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Reviewer: Nathan Hansen

Reviewer's report:

I have had the opportunity to review the manuscript entitled “Modeling predictors of drug use among male street laborers in urban Vietnam.” This manuscript described a study testing the Information-Motivation-Behavioral Skills (IMB) model against a modified model in a sample of 450 male street laborers in Hanoi City, Vietnam. The results indicate that the original IMB model fit injection risk behavior patterns better than a modified model that incorporated social variables into the IMB framework.

This is well constructed study. It utilized an ambitious sampling strategy of an understudied population of men who likely are at increased risk for HIV infection. This sampling strategy resulted in an adequate sample size for the analyses, and the analyses appear to have been well thought out and conducted appropriately.

Major Compulsory Revisions:

My two major concerns with this manuscript have more to do with the organization of the paper than with the study design or statistical analysis.

1. First, a primary objective of the study is to compare a modified version of the IMB model to the original in an attempt to better contextualize risk behavior among the study population. However, no rationale for why a modified model is needed, or how the IMB model should be modified, is given until the discussion. This should be a central point in the introduction and should explain potential limitations of the IMB model, discuss alternatives (why not use another model altogether rather than just modifying the IMB model), and then discuss proposed modifications to the IMB model. This has implications for measurement, potentially for sampling, and for setting up the statistical analyses, and should be done in the intro. Then subsequent sections of the paper can build from this.

While the theoretical discussion of the IMB model and its potential shortcomings and suggested modifications is important, this should also tie directly to the design of the current study. In particular, the modifications to the IMB model and subsequent measurement issues should be tied together to justify the selection of measures and their use in the modified structural model.

2. Second, I think more explanation is needed around the sampling strategy. The study used an elaborate social mapping strategy that appears to have been used to draw a sample that covers all of the districts of the city. However, it does not
describe if there was a system to weigh venues or districts by size or demographic difference, or whether participants were selected from venues randomly or purposefully. I assume the aim was to draw a sample that is representative and can generalize to laborers throughout the city, but more information would help to determine if that was the case, and whether these attempts were adequate. It would also be interesting to know if there were venues or districts where injection drug use is over-represented and whether this is a factor that should be accounted for in analyses.

Minor Essential Revisions:

3. While I appreciate the attempts in the discussion to tie the findings from this study into the larger literature, some of the comparisons made did not seem to make sense, or perhaps could have been handled better. I suppose I would suggest organizing this more around (1) similarities between injectors and injection (as far as can be determined in the current study) and injectors studies in other global regions, (2) differences, and (3) possible cultural and contextual features that may account for the differences.

4. Finally, I do think that both research and clinical/applied implications of this study could be more developed and fit more to the context of Vietnam. How can these findings influence HIV prevention research and practice with injectors in Hanoi and Vietnam more broadly?

In summary, I think this is an impressive study. However, the write-up of the study presented here could be greatly improved with a reorganization of the information on the modification of the IMB model, more information on the intent and implementation of the sampling strategy, and more discussion of cultural and contextual features and implications of findings.

**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:**

I declare I have no competing interests