Author's response to reviews

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

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Author's response to reviews: see over
Dear Editors and Reviewers,

Thank you very much for your comments and providing reviewers’ comments. We have modified the manuscript in response to the comments and suggestions.

I. Revised according to the comments of reviewer 3: Karen Wynter

Major compulsory revisions

1. * The aim of the research is still unclear, in the Abstract, the end of the Background (p.5) and the Discussion. It needs to be clear to the reader that the study aimed to test a modified version of the IMB, which includes psychosocial stress, and compare this modified version with the original IMB model in terms of goodness-of-fit. The reader has no understanding of the modified model when reading the Abstract for the first time.

   Response: We already revised this as:

   The objective of this study was the study aimed to test a modified version of the IMB, which includes psychosocial stress, and compare this modified version with the original IMB model in terms of goodness-of-fit to predict risk drug use behavior among this population

2. * The aim (p. 5) still states that the purpose of the model is to predict “HIV-related drug use behaviour”. While unsafe practices when using drugs certainly have implications for risk of HIV, the drug use behaviour itself is not related to HIV.

   Response: We already revised this as the above revision. Also because risk drug use behavior was assessed with five items asking 1) if participants ever took a drug in their lifetime, 2) if they ever injected a drug in their lifetime, 3) how often did they inject drugs during the past month, 4) how often did they re-use syringes offered from other peers during the past month, and 5) how often did they offer their syringes to other peers during the past month, it would be appropriate to use the measure “risk drug use behavior”.

3. * I appreciate that the author/s may not wish to do further analysis and present “more” statistics such as percentages in specific response categories, but I still think that it is inaccurate to conclude that a mean score of 3 on a scale of 0 to 5 reflects that a behaviour is “common” while a mean score of 2 on a scale of 0 to 4 reflects that a behaviour is “inconsistent” (p. 9).

   Response: We already did further analysis and presented percentages by categories in the text and in Table 2 as well.

4. It is not clear whether one (p. 5) or two (p. 13) qualitative studies were conducted prior to this quantitative study.

   Response: we revised one qualitative study.

5. * As I stated in previous reviews, I think the author/s need to elaborate “broader environmental and social factors” which are mentioned twice in the Discussion (p. 14). Some examples of such factors would indicate that the authors have thought carefully about which other factors might be important and how further research could be conceptualized.

   Response: we revised as follows in the discussion.
One possible explanation for this would be that other broader environmental and social factors such as structural social capital and social policies may also be influences on drug use. According to Harpharm et al. [45], fewer drug users have been related to having actual participation in communities, institutional linkages with services, facilities and organizations, frequency of general collective action, specific collective action and other connections. Recognizing the important role of material social capital in shaping risk drug use behavior allows researchers and policy makers to think about how to better inform policies for preventing risk drug use behavior among male street laborers.

6. It’s not clear how the sentence “Findings of the study may be generalized…” follows on from a discussion of Pearson’s product moment correlations between pairs of variables (p.14). Indeed, it is also not clear (as stated by another reviewer) how Pearson’s product moment correlations are an indication of construct validity.
Response: we revised as follows:
- As Vietnam has many cities that resemble Hanoi, the results of this study could be helpful to other similar urban settings.
- The construct validity of the variables in the model has been examined based on Pearson’s product moment correlation statistics between pairs of variables and the results of factor analysis for the scales used in the model.

Minor essential revisions
7. There are still several typographical and language errors, and the manuscript would certainly benefit from an additional reading by an English-speaking person familiar with writing for a peer-reviewed journal. For example “risk drug use behaviour” is not meaningful; perhaps “risky drug use behaviour” might be better.
Response: we replaced risk drug use behavior with risky drug use behavior. We actually had already editing by an English native speaker.

8. In the Background, it is stated that there are opportunities for the IMB model to be adapted / modified, but it’s not clear how the current modified model addresses the limitations of the original model. Does the current study (a) adapt existing constructs in the model? (b) validate the model in different populations? and/or (c) include broader social factors in the model, not just individual-level ones? (p4 – 5)
Response: we revised as follows:
In this study, we both adapted the existing constructs of the IMB model and added one more construct “psychosocial stress” to the model for testing its goodness of fit.

9. The sentence about how psychosocial stress is conceptualised (last sentence of Background p.6) belongs in the “Measures” section of the Methods.
Response: We added this sentence because another reviewer required us doing such.

10. The “goodness-of-fit” criteria (as they are commonly called, rather than “fitness”, p.8) include the #2 criterion, which is reported in the results but not included in the description under Data Analysis (only the CFI and RMSEA are mentioned).
Response: We added another criterion i.e. WLS $\chi^2$ should be not significant under Data Analysis.

11. * The p-value threshold is still inconsistent; mostly the author/s state that p<0.05 (for example) indicates statistical significance but Table 2 still cites the threshold as p # 0.05.
Response: We agreed that P<0.05 as a threshold. Acknowledgedly, we had a mistake in Table 3, we revised with such convention.

12. Please clarify what is meant by “the path from behavioural stills to behaviour significantly increased” (p.11). Is it the path coefficient which increased?
Response: yes, it is the path coefficient which increased, but because of the length of the paper we would like to save by removing the coefficient. However, for better understanding, we also mentioned the path coefficient somewhere in the paper.

13. Figure 2, types of venues, number 8 reads “Small”. I think this text is incomplete.
Response: There was a missing word “business” because of lack of the space in this box. Now we already added this text.

14. Figure 3 has abbreviations in the footnotes which are not used in the diagram (Trans; Info)
Response: In the previous version, we used these abbreviations, while in the new version, we used the full forms, but we forgot deleting them. Now in this revision, we deleted those abbreviations.

15. Table 1 has a typographical error in the title (Orignal).
Response: You are right. We fixed with original.

**Discretionary revisions**

16. I would caution against stating that a behaviour is “more likely” in men with certain characteristics than in other men, based on qualitative research (p.5).
Response: we revised as follows:
Risk behaviors for acquiring HIV, including unsafe sex and injecting drug use, were more likely in men who had misperceptions of HIV/AIDS and experienced psychological stresses such as tedium, boredom, depression, fatalism, revenge, and family and social pressure as well as alcohol consumption than in other men.

17. Please clarify what you mean by “Men were selected because of their greater frequency…” Do you mean that street laborers are more commonly men than women? (p. 6)
Response: yes, we mean that men are more commonly than women.

18. Presumably the participants were not screened (invited to participate?) during the interviews, rather before they were interviewed? (p. 7)
Response: We felt that it’s quite clear given our descriptions.

19. While I don’t recommend repeating detailed results in the Discussion, I think it would be good to remind the reader of the important overall findings, e.g. the % sharing needles in the current study, when comparing these findings with other “consistent” studies (p. 11).
Response: In the discussion section, we would like to mention some of the main findings as basis for comparison with other research data.

**II. Revised according to the comments of reviewer 4: Nathan Hansen**

**Abstract:**
1. Background: In the first sentence, “drug risk” might be better phrased as “drug use-related HIV risk” or just “drug use.” Also, it might be better to say the study tests “a modified version”
rather than “the modified version” of the IMB model, as more than one modified version is possible. Finally, the last sentence, “risk drug use behavior” should match the phrase in the first sentence—so something like “drug use-related risk behavior” would be better.

Response: We already replaced drug use or drug use-related HIV risk with risky drug use behavior because other reviewers also suggested that. We also revised a modified version for the modified version.

2. Methods: There needs to be a better transition between methods and results. Methods should state that SEM was used to analyze data from interviews.

Response: we provided a transition as suggested: Structural equation modeling (SEM) was used to analyze data from interviews.

3. Results: There wasn’t really a hypothesis stated for results to be contrary to—I might remove the opening phrase and just start with “Overall measures of fit…” Again, last sentence; use “drug use-related risk behavior.” Some of the wording here could be improved.

Response: We removed the phrase “Contrary to the hypothesis”. We also replaced drug use-related risk behavior with risky drug use behavior.

4. Conclusion: I would omit the sentence: “The results provide interesting directions for future research and suggest ways to effectively design intervention strategies” and simply explain the directions for future research and ways to effectively design interventions.

Response: We revised as follows:

An AIDS prevention program for these men should not only distribute information and enhance motivations for HIV prevention, but consider interventions that could improve self-efficacy for preventing HIV infection. Future public health research and action may also consider broader factors such as structural social capital and social policy to alter the conditions that drive risky drug use among male street laborers.

5. Key Words: Unskilled laborer is a key word, but the abstract uses the term low-skilled laborer. Choose one and then be consistent.

Response: we used unskilled instead of low-skilled.

Background:

1. First paragraph: “at risk drug using populations” would be better as “at-risk, drug-using populations.” Also should say “Injection drug users” rather than “injecting drug users”.

Response: we used “at-risk, drug-using populations” instead of “at risk drug using populations”. We also revised the word “injection” for “injecting”.

2. Bottom of page 3: I am not sure that the “social influence of drug using peers, friends, or relatives” helps migrants stay away from drugs. I would expect that these influences would increase drug use. In fact, the intent of this entire paragraph is somewhat unclear. And in the last sentence of the paragraph, “a fairly great attention” needs to be rephrased. Finally is the association of drug use behavior with this population what is of interest, or variables that are associated with drug use behavior within this population?

Response: we replaced the phrase “helps migrants....” with “facilitate migrants to take drugs”, and the phrase “fairly great attention” with “greater attention”. We revised ....drug use behavior and its associated factors among this population instead of the association of drug use behavior with this population.
3. On page 4, in the background, generally past tense is the most appropriate; thus the paper should read “To identify an appropriate theory for the current study, a critical review of the literature was essential” rather than “is essential”.

Response: yes, we used the past tense “was” for “is”

4. The last sentence of the paragraph at the top of page 5 is unclear—what types of items should be added to which constructs?

Response: we replaced items with variables. Because of the length of the paper, we highly appreciate if you accept us not mention by names of the variables.

5. On page 5: Again, use the term “injection drug use,” not “injecting drug use.”

Response: We replaced injecting with injection.

6. Last paragraph on page 5: A modified version of the IMB model has not been described yet, so stating that “the purpose of this study was to examine if the modified IMB model is superior to the original” does not make sense. What modified model? Some points that put migrant laborers at increased risk have been noted, but not how the IMB model should be adapted or modified based on this information. There is a leap in logic here.

Response: For clearer purpose, we provided more details on a modified version in the last paragraph of the background.

Methods:
1. In the sample size and participants description it reads “men were selected because of their greater frequency compared to females.” What does this mean—more male migrant laborers, more males using drugs, more males with HIV, more males in Vietnam?

Response: we revised as follows:

Male street laborers were selected because they outnumbered female counterparts traveling to cities to search for substances.

2. There are some minor typos and errors in this section.

Response: we checked these and revised accordingly.

Findings:
1. On page 9, in describing education, it reads: “(mean class completed=8).” What does this mean? Is it years of education? Does “class” represent some other level of educational achievement?

Response: we explained further as: mean grade completed=8; in Vietnam the education system classifies 12 grades ranging from 1 to 12 for primary, secondary and high school, and over 12 grades for higher education.

2. In the Descriptives of Modified IMB Model Constructs it reads: “Mobility was low, alcohol consumption and depression levels were close to moderate…” etc. What are the low, moderate, medium, positive, and high levels referenced here made in comparison too? Is there a normative sample or a way to anchor the reported values?

Response: We only provided a very suggestive interpretation of the results for quantitative variables and data. Based on the range (the min and the max), we only had such initial interpretations. We also asked several statisticians about how to interpret this type of data, they
also suggested that we may use our current explanations. There is no rule of thumb about the level when looking at the prior literature. We hope that you accept our interpretation.

3. Last sentence on page 9 should read “scales and subscales demonstrated construct validity.”
Response: Yes, we followed your advice using scales and subscales demonstrated construct validity.

4. On page 10, the sentence starting with “There was a significant path from information and motivation to behavior skills…” is long and convoluted. It is missing a conjunction (and, or) somewhere, and may be improved by splitting it into two sentences.
Response: We greatly acknowledged your comments. As three other reviewers said that it’s fine to use that way, we hope to receive your acceptance on such write-up.

5. For the last sentence describing the original model, the text should note that all fit criteria were met, not just the Chi-square.
Response: In this model, only the main fit criterion was met, while others are not really met.

6. No comma is needed after All in the second paragraph on page 10.
Response: we deleted comma after All in this paragraph.

Discussion
1. The information in the last paragraph on page 12 and continued on page 13 describing the formation of the modified IMB model should be in the background section to explain how this model was created.
Response: We deleted some text in order to avoid the duplication between Background and Discussion section.

2. Model fit of the modified model was not as good as for the original, but wasn’t that bad—it was also a more complicated model. I would guess that with some effort to get better measures and a stronger measurement model, a modified model would be fine (mobility and alcohol use don’t really seem to work with depression and social isolation). The question is whether the added constructs add significantly to prediction of behavior. They do seem to work against information and motivation. In fact, stress might actually operate more as a moderator. It might be beyond the goals of the current paper, but it does seem that more exploration of these variables is warranted.
Response: We highly appreciate your comments and suggestions. We actually tried so much time doing mining data and finally we came up with the current model. Because there were some variables not normally distributed, we had to apply Weighted Least Square (WLS) Method of Estimation. Because of this, we should accept some limitation of the data. It’s also beyond the scope of the current paper, perhaps in the future research we will consider your suggestions. Further, we also wish to balance with other reviewers’ comments (3 other reviewers were not worried much about the model).

3. Why was the description of the test for indirect effects in the Discussion and not in the Findings?
Response: Because normally in the findings section, authors are expected to provide basic or initial comments on the results, while in the discussion section, they should provide insights or further interpretations and implications from the results. In this way, we would like to have
some differences in the way of presentation between two sections. We hope to receive your acceptance.

We look forward to hearing from you soon.

Sincerely,

The First, Correspondent Author

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