Reviewer's report

Title: Frequent food insecurity among injection drug users: correlates and concerns

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Reviewer: Rafael Perez-Escamilla

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This cross-sectional study examines the association between food insecurity and risky behaviors associated with drug injection in a convenience sample of needle exchange program participants from Toronto (n=144). Manuscript is well written and findings and may have important public health implications as FI-associated behaviors may increase risk of transmission of HIV and HCV. However there is still substantial room for improvement.

Major Compulsory Revisions:

1. A highly relevant article for this work is not included. Reference to this article is: Romero-Daza, N., Himmelgreen, D., Pérez-Escamilla, R., Segura-Millán, S., and Singer, M. Food habits of drug-using Puerto Rican women in inner-city Hartford. Med Anthropol 1999;18:281-298. This paper represents the qualitative study associated with the quantitative research by Himmelgreen et al. (36). The later study is simply cited as another study showing a high level of FI among drug users. These two studies however have additional substantial content and findings that complement the findings from this study.
   a. The study by Romero-Daza et al. documented how different types of drugs have differential influences on appetite, cooking and dietary intake behaviors.
   b. Himmelgreen’s et al. study clearly documented major differences among drug and non-drug using Latinas regarding: dietary intake (including sugar consumption), anthropometric differences (including wasting), and food assistance program participation.
   c. An important conclusion from both papers is the need to included dietary counseling as part of drug addiction recovery programs.

Please ensure that these two papers are carefully read and their findings incorporated in the relevant sections of the introduction and discussion sections.

2. P.7; Par. 3: How was 'too intoxicated' defined? Was this an issue only for consenting or also for applying interview after consent? Was interview applied right after consenting? Was there a quality control protocol in place to ensure reliability of responses? This is especially relevant to report in studies involving populations at high risk of being under the influence when responding survey questions.

3. P.7; Par. 4: FI assessment/analysis section is very underdeveloped/confusing
making it very difficult to understand the quality and validity of the findings of the paper. FI experience scales are designed to assess FI at the household level. Given the nature of the sample I would understand if questions had to be used only in reference to respondent but this is unclear. Please list the exact wording of the 3 FI questions from the CCHS (include response options). How many additional FI questions are in CCHS? Why were these 3 chosen? What was the internal validity (psychometric behavior) in your study sample? Also need to report exact wording for FI drug binge question and response options? Need to report here how were answers to 4 FI questions combined to come up with FI classification? What was the internal validity (psychometric behavior) of the 4-item FI scale in your study sample? Table 5 also includes a fifth FI question on ‘Did you use a food program? What was the algorithm used to classify individuals into different FI category(ies)?

4. P. 8; Par. 1: Only FI questions related to ‘lack of money’ were included or also the FI question related to ‘drug binge’. What about the question on use of food programs?

5. P. 9; Last Par.: Reporting a prevalence of monthly FI as higher than daily/weekly FI (22.1% vs. 54.5%) seems awkward as one would expect that the opportunity for experiencing FI is higher the longer the period of reference is. After reading paper several times I now understand that these are mutually exclusive response options to same question(s). Again, authors need to clearly explain in methods section how respondents were classified into different FI category(ies) and the response options given to each question.

6. P. 10, Par 3: First time I see term ‘Severe FI (with hunger)’ being used to describe study results. Authors report ‘In our study we considered instances of severe and mild/moderate food insecurity experienced daily/weekly, or monthly’. Does this means that severe FI was considered when FI was reported daily/weekly and mild/moderate when reported monthly? If so, this is a very unusual way of coming up with these categories. Authors need to provide a reasonable justification for this decision. Also was severe FI based in a combination of answers to several FI questions or not? Again, FI classification algorithm needs to be clearly explained in methods/analyses sections and not until reader reaches discussion section.

7. P. 12, Par 2: In my view main limitation is that study is cross sectional precluding any inferences regarding directionality of effects. Does FI leads to unsafe drug use? Does unsafe drug use leads to FI? Both? Also, I reserve judgment on FI assessment/classification until more specifics are provided by authors.

8. Table 1 needs to be presented by levels of FI (i.e. severe vs. mild/moderate) (in addition to data for whole sample) providing p values for comparisons across categories.

9. Table 3 needs to also report N’s, %’s and raw ORs (with 95% CI) for each variable. Also it needs to provide reference categories for each variable. Again it is impossible to understand what food insecure means in Table.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

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