Reviewer's report

Title: Methamphetamine use and correlates in two villages of the highland ethnic Karen minority in northern Thailand: a cross sectional study

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Reviewer: William Zule

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This article describes correlates of methamphetamine use in two Karen villages in Thailand. Additional background information on the Karen's status in Thailand (e.g. are they a discriminated against minority? What is the relationship between the Karen in Thailand and the Karen in Myanmar?).

Some of the results and the discussion need to be rewritten. Since methamphetamine use is the dependent variable in the multiple logistic regression analysis, it is probably more correct to say that males were more likely to be methamphetamine users (or being male was associated with increased odds of methamphetamine use) than to say that methamphetamine users were more likely to be male. The same holds true for the other independent variables in the model.

In the discussion, the authors state that the association between methamphetamine use and STIs suggests that methamphetamine users are likely to have unprotected sex. While this may be true, it seems that the conclusion goes beyond the data since no data on condom use are reported. The 11% of methamphetamine users that report a history of STIs compared to the 1% of non-methamphetamine users reporting a history of STIs definitely suggests an association between methamphetamine use and STIs. However, 89% of methamphetamine users in the sample had never had an STI. It would be helpful to know how a history of STIs was measured. Also if condom use were measured, it would be helpful to include it in the bivariate analysis to show a relationship between methamphetamine use and unprotected sex.

Limitations-- The limitations section should acknowledge the small number of methamphetamine users (n=54) in the sample. In their book, Applied Logistic Regression (2000), Hosmer and Lemeshow suggest that logistic regression models as general rule should have 10 cases (in least common event) per parameter. In this case, with 39 methamphetamine users in the sample that would suggest that no more than 5 or 6 covariates or independent variables should be included in the model. However, there are 11 independent variables in the model. This could reduce power and lead to a numerically unstable model. This is probably okay, but it just needs to be acknowledged as a limitation.

Level of interest: An article whose findings are important to those with closely related research interests
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.