Reviewer's report

Title: High risk behavior for HIV transmission among former injecting drug users: a survey from Indonesia

Version: 1 Date: 26 March 2010

Reviewer: Thomas Kerr

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SUMMARY COMMENTS

The paper seeks to compare risk behavior among current and former injection drug users (IDU) in Indonesia. Considered within the broader literature on injection drug use and HIV risk behavior, this is a novel study, primarily due to the unique setting where this work was undertaken. Additional strengths include the use of reasonably well-validated measures of HIV risk and drug use. The findings are important and if appropriately disseminated should help to inform public health policy and practice, as well as indicate future research activities in various settings. However, there are a few relatively minor problems with the presentation of data, the statistical analyses, and the manuscript needs some tidying up. As well, the discussion could be further developed, particularly as it addresses the implications of this work. Still, taken in sum, this is an interesting and important study. More specific comments are noted below.

ABSTRACT

Minor Essential Revisions:

It would be helpful if the authors indicated what statistical comparisons were made (under the Methods heading). As it stands it says that the authors simply "assessed" drug use and HIV risk behavior, when in fact they undertook a statistical comparison of current and former IDU. This is a strength of the study that should probably be noted in the abstract.

Under the “Results” heading, the authors may wish to note that “…(44%) self-identified as former IDU” (i.e., change “were identified” to “self-identified”).

It would be helpful to the reader if the conclusion section of the abstract included a brief summary of the main findings (e.g., “We found high rates of ongoing HIV risk behavior among both current and former IDU…”).

BACKGROUND

Minor Essential Revisions:

There are a few statements in this section that should be supported with appropriate references. For example:
“…up to 50% or more of IDU are already HIV-infected.”
“…harm reduction programs…only reach a minority of IDUs.”

The last sentence on the first page of the Background regarding consistent condom use is confusing. Specifically, it is unclear which group/population the authors are referring to – sexually active IDU in general or IDU who have sex with sex workers.

The statement at the top of page 2 of the Background should be tempered to read as “We know of no data that has been reported concerning HIV risk behavior among fIDUs in Indonesia”. This is suggested because although the authors are not aware of any such data, it does not mean that there are none - some may have been reported but unnoticed. As well, some may be currently “in press”.

On page 2 of the Background section, a number of statements are made regarding former IDU and are supported with references 2, 5, 6, 7 & 8. These references appear to refer to studies of non-injectors. Do all of these studies also refer to former IDU? If not, then they may not be relevant to the statements being made about former IDU.

METHODS

Major Essential Revisions:

The authors report using the independent t-test to compare continuous data. However, this test is generally used when the data follows a fairly normal distribution. It is doubtful that all the continuous data in this dataset followed a normal distribution, and therefore some non-parametric tests (e.g., Wilcoxon Rank Sum test) should probably be used instead. I recommend the authors reassess their continuous data to ensure that they are using the appropriate statistical tests. If there data meets the assumptions of the tests used, no revision to this aspect will be needed.

Minor Essential Revisions:

There are a number of spots throughout the manuscript where the language needs to be corrected and typos need to be fixed. For example, under the heading “Assessment” (Methods section), the authors write “…by trained interviewers who assumed all participants…” – this should probably be “…assured all participants…” I suggest that the authors carefully proofread the manuscript and correct all errors and typos of this kind.

It is unclear whether the RDS method of recruitment sought to enroll only current IDU or a combination of current and former IDU. Some clarification related to this point would be helpful.

The authors state in the Methods section that the descriptive data are presented in terms of frequency. However, this is not entirely accurate. Further comments
regarding the presentation of the data are detailed below under the section “Tables”.

Discretionary Revisions:

The overall analyses could be improved if some sort of multivariate analyses could be included, such as a multivariate logistic regression comparing former and current IDU. However, the small sample may preclude this, and the present analysis is interesting as is.

RESULTS

Minor Essential Revisions:

The authors state that the demographic data did not differ between fIDUs and IDUs, but then go on to report some differences. Perhaps this could be modified to be a bit less confusing.

The authors state that “…no participants reported that they had been clean from drugs…”. The word “clean” in this sentence is not really very specific and should probably be replaced (e.g., “…none reported total abstinence…”). Rightly or wrongly, drug user activists in some settings object to the use of the word “clean” to refer to abstinence from drugs (they say this infers that those using drugs are “dirty”).

Although the authors provide clarification on this point later in the discussion section, it would be helpful to indicate either in the methods or the results that the authors were unable to determine illicit from licit methadone and buprenorphine use.

The section reporting data on sexual risk behavior is somewhat confusing. The section starts with a sentence indicating a difference in rates of sexual risk behavior among cIDUs and fIDUS. However, the next sentence states that there were no differences among these groups with respect to virtually every form of sexual risk behavior. This should be re-written to ensure greater clarity. The data that follows is also not reported in a consistent fashion. Some of the data are reported in aggregate form, while other data are reported by group. A more consistent presentation in this section would help improve the reporting of the data.

DISCUSSION

Minor Essential Revisions:

The authors state that condom use was “inconsistent” among participants, but there is little in the way of detailed data presented to support this. A related point is made below in reference to the tables.

The authors appear at times to lump together behaviors that carry significantly different levels of risk. For example, the risk of HIV acquisition from tattooing and needle stick injuries is actually very low. In other words, the authors could
provide a more nuanced discussion of the varying levels of risk among the
groups studied. For example, without getting into too much detail, it appears that
while current IDUs are clearly engaging in numerous behaviors that carry a
significant risk of HIV infection (e.g., syringe sharing), former IDUs engage in
some behaviors that carry HIV risk (in particular sexual behaviors), some
behaviors that carry a low risk of HIV infection (e.g., needle sticks), and some
behaviors that carry risk for hepatitis C infection (e.g., tattooing). Given the focus
of this study, a more detailed discussion of the varying levels of risks should
probably be included.

The testing rate (only 75% of participants reported a history of HIV testing)
among IDUs in this study is arguably low. Given that this is a high-risk
population, testing rates should be much higher. If only 75% have a history of
testing, it may be that recent testing rates are very low. Given the focus of this
paper, and the relevance of HIV testing to HIV prevention efforts generally, the
authors should probably comment on this and discuss the related implications for
HIV prevention in this setting.

The authors could take this discussion further by noting that, given their findings
regarding the behavior of former IDU in their study, interventions that promote
injection cessation may have limited impact on transmission of HIV in settings
where injection drug use is widespread. It would also be useful to talk about very
specific interventions needed to lower HIV risk taking among former IDU (e.g.,
going substitution therapies, addiction treatment, sexual risk reduction
counseling, etc).

The limitations section is could be augmented. Perhaps the authors could
improve this section by noting other possible limitations (e.g., the potential effects
of socially desirable responding).

The authors state in the conclusion that “Prevention should also be targeted at
schoolchildren...”. This is an interesting but somewhat problematic point given
that school-based drug abuse prevention programs (e.g., the DARE program)
have generally not been found to be effective. I suggest that the authors either
offer more specific suggestions regarding the evidence-based programs they
think should be implemented, or they should modify this sentence to refer to
more broad evidence-based prevention efforts (a good review of these types of
programs were recently summarized in an article by Tim Stockwell in The
Lancet).

TABLES

Major Essential Revisions:

The tables could be improved upon. First, it would be helpful to see complete 2x2
data in Tables 1 and 2 (e.g., the raw counts for each cell for each variable – for
example, the number of married and unmarried former IDUs and current IDUs).
The authors actually suggest in the methods that this type of frequency data is
shown when in fact it is not.
It is also unclear why a more detailed table of risk behavior by group is not presented when this is the primary focus of the paper. The inclusion of such a table would likely greatly strengthen the presentation of the data, and serve to address some of the limitations associated with the presentation of data (e.g., sexual risk behavior) in the main body of the manuscript. The categories shown in Table 3 appear to be a little bit too broad. The authors went to the trouble of measuring a very detailed set of risk behaviors and it would be helpful to see more detailed data related to these various behaviors in the tables.

The footnotes of the various tables could include more details. Alternatively, some additional information concerning the variables could be included in the methods section. For example, it would be helpful to know what “other opiates” includes.

Minor Essential Revisions:

The data in the tables are not appropriately aligned.

**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 that I have no competing interests.