Author's response to reviews

Title: Life years lost to incarceration: inequities between Aboriginal and non-Aboriginal Canadians

Authors:

Akwasi Owusu-Bempah (a.o.bempah@mail.utoronto.ca)
Steve Kanters (skanterz@gmail.com)
Eric Druyts (edruyts@gmail.com)
Katherine A Muldoon (katherine.muldoon@gmail.com)
John W Farquhar (john.farquhar@stanford.edu)
Edward J Mills (edward.mills@uottawa.ca)

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Author's response to reviews: see over
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Re: Life years lost to incarceration: inequities between Aboriginal and non-Aboriginal Canadians

Dear Editors,

Thank you for sending our manuscript to the reviewers. We are tremendously grateful for their efforts and expertise.

We have given careful consideration to the issues and suggestions raised by the reviewers. We have been able to address and respond to all of the reviewers’ points.

Our revised manuscript is attached and our responses to comments are listed below.

Sincerely,

Edward Mills
For the authors
Response to Reviewer Comments

Reviewer #1

This is potentially an important paper. However, there are several important revisions needed to accomplish this. The paper also has a number of what I believe are important omissions that need to be remedied. For this reason, my recommendation is currently “unable to decide until revisions are completed.” I’ve included a few editorial notes in what follows, and also attached a .pdf with additional copy edits. This manuscript complements an important piece of work done in the United States on years of life lost to imprisonment (Hogg et al 2008). It has the potential to compare the years of life lost among minorities in Canada to those in the United States. I believe the timeliness and importance of this research make the investment in these tasks worthwhile, and that the manuscript once revised will be an important contribution to the journal.

Additional comments follow.

I. Four critical omissions:

There is a substantial amount of literature on life lost to prison that is not framed in a specifically epidemiological methodology that should be gleaned and cited. The author appears naïve because of these exclusions.

**Response:** Thank you for your comment. This has been addressed (in conjunction with comment no. 3 below). We acknowledge that these are very important factors, and have now addressed them further in the discussion section.

There is also a very substantial body of work on the public health impact of incarceration in the U.S. context. The authors need not – indeed, should not – be citing studies of Bangkok to establish the very important point (cite # 15) that prison has deleterious effects on health. This has been established for North America and other OECD areas.

**Response:** Reference 15 has been removed. The statement this reference was used for is also supported by an additional 3 references relevant to the North American setting.

The authors should expand the discussion beyond strictly health-related issues and discuss the impact of imprisonment on child well-being, family structure, joblessness, community cohesion and so on. This need not be extensive, but these are important issues to get into the conversation.

**Response:** We appreciate this comment. As mentioned above, we have addressed these issues in the discussion section of the manuscript. We have kept this discussion brief, as you have suggested.
The authors should discuss the huge differences in years of life lost to incarceration between Canada and the U.S. Hogg et. Al. 2008 have startlingly different findings.

**Response:** Thank you for your comment. The focus of our article is different than that of the Hogg et al paper. Specifically, each paper had different research objectives. Although the methodology in both studies was the same, the Hogg et al looked at black, white and hispanics incarceration proportions whereas our current study looks at discrepancies between Aboriginal and non-Aboriginal incarceration rates. To compare these would not be appropriate.

II. Minor revision

Present the formula for the Sullivan method – the notation from this formula is used throughout and it cannot be assumed the reader knows the formula.

**Response:** After approaching how to include this formula in multiple ways, we found that it does not lend itself to being presented in an article. The formula is not a mathematical function, but a series of step-wise calculations using basic arithmetic in an excel spreadsheet. The reference provides all material needed for calculating these values. If interested, a reader can find the spreadsheets online to recreate what was done.

III. Minor revision

The discussion of data sources is choppy and very difficult to follow. The authors should introduce Table 1 early on and use it for a guide.

**Response:** We agree that we should introduce Table 1 earlier. To address this concern we referenced Table 1 earlier while breaking up another paragraph to increase readability. The authors felt that the ideas were presented well and that these minor revisions increased the flow of the section without sacrificing a thorough explanation of the methodology.

Table 2 should not include rows for data you do not have – Prince Edward Island, for example. These NA provinces should either be in Table 1 or not reported at all.

**Response:** We felt that it was important to include these rows to show the lack of data. It was important for us to be very transparent regarding all Canadian data. What we have done to address this issue is include these provinces in Table 1 to show exactly what data was missing.

IV. Important revision

The age distributions in table 3 should be consistent across panels. Using 18-55 for BC and 18-65 for Canada is incorrect. This renders the two panels of the table non-
comparable; this confounding factor is not obvious from the title or the table so the results might be cited incorrectly.

**Response:** We are aware of this inconsistency and worked hard to address it. However, the only data available were distributed as such; it would not be appropriate to inflate the range purely for comparability. A footnote was added to ensure the reader is aware of this discrepancy when reading the tables.

V. Minor revision

The authors should use “years of life lost” or “years of life lost to incarceration” throughout, not “life lost to prison” or “prison life expectancy.” The latter is easily misconstrued. This is especially true at the first usage at

**Response:** Thank you. We have now corrected this matter.

VI. Table 1:

“Demographics” should be “Demographic Data”
Can the “sex distribution” and “age distribution” rows be combined? They are identical except for the one word.

**Response:** Thank you. We have now corrected this matter.

VII. Table 2.

As above, exclude the lines with “NA”.

**Response:** We feel that these data need to be presented to report on lack of data. As there are only 13 provinces and territories, presenting data for all these regions does not waste space and may be informative. We have addressed this (as in a previous comment) by editing Table 1.

Important revision: Please include a RR with CI to the right of the final column.

**Response:** Thank you for this comment. We have added odds ratios to Table 2.

VIII. Table 3.

Important revision: Why are the C.I.s omitted from this table? Definitely include them.

**Response:** For Table 3, we included a note at the bottom reporting the standard error. We had previously calculated the confidence intervals; however, they were very narrow, and thus there is no need to provide them in addition to the standard error. For instance, male Aboriginal life expectancy (in years) was 72.03, the 95%
confidence interval was 71.91 to 72.10. The authors felt that the data presented with the note was an adequate amount of information.

Important revision: Add a RR and C.I. to each pair of rows to compare Aboriginal to non-Aboriginal. This table is the punch line to the entire manuscript and should have these measures of association for impact.

**Response:** As the data is continuous in Table 3, it is not valid to calculate RRs. The measures of association that are possible were calculated and presented in the text. We felt it redundant to include this information in the tables as well.

IX. The RR with a numerator of 1.0 should probably just be excluded. I leave that to the author’s judgment.

**Response:** All authors felt it important to include all of the data so that the reader can interpret the findings themselves.

X. Results, last sentence: To my mind, comparing male aboriginal to female non-aboriginal would better be comparing aboriginal overall to non-aboriginal. This currently has a feel of cherry picking because the huge differences between male and female incarceration and the mechanisms leading to incarceration (in the U.S. I am sure, and I suspect in Canada as well) are legion. Male and female incarceration just are not the same animal. The latter number – aboriginal vs. non-aboriginal overall -- might also be mentioned in the abstract and/or included in a table.

**Response:** Thank you for this comment. We have added the appropriate information in the text.

**Reviewer #2**

1. This paper estimates incarceration rates and time spent incarcerated in Canada according to sex and Aboriginality. It replicates a method used in a previous paper (ref #3, Harm Reduction Journal 2008, 5:4), to which author Druyts contributed. If this information is not available in Canada then the estimates provided here may be useful for Canadian researchers and policy makers. I am unsure why this would be of interest outside of Canada.

**Response:** We feel this paper is very important outside of Canada as well. The original Hoggs et al paper was fantastic in outlining disparities regarding incarceration of different races. Our paper focuses on the aboriginal population. Canada is not the only country with a disadvantaged aboriginal population and as such, we feel it very important to outline this large disparity that may also be present in other countries around the world.

2. I found the title misleading -- "life years lost to incarceration" might have referred to how incarceration impacts on life expectancy, but in fact this paper simply estimates life
years INCARCERATED. The "lost to" is a value judgment that is not separated from the data. In the Discussion the authors argue that "it is critical to consider the serious health consequences associated with the use of incarceration as a means of punishment". Setting aside the somewhat one-sided discussion (there is also evidence that incarceration can improve health, at least in the short term), this paper unfortunately provides no information whatsoever on the health consequences of incarceration. I wonder whether this paper may be better suited to a criminology journal.

**Response**: Reviewer 2 felt that the opposite was true; they preferred the term ‘life years lost to incarceration’. We agreed that this term was appropriate and changed the abstract to reflect that. Although we appreciate that some might construe this in a different way, we feel that if taken literally, the term is appropriately explicit.

3. The literature review is very brief and overall the paper is very much focused on Canada -- and therefore may be of limited interest to readers outside of Canada. This focus is reflected in references that non-Canadian readers may have difficulty understanding -- for example, what is a CANSIM table? What is Bill C-10 about?

**Response**: We very much appreciated this comment and thought it was very important to the relevance of this article in the literature. We subsequently added some information on CANSIM and Bill C-10. We then had it reviewed by other researchers outside of Canada to ensure it was appropriate for an international journal. They agreed that if these small issues were addressed, this paper does have relevance, as Canada is not the only country with a disadvantaged Aboriginal population.

4. If information on incarceration rates in Canada by sex and Aboriginality are not publicly available, then this paper provides useful new information. However, I find the language "life years lost" misleading and struggle to see the international relevance.

**Response**: As discussed in the second comment, we have looked at this many ways through many different people and came to the conclusion that the phrase ‘life years lost to incarceration’ was the most accurate in this context, and in line with the terminology (“years of life lost to…”) for the Sullivan method.