Reviewer's report

Title: Predictors of Premature Mortality in Swedish Drug Abusers: A Prospective Longitudinal Study 1970 - 2006

Version: 3 Date: 20 November 2010

Reviewer: John Corkery

Reviewer's report:

This is an interesting paper, but I feel there are some major gaps in it which need to be addressed, and by so doing make it a stronger paper, and increase its external validity.

Major compulsory revisions

Abstract - Mention country of study site

How do the findings compare to other cohort studies, especially SMRs, evolution of causes of death?

Page 3, para 3, There are papers on the role of amphetamines, ecstasy and cocaine in causing death - these need to be cited e.g. papers by Schifano et al based on UK data.


PMID: 16574720.

Page 5, para 2 - where any lost to follow-up? If so, how many? (This needs to be mentioned here not later on)

Page 7, line 3 - why are not licit/prescribed drugs discussed anywhere in this paper? There is no discussion of recreational drug use and death - another gap.

Page 10, bottom para - What were the other causes of death in the drug-related group? This is important information? Did these change over time?

Page 11, first para - Again, it is important to tell us what thgese causes of death in the non-drug related death group were. What were they, and did they change over time?

Page 13 - Discussion - How does the length of this study's follow-up period compare to other cohort studies? What was the average length of follow-up? It would interesting to gove SMRs for 5-year periods to see how they changed over time. This would also facilitate comparision with other studies, e.g. those on the addicts notified to the Home Office in the UK. None of which have been cited. This will help improve the generalisability of the study's findings.

Page 16 - There is no discussion of the evolution of causes of death over time. What has been the effect of hepatitis, HIV/AIDS etc? As mentioned above - no discussion of recreational drugs causing death, or of the role of prescribed, licit drugs. Very little discussion of how findings compare to other countries outside Scandinavia. We need to know to what extent these findings are similar/different to other regions of the world and/or time periods.

Minor essential revisions

Abstract - How many cases lost to follow-up? What was the average ages at recruitment and death? At what level were the predictive factors/variables statistically significant?

Page 3, para 2, line 1 - who states that the association is not clear? para 2, line 3 - where was amphetamine the most common substance of abuse? para 2 - what is the literature on stimulants, barbiturates, benzos? para 3, last line - for cannabis see Oyefeso et al.

Page 5, para 1, line 2 - what does 'heavy' use mean? Or do you mean 'Hard'?
para 1 - It would interesting to know something of the nature of the region. e.g. is it rural or urbanised, what is employment like, what was the rate of comorbidity/mental health issues in the recruitment period in the general population?

Page 5, para 3 - Were any physical conditions/diseases diagnosed at recruitment?

Page 7, line 1 - is the second reference correct?

Page 8 - move Acknowledgements to end of paper

Page 8, bottom para - Mention any loss to follow-up?

Page 9, para 1, line 4 delete 'a' before 'chronic'
line 8 - what are the p values for these results?
para 2, line 5 - reverse 23% and 8%
para 3, lines 5 and following - presumABLY NUMBERS LIKE 300.40 are ICD-8 codes?

Page 10, para 2, first line - Replace 'in 2006' with 'by 2006'. Do not start a sentence with a number!

Page 12, para 3 - suggest inserting 'Related to' at the start of the second sentence.

Page 13, Para 3, lines 6-8 - Any references to support these claims?

Page 14, para 2, line 4 - see reference to Oyefeso et al, above.
para 3, line 3 - How does this compare to the general population at the time?

Page 19 - Table 1 - what does 'mixed abuse' mean? Is it with other drugs or alcohol or both?

Page 20 - Table 2 - spell out what CS means (I note Dr Odenwald's quert)
Page 22 - Figure 2 - as above

**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