Reviewer's report

Title: Smoking, mental illness and socioeconomic disadvantage: Analysis of the Australian National Survey of Mental Health and Wellbeing

Version: 2 Date: 3 February 2013

Reviewer: Emily Stockings

Reviewer's report:

Overall, this is an interesting report which contributes new findings to the field of smoking and mental illness and socioeconomic disadvantage.

Minor essential revisions:

1- In the methods section, page 7, paragraph 3, need to clearly define the two outcomes: Current smoking, and Smoking Cessation. It is unclear how 'smoking cessation' was defined. It is later referred to as 'time to smoking cessation' and 'time to quit smoking' in the results (page 17). Needs clarification.

2 - Terminology in text and tables is not consistent. E.g 'bottom quintile' in text is also referred to as 'lowest' in figures and 'first' in tables. Similarly, 'area level disadvantage' in text appears as 'relative disadvantage' in tables. Consistency needed to reduce confusion.

3- Authors refer to tables 1 and 2 when discussing 'associations' between mental illness, socioeconomic status and smoking, however associations do not appear to be indicated in tables 1 and 2.

4 - In the results section, page 16, paragraph 3, line 2, stating "We eliminated non-significant variables...." - at what significance level were variables excluded from the model?. Similarly on page 17, paragraph 2, it states "Several indicators were eliminated in the final multivariate model" - need to state why / what significance level was used.

5 - In the discussion, page 19, paragraph 3, sentence beginning "Other reports have suggested..." - citations are needed.

Discretionary revisions:

6 - In the introduction, more evidence to support the hypothesis would be beneficial, particularly in paragraph 2 on page 5. Are the authors suggesting that the association between smoking and mental illness is wholly explained by socioeconomic status?

7 - In the Methods section, page 13, paragraph 2, might be useful to state the use of Univariate and Multivariate regression models, and significance levels for dropping variables from the model.
8 - In the results, paragraph 1, the authors describe prevalence of mental illness, but not prevalence of socio-economic factors. Should equal weight be given to both?

9 - In the discussion, page 19, paragraph 1, details regarding Australia’s National Preventative Health Taskforce are mostly the same as the introduction. Might be more telling to include outcomes, or indicators of success.

10 - In the discussion, page 23, paragraph 1, details regarding population-health based models for disadvantaged groups - might be useful to include some evidence of successful models, e.g. effect of price on low SES smokers.

11 - In the limitations section, it might be important to note that the NSMHWB only focused on 'select' mental health disorders, and did not include Schizophrenia / other psychosis, a group with very high smoking rates and low SES.

12 - Overall, the authors conclude that the 'association between mental illness and smoking is not explained by the association between mental illness and socioeconomic status'. If so, perhaps the authors should include some discussion about what the association between mental illness and smoking is accounted for? e.g. nicotine metabolism and effects of nicotine in persons with mental illness. What is particular about persons with mental illness which means they are more likely to smoke?

13 - The authors pay great attention to defining socioeconomic status indicators in the methods section, but do not discuss these particular indicators in any great detail in the discussion, despite strong associations (e.g. renters vs. home owners). Some discussion of these factors would tie the introduction, methods and discussion sections together more clearly.

**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.