Reviewer’s report

Title: The Effect of Major Depression on Participation in Preventive Health Care Activities

Version: 1 Date: 16 January 2009

Reviewer: Jonas Manjer

Reviewer’s report:

This paper addresses the potential effect of depression on participation in preventive health care activities. This is an important topic, as poor health consciousness and disadvantageous behaviour is correlated to depression.

The authors used data from a large public health survey.

The conclusion is that there is no association between depression and participation in several preventive health activities.

There are some important questions about study design that has to be answered and the material and methods section must be enlarged.

Major Compulsory Revisions

Introduction:

1. References 6-8 are used in order to summarize the scientific area. All these references are from Canada. Please convince me that the pattern is the same in other parts of the world.

2. The area of blood pressure check is not mentioned in the introduced. The usefulness of this endpoint should be motivated.

3. It is unclear what kind of screening the authors refer to concerning reference 11.

Material and methods:

4. More information has to be given concerning the NPHS. It is not enough to refer to their site.

Important information is:

a) Sampling frame – birth-year-cohorts?

b) Exclusions?

c) Eligible population (number of individuals)?

d) Randomised sample? How was this performed?
e) Participation rate?

f) Differences between participants and non-participants?
   - age?
   - sex?
   - geographical areas?
   - If possible: obtain mortality rates in these two groups

g) Baseline examination – when?

5. Definition of blood pressure checks? Physician / nurse / at home?

6. What are the recommendations for blood pressure checks in Canada?

7. Who is invited to Pap-smear in Canada?

8. Who is invited to mammography screening in Canada?

9. What is the overall participation in Canada concerning Pap-smear and Mammography?

10. The meaning of: Due to a lack of “organic” and hierarchical exclusion items”…. is not clear to me. This terminology may be well defined within the specific field, but to a reader from a more general background it is not clear what it means.

11. The interview guide / questionnaire has to be described more in detail:
   a) Number of questions?
   b) Areas that were covered?
   c) Proportions performed in-person vs. over the phone?
   d) What is meant by “chronic diseases”?

   a) The use of the bootstraps procedure has to be explained. What specific design problems are you referring to?
   b) The rationale for inclusion of the selected co-variates in the multivariate analysis should be given.
   c) Why include previous diagnosis of hypertension in the adjusted analysis of mammograms and (?) Pap-smears.
   d) It is not clear what the adjusted analysis included concerning Pap-smear.

Results
13. It is not clear if table 1 refers to subjects who had participated in blood pressure checks at baseline or if it includes all subjects in the NPHS.

14. Table 1 should include the number of subjects in different groups. Absolute numbers in the heading or in each row.

15. There ought to have been a statistical testing between the groups. Even if CI:s overlap, there may be statistically significant differences.

16. The unadjusted HR. Does it relate to non-participation or participation?

17. The adjusted HR for MDE should be given.

18. Age is adjusted for, it would be valuable to see if the pattern is similar in different age strata (given the introduction).

19. Table 2 (mammograms). The heading should probably be about those that did NOT have mammograms.

20. Table 2 and 3 (Pap-smear) should be changed as table 1, point 13-16.

Discussion

21. There are no references when the authors talk about the “existing literature”.

22. Representativity of the NPHS. Can we expect to find similar frequencies of depression and participation in preventive health care activities in the NPHS as in the general population? If not – how would this have affected the results?

23. Selection bias. Only subjects who had participated in the preventive health activities at baseline were included. They were probably selected towards more health conscious individuals, and perhaps milder forms of depression, as compared to subjects that had not participated in these activities.

The authors need to convince the reader that the null finding is not merely an effect of comparison of two very similar groups. “Healthy depressed” and “healthy non-depressed”.

24. Confounding. There should be a clear comparison between depressed and non-depressed with regards to the covariates included in the multivariate analysis. A cross-table with percentages would be preferable.

25. What other potential co-variates may have been of interest if there had been available information?

26. Point estimates indicate potentially interesting findings, +20% risk of non-participation for both mammography and Pap-smear. Discuss the problems of potential type II errors more in detail.

Minor Essential Revisions

27. It would be an advantage to use sub-headings in the material and methods
section.

28. The results section include information on how analyses were performed that are not presented in the material and methods section. The results section (blood pressure) also includes some interpretation of the findings. This may be more appropriately placed in the discussion. A matter of taste.

**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/JM