Reviewer's report

Title: The influence of multi-morbidity and self-reported socio-economic standing on the prevalence of depression in an elderly Hong Kong population: are men and women different?

Version: 3 Date: 25 November 2007

Reviewer: Petros Skapinakis

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. The aim of the paper (as I understood it) is to examine the association between depression and number of chronic medical conditions after having taken into account the effect of socioeconomic status. In other words, is SES a confounding variable that explains the association between chronic medical conditions and depressive symptomatology?

If this is the aim of the paper then I think that you should present the following tables from your analysis:

A. A first table with the basic description of the whole sample (for example, % male, % female, n, % with chronic medical conditions, mean sd of GDS etc.). In your original table 1 you give n and % of those depressed only and not of the whole sample.

B. In a second table you should present the results of the logistic regression. In this table you should present number of subjects and % with depression in the corresponding category (e.g. n of men with depression and % with depression, for example 154 [8.1%]). In the next columns you can present the odds ratios with their 95% CIs. Odds ratios should be presented in three columns, firstly unadjusted, secondly adjusted for all other variables except SES variables and then fully adjusted for SES variables. If you want you can present the full model (after adjustment for SES variables) in another table. This suggested presentation of your results will help the readers to see whether the association between chronic medical conditions and depression is influenced after the inclusion in the model of the SES variables.

2. I think that table 4 (spearman correlations) is not very useful (since this reports univariate associations) and I think that you can leave it out.

3. I do not agree with your conclusion that associations in women are different compared to men. Looking at your results in table 5 and 6 my conclusions are the following: a) there seems to be a trend for an increased prevalence of
depression as the number of chronic medical conditions increases in BOTH men and women. You should examine your data for the presence of a linear trend by including the variable LTC as a continuous rather than categorical. Although you found that the fourth category of LTC (3 or more conditions) was significant in men but not in women, the trend in women was exactly the same with a point estimate of 2.4 vs 2.9 in men. Perhaps if you try the variable as a continuous one, or if you merge the first two categories into one (since in this elderly population it is quite rare not to have a medical condition) you may be able to find a significant result even for women. In any case this non significant result is more likely a type II error due to lack of power.

b) exactly the same applies to the SES variables, again the trend in women is quite similar and lack of power most probably explains the non-significant result. In summary I do not quite agree with your conclusion about the differences in women and men and I think that it would be better to run a logistic regression analysis in the whole sample instead of the two separate analyses you presented (this will increase your power as well). If you insist on the separate analyses, I think you should re-examine your conclusion about the differences in women and men as I think that your results do not show this difference so clearly.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. The tables need more detailed and accurate titles. Tables should be reduced to two or three.

2. It is a common worldwide finding that women have higher rates of depression (almost double) compared to men. Since you report a similar prevalence you should discuss this finding in you discussion. Since your sample was not selected at random, this finding may be an indication of selection bias (healthier women selected to take part in your study). Are there any other studies from similar populations that show similar rates for depression in both sexes?

Discretionary Revisions (which the author can choose to ignore)

I found the term LTC quite confusing, why don't you use something like: chronic medical conditions?

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

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'