Reviewer’s report

Title: Use of psychotropics, opioids, anticholinergics and antiepileptics and cognitive decline in the aged: a longitudinal population-based study

Version: 2 Date: 12 August 2011

Reviewer: Pariya Fazeli

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Discretionary Revisions
1. In the conclusion section of the abstract it seems like you basically just repeated your results section. Perhaps you could make the language more everyday in contrast to the results section. You could also add some stats in the results section to make it not essentially the same thing as what you have written in the conclusion section. Also could add an implication(s) to the conclusion.

2. In the first sentence of the second paragraph of the background section say “A majority of the studies” rather than “The most of the studies”

3. Perhaps change your consistent usage of the word “Firstly” to “first”

4. In the 6th paragraph of the methods and measures section in the first sentence say “control” factors rather than confounding factors

5. Perhaps change the title to something like “Use of CNS medications and cognitive decline…”

Minor Essential Revisions:
1. In the last sentence in the methods section of the abstract change “analyses” to “analysis”

2. Add an S to the word Material in the methods section. Furthermore, you may want to change this subsection to read “Participants” rather than “Materials”, since you explain your sample here

3. The second word of the first sentence of the materials section should say “sample” rather than population

4. In the methods and measures section, in the first sentence, check your usage of commas and the word “and”

5. In the results subsection of the discussion, in the 2nd paragraph, the last sentence says “the use of a psychotropic medication alone has not inevitably effect on cognitive functioning…”. Please fix this sentence as the wording is confusing. Perhaps say “it does not inevitably effect cognitive functioning”

General Comment: This is a well written paper examining the use of CNS medications and risk of cognitive decline in a cognitive intact sample of older adults. The researcher is specifically trying to examine whether certain CNS medications alone AND combinations of different CNS medications will have a differential impact on cognitive functioning. Results revealed that after controlling
for confounds, the use of Ops, and the combined use of Ops and BZDs or Ops and any CNS medication was associated with cognitive decline, and AChs was associated with decline in men only. These findings imply that of all the CNS medications analyzed in this study, the use of Ops may have the greatest effect on cognitive function in the general population. There is a large amount of tables in this paper. This would not be a reason to reject the paper. Just coming from the perceptive of a reader, the paper seems very table-heavy. Perhaps you could condense the tables or omit one(s) that aren’t crucial to interpreting the results. This is just a personal opinion and not a major criticism of the article.

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-PLF