Reviewer's report

Title: The psychometric properties of the AUDIT. A survey of a random sample of an elderly Swedish population.

Version: 3  Date: 15 April 2014

Reviewer: Linda Ng Fat

Reviewer’s report:

Thank you for taking into account my revisions and providing a letter in response to the revisions. The paper has been improved however there are few areas which need clarification. Below are comments in response to the letter ‘Author’s response to reviews’

1: Thanks for acknowledging the use of 17-71 year olds as a comparison group as a limitation. However your reasons for justifying why you used such a broad age group is not clear in the paper. You could elaborate where you have written in the limitation section: ‘also the much wider age space (17-71) in the control group is a limitation’, why you had to use such a large age group? Furthermore this limitation has not been properly discussed, why might this introduce bias in to your sample? The paper ‘Bergman H, Källmen H: Alcohol use among swedes and a psychometric evaluation of the alcohol use disorders identification test. Alcohol and Alcoholism 2002;37:245-251’ shows differences between age group within the 17-71 year old age group.

2: Also in the conclusion the term ‘younger population’ is still used. This is misleading and could be amended as has done in the rest of the paper.

3. What were the differences in AUDIT scores between the groups? Surely this would have been an important analysis to carry out ahead of assessing if AUDIT is a valid instrument. Presenting these results would also give the reader a sense of the drinking patterns (i.e. proportion of hazardous drinkers, non-drinkers etc), between 79-80 year olds and 17-71 year olds. This may be particularly important when assessing the usefulness of item 1 and 4 which appeared to be less reliable for 79-80 year olds.

Minor essential revisions

4. Thanks for providing a short definition of audit c. This part could be improved if you provide a few words here explaining why you also looked at AUDIT-c. Although your literature review suggests that a lower cut-off or fewer items on the AUDIT might be more reliable for the elderly population, a few words explaining why you have looked at AUDIT-c would make the justification clearer for this analysis.

Also in the same sentence below what do you mean by “specific tested person”? Can this sentence be reworded to make it easier to follow?
“The second aim was to provide data for comparison with a specific tested person for both AUDIT and the shortened version of the test, AUDIT-c (the three first items of the AUDIT), for elderly persons.”

4. In the second paragraph of the design section, there is a spelling mistake ‘tabe’ should be table.

5. The reference ‘O’connell et al’ in the introduction, paragraph 4, page 3 needs to be reformatted.

6. The paper needs to be proofed read and checked for grammatical errors. Some of the phrases, although I can make sense of them, are difficult to follow and could be reworded.

Here are a few examples:

In the statistics section, page 5 “Items loading above 0.4 on a factor were considered as in a high degree be associated and belonging to that factor.”

This phrase in your discussion section, first paragraph (page 6): “Since the lower reliability mainly was due to lower item-total correlations for the alcohol problems subscale (item 4-10) one can expect that in older ages people react more differently on (to) alcohol consumption due to problems with health and medication in many (many what?).”

In the second last sentence of the first paragraph of the discussion (page 6): “The same is valid for item 4 concerning how often the responders felt difficulties to stop drinking after a drinking session.”

Minor discretionary reviews

7. Consider presenting the AUDIT items in full in Table 2 or at least provide a short description of the item. This would make the table easier to read rather than having to refer to the AUDIT questionnaire from another source.

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I have no competing interests