Reviewer's report

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

Version: 2  Date: 5 March 2014

Reviewer: Steven Bell

Reviewer's report:

Thank you for the opportunity to review this paper on the psychometric properties of the Alcohol Use Disorders Identification Test (AUDIT) in an elderly Swedish population. According to reviewer guidelines I have divided my report up into three sections: major compulsory revisions, minor essential revisions and discretionary revisions.

Major Compulsory Revisions:

1) Include a table which outlines the characteristics of the samples used in the paper.

2) The comparison sample is very wide ranging in terms of age, spanning from age 17 through to 71. I think it is difficult to consider those aged 65+ years (the age commonly accepted as being “elderly” in the developed world) as “younger people”. Perhaps it would be more appropriate to exclude those who would be considered as elderly using this definition – given one of the primary aims of the study is to compare the validity/reliability of the AUDIT amongst those considered elderly to a younger general population sample. Work led by the first author of this manuscript [reference 7] illustrates that those aged 61-71 have lower AUDIT scores and are less likely to be AUDIT positive cases than those aged 17-60 – further illustrating how including this elderly group within the comparison sample may introduce bias.

3) It is not clear why Table 3 presents data stratified by gender when previously all analyses were conducted in the pooled sample. It is also not entirely clear from the caption above the table which sample of participants these means/standard deviations refer to. Additionally, AUDIT scores are typically positively skewed; perhaps it would be more appropriate to present the median or geometric mean. I am also not sure how Table 3 explicitly relates to the second aim of this manuscript, which is to compare the full 10-item AUDIT with the shortened 3-item version (AUDIT-C). Would it not be more appropriate to also present/compare the proportion of individuals identified as positive cases between the two scales? Within the main text, the only comparison made is between men and women (and postage wave), explicit differences between scales are not mentioned.

4) It is not immediately clear from the manuscript whether the analyses presented are for a combined sample of drinkers and non-drinkers. As a form of
sensitivity analysis it would be helpful to see a comparison of the AUDIT scores/factor loadings between samples limited only to those who consumed alcohol (especially as rates of abstention tend increase with age).

5) I find the following passage in the discussion “An important question is if AUDIT is appropriate to use for screening in an elderly population? Although this study showed that AUDIT is less reliable and valid in the elderly as compared to younger responders it is no reason to conclude that AUDIT is less appropriate than any other test” slightly off track. While it is true that this study did not compare different standardised tests, so we cannot make any inferences regarding how it fares against other tools to assess alcohol consumption – in response to the question initially proposed, the findings presented in the manuscript seem to indicate that the AUDIT (as delivered by postal questionnaire) is NOT appropriate for screening for alcohol use in the elderly. Perhaps this should be highlighted more in the discussion section.

Minor Essential Revisions:

6) In the abstract, the term “riskful” is used – perhaps it would be more appropriate to use the word “risky”?

7) On page two, “Introduktion” should be “Introduction”.

8) Provide a reference for the statement “It is reported to be valid and reliable for a primary care population” (pg. 3).

9) In the introduction section you refer to the AUDIT but do not expand upon the questions which it is made up of, this makes it difficult for readers to follow when you later refer to the AUDIT-5 and mention specific item numbers. Perhaps it would be beneficial to outline the specific questions somewhere in the manuscript (for example, in Table 2; expanded upon below).

10) The elderly are a definitive article, the word “the” should be included alongside the adjective elderly in several instances throughout the manuscript (e.g. on page three, […] appropriate to screen for alcohol problems among THE elderly”). Similarly there are several occasions where “the” should proceed AUDIT (e.g. THE AUDIT was sent as a postal survey, page four).

11) On page three there is a (“ before references 2 and 3, and a “)” after reference 5 – these should be removed. On the same page, when referring to multiple AUDIT items.

12) In the introduction section, when referring to multiple items of the AUDIT an “s” should be added to the word “item” in parentheses.

13) The assumption that late-responders may similar to non-responders could be strengthened by referencing: Studer et al. (2013). Examining non-response bias in substance use research—Are late respondents proxies for non-respondents? Drug and Alcohol Dependence 132: 316-323. However, I think it is perhaps overstated that this “[…] made a dropout analysis possible” (pg. 4). I would
suggest that this statement is toned down.

14) In the methods section, it would be helpful if the year the survey of the elderly population was conducted was stated (I gather from Table 1 that this was 2013, but it should be explicitly stated in the main body of the manuscript).

15) It would be useful if the decision to take items with factor loadings of 0.4 to be considered as belonging to a particular factor could be expanded upon/referenced.

16) It is not clear how missing data were addressed (or the proportion of missing data for each variable).

17) While model fit statistics are presented they are not interpreted. Various indices are listed in the methods section (RMSEA, CFI, TLI, etc) but thresholds for good fit are not described. According to guidelines suggested by Hu & Bentler (1999; Stru Equ Mod 6: 1-55) all models specified, regardless of sample, were poor fitting (however, particularly those in the elderly sample).

Discretionary Revisions:

18) In the abstract, it might be more appropriate to state the exact response rate instead of simply “above 73%”.

19) In Table 2, perhaps it would be beneficial to state the actual AUDIT items instead of simply the item number (e.g. 1. How often do you have a drink containing alcohol?). This would help readers throughout the rest of manuscript (see comment 9, above).

20) Perhaps it would be helpful to present information from the test concerning the three mailing groups.

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 declare that I have no competing interests