Reviewer's report

Title: Reliability and validity of Arabic adaptation of short form of Rapid Estimate of Adult Literacy in Dentistry (AREALD-30) in Saudi Arabia

Version: 2  Date: 29 June 2014

Reviewer: Lyndie Foster Page

Reviewer's report:

Manuscript: Reliability and validity of the AREALD-30 in Saudi Arabia.

Major Compulsory Revision for all

Dear Authors

Thanks you for this interesting paper, which will contribute to the literature in this field. My comments follow.

Overall this paper requires a very close edit, as there are many instances where the English grammar requires correction before publication. Also consistency is required in how the authors abbreviate the measures, for example once the authors have mentioned a new measure Arabic Rapid Estimate of Adult Literacy (AREALD) this can then be referred through out the manuscript as AREALD. This is also for all statistical measures, example Confirmatory Factor Analysis (CFA) can then be referred as CFA. There are multiple instances from the abstract through to the discussion where some are repeated in full words and others are already abbreviated without us having them defined. Please check this carefully.

The title of the paper is clear but the introduction does not introduce us to the REALD-30. It just appears with no understanding of its development and how it has performed against the REALD-99. The discussion is the first introduction of the REALD-30. Does this short-form version have all the same questions as the REALD-99? This is a major problem of this paper and requires addressing before publication.

Abstract: Requires editing and all abbreviations defined (AREALD-99) line 6, check use of capitals also in this section “Dentistry related words needs to be “dentistry …

Introduction: Requires editing check parentheses are closed in correct places and again all abbreviations need to be identified and have some consistency. TOFHLiD is not defined. Require a reference to the American Dental Association glossary of terminology and I would consider whether the use of capitals is appropriate here. As already discussed there is no mention of the REALD-30, which is what the paper is about?

Methods: Requires editing for consistency re statistical tests ICCS, EFA and CFA etc. The line regarding the Ministry of Health leaflets is not required as adds
noting to the paper as the use of this tool has not been introduced in the introduction as a public health importance or driven by policy.

When describing the values for ICCS and kappa consider if you require them to two decimal places?

Results: this section requires consistency of decimal places example 28.74 years should be 28.7. One decimal place is all that is required here. Overall the results section does not need to describe the tests undertaken, example “the Kruskall-Wallis test indicated..” as we have already had the tests described in the methods section. Table 1 would provide more value if it included the overall mean scores for the REALD-30 and -99 against the socio-demographic characteristics so we can get an overall feel for the measure and the range of scores.

Do not need to state that (not presented in table) as the readers can assess those themselves. Important to report the results not just repeat what we can read in the tables and report only the significant findings. No comments regarding if the results support or refute as at the bottom of page11, “the figure supports the use of the items...” as these comments should be saved for the discussion. Table 2 title does not require the full title of AREALD-30.

Discussion: It would be beneficial if the authors could start with an overall review of the main findings in the first paragraph. The discussion requires re writing highlighting the main findings and their relevance to other reported literature. As a reader I get lost in this section of the paper as it does not substantiate the findings in a clear and concise way. Early in in the discussion we need to understand why the AREALD-33 version is required and important as this sets us up to consider the properties of the measure. We also need to go back to the introduction to introduce this concept to us as why we are translating the long form so we can use the short-form and the need to assess the short-form against the long-form. This is not discussed at all. We also need to understand early on the limitations of both the AREALD-99 and -30 and of this study. Is it generalizable to all of the Saudi population, is this sample representative.

It is of no value just reporting the values for the reliability, internal consistency and ICCS against other version of measures, as this needs discussing with regard to these other measures. The robustness of the AREALD versions need to be considered looking at all these measurement properties. Some references are required (page 20, paragraph one- “...in accordance to the original READL instruments”. We want to know the reference for this work. Grammatically check capitals, parenthesis placement, reference placement and full stops.

Page 21 Paragrh two “… extreme measures was not a deterrent to the use of the AREALD.” Which version are the authors referring to? Both? Also think about use of were or was here.

Lyndie Foster Page
I have no conflict of interest or competing interests.

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

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.