Reviewer's report

Title: Assessment and application of the Chinese Resident Health Literacy Scale using item response theory: a population-based sample in south China

Version: 2 Date: 24 April 2015

Reviewer: Melody S Goodman

Reviewer's report:

Minor revisions
1. The abstract conclusion needs to be re-written for grammar and clarity for the reader
2. Are the SBSQ the same as Single Item Literacy Screening (SILS) items that comprise the Brief Health Literacy Screen (Chew et al)? I have never heard this terminology before and suggest the authors use standard terminology when referring to existing health literacy instruments.
3. On page 5 line 5 I don’t think gregarious is the correct way to define these populations
4. What is geracomium?
5. What is a single choice questions are authors referring to the two types of multiple choice questions? Single answer (respondent can choose only one answer) or multiple answer (where respondent can select all the options that apply)?
6. On page 9 line 9 stronger health literacy skills or higher/more likely to have adequate health literacy.
7. Authors state they use a multivariate model but the model is multivariable.
8. Several grammatical errors needs a good proof read
9. What is ability? How is it measured? It is unclear to this reader what figure 1 is presenting
10. Line 15 on page 12 should be “research” not “researches”
11. On line 13 of page 12 consider “represented in” instead of “in the contest of”

Discretionary revisions
12. Why did the authors choose to use so many different statistical software programs for their analysis and not just use SAS?

Major revisions
13. When the authors state they do not have reliability >0.9 are they referring to Cronbach’s alpha? While being >0.9 is excellent values >0.8 are often considered quite good. I wanted more information on the shorter version of the measure similar to that presented for the long measure
**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:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

None