Reviewer's report

**Title:** The relationship between health literacy and multimorbidity in a primary care setting

**Version:** 3 **Date:** 12 January 2012

**Reviewer:** Sandra Smith

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1. **[Major compulsory revision]** The paper would be significantly strengthened by a clear differentiation between basic literacy and health literacy. The terms are used interchangeably, infering in contradiction to stated the definition of health literacy, that health literacy is simply ability to read.

2. **[Major compulsory revision]** This problem reflects the use of the NVS as a measure of health literacy. The authors correctly state that the NVS is validated against other measures of literacy, not health literacy (TOFHLA, which is validated against the REALM). NVS measures only reading skills, and says nothing about ability to access, evaluate, communicate or apply information to promote, maintain or improve health. Therefore the title, discussion and conclusion would be more accurate if they referred to literacy rather than health literacy, in accordance with cited authors.

   The description of the NVS should specify internal reliability and discuss validity of the instrument as a measure of literacy vs. health literacy.

3. The authors are to be applauded for considering confounders. Here again, the issue of literacy vs health literacy rises. The confounders addressed relate to basic literacy. Multiple additional systemic, social, and environmental factors interact to determine health literacy as defined, and health literacy involves an array of interactive and reflective skills in addition to reading (Nutbeam 2008). (This will not be problematic if the authors report on literacy rather than health literacy). One of these factors in health literacy is experience.

   Health literacy as defined develops over time with need, opportunity and experience; so that patients with multiple chronic conditions can be expected to have more vocabulary, disease knowledge and self-care capacity than a newly diagnosed patient. The NVS could not detect or reflect this experience, and so may underestimate health literacy in this sample of experienced patients. This should be noted under Limitations. Also, if patients have low reading ability, the reliability of their responses to the self-administered questionnaire must be suspect. **[major compulsory revision]**

4. **[Minor revision]** The literature suggests that an individual who has completed 12 years education is very unlikely to have low basic literacy. The reported education levels would be more informative if stratified as <12 years vs > than 12
years.

5. [Minor revision] The writing is clear, with one exception. In the introduction, the authors refer to "difficult self-care" as a health outcome. Both the term and its categorization as an outcome need clarification.

The authors have demonstrated that multimorbidity is not related to reading ability. This is an important finding that suggests other categories of literacy skills affect patients' ability to use information for health. The finding confirms the need for new measures that reflect the reality of health literacy in people's lives.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
'I declare that I have no competing interests'