Reviewer's report

**Title:** Strengthening community-based tools for Dengue prevention: a cross-sectional survey in a temperate region (Madeira, Portugal)

**Version:** 1  **Date:** 26 September 2013

**Reviewer:** veerle vanlerberghe

**Reviewer's report:**

The topic of manuscript is interesting, but the text is difficult to read. The authors use often words as concepts, myths, topics, without specifying the ‘knowledge’ behind, which makes it difficult to understand the results of the analysis.

General remark:

- The title doesn’t fit with the content of the paper. The paper is not about community-based tools for dengue prevention, but about measuring knowledge on dengue and its prevention.
- The abstract need to be adapted according to the changes in the text (as stated below: the topics need to be explicated, if there is an assessment of tool, the methodology of this assessment need to be explained, …)
- The authors start from a view point that knowledge is a measure of behaviour, which is not at all universally accepted, even stronger most researchers think the association between these two aspects is very low. Hence relevance of measuring knowledge is debatable and not ‘indubitable’, as stated on page 3.
- To evaluate if one measurement tool is better than another (which is stated as one of the objectives of the study), it must be compared with another measurement tool. I couldn’t identify the comparison tool in the article, so it’s not possible to judge if the proposed tool is better. Hence the objective: assessment of a novel tool needs to be withdrawn or the assessment methodology need to be explained.
- One of the objectives of the study was also to explore (introduction) and evaluate (abstract) community involvement of Madeira residents (pg 3): I didn’t find this aspect back in the article. Measuring knowledge is not measuring community involvement.
- The difference between topics and concepts is not well explained, neither why they were categorized separately.

Specific remarks:

- The five main topics and the concepts are not clearly explained in the methods, which makes it difficult to read the article. Also in the results, authors talk about concept 1 or concept 2 (and not naming the concept itself) and the reader has always to go back to the tables to understand about what the authors are talking about.
- On page 4 – knowledge evaluation: knowledge, behavior and comprehension of
the program are used intertwined: who ‘should’ do domestic aegypti control can hardly be called a ‘knowledge’

• Page 4 – EK score: ? each resident him/herself evaluates or scores the number of essential concepts he/she assimilates: how was this standardized? . An EK-score of 10 is sufficient knowledge: what’s the basis for this threshold? . Explicit also the theory behind the link between knowledge score and individual compliance in domestic behavior? People having a high knowledge on the disease or transmission, are therefore not having a good behavior (take the example of ‘stop smoking’: everyone knows, but therefor they don’t stop!)

• Page 5: topic’s understanding: are these other topics than explained on page 4? What’s the difference between knowledge evaluation and topic’s understanding? Topic related concepts: what is this? Where do the ‘myths’ enter in these wordings of topics, concepts, topic’s related concepts ?

• Results: Explicit the concepts and topics and topic’s related concepts and myths, ….otherwise the result section is difficult to understand.

• Results: you demonstrate in results that knowledge have little association with behavior… so why authors continue to stress that knowledge evaluation is important? As stated in discussion: last sentence of page 7? I don’t find evidence for this association behavior-knowledge in the article.

• Discussion: ‘… the level of education was the most determinant in the knowledge concerning domestic … emphasizing the relevance of extensive health education programs.’ ?can authors explain the logic behind this sentence? Level of education has normally nothing to do with health education programs.

• Discussion: ‘… suggesting that measures that make the problem more ‘visible’ would be of a great impact…’: isn’t it the nuisance (being bitten by mosquitoes) that make people adopt preventive practices? How would you make this more ‘visible’?

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