Reviewer's report

Title: Association of Health Literacy with Complementary and Alternative medicine use: A Cross-sectional study in Adult Primary Care Patients

Version: 1 Date: 13 September 2011

Reviewer: Andrew Long

Reviewer's report:

The topic of adult health literacy and CAM use is an important one and under-researched. In principle, this paper could make a valuable contribution; however, I have two major concerns.

The first relates to the concept of health literacy (itself problematically and variably referred at different times in the paper as ‘adequate literacy’, ‘health literacy’ and ‘adequate health literacy’ – literacy and health literacy are not equivalent concepts). While the authors appropriately quote one definition of health literacy (from the Institute of Medicine, 2001), I would question whether this is the most appropriate in the context of an exploration of CAM modalities, in particular as it does not explicitly embrace the ‘acting and using’ of health information. This aspect is particularly germane in a CAM context because of the active nature of CAM use – individuals opt in by a purposeful decision or choice to use / try a CAM modality. In this regard the definition of Rootman (2008) would be more germane or Nutbeam (2000, 2008). [e.g. health literacy as ‘the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life course.’ From Rootman I, Gordon-el-Bihbety D (2008) A Vision for a Health Literate Canada. Ottawa, ON: CPHA]

Associated with this is a second issue, relating to the measurement of the key variables, health literacy (the dependent variable) and CAM use (the primary independent variable). (1) For health literacy, use is made of REALM-R which as its full name indicates was designed as a brief screening instrument to assess an adult patient’s ability to read common medical words; that is, it is a test of reading ability in a health context. Exactly how it is purported to measure, even in IoM terms, ‘the degree to which individuals have the capacity to obtain, process and understand basic health information...’ (see p3 of the paper) is at best moot. Furthermore, REALM-R uses ‘medical’ terms; their relevance to ‘a patient’s ability to read common CAM-related words’ (my adaptation) is similar unclear. (2) For CAM use (in the last 12 months) the authors appropriately utilise the newly developed, but as far as I am aware there are no published papers on the validity or reliability of I-CAM-Q. Despite this, use of this measurement instrument is highly appropriate (with indications about its need for validation). But I note that the authors do not report on other data which is contained in the I-CAM-Q, in particular, reasons for CAM use. I would suggest that this latter information is of considerable importance in making sense of the data (see below).
Looking at other parts of the text:

Background: the final sentence of the second para (p3 of text) could be inappropriately interpreted by the reader as suggesting (though definitely not said by the authors) ‘higher CAM use leads to poor QoL outcomes’. I would suggest that the evidence suggests that those with poorer QoL and/or possible ill-health outcomes opt to utilise CAM. The authors might like to make their point clearer.

Methods: Further details are needed on the setting of the study – that is, the clinic and the sort of patients attending. In addition, it is important to indicate why a 10-week recruitment period was chosen, intended sample size and rationale.

Results: In the ‘methods: statistical analysis’ section, the authors point to their use of the 5% significance level. It is thus inappropriate to comment about ‘marginally significant’, for example, for a p=0.08. This applies both to the chi-square and logistic regression analyses. In the latter, model 1 definitively demonstrates ‘no relationship’ (given the 95% confidence interval for the OR embraces the null/unity value). I would also recommend that %s are rounded to the nearest integer, for the non-LRA findings, at least in the text (to aid ease of reading).

Tables: In tables 1 and 2, I would recommend that only significant relationships are highlighted taking on board the 5% significance level chosen. In table 2, it would be helpful to reorder the items according to the column (all [types of CAM use] – i.e. first line, overall CAM use, then in order – vitamins, prayer, etc – again for ease of reading. In addition, here it would be helpful if the number of cases who used a particular CAM was also included (as the question has Yes/No responses against each); is then the reported % of all respondents or what? In addition, I wonder if it would also be helpful to report the average number used.

Discussion: To make most sense of the findings, it seems very important to at least to talk about participants’ reasons for use (note: a core question within the I-CAM-Q) of each of the CAM’s they have used. More broadly, I would suggest that it is most appropriate to consider (thus, both report findings on and discuss) CAM use and reasons for CAM use together for this sample group.

I hope these comments are helpful to the authors. Overall, however, the core measurement issues raise considerable questions about the validity of the paper as presented.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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.