Reviewer's report

Title: Internal Health Locus of Control in users of Complementary and Alternative Medicine: a cross-sectional survey

Version: 1  Date: 13 June 2014

Reviewer: Felicity Bishop

Reviewer's report:

This manuscript reports a large cross-sectional survey of students, which assesses the relationships between internal health locus of control and a number of indicators of CAM use. The rationale for the study is generally clear, in that previous studies have produced mixed results regarding associations between CAM use and internal health locus of control and this study revisits this question using better measures of the key variables and a large sample size. The data appear to be robust and the results can thus contribute to the evidence-base regarding CAM use and internal health locus of control.

1. Is the question posed by the authors well defined? YES
2. Are the methods appropriate and well described? YES
3. Are the data sound? YES
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? YES
5. Are the discussion and conclusions well balanced and adequately supported by the data? YES
6. Are limitations of the work clearly stated? YES
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? YES
8. Do the title and abstract accurately convey what has been found? YES
9. Is the writing acceptable? YES – but would benefit from proof-reading.

Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

1. The final sentence in the abstract could be clearer.
2. The two sentences at the start of results paragraph 2 (Participants without chronic condition had...) could be moved to methods section.
3. Known co-variates of CAM use may be confounding the results, as the authors acknowledge in the discussion; could you not control for some of these, e.g. gender, in the analyses?
4. In the discussion (p8 paragraph 1), the authors tentatively compare the strength of relationship between IHLOC and 1, chronic illness vs 2, CAM use. I would be interested to see a fuller analysis of this dataset using multivariate
statistics which could explore such questions.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Ensure descriptions of all the instruments are complete, i.e. include number of items on each instrument and response scales/options.
2. Report the extent and type of missing data (e.g. missing at random?) and rationale for not imputing it.
3. The BEE should be written out in full on page 9.

Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

1. For the CAM appraisal variable: It would be more usual to do a median split to create 2 equal groups instead of a mean split. Please do a median split or justify using mean split. Please also report the mean (and SD) scores on CAM appraisal for the high/low groups and comment on the meaning of these scores, e.g. are the high appraisal group scoring towards the maximum score on this scale?
2. Add the direction of differences to the text reporting the results of the ANOVAs (results paragraphs 3-4).
3. Please justify in the manuscript why a student sample is appropriate for this study.

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

**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