Reviewer’s report

Title: Are religious beliefs and practices of Buddhism associated with disability and salivary cortisol in office workers with chronic low back pain?

Version: 1 Date: 19 November 2012

Reviewer: Quinette Louw

Reviewer’s report:

This is an interesting paper and the authors could improve the quality of the paper by revising the manuscript according to the following comments and suggestions.

INTRODUCTION (Minor revisions)

The introduction should be more specific to the main focus of the manuscript. The first paragraph is a very general introduction to LBP and should be revised to introduce the main focus of the paper at an earlier stage.

In paragraph 1, the authors refer to the incidence rate as a percentage while it is usually expressed as the number of new cases per population.

The second sentence of paragraph one requires grammatical correction.

Paragraph 2

In the last sentence the authors suggest that “the epidemiological literature suggest…….” This should be revised as one paper cannot be representative of the epi literature unless it is a systematic review. Perhaps the authors should search for a systematic review to reference. This particular paper was also published almost 7 years ago. The reference that the authors refer to is published.

This sentence referred to above is the crux of the paper and should thus be well justified.

Paragraph 3

The aspects of religion should be introduced earlier in the introduction. The study by Abraido was published in Spanish and it is not certain whether they have truly established a causal relationship. The authors should confirm that and possible also reference another study since this is a main justification for their paper.

The last sentence states that the authors’ hypothesis that religion may reduce disability:

• I do not think that the authors can test this hypothesis in this cross-sectional study
• It is unclear if they are referring to the hypothesis of this study as another hypothesis is stated at the end of the intro (which is appropriate)

Paragraph 4
The last sentence is important but clarification and further explanation is required. The authors state that mindfulness treatments are associated with improved physical function. This should be explained in more detail.

Salivary cortisol is measured in this study, but not mentioned in the intro although the authors conclude that it adds to the strength of the study.

Methodology (Major revisions)
• State the type of office workers? How were they recruited
• Why were office workers deemed appropriate for a study of this nature? Could the association be different in another working population?
• How was the screening done for the exclusion criteria
• How were subjects assured of anonymity, particularly since they were asked about their religious beliefs and practices
• The main questionnaire is the Thai Buddhism questionnaire. The authors reference a national research document but there is no indication where readers can access this document. Since this is the main exposure, the authors should provide a reference of a published paper to be transparent about the validation process of the paper. An inappropriate questionnaire could have profound effects on the findings of this cross-sectional study. Furthermore, the authors only refer to the internal consistency of the questionnaire and the other psychometric properties of the questionnaire should also be mentioned.
• Why was the Roland Morris selected???
• Salivary cortisol – which “Wednesday” are the authors referring to?
• How was the randomization done?
• The last sentence of the results should be part of the discussion

Statistical analysis/ Results (Major revisions)
I would recommend statistical review of this paper, particularly with reference to the explanation of the statistics- large sections of the results should be in the data analysis sections. Could confidence intervals be calculated for correlations?

Which were the significant confounders? (refer to relevant tables in subsequent sections)
It will be good to include another table to describe the findings of the religion questionnaire to illustrate the variability of the data as I suspect that many of the
participants would probably have reported high commitment to their religion and it is also reflected in the table on page 27. It will be good to know about the distribution of this data and how it was applied in the regression model.

Discussion (Minor revisions)

The first paragraph states the outcome with respect to Buddishm and stress- this was not the main outcome according to the hypothesis which appears to present disability as the main outcome. This should be checked and revised.

Page 18: second last sentence- authors should explain this possible mechanism in more detail.

Explain why a homogeneous sample is a strength as this is the case in most project.

A further limitation is the effect of reporting on socially undesirable behaviour which could introduce biased associations. This should be included and explained in the limitations sections as this would be a significant threat in a society where more than 97% of the population is Buddhist.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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