Reviewer’s report

Title: The DREEM, Part 2: Psychometric properties in an osteopathic student population.

Version: 1 Date: 10 March 2014

Reviewer: Boaz Shulruf

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The aim of this study was to “to investigate the educational environment, using the DREEM, in all 5 year levels of an osteopathy”. Such an aim is a bit too broad and is focusing on the process i.e. ‘investigate’ rather than a particular outcome (e.g. identifying the difference in educational environment across sub-populations or environments or any other topic of the authors’ interest).

With the lack of such clear objectives, assessing the merit of the manuscript is a challenge. Thus, my review is limited to the analysis, given that the objective is to provide a mere description of the educational environment at the investigated institution.

The DREEM is a widely utilised assessment tool for educational environment. However as the authors correctly indicated, not all studies that utilise the DREEM could demonstrate the same factor structure. In addition some studied used the total scores, others factors scores and many item scores. The current study used item scores and factor scores to describe student perceptions of their educational environment. Such an approach means that the description of the educational environment is derived from two different conceptual frameworks, and those should be clearly indicated. The first is a description of educational environment by particular items and in this case the factors are meaningless as each item stands alone. Once that framework is employed the analysis, particularly the report on the statistical significance must include correction for alpha inflation since there are many comparisons and some might yield significance level of p<.5 by chance only.

When a factorial framework is utilised, than the factor structure should be re-validated. Then the analysis and the interpretation need to consider factors only but not individual items. In that case reporting factors’ reliability is appropriate. I believe that making this distinction in the analysis and the interpretation may significantly add to the merit of the study.
Also, it is important to note that the years’ comparison is in fact a comparison of different cohorts as well. Thus, the discussion needs acknowledge that and indicate that any differences across years could be related either to the cohort or to the learning environment or both. Obviously, even if no differences were found across years, that could be an artefact as it is possible that the impact of the cohort outweigh the impact of the year’s learning environment.

I believe that specifying what phenomena were to be identified and improving the analyses and the interpretations as mentioned above would significantly improve the manuscript and make it an important contribution to the literature.

**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