Reviewer's report

Title: Evaluation of the acceptability of Peer Physical Examination (PPE) in medical and osteopathic students: an inter-professional cross sectional survey

Version: 1 Date: 26 March 2013

Reviewer: Gordon Hendry

Reviewer's report:

This is a study which seems to be designed to 1) test the validity and reliability of a new questionnaire for measuring attitude towards PPE, and 2) to compare attitudes to PPE between med students and osteo students. The data analysis and results generally seem sound, however there are some significant changes required to bring the article up to publication standard. The authors have not identified how the results of this cross-sectional comparison between 3rd year med student and 1st year osteo students attitudes towards PPE may have any impact on the delivery and the nature of PPE practice in future. As such, the study seems to have little relevance.

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 Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?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

1. The question/aims posed by the authors appear to be well defined initially. But there seems to be a secondary aim which was to demonstrate the reliability and validity of the new PPE questionnaire which was then used to measure students acceptability perceptions of PPE.
2. At times the methods are confusing as it is difficult to determine what the specific aims of the study were. There was an aim to measure the attitude to PPE in med and osteo students to perform a comparison. The authors state that the aim was also to confirm findings of previous research about PPE in a group of Italian students, since no previous studies exist. There are also statistical analyses to determine the validity and reliability of the newly developed questionnaire despite it apparently being validated previously. It is difficult to
determine whether or not the med students were conducting the same or a different PPE task of that conducted by the osteo students. Criterion validity should be conducted where there is a known, acknowledged gold standard measure available. I don’t think the EFS questionnaire is considered to be the gold standard for examining perceptions of PPE.

3. The data seem sound but the presentation of questionnaire validation results in the ‘Validation of Instrument and Statistical Methods’ section is confusing. This should be in the results. There is no mention of whether the data were normally distributed or not.

5. There appears to be an assumption that osteopathic students have a better attitude towards PPE. However this was merely a cross-sectional study and it is likely that perceptions of PPE could fluctuate over time with experience. The authors should place more emphasis on the limitations of the study design as they cannot make conclusions about causality in a cross-sectional study. The authors discuss a lot of work by Gale (2011) which does not seem to be relevant to this study.

6. Not all relevant limitations are acknowledged. In terms of the development of the new PPE questionnaire, the authors have not addressed other important aspects of validity and reliability such as content validity, construct validity, reproducibility, responsiveness, floor/ceiling effects, and interpretability. The authors also claim that the results of this study have contributed to the reflection of teachers and students about own practice and mutual understanding. While this may be true, there is no evidence provided of this in this article. There also seems to be too much of a focus on the positive attitude amongst osteo students, instead of focusing on why medical students may not find PPE quite as acceptable.

7. Generally there are few relevant references. There seems to be too much focus on the osteopathy profession instead of the relevant and importance of PPE.

8. The abstract is confusing where the aims are to compare perceptions of PPE, and the results present validity and reliability stats from the development of a new questionnaire.

9. In places the writing is difficult to understand and there are some grammatical errors.

Minor essential revisions
1. Abstract, background. Please re-write the final sentence of the background section of the abstract more clearly by starting “The aim of this study was to…”.
2. Abstract, background. Please include a secondary aim which was to determine the reliability and validity of the new questionnaire.
3. Abstract, results. The sentence starting “The new questionnaire” should be in the conclusions section.
4. Background, 2nd sentence. The grammar of this sentence is not correct,
please re-write.

5. Background, 1st paragraph. The authors state that Osteopathy is a recognised system of healthcare but that it is still in the process of being acknowledged as an official healthcare profession. This is a contradiction and should be re-written.

6. Background, sentence starting “So we looked…” This sentence is not necessary. Please re-write to highlight that PPE is adopted across health and medicine disciplines.

7. Background, sentence starting “PPE is the learning activity…”. This is a formal definition of PPE, please provide a reference.

8. Validation of Instrument and Statistical Methods, “The questionnaire asked some other…”. There is an extra full stop at the end of the sentence.

9. Results, 1st sentence. Was this the new PPE questionnaire score or the EFS score?

10. All references in text. Please re-write according to journal standards such as (Rizan et al, 2012).

Major compulsory revisions

1. Abstract, conclusion. The sentence starting “The contact with the body, in the context of PPE, proved to be a valid topic…”, this sentence needs to be re-written as it does not relate to the original aims and methods of the study.

2. Background, “The objective of this study…”. The main objective appears to be comparison of attitude to PPE between med and osteo students, and also to measure reliability and validity of the new questionnaire. Please re-write.

3. Methods. It is unclear whether or not the students completed the questionnaires after completing the same or different PPE tasks. Please acknowledge whether both groups of students completed different tasks. If the tasks were different, this might explain the differences in attitudes and should be acknowledged in the discussion section.

4. Methods, final sentence, “No selection criteria”. This is not correct. The selection criteria must have been med students attending one third year class after exposure to PPE, and osteo students attending parallel classes after exposure to PPE.

5. Validation of Instrument and Statistical Methods. Why was there need to conduct additional validation of the new PPE questionnaire?

6. Validation of Instrument and Statistical Methods. Please place all validity and reliability results for the PPE questionnaire in the results section.

7. Results, “The EFS score showed a parallel…”. The authors state that the questionnaire showed a parallel behaviour and that the results are summarised in tables 3 and 4. What do the authors mean by parallel behaviour and how are these summarised in tables 3 & 4?

8. Discussion. The authors make several references to the work of Gale (2011) in the discussion which do not seem relevant. The authors should focus more on the limitations of the study and the significance of their results to the use of PPE
in both medical and osteo education. The discussion seems one-sided in favour of explaining some osteopathy theories for which there is a poor evidence base. The authors should acknowledge the limitations of their questionnaire and the aspects of validity and reliability that were not examined. They should also comment further on the limitations of the sampling methods adopted and the limitations of cross-sectional survey study design. Further, there is a major limitation that has not been addressed where 3rd year med students and 1st year osteo students have been recruited. Do the authors think that the number or years of study may have impacted on the results in addition to the type of PPE task conducted prior to the administration of the questionnaires.

9. Conclusions. Some of the conclusions are not supported by the data. The results of this study confirm that there was a difference in the mean scores for the 2 groups of students. There is no data provided on the validity of the topic, nor the impact of the study on teachers and students own practice and mutual understanding and acknowledgement.

10. Authors’ contributions. The text for authors’ contributions is missing, please provide.

**Level of interest:** An article of limited interest

**Quality of written English:** Not suitable for publication unless extensively edited

**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