Author's response to reviews

Title: Medical Students' perceptions of Educational Environment at an Iranian Medical Sciences University

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Author's response to reviews: see over
Dear Editor in Chief

Journal of BMC Medical Education

Article: Medical Students' perceptions of Educational Environment at an Iranian Medical Sciences University

Reference number: 1068603872355238

Version: 2

Thank you for the opportunity to re-revise our manuscript, reference number as 1068603872355238. Attached, please find the responses to the reviewers’ reports on the manuscript. It would be most appreciated if you consider the answers to be reviewed.

Also quality of the English of manuscript has been improved.

I sincerely thank you in advance.
Reviewer's report
Title: Medical Students' perceptions of Educational Environment at an Iranian Medical Sciences University
Version: 1 Date: 26 May 2010
Reviewer: Susan Miles

Reviewer's report:
The authors have used the DREEM, translated into Farsi, to collect data about student perceptions of the educational environment in their medical school in Iran.

Their data is a useful addition to the growing literature of DREEM as used by medical schools in various countries, running different types of curricula. They include a good discussion of their findings within the context of other DREEM studies.

There are a number of revisions needed, but once sorted it is this reviewer's recommendation that this paper be accepted for publication.

Major compulsory revisions
RESULTS + DISCUSSION
1) The authors need to be clear about why they selected the items they have included in the text of the Results section, as there is little difference between the means scores for the all individual items. The authors have not mentioned the commonly used interpretation cut-offs i.e. #2.0 (McAleer, S. and Roff, S. (2001). A practical guide to using the Dundee Ready Education Environment Measure (DREEM). In: J.M. Genn. Curriculum, environment, climate, quality and change in medical education: a unifying perspective. AMEE Education Guide No. 23. AMEE: Scotland), which is fair enough if that is their preference, but they do need to be clear about exactly why they have highlighted particular items over other items when the scores are all very similar. The same is the case for the items discussed in the Discussion.

- The selected items removed from results and discussion, also It has been mentioned the practical guide of McAleer and Roff(2001) in the methods, Results and discussion as recommended.

DISCUSSION
2) The authors need to take care in their interpretation of item 3 “There is a good support system for students who get stressed”. This item does not indicate how stressed the students are, as suggested by the authors. A low rating would refer to a perceived lack of support available to those students who get stressed. The authors might also like to consider their interpretation within the context of their own rating of 2.5 for the item “The enjoyment outweighs the stress of studying
medicine”. Although by many standards this is a pretty low score, it is one of the highest rated items reported here. As it currently reads, the interpretation of their finding for item 3 is incorrect.

- The interpretation of item 3 has been changed as recommended.

3) The authors note in the Discussion that students in higher years rated the educational environment higher than students in the beginning years. This has not been mentioned at any point before now. It should be referred to in the Results, there should be some indication of how many of the 182 students who completed the DREEM were in each of the year groups etc. The following sentence “This result is in line with the results of Fidelma ...” need clarifying as it is unclear whether the authors current results are “in line” or “differ” from these other two papers.

- These sentences were deleted from discussion.

Minor essential revisions
1) The exact purpose of the research is unclear and should be clarified. Is it just diagnostic, to highlight strengths and weakness, as suggested in the Background? Or is it to act as a baseline prior to planned curriculum change, as suggested in the Conclusion? (the Conclusion suggests that changes were already planned, and are not just now being done due to the findings of this study).

- The purpose of the study was diagnostic, to highlight strengths and weakness.
- The conclusion has been revised.

TITLE
2) Capital P for “Perceptions”

- This was done.

ABSTRACT
3) Capital S for “Sciences” in the last sentence.

- This was done.
Methods
4) “86.6%” not “%86.6”. Same in the Participants sub-section of the Methods section.

• This was corrected.

5) “DREEM” not “DERRM”.

• This was corrected.

BACKGROUND
6) What is meant by “its prospect” at the end of the first paragraph? This requires clarification.

• This was corrected.

7) Regarding the sentence “It is geared to pinpointing ...” the authors should note that the DREEM doesn’t do any of the things described in this sentence, it is a tool that can be used if you want to do these things, as such this sentence should be re-worded slightly to make this clear.

• This was corrected.

8) Are basic science and pathophysiology courses “a” course (singular) or “courses” (plural)? Same for the clinical sciences course - should this be “a clinical sciences course” or “clinical sciences courses”? Check this throughout as these courses are referred to in multiple sections of the paper.

• They are singular.

METHODS
Participants
9) Why was the DREEM only distributed to 210 of the 350 students referred to in this section? It would be useful to know why these students were selected for inclusion.

• At the time of study, some of students were in other universities to pass the lessons that they could not pass in this university. Some of them especially
clinical students were in holiday. So, 210 students were the most number of students who were included in the study.

Measures
10) Space missing between “... institutions [1]. DREEM contains ...”

- This was done.

11) The authors refer to “experts” translating the DREEM. In what were these people expert?

- They were expert in medical education. This was added to the text.

RESULTS
12) What is the “intended sample” referred to in the description of the demographics? The 210 targeted students, the actual responding sample of 182, the full 350 available medical students?

- The actual responding sample of 182. This was added in the results.

13) The subscale scores at the top of Page 5 do not need to be both here and in Table 1. Remove from one place.

- These scores removed from the top of page 5.

DISCUSSION
14) Space missing between “... much higher [14-15]. In a survey ...”

- This was done.

15) The last sentence is unclear; what is meant by “in this regard” i.e. why are the authors suggesting further research in larger universities, is it just to check the lack of gender difference they found (referred to in the previous sentence) or do they have another goal in mind? Currently it is unclear what the authors mean.

- To check the lack of gender difference was found in this study.

CONCLUSION
16) The authors note that the scores demonstrate priorities for modification but it
would be useful to know what they are going to do about it - do they have any recommendations? This is particularly key as it is suggested here that there are already planned changes forthcoming. Will the DREEM data feed into this at all (with respect to suggesting areas in need of attention), or simply act as a baseline? This is related to point 1 above in this section about the purpose of this study (diagnostic or baseline data), and how it fits in changes that may or may not have already been due to occur. These issues need clarifying so that both the authors’ original goal and resulting conclusions are completely obvious.

- The conclusion was revised.

LIST OF ABBREVIATIONS USED
17) Either capital A for Abbreviations, or lower case u for used.

- This was done.

REFERENCES
18) The date for reference 1 is incorrect.

- This was corrected.

19) Capital K for the name of the school in reference 10.

- This was done.

TABLES
20) The * is not required after the P in Table 8. And there is a missing * after the P for the total DREEM score if the authors are using p<0.05, as they state previously.

- These were done.

Discretionary revisions
ABSTRACT
Background
1) The end of the first sentence is phrased awkwardly and should be re-written (... to make the modifications and improvements necessary in the quality of educational environment).

- This was done.
Methods
2) Suggest “So, 182 questionnaires in total” rather than “So, totally 182”. Same in the Participants sub-section of the Methods section.

- This was done.

Results
3) Suggest “... DREEM score were found to be ...”

- This was done.

BACKGROUND
4) “the Dundee Ready Education Environment Measure” rather than “The Dundee ...”

- This was done.

5) The authors use a relevant and up-to-date literature. But in some places in the Background is it not as appropriately used as it could be, and it appears as if the references could be used interchangeably. For example, the reference for the first sentence [1] is not particularly appropriate. Also, whilst reference [10] does briefly mention scores found by other authors, wouldn’t reference [9] be more appropriate for discussing institutional comparison? I would question whether references [6] and [7] do indicated that education environment “influences how, why and what students learn”. Likewise, in the Discussion, given the authors’ argument about traditional versus modern schools giving different DREEM scores one wonders why reference [9], which specifically looks at this issue, has not been used. It is recommended that the authors double check that the match between the reference numbers in the text and the number in the Reference list is correct.

- These references were checked.
- The reference 9 added to discussion.

METHODS
Measures
6) References not needed in this section (also to note, they seem to be a fairly random selection of the previously cited references).

- References removed from this section.
Data analysis
7) “p<0.05” should be moved to the end of this section, to accompany the description of the statistical test that has been used.

- This was done.

RESULTS
8) This reviewer recommends that instead of having separate tables for each of the five subscales, all the DREEM items are included in a single table, they can still be grouped by subscale. This is more common practice in the published DREEM literature where mean scores for all 50 individual items are reported. As this paper currently has 8 tables, this would be particularly appropriate for clarity of reference between the discussion of the results and the tabulated data.

- All the DREEM items included in a single table as recommended (table 2).

DISCUSSION
9) Page 6 - the authors refer to an Indian medical school [13], where “the DREEM subscale scores were found to be higher than those in the present study.” It would be useful if the authors could elaborate on that to note if this school was traditional or modern / student centred to extend their immediately previous discussion.

- The Indian medical school that mentioned above was traditional. This was added to discussion.

10) Suggest “females” instead of “girls” in the second to last sentence of the Discussion.

- This was done.

Discussion.
11) The authors have stated that the students on clinical courses rated the educational environment as higher compared to students on the basic sciences and pathophysiology courses - it would be useful to include some discussion about why they think this might be the case.

- One possible explanation is that they are more familiar with the education system.
CONCLUSION
12) To note again, care when interpreting item 3 regarding support for stressed students, and how low scores don’t necessarily mean that students are stressed. Also, regarding a previous point about why the authors have chosen to highlight certain items over others - timetabling was rated as low as the other items mentioned in the conclusion but it has not been referred to, which again begs the question as to why certain items have been mentioned and others have not. When dealing with points 1 and 2 in the Major compulsory revisions section above the authors should also consider whether this impacts on this aspect of their conclusion.

- The selected items removed from results and discussion, also It has been mentioned the practical guide of McAleer and Roff(2001) in the methods, Results and discussion as recommended.

- The interpretation of item 3 has been changed as recommended.

- And the conclusion was improved.

TABLES
13) The authors have included the standard deviation for Tables 1, 7 and 8, but not for Tables 2 to 6. I’m not arguing that it is needed, but the authors should be consistent through the tables as to whether this is included with the mean.

- The Standard deviation (SD) added in tables 2 to 6.

Level of interest: An article whose findings are important to those with closely related research interests
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
Reviewer's report
Title: Medical Students’ perceptions of Educational Environment at an Iranian Medical Sciences University
Version: 1 Date: 5 May 2010
Reviewer: Sue Whittle

Reviewer's report:
DREEM has been widely used to evaluate educational environment at various medical schools, and this study of an Iranian Medical School adds to these studies. However, I think you could add more value to your data by a more in-depth analysis of results, and a clearer attempt to compare results with those from other similar traditional schools, and with schools which operate different curricula.

Minor essential revisions
1. Abstract - line 9 DREEM, not DERRM
   • This was corrected.

2. Methods. It is stated that questionnaires were distributed to 210/350 students, but it is unclear how/why these students were selected. It is misleading to give a response rate out of 210, instead of 350 - this should be rectified.
   • At the time of study, some of students were in other universities to pass the lessons that they could not pass in this university. Some of them-especially clinical students- were in holiday. So, 210 students were the most number of students who were included in the study.

3. Strictly speaking, a non-parametric data analysis method such as Mann-Whitney, should be used for non-parametric data. If a t-test is used, as in this paper, it's use should be justified, and reference should be made to this in support of inferences drawn.
   • Mann-Whitney test was used to data analysis and t-test removed.

4. The DREEM questionnaire is specifically designed for medical curricula, and so contains a number of references to patient contact, e.g. items 6, 18,11 - and also perhaps 21 & 31 to some extent. I assume that the basic science students have no clinical contact, so are unable to answer these questions sensibly. You ought to address this in your discussions - if you showed the scores for all the items for both science/clinical cohorts, this might lend itself to discussion of this problem. (see below)
   • Yes, it is right; the basic science students have no clinical contact. But in this study these students did not answer to the mentioned items.
5. In the results section, it would be very helpful to include the results from other medical schools in a table alongside your own data. This would make it much easier to compare the results than including them in the text. You could also clarify which medical schools use a comparable, traditional curriculum, and which PBL/integrated curricula. A more thorough discussion of the comparisons would be very valuable.

• This is common in papers to include and compare the results of other studies in discussion as we have done here.

Discretionary revisions
6. Background - I would question the use of the word 'efficiency' in relation to educational environment (used twice, para 1, line 4, & para 3, line 6). I would suggest 'effectiveness’ instead.

• This was corrected.

7. It would also be helpful to show the item scores for the science/clinical cohorts, and discuss where the differences between the two groups lie.

• The difference between basic sciences and clinical groups regarding DREEM domains has been mentioned in Table 8, but if we compare item scores between these two groups the content of the paper will become very large.

8. Try to avoid vague references to scores as 'decent' 'neither too positive, nor too negative'. On a 0-4 scale, as used here, you could regard a score of 2 as neutral, below 2 as negative and above 2 as positive - this would make your descriptions clearer.

This was done and It has been used the practical guide of McAleer and Roff(2001) to interpret the items.

9. At the end of your discussion you refer to the possibility that clinical students rate educational environment more highly than the basic sciences students simply because they are more familiar with the education system. This suggests that the educational environment does not change between the basic science and clinical parts of the course, which seems unlikely. Perhaps you could discuss this in more depth?

• This was done.

10. You might be clearer at the end of the paper how you plan to address the issues raised by the results of the DREEM survey. Any specific interventions that you have/intend to introduce would be of value to other schools who use this questionnaire.
The purpose of the study was diagnostic, to highlight strengths and weakness. And conclusion is according to this purpose.

Level of interest: An article of limited interest
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

Reviewer's report
Title: Medical Students’ perceptions of Educational Environment at an Iranian Medical Sciences University
Version: 1 Date: 2 June 2010
Reviewer: Martina Kadmon
Reviewer's report:
The authors of the article have analysed an important topic in medical education, the students' perception of the educational environment in a single medical school. Many medical schools around the world continuously seek measures to positively influence this parameter in order to increase the efficiency of their training program.
Unfortunately, the data collected has a very limited generalizability and may thus not easily be transferred to other medical schools. Conclusions may not necessarily be applicable to other traditional curricula. Furthermore, the authors do not give concrete ideas as to how the data will influence their future development concretely.

- This was added to discussion as a limitation.

The methodology describes the number of students included but does not give an answer as to how they were chosen and why not all students were included in the study. The results are rather scarcely presented and do not consider the various subscales enough to be able to draw conclusions from the subscale data. In the discussion the authors conclude that the mediocre results on the evaluation of the educational environment is due to the traditional educational system but provide no convincing evidence for this conclusion. Waht concrete
steps should be taken on the basis of the underlying data?

- At the time of study, some of students were in other universities to pass the lessons that they could not pass in this university. Some of them—especially clinical students—were in holiday. So, 210 students were the most number of students who were included in the study.

It has been used the practical guide of McAleer and Roff (2001) to interpret the items and DREEM domains and this was added to the text.

- The conclusion was revised according to the results.

**Level of interest:** An article of limited interest  
**Quality of written English:** Needs some language corrections before being published  
**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

Best Wishes

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