Author's response to reviews

Title: Undergraduate research in medical education: a descriptive study of students' views

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Author's response to reviews: see over
Replies to reviewers:

We are grateful to both reviewers, and would especially like to thank reviewer 2 for taking the time to provide considered and often detailed comments regarding numerous aspects of the text. We have included most of the suggestions offered, recognizing that they provided necessary improvements and greater clarity. Where we differ in opinion, we have provided our arguments. Specific replies to each of the comments are presented in the section below.

Reviewer 1, Prof. Juraj Mokry.
I would recommend attaching the copy of questionnaire (translated into English) to the paper.
The questionnaire has been translated into English and included as an appendix, as suggested.
Was the questionnaire validated? How? This should be included into the manuscript.
The initial questions were those that students themselves believed required answers and a pilot study was conducted in which the relevance of the questions was tested to some degree, as indicated in the text. However, different from an epidemiological survey, or a health assessment instrument, the questionnaire was not rigorously validated. We also have no knowledge of any ‘standard questionnaire’ for medical education that could be culturally adapted.
The importance of including further information in the manuscript is unclear, because despite his detailed analysis, the second reviewer did not mention anything concerning this simple questionnaire. We suggest that its inclusion as an appendix is sufficient.
I would recommend to condense the conclusions only to major results (take-away message) and not to repeat the method and results like in abstract.
After consideration, we feel that the longer, consolidated conclusion offers a more complete summary of the survey and subsequent report and is best left as is, since the abstract already contains the concise, condensed ‘message’ the reviewer refers to.
We would like to thank Dr. Mokry for recommending the following articles:

Mokry J, Mokra D. Opinions of medical students on the pre-graduate scientific activities - how to improve the situation? Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub. 2007 Jun;151(1):147-9; we were able to locate this one and download it.

Mokry J, Sevecova D, Sulaj M. Student scientific activities at Jessenius Faculty of Medicine, Comenius University in Martin - current state and its future. Bratisl Lek Listy. 2004;105(1):25-9; we were unable to access a copy of the second article, so perhaps the author could forward us one. Its title and abstract suggest it could contain information useful to our ongoing involvement in improving medical education at São Paulo State University.

Reviewer 2, Prof. Karl Kingsley.

Again, we would like to express our gratitude for the considerable effort taken to detail the following improvements to our manuscript.

Page 4, Line 1: should read "No structured curricular....."
The word "structured" was added, as suggested.
Page 4, Line 3: should read "...willing and available to facilitate these projects."
The verb was changed, as indicated.
Page 4, Line 8: should read "...including questions and open-ended comments, was designed using input from undergraduate students, following a pilot study"
The phrase was revised, as suggested.
Page 4, second to last line: should read "published" not publicized
This oversight was corrected, as suggested.
Page 5, Line 1: delete "quantitative"
The word “quantitative” was deleted, as suggested.
Page 5, General data, line 1: should read "by 415 students (yielding a response rate of 76.8%)"
The phrase was corrected, as suggested.
Page 5, General data, line 8: should read "...had participated in some type of research project"
The phrase was corrected, as suggested.
Page 5, Undergraduate research and motivation, line 1: should read "The survey revealed that of the 219 students who had not participated in any research project during undergraduate education, 187 (85.4%) showed an interest. This group felt......, while 32 reported no plans for such activity.
Both sentences were altered, as suggested.

Page 6, line 2: delete "in June 2009"
The date was deleted, as suggested.
Page 6, line 5: suggest beginning with "Analysis of these data also revealed that student motivation to...."
The opening phrase “Analysis of these data also revealed that” was added, as suggested.
Page 6, line 8: replace "chosen" with "cited"
The verb was changed, as indicated.
Page 6, second full paragraph "Students involved with...." This paragraph is confusing. Consider deleting or re-phrasing, please.
The paragraph was re-written to clarify the point being made, and now reads “Concerning curriculum enrichment, the attributes deemed most important were the grades obtained during undergraduate studies (52.0%), followed by extension activities, such as UR (38.6%), and monitorships in specific areas (9.6%). Reservations concerning the consistency of grades, their reflection on learning and their influence in residency exams and project submissions to funding agencies were discussed in students’ comments.”
Page 6, third paragraph: replace "We should add" with "It should be noted..." This is a research article and should be written in the passive voice.
A brief review of recent articles in Medical Education (May & June 2013) reveals no bias concerning the active voice. Most of the articles we chose at random had phrases that included the personal pronouns “we” and “our”. We have left the original intact and accept the editor’s decision on this point, since either phase is valid.
Page 6, last paragraph "For 24.5%...." is also very confusing. Consider deleting or completely re-phrasing, please.
Eliminating the paragraph was not really an option, since 24.5% of students felt this issue was important. It has been re-written in order to clarify the ideas we were aiming to express, and now reads “The study’s objectives influenced the choice of
the department in which 24.5% of respondents sought participation in UR, while the classes of the discipline influenced this choice for 19.4%, a very similar percentage to those who indicated that they intended to follow a specialization in the same department.

Page 7, please delete "Like the following example....." This was not helpful and merely repeated what the authors already stated.

Our first draft included numerous quotes from the students in an attempt to let their voice clarify the points being made, which resulted in a very long (long-winded) article. We elected to re-write it with no quotes and felt that it lacked an important aspect of the study, namely the students' comments, which synthesized their point of view. We finally settled on the version under review in which a few of the most relevant comments were inserted to clarify the students' collective voice, since we felt this added rather than detracted from the article. However, the reviewer's suggestion of an appendix seems to resolve this conflict, so we have included all the quotes indicated here and several previously excluded quotes in an appendix.

Page 8, same comment - please delete "for example: "Lack of information...."
This was not helpful or insightful, but merely repeated what the authors already stated. Consider keeping comments to an appendix for review

See previous comment.

Page 9, last line: please delete "students made some comments about this topic..."undergraduate......"; This was also not insightful or helpful.
See previous comment.

Page 10, consider revising to "Developing critical understanding of medical publication was cited by 10.7%, while a combination of these factors...."
The phrase was revised, as suggested.

Page 10, last paragraph: revise to "The majority (67.9%) of completed projects were presented at...."
The phrase was revised, as suggested.

Page 10, last paragraph: Delete "Congress" and begin with "Presentation..."
The word “Congress” was deleted, as suggested.

Page 12, line 12: revise to "....student demotivation, primarily centered on...,"
The word “primarily” was added, as suggested.

Page 12, line 13: revise to "....the supervisor should have greater....."
The verb tense was altered, as suggested.
Page 12, line 19: delete "the question of"
The words “the question of” were deleted, as suggested.
Page 13, last paragraph: Consider deleting the sentence "Such meetings...." This did not add value to the manuscript.
Although this point was considered important by the students, we decided that the reviewer is correct and deleted the sentence, as suggested.
Page 14, line 3: Change "Our" to "This" - should be written in passive voice.
Unlike the point conceded above, here we feel “Our analysis...” is better. Current trends in scientific writing seem to show the opposite of the reviewer’s point. Use of the active voice is increasingly accepted, and in numerous journals in diverse areas of scientific study, it is the rule, rather than the exception. It is our understanding that this is in response to an ethical issue, wherein the researchers assume responsibility for their analyses and interpretations of the data obtained, in contrast to the assumed objectivity generally attributed to the passive voice.
We also refer back to our previous comment; the journal shows no discrimination regarding the use of the active voice.
Page 14, line 7: consider deleting "and is comparable to that verified for Dutch..."
This is not really a relevant comparison.
The phrase was deleted, as suggested.
Page 14, line 12: replace "inferior to international experiences like Stanford" with "lower than research intensive programs at Stanford"
The phrase was revised, as suggested.
Page 14: consider deleting "The longest running UR course...." this is confusing.
We believe this point is important, since it refers to the situation of UR in Brazilian medical schools, so we re-wrote the paragraph in order to clarify the comparison we were making. It now reads “UR in Brazil dates from 1995, but the results of this activity on medical education are far less consolidated than those reported by Stanford.”
Page 14: also consider deleting the paragraph beginning with "Scientific publication..." this doesn't add value to the manuscript or clarify any relevant point.
As noted above, the initial draft included quantitative analysis and a qualitative approach. Certain paragraphs have become less relevant in the present format. The paragraph was deleted, as suggested.
Page 14, last paragraph: Begin with "Similar to UR worldwide....."

The beginning of the paragraph was revised, as suggested.

Page 15, consider deleting paragraph beginning with "Regarding this question..."

This doesn't really provide context for this study but is more governmental and policy directed.....

This point is genuinely important for Brazilian medical education and those directly involved in curriculum development; however, it is probably more adequate for a paper using qualitative analysis, hence, the paragraph was deleted, as suggested.

Page 16, second paragraph: consider deleting the sentence "The teaching model...."

Again, we believe this point is an important feature of the closing argument, so we re-wrote the sentence in order to clarify the ideas we were hoping to express. It now reads “Medical education is currently diversifying its scenarios to include emergency medicine and primary health care, following models that are also centered on the students as generators of knowledge. Studies suggest that research is an essential element in the formation of the new health professional...”

Page 17: replace "reality" with student perception in all instances.

The word “reality” was either deleted (because it was unnecessary) or revised.

Page 17: conclusions: Replace "The project" with "A survey"

The word “project” was substituted by “survey".