Author’s response to reviews

Title: The association between health professionals’ international experience and the academic output of their students in Harbin, China

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Author’s response to reviews:

Dear Liam Messin,

Re: Manuscript reference No. MEED-D-18-00672

Please find attached a revised version of our manuscript “The association between health professionals’ international experience and the academic output of their students in Harbin, China”, which we would like to resubmit for publication as a research in BMC Medical Education.

Your comments and those of the reviewers were highly insightful and enabled us to greatly improve the quality of our manuscript. In the following pages are our point-by-point responses to each of the comments of the reviewers.

Revisions in the text are shown using yellow color for additions.

We hope that the revisions in the manuscript and our accompanying responses will be sufficient to make our manuscript suitable for publication in BMC Medical Education.

We shall look forward to hearing from you at your earliest convenience.

Yours sincerely,

Tingjiao Liu, PhD

Address: Department of Neurology, The First affiliated Hospital of Harbin Medical University, China
Reviewer #1

1. Replacement of the word 'impact' with 'association'. You cannot claim causality for the observations you are making at this juncture.

- We have replaced the word 'impact' with 'association'.

2. There are a number of limitations that should also be factored in including the bias that may result from self reporting (i.e. the fact that data is captured by a questionnaire) and the fact that there may be other factors in the mentors that resulted in the associated improvements in their mentees other than their time overseas.

- These limitations have been added in the Study Limitation section.

3. Reconciling the results with the discussion is confusing in that some aspects suggest that the association is not very strong or missing.

- In Results paragraph 2 line 60 written: “We found statistical differences between Group A and Group B for total IF (P=0.001) and total number of papers (P=0.040). There were significant differences in the mean scores between Group A1 and Group B1 for total IF (P=0.040) and total number of papers (P &lt; 0.001). Similarly, Group A2 and Group B2 had significantly different mean scores for total IF only (P=0.009).” Group A are students of returning professionals and Group B are students of resident professionals. Group A1 and Group B1 are scientific research students from HMU. Group A2 and Group B2 are clinical medicine students from affiliated hospitals. So these results came to this conclusion: “Our study revealed that there is a wide gap in the research abilities between students of returning professionals and students of resident professionals, including both scientific research students and clinical medicine students.”

4. The 100% participation rate while guaranteeing anonymity needs to be explained.

- These sentences were added in Methods section paragraph 3: “To ensure confidentiality and a high response rate, three investigators meet the students face to face and distributed the questionnaires to them. The students were required to complete the questionnaires while the investigator was present, and the investigators were not allowed to disclose any information or data collected.”
Reviewer #2

1. In methods: why mentioning a few sentences on HUCM if they are excluded? seems not relevant.

- These sentences have been deleted.

2. In methods: a bit more information on how the questionnaire was distributed to explain the 100% response rate.

- We have added the following sentences in the “Methods” section (Paragraph 6): “To ensure confidentiality and a high response rate, three investigators meet the students face to face and distributed the questionnaires to them. The students were required to complete the questionnaires while the investigator was present, and the investigators were not allowed to disclose any information or data collected.”

3. How did you match group B for grade? Which grade? GPA?

- By “grade,” we meant that the students were matched based on their year of enrollment. This sentence has been added in the “Methods” section (Paragraph 2): “PhD students in China are differentiated and graded by their time of enrollment.” All of the students included in Group A and Group B were in 2012–2014 enrollment classes. We have replaced “grade” with “enrollment year” throughout the article to clarify the intended meaning of this term.

4. Methods: How many cases you did not find a match? I find this information important.

- We have added the following sentences in the “Methods” section (paragraph 6): “And there were 78 students of Group A who did not have a match. In total, there were 694 students enrolled in 2012–2014, 335 of whom were students of returning professionals.”

5. In discussion: First paragraph relates to a different topic/thema. I don't feel it contributes to a clear line of reasoning.

- The first sentence of this paragraph was intended to explain the importance of international training experiences. We have changed the phrase “global health programs” to “international training experiences” to clarify the meaning and relevance of this sentence. This flows logically to the next sentence, which describes the presumed link between a professional’s study-abroad experience and the benefit to their students (“It is often assumed that a health professional’s study-abroad experience has a positive influence on the scientific research capacity of their students; however, such an influence has not been evaluated in China.”). The rest of the paragraph adds a summary of the most important results of the present study. We hope that this change will clarify this paragraph’s relevance to our topic.
6. Your recommendation regarding a database could use some more flesh. At present, it seems a bit out of the blue.

- To make our recommendation more reasonable and well-documented, this has been deleted in the “Discussion” section (Paragraph 4).

7. Although it is mentioned in the limitation section, I am still left wondering how much in terms of motivation and ambition the two groups are different that might explain (parts of) your results. It could be elaborated a bit more.

- In the section on study limitations, the following text was added: “Furthermore, professionals who undertook six months or more of international training are likely to have high-level administrative titles, so more candidates apply for PhD positions with these professionals. Only one or two students can obtain PhD positions with each professional per year, so the students of these professionals are likely to be particularly competitive among their peers.”

ADDITIONAL REQUESTS/SUGGESTIONS:

8. Some language issues for instance line 16 introduction section.

- This sentence has been deleted, and the entire manuscript has been checked carefully for remaining language problems.

Use of the word 'the' questionnaire in abstract.

- We have changed the wording here, now describing it as “a self-administered questionnaire.”

9. I am wondering whether the wording of the results section could be a bit more descriptive than just an summary of the table/appendix.

- We have modified the “Results” section to be more descriptive as follows.

- This sentence in paragraph 1 has been deleted: “Their tutors had been abroad for anywhere between 6 and 192 months (mean, 38.54 months).”

- And the sentence “Similarly, there were 257 age-, grade-, and specialty-matched students of resident professionals (Group B: 82 students in the 2012 class, 87 students in the 2013 class, and 88 students in the 2014 class; Table 3) with an age range of 26–34 years (mean, 31.29 years),” has been changed to “Similarly, there were 257 age-, enrollment year-, and specialty-matched students of resident professionals with the same grade and age proportion as those in Group A (Table 3, Group B),”
This sentence was added in paragraph 2: “A wide gap was observed between Group A and Group B for both total IF and number of articles.”

This sentence was added in paragraph 3: “A strong linear association was observed between the total IF for articles published by the clinical medicine PhD students of returning professionals and the total IF for their advisor’s articles published while abroad.”