

Author's response to reviews

Title: When empathy is higher in senior than in first year medical students: A cross-sectional study

Authors:

Eunice Magalhães (eunicemagalhaes@ecsaude.uminho.pt)

Ana P Salgueira (anasalgueira@ecsaude.uminho.pt)

Patrício Costa (pcosta@fpce.up.pt)

Manuel J Costa (mmcosta@ecsaude.uminho.pt)

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Author's response to reviews: see over

ANSWERS TO COMMENTS BY REVIEWER Gary Rogers

Revisions unsolicited by the reviewers

We have updated the reference list. New references hold the numbers 3, 13,14.

Major Compulsory Revisions

2. As the reviewer suggested, the phenomenon of empathy decline is mainly confined to medical schools in the USA [9,10]. The studies on non-American Schools are unclear in that they report declines [14], and other studies reported ascents [15,16] or no variations on empathy scores in medical students [17]. The authors reinforced these ambiguities on the introduction and clarified this point (page 5, 1st paragraph).

3. The reviewer makes a good point and we have added references in that section that illustrate translations. The reports on Japan and Korea with JSPE-sv are now reported on the introduction (page 5, 1st paragraph). Moreover, we would like to clarify that the Portuguese version of JSPE is not an unpublished paper as it was published on *Proceedings of the National Symposia of Psychology Research - Portugal* (2010) [23].

4. We agree with the reviewer and have added the following text: “The curriculum and the pedagogical methodologies were stable over the period between which the two sampled cohorts undertook them” (page 7, 2nd paragraph, line 11)

5. The authors agree to a great extent with the reviewer and have addressed the concerns as follows: the reviewer has a point when he states that, in the conclusion, the inferences that the curriculum has impact on empathy have been exaggerated – we have corrected that by replacing “that have reported positive data on how they nurture empathy” with “have reported positive data on cross-sectional empathy variation during medical school” (page 16, 2nd paragraph, lines 4-6).

Minor essential revisions

6. We thank the attention of the reviewer to the details regarding the references. We have corrected the imperfections detected by the reviewer and did a careful proofreading on the reference section, making further corrections.

Quality of written English: the manuscript had been reviewed for English before submission by a Canadian colleague with extensive publication curricula. Still, we have carefully reread the manuscript and made changes that we trust improve the quality of the writing.

ANSWERS TO COMMENTS BY REVIEWER Barbara Griffin

Revisions unsolicited by the reviewers

We have updated the reference list. New references hold the numbers 3, 13,14.

Major Compulsory Revisions

1. The definition of empathy adopted on this paper is now elucidated on page 4, lines 12-17. The authors agree with the reviewer that the distinction between “attitudes toward empathy” and “empathic behavior” is important. In accordance, we have also added to the manuscript an essential element of information (page 6, lines 3-5), that is that the available literature supports that “attitudes” are highly correlated with behavior [4]. This evidence supported the authors’ decisions of using a self-reported measure of empathy.

2. This is a sensible comment in the sense that when one adds a hypothesis, one might think about discussing the corresponding results. However, the fact is that the results are not original and, hence, that what we would state and comment about them would be a repetition of what others have said. We found that this would be an extension to the paper which would not add significant value. We would like to maintain the focus on our main objective, which related to the first hypothesis. We are hopeful that the reviewer might agree with our argument.

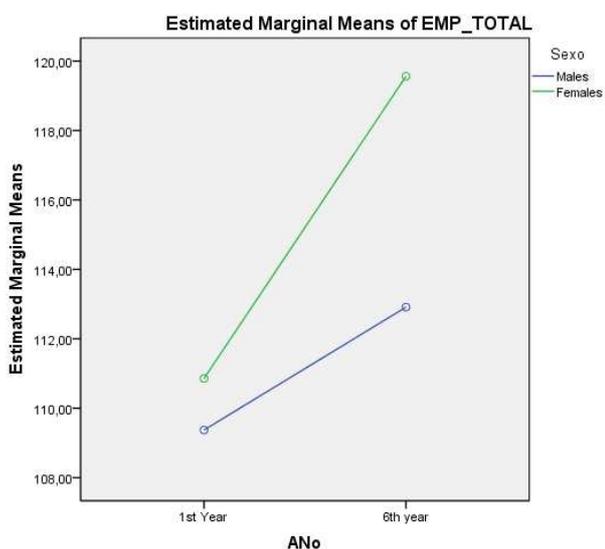
3. We agree with the reviewer and the results section was rearranged as suggested.

4. In our original manuscript, we were concerned with presenting analyses of empathy comparable to other international studies (e.g., USA, Japan, and Korean). We agree with the reviewer that the analyses of the individual dimensions can be of value to the manuscript. Therefore, in the revised version that is now being submitted, the new analyses suggested by the reviewer, are included and discussed (pages 11,12, 14).

5. The means and standard deviations are now included (pages 11 and 12).

6. We had explored the possibility that only females presented an increase in understanding of empathy, raised by the reviewer and decided not to include it in the original manuscript. In fact, our data reveal that males also showed an increase, but less expressive. We include data to illustrate this in the present reply (see table and graph below). We believe that the inclusion of the data will not add a significant value to our paper and maintained the decision of leaving them outside the revised version as well.

Still, in the discussion the interaction effect between training and gender is reinforced in this revised manuscript (page 13, 2nd paragraph, lines 3 and 4).



Gender	Year	Mean	Std. Deviation	N
Males	1st	109,6860	10,82618	86
	6th	113,1935	10,01472	31
	Total	110,6154	10,68825	117
Females	1st	110,5619	10,55713	210
	6th	120,7705	7,46412	61
	Total	112,8598	10,81197	271

7. The fact that there were no findings regarding specialty is interesting, but further research is required to clarify the underlying reasons. It is quite possible that, as suggested by the reviewer, it may be related to the definition behind the development of the instrument, which emphasizes the more cognitive aspects of empathy. We feel that, without any further data and given the well-known changes in specialty preference of medical students, advancing any single explanation would not be rigorous and trying to contemplate many definitions is actually out of the scope of the paper that highlights the cross-sectional variation of JSPE scores. Therefore, we maintain our original text.

8. We agree. The conclusion that empathy scores “increased as a function of medical training” were revised to “The present cross-sectional study in 6 cohorts of undergraduate students, found that senior students scored higher on the JSPE-spv than first year students”. We trust that the reviewer’s concern is adequately addressed.

- Minor Essential Revisions

9. The rationale for categorization of specialty preference was explained on the “instruments” section – “Specialty preferences” (page 8, 2nd paragraph, lines 5-10).

10. The difference between “Perspective taking” and “Ability to stand in the patient’s shoes” is very frail as these two dimensions refer to the core of the “cognitive” ingredient of empathy. This issue goes back to the construction of the original instrument. The original authors state the following assumptions: 1) the “Perspective taking” includes the physician view of the patient’ perspective; 2) The “Ability to stand in the patient’s shoes” implies “thinking like the patient” [4]. Readers can find the original argument in the specific reference provided in the corresponding section.

11. Expression and spelling were improved as the reviewer suggested in the points “a” to “e”.

Quality of written English: the manuscript had been reviewed for English before submission by a Canadian colleague with extensive publication curricula. Still, we have carefully reread the manuscript and made changes that we trust improve the quality of the writing.