

Dr. Panteleimon Giannakopoulos
Dr. Ting-Shao Zhu
Editors-in-Chief
World Journal of Psychiatry

January 16, 2023

Dear Drs. Giannakopoulos and Zhu,

Thank you for the opportunity to revise our manuscript. Below, we present point-by-point responses to each comment made by the reviewers and editors. Additionally, we have prepared a revised manuscript with changes highlighted in yellow. We trust that you will find the updated version of our manuscript aligns with the standards for publication in the *World Journal of Psychiatry*. Should you believe that further amendments are necessary, please do not hesitate to inform us.

Sincerely,

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Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors:

Thank you authors for writing an editorial on these important issues in medical education. Professionalism, relational skills, resilience, empathy, and mental wellbeing, are all the crucial components for the success of a clinician. This brief manuscript offers an overview of what mindfulness-based training in medical education is. Although it may not be a silver bullet, it may still provide a possible solution to the long-lasting problems in healthcare education. However, there are some minor spelling, language style issues which require special attention.

Authors' response: We appreciate the reviewer's positive comments regarding our editorial. A native English speaker has revised our manuscript to correct any spelling and style errors that might have been overlooked.

Reviewer #2:

Scientific Quality: Grade D (Fair)

Language Quality: Grade B (Minor language polishing)

Conclusion: Rejection

Specific Comments to Authors:

This manuscript titled with "Mindfulness training in medical education as a means to improve resilience, empathy, and mental health in the medical profession" mainly introduces the positive application of mindfulness training in medical student education. The authors propose that there is a mental health crisis in the medical profession, and argue that this mental health crisis is related to the inappropriate way of acquiring interpersonal relationships in the process of medical education. Based on literatures, the authors state that mindfulness training can exert a positive effect to improve student self-awareness, ability to attend to patients, peer cohesion and group support, and student insights into the culture of health and social education. This issue of mental health in medical students is of course important for the development of their professional career and for a better treatment on patients. However, some concerns need to be addressed in the manuscript. 1. The authors have cited some literatures to support their viewpoint that mindfulness training plays positive roles in medical education. However, these literatures are not analyzed in details, and there is no novel data (either in the form of Figure or Table) produced by the authors, to provide a strong support for their viewpoint. For example, how to perform mindfulness training? Are there different ways for mindfulness training practice? If yes, is it possible that different ways of mindfulness training could exert positive effects at different extents? Is there any weakness or shortcoming for mindfulness training? Furthermore, what are the roles for the other factors, such as the gender, age, occupation, persistence time etc., played in the positive effects of mindfulness training on medical education? Totally speaking, this manuscript is written in common because there is no novel thinking or speculation provided by the authors for a better understanding about the role of mindfulness training in medical education and its underlying psychological and pathophysiological mechanism.

Authors' response: We appreciate the opportunity to address the reviewer's comments. Firstly, we would like to highlight a fundamental misunderstanding. The reviewer's comments, both above and in their third comment below, suggest a misinterpretation of our manuscript as a review article. As clarified in our previous cover letter, our manuscript is an invited editorial on mindfulness in medical education. Due to this misunderstanding, the reviewer had expectations for our manuscript beyond the scope of the aims of an editorial. Examples of these misplaced expectations include the request for figures and tables, a more granular level of detail about prior studies, and guidance on how to implement mindfulness training.

Editorials play valuable and multifaceted roles in medical journals. One of those roles involves providing the opportunity to express perspectives on current issues or trends within the field. They contribute to the ongoing dialogue within a scientific field and help shape the narrative around significant developments. We argue that our editorial fulfills these aims by highlighting what we call 'the opportunity to gather momentum, spread, and study mindfulness-based programs in medical schools around the world as

a way to address some longstanding shortcomings of the medical profession and the health and educational systems upon which it is rooted.' To arrive at such a conclusion, we have addressed several important points, including existing challenges in the field of medical education, such as the issue of declining empathy and medicine's mental health crisis, difficulties related to the hidden curriculum of medical institutions, the importance of strengthening resilience, and some existing movements and evidence favoring the implementation of mindfulness-based interventions within and outside medical education.

Furthermore, we contend that our argument, proposing that the inappropriate acquisition – or rather, deterioration – of interpersonal skills results from the interaction between a challenging environment and the individual mental capital of medical students, is novel. As mentioned in our text, we assert that addressing the hidden curriculum of medical institutions, which has been the focus of the mainstream narrative in medical education for decades, is not sufficient and highlight mindfulness as a complementary approach to address those shortcomings.

In response to the reviewer's comments regarding the lack of information about the psychological and pathophysiological mechanisms of mindfulness-based practices, we have added the following text to our manuscript.

"As to the pathophysiological mechanisms underlying the effects of mindfulness-based practices, there is some evidence from the neuroscience field indicating that they are associated with neuroplastic changes in the insula, amygdala, anterior cingulate cortex, fronto-limbic network, temporo-parietal junction, and default mode network. These structures are related to the regulation of attention and emotion, and change in perspective on self ^[31,32]."

31. De Vibe M, Solhaug I, Rosenvinge JH, Tyssen R, Hanley A, Garland E. Six-year positive effects of a mindfulness-based intervention on mindfulness, coping and well-being in medical and psychology students; Results from a randomized controlled trial. *PLOS ONE* 2018; **13**: e0196053. [DOI: 10.1371/journal.pone.0196053]
32. Hölzel BK, Lazar SW, Gard T, Schuman-Olivier Z, Vago DR, Ott U. How Does Mindfulness Meditation Work? Proposing Mechanisms of Action From a Conceptual and Neural Perspective. *Perspect Psychol Sci* 2011; **6**: 537–559. [DOI: 10.1177/1745691611419671]

While we found some data on the potential moderating roles of gender and age for the effectiveness of mindfulness-based practices, we felt that adding more information in that regard was beyond the intended scope of this editorial and would be more appropriate for a formal review article on that subject

2. The argument that the mental health crisis and the inappropriate acquisition of interpersonal skills during medical education is the byproduct of a challenging environment and the mental capital of individuals needs more discussions. The authors go through this argument too quickly and there is no supportive data provided. Especially, how a stressful environment influences the development of empathy and

interpersonal skills in medical students needs to be addressed with supportive data or literatures.

Authors' response: We appreciate the reviewer's comment and the opportunity to strengthen that aspect of our manuscript. We have added the following text, supporting our argument while drawing on the results of a recent systematic review.

"Our argument is supported by a recent systematic review of predictors of empathy and compassion among medical students, which included 222 studies^[19]. On the one hand, that review revealed that empathy and compassion are negative associated with factors such as heavy workloads, hierarchical work environments, 'assembly-line' organizational culture, and an educational ethos prioritizing the acquisition of knowledge and academic achievement. On the other hand, that review also found evidence that empathy and compassion were positively correlated with individual characteristics of students, such as emotional intelligence, openness, perspective-taking, and reflexive skills."

19. Wang CXY, Pavlova A, Boggiss AL, O'Callaghan A, Consedine NS. Predictors of Medical Students' Compassion and Related Constructs: A Systematic Review. *Teach Learn Med* 2023; 35: 502–513. [DOI: 10.1080/10401334.2022.2103816]

3. It is advised that the authors need to add appropriate subheadings to different content parts of the manuscript according to the review paper guidelines to increase the readability.

Authors' response: As described earlier, the belief that our manuscript is a review article was a misunderstanding. It is exceedingly rare for an editorial to have subheadings.

Reviewer #3:

Scientific Quality: Grade C (Good)

Language Quality: Grade C (A great deal of language polishing)

Conclusion: Major revision

Specific Comments to Authors:

Reviewer #3: This paper promoting mindfulness training for medical students makes the case that: - there is more depression and suicide in the medical profession compared to other professions - medical students are taught a lot of facts but do not know how to relate to their patients - mindfulness training is part of the solution.

Authors' response: We appreciate the reviewer's comment and the opportunity to further clarify our arguments and strengthen our manuscript. Firstly, we make the case that there is a mental health crisis in the field of medicine and provide the National Mental Health Survey of Doctors and Medical Students from Australia as a reference supporting that claim. According to that report, 'approximately a quarter of doctors reported having thoughts of suicide prior to the last 12 months (24.8%), and 10.4%

reported having thoughts of suicide in the previous 12 months. The data also indicated that thoughts of suicide are significantly higher in doctors compared to the general population and other professionals (24.8% vs. 13.3% vs 12.8%).¹ Besides adding that information to our text, we also included four further supporting references (Schwenk T. Resident Depression: The Tip of a Graduate Medical Education Iceberg. *JAMA* 2015; 314 22: 2357–8. [DOI: 10.1001/jama.2015.15408]; Reyes C, Santana V, Arocha G, Martínez N, Almonte K. Prevalence of depressive symptoms and suicide risk among medical residents. *Eur Psychiatry* 2022; 65: 552–552. [DOI: 10.1192/j.eurpsy.2022.1412]; Liétor M, Cuevas I, Prieto M. Suicidal behaviour in medicine students and residents. *Eur Psychiatry* 2021; 64: 581–581. [DOI: 10.1192/j.eurpsy.2021.1551]; Devi S. Doctors in distress. *The Lancet* 2011; 377: 454–455. [PMID: 21300592 DOI: 10.1016/S0140-6736(11)60145-1])

Secondly, we trust that the reviewer slightly misunderstood our arguments when they state that we had claimed that 'medical students are taught a lot of facts but do not know how to relate to their patients.'² In reality, our manuscript underscores the shift in medical education towards life-long learning skills, acknowledging the need for improved relational skills, as outlined in the quotations below from our first two paragraphs.

“By the end of the 20th century, there was a consensus that medical education should transition its focus from the memorization of factual material to the cultivation of life-long learning skills in students^[1–3]”. “While medical schools adapted to the changing landscape of information delivery, the emphasis on relational skills did not experience a comparable shift within formal curricula.”

Lastly, we appreciate the reviewer’s acknowledgment of our claim that 'mindfulness is part of the solution.'³ Our editorial is substantiated by robust backing from a significant UK parliamentary group report, mounting evidence emphasized in reviews, and the integration of mindfulness practices in one-third of accredited US medical schools.

Reviewer #3: The paper is not convincing, in large part because of English difficulties. What is meant by disruptive behaviour in the context of medical errors? What is meant by vehement lessons? What is the hidden curriculum? What is meant by gather momentum and spread?

Authors’ response: We regret the reviewer’s assessment regarding the quality of our English text. Despite the fact that the other two reviewers considered our text sufficiently clear and requiring minor polishing, we have asked one of our colleagues, a native English speaker, to further revise our manuscript looking for any grammatical or style errors that could have been overlooked. We would like to highlight that we have already published in high-impact journals such as the *British Medical Journal*, the *New England Journal of Medicine*, *JAMA Network Open*, and *JAMDA*, among others, and that the quality of our English writing has never constituted a barrier for publication of our work.

Regarding the reviewer's question about the expression 'gather momentum and spread,' it was used to encourage action to promote mindfulness practices within medical education, underscoring the current favorable environment for progress.

With regards to the reviewer's question about the meaning of the term "hidden curriculum", we would like to remark that we had provided a clear definition about that concept accompanied by Fred Hafferty's classical reference in the third paragraph of the first version of our manuscript, as follows: "The hidden curriculum represents the learning derived from the organizational and cultural environment of healthcare institutions¹⁶. It comprises unspoken, taken-for-granted rules and customs that teach vehement lessons about what is and what is not important, acceptable, or desirable in medicine on a daily basis."

We are happy to clarify that the expression 'vehement lessons' means powerful lessons, such as the ones that students learn by observing unethical behavior, as detailed in one of our previous publications on the tolerance of unethical behavior in medical schools (Vidal EI de O, Silva V dos S, Santos MF dos, Jacinto AF, Boas PJFV, Fukushima FB. Why Medical Schools Are Tolerant of Unethical Behavior. *Ann Fam Med* 2015; **13**: 176–180. [DOI: 10.1370/afm.1763])

In what concerns the reviewer's inquiry about the meaning of 'disruptive behavior,' we would like to point out that it is a term in common English usage that implies undisciplined and troublemaking conduct. When we used that term, we also cited the paper by Sanchez on 'Disruptive Behaviors Among Physicians,' published in 2014 in JAMA (doi:10.1001/jama.2014.10218), so that any readers unfamiliar with that concept could easily find more information about it.

Reviewer #3: Beyond language, the paper needs to make a stronger case for the three points stated earlier. What are the effects of mindfulness training being compared to when judging outcomes such as resilience, empathy, mental health, compassion, self-awareness, conflict resolution and relatedness? It might be wiser to select only one or two of these outcomes and to provide compelling evidence that mindfulness training is indeed more powerful than a comparative intervention (modeling interview techniques for instance) for these outcomes. Otherwise, the argument for mindfulness training seems too all-encompassing and difficult to take seriously.

Authors' response: We appreciate the reviewer's comment and the opportunity to further clarify our arguments and strengthen our manuscript. Firstly, we would like to underscore, as previously explained in our responses to reviewer #2, that our manuscript is not a review article but an invited editorial. As such, it is beyond its scope to provide that granularity of detail regarding the comparators adopted in studies that examined the effectiveness of mindfulness in medical education or to select just one comparator to present a summary of the evidence, as could be expected from a systematic review. In addition, we would like to remark that one of the reviews that we cited noted that 'despite the different designs of those programs, their results were uniformly positive and involved increases in empathy, self-compassion, ability to focus, decreased stress, anxiety, and depressive symptoms in medical students and healthcare professionals²²."

With regards to the reviewer's concern that the argument for mindfulness training is too all-encompassing, we would like to argue that both the abstract of our manuscript and its concluding paragraph, we explicitly stated that mindfulness is not a universal solution. Moreover, in our editorial, we also emphasized the importance of addressing the hidden curriculum and the fact that a supportive environment exerts a paramount role in realizing the positive effects of mindfulness-based intervention.

EDITORIAL OFFICE'S COMMENTS

(1) *Science editor:*

1 Scientific classification: Two Grades C, and Grade D.

2 Language classification: Two Grades B, and Grade C.

3 Peer-Review: Reviewer 05176598 pointed out that the authors have cited some literatures to support their viewpoint that mindfulness training plays positive roles in medical education. However, these literatures are not analyzed in details, and there is no novel data produced by the authors, to provide a strong support for their viewpoint. This manuscript is written in common because there is no novel thinking or speculation provided by the authors for a better understanding about the role of mindfulness training in medical education and its underlying psychological and pathophysiological mechanism.

4 Recommendation: Transfer to other *Baishideng* journals (*World Journal of Clinical Cases*).

Authors' response: We appreciate the assessment of our manuscript by the science editor. Throughout our responses to the reviewers' comments, we have strived to demonstrate that the evaluation of our work by reviewers #2 and #3 was compromised by a fundamental misunderstanding. They believed our manuscript was a review article instead of an invited editorial. It's important to note that when reviewer #2 criticized an alleged lack of novel data supporting our arguments, they were referring to novel data in terms of tables and figures, which exemplifies their misplacement of expectations for a review article onto an editorial.

Throughout our responses, we have consistently emphasized that our manuscript fulfills one of the essential roles of editorials by expressing an up-to-date perspective on a relevant subject related to mental health in the field of medical education. Furthermore, we assert that our argument, proposing that the inappropriate acquisition – or rather, deterioration – of interpersonal skills results from the interaction between a challenging environment and the individual mental capital of medical students, is novel. As mentioned in our text, we contend that addressing the hidden curriculum of medical institutions, which has been the focus of the mainstream narrative in medical education for decades, is not sufficient. We highlight mindfulness as a complementary approach to address these shortcomings. Importantly, the comments of the editor-in-chief below confirm that our manuscript meets the basic publishing requirements of the *World Journal of Psychiatry*.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade D (Fair)

(2) *Company editor-in-chief:*

I have reviewed the Peer-Review Report, and full text of the manuscript, all of which have met the basic publishing requirements of the *World Journal of Psychiatry*, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors.

When revising the manuscript, it is recommended that the author supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply PubMed, or a new tool, the RCA, of which data source is PubMed. RCA is a unique artificial intelligence system for citation index evaluation of medical science and life science literature. In it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information at: <https://www.referencecitationanalysis.com/>, or visit PubMed at: <https://pubmed.ncbi.nlm.nih.gov/>.

Authors' response: We appreciate the assessment of our manuscript by the editor-in-chief. Specifically, we are grateful for the editor's evaluation indicating that our manuscript fulfills the basic publishing requirements of the *World Journal of Psychiatry* and its conditional acceptance. Following the guidance provided by the editor-in-chief, we endeavored to incorporate new and impactful references. Unfortunately, when we attempted to use the RCA tool recommended by the editor and entered our various sets of keywords (e.g., mindfulness AND medical education), we couldn't retrieve any references. Consequently, we turned to PubMed.

We have included seven new references in our editorial, four of which were published in the last two years. Notably, among the new articles, one was published in JAMA and another in The Lancet. Additionally, we meticulously reviewed our reference list and found that one-third of the papers cited were published in the last five years, and 56% within the last 10 years. We included older papers because of their crucial relevance to our subject, as recommended by the American Psychological Association Style Guidelines (see Greenbaum H. The "outdated sources" myth. Available from: <https://apastyle.apa.org/blog/outdated-sources-myth>). Examples of such papers include the 2010 Lancet commission's report on 'Health professions for a new century' and Fred Hafferty's seminal 1998 paper on the hidden curriculum.

It is important to highlight that most of the references supporting the role of mindfulness in medical education that we cited were published in the last five years, including five review articles.

We trust that our responses above sufficiently address all concerns raised by reviewers' and provide clarity on the robustness of our manuscript so that it can be accepted for publication in the *World Journal of Psychiatry*. Should you believe that further amendments are necessary, please do not hesitate to inform us.

Sincerely,

Edison Iglesias de Oliveira Vidal

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Dr. Panteleimon Giannakopoulos

Dr. Ting-Shao Zhu

Editors-in-Chief

World Journal of Psychiatry

February 28, 2024

Dear Drs. Giannakopoulos and Zhu,

Thank you for the opportunity to revise our manuscript. Below, we present point-by-point responses to each comment made by the reviewer. Additionally, we have prepared a revised manuscript with changes highlighted in yellow. We trust that you will find the updated version of our manuscript aligns with the standards for publication in the *World Journal of Psychiatry*. Should you believe that further amendments are necessary, please do not hesitate to inform us.

Sincerely,

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Reviewer #4:

SPECIFIC COMMENTS TO AUTHORS

Reviewer's comment: This paper acknowledges the stresses borne by both medical students and practising physicians but fails to differentiate these two groups and the different stressors they are exposed to.

Authors' response: We appreciate the reviewer's comment and the opportunity to offer clarifications. Respectfully, we would like to remark that the main focus of our manuscript is on medical education and medical students and not on practicing physicians. We do mention in the seventh paragraph of our manuscript that "the high rates of depression, burnout, and increased risk of suicide among medical students, residents and physicians in comparison with other careers also point to the existence of a mental health crisis within our profession^[1-4]." Although an exploration of all the sources of stress and burnout among practicing physicians or its differentiation with the sources of stress among medical students is clearly beyond the scope of our editorial, our argument that there is a mental health crisis within the medical field, from undergraduate level to practicing physicians remains sound and is supported by the references that we cited. Moreover, the argument outlined in our conclusion section that spreading and studying mindfulness may offer an opportunity "to address some longstanding shortcomings of the medical profession and the health and educational systems upon which it is rooted" is consistent with the view that changes in medical education are important means to improve healthcare systems ^[5,6].

Reviewer's comment: Medical students undergo the same stressors as other students in high-powered training environments and physicians' stressors have more to do with government regulations and the need to make the kind of living they had grown to expect. Stress leads to psychological and cognitive problems which, as the authors state, is likely to respond to mindfulness techniques and related stress-reduction interventions. Are the authors suggesting this to physicians in practice as well as to students? This is presently unclear.

Authors' response: Firstly, although we could not find any systematic review comparing the degree of stress among university students from various professional fields, we did find evidence from different countries showing that the degree of stress experienced by medical students is superior to students from other fields ^[7-10]. A now classic study comparing medical students with their peers in economics, chemistry, and psychology found that medical students reported having less sleep, less time for recreation and for personal care, and less time to spend with friends than any of the other groups ^[11]. Indeed, medical students face some challenging situations related to witnessing suffering and dying that are uncommon in other fields. Of course, any attempt to compare the degree of stress of medical students with that of students from other areas would represent a digression from the aims of our editorial. Secondly, as explained in our previous response, the main focus of our manuscript lies in the role of mindfulness in medical education and it is beyond its scope to compare the similarities and differences concerning the sources of stress between practicing physicians and medical students. Despite that fact and in consideration to the reviewer's comment, we would like remark that a systematic review published in the Lancet on interventions to prevent and reduce burnout among physicians featured mindfulness practices prominently as an effective approach to reduce depersonalization and mental exhaustion ^[12]. However, because addressing stress and burnout among practicing physicians was beyond the scope of our manuscript, we chose not to cite that manuscript.

Reviewer's comment: The authors also state repeatedly that empathy is lost as students progress through their training. They offer one supportive reference. Are there more? This is an important point and I am not sure it can be supported. It is true that students lose what might be called naivete about their own ability to comfort their patients but I am not sure that this means a loss of empathy. This needs more discussion.

Authors' response: Respectfully, we would like to remark that the single reference that we cited supporting our claim that empathy is lost as medical students progress through their training was a systematic review^[13], which included 18 studies. Importantly, 16 out of those eleven studies provided evidence of declining empathy levels over time among medical students or residents. We firmly believe that that review provides sufficient evidence supporting our claim.

Reviewer's comment: I am also not convinced about the ability of mindfulness to promote empathy. Why would it. It is essentially a technique that focuses on the self and not on others. This needs to be defended. There are interventions such as modeling interviews by experienced staff or asking patients to speak about their experiences with doctors that do a better job at increasing empathy. Mindfulness is useful but it is one of a number of useful potential changes to the medical curriculum (which is, of course, already over charged). I would also ask the authors to carefully go over their text with a native English speaker to avoid grammatical and other errors,

Authors' response: Firstly, we would like to highlight the fact that, in the eighth paragraph of our manuscript, we had cited a review article about mindfulness-based programs in medical education that "concluded that despite the different designs of those programs their results were uniformly positive and involved increases in empathy, self-compassion, ability to focus, decreased stress, anxiety and depressive symptoms in medical students and healthcare professionals^[14]". Another recent systematic review focused exclusively on the effectiveness of mindfulness-based interventions on empathy in healthy populations and included 12 randomized clinical trials and one quasi-experimental study^[15]. Its meta-analysis found a statistically significant positive standardized mean difference of 0.37 favoring the mindfulness-based interventions in improving empathy levels in comparison to controls. Importantly, seven out of the 13 studies included in that review focused on subjects in medical related occupations and four of them included medical students. In consideration to the reviewer's comment, we have added a citation to that review to our study.

As to the reviewer's skepticism about why should mindfulness-based interventions have positive influence on empathy levels, several mechanisms have been proposed to explain that phenomenon, as follows.

- **Increased Self-Awareness:** Mindfulness practices encourage individuals to observe their thoughts, emotions, and bodily sensations without judgment. This heightened self-awareness allows medical students and professionals to

recognize their own emotional responses and biases, which can facilitate a deeper understanding of others' experiences.

- **Enhanced Emotional Regulation:** Through mindfulness training, individuals learn techniques to regulate their emotions more effectively. This enables medical students and professionals to remain calm and composed in challenging situations, which in turn allows them to better attune to the emotions of their patients and colleagues.
- **Improved Communication Skills:** Mindfulness practices emphasize active listening and present-moment awareness, which are essential components of effective communication. By cultivating these skills, medical students and professionals can develop stronger empathic connections with their patients, colleagues, and peers.
- **Promotion of Perspective-Taking:** Mindfulness encourages individuals to adopt a non-judgmental and compassionate stance toward themselves and others. This perspective-taking ability allows medical students and professionals to appreciate the perspectives and experiences of their patients, fostering empathic understanding and connection.

Reviewer's comment: I would also ask the authors to carefully go over their text with a native English speaker to avoid grammatical and other errors,

Authors' response: We appreciate the reviewer's evaluation that our manuscript required minor English polishing. A native English speaker revised our manuscript and any remaining flaws were corrected. Importantly, we would like to remark that several of the errors available in the previous version of our manuscript were probably introduced by the journal's auto-editing mechanism, which ended up merging words such as "learning something" in the first paragraph into "learningsomething", and "impart vehement" in the third paragraph into "impartvehement", for example.

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