Author’s response to reviews

Title: Occupational burnout and empathy influence blood pressure control in primary care physicians

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Author’s response to reviews:

Distinguished Dr. Goetz,

We attach the review of the article: Occupational burnout and empathy influence blood pressure control in primary care physicians.

We have tried to respond to all the requests and demands of the reviewers. Regardless of the answer in the letter, we have indicated in the manuscript all the changes made.

We hope that they are of your interest and we are at your disposal to make the necessary changes.

Sincerely,

REVIEWER 1:

Larry A. Green, M. D. (Reviewer 4): This study is about important issues in general practice and primary care and of interest to clinicians and policy makers.
1. The limitations now noted in this revision make clear that the title of the paper and conclusions are an over-reach, not adequately defended by the methods. Example from first paragraph of conclusions: "Our findings indicate that patients under the care of more empathetic and less burnt out family physicians and nurses are more likely to come to the center for BP checks, adhere to prescribed treatment, and work hand in hand with primary care practitioners to attain health goals."

Thank you for reviewing our manuscript and your interesting comments. Please find below a description of the changes we have made in response to your suggestions.

The reviewer is right, so we have deleted this paragraph to avoid a conclusion that might be confused, or insufficiently endorsed by our results. Finally this paragraph will remain:

We believe that patients have a key role in improving high BP, a disease known to have multiple causes. We also believe that health care professionals can play a crucial role in actively engaging patients in their own care, and work hand in hand with them to attain health goals.

Please see this reflection to the discussion section (page 13, paragraph 3).

2. There are no data presented to justify these claims. Your acknowledgement of statistical but not clinically significant findings takes away the ability to confidently make other claims in the paper. An example of over-reaching is the narrowness of the definition of "management" and the broad claims about management of patients with high blood pressure.

We consider the detail explained by the reviewer to be of great interest, so in the section on methodology we have added an aspect of what we consider to be management. In addition it has served to improve one of the aspects commented in turn by another reviewer. If you think we have to specify more, as far as the management of the tension control is concerned, we will be happy to do so. We propose to add the following paragraphs:

Management was considered to be adequate when at least two correctly recorded BP measurements, taken on different days, were included in the patients’ records for the period studied. All the primary care centers have the same tensiometer and are periodically revised to make the same records and to ensure quality of measurements.

Please see this reflection to the methods section (page 6, paragraph 1).
3. The demonstration of the use of this regional data set for observational research is important and raises the feasibility of using additional methods to strengthen inferences about entire populations and subsets with particular features.

Thank you very much for the comment. We believe that it could be positive that other research teams can join this line of research and thus check the results.

4. You may be weary of revising, but if you are inclined this could be publishable in my view as a preliminary, exploratory study that determined the distribution of burnout and level of empathy in both nurses and physicians in your region, finding potentially important relationships between empathy and burnout and some intriguing statistical association with important patient level variables for which there is evidence that burnout and empathy of clinicians could be affecting clinically important results.

Thank you very much for your comment. We have included this reference in our article in the conclusions section:

This is preliminary and exploratory study that determined the distribution of burnout and level of empathy in both nurses and physicians in our region, finding potentially important relationships between empathy and burnout and some intriguing statistical association with important patient level variables for which there is evidence that burnout and empathy of clinicians could be affecting clinically important results.

Please see this reflection to the conclusions section (page 13, paragraph 4).

3. This would justify a more rigorous analysis using methods that strengthen the likelihood of observational studies revealing actual "truths" about practice.

The reviewer is right. That is why we have included this statement in the final part of the article as a future line of research, so that it can be useful both for our team and for the readers of the publication.

Finally, our results should pave the way for new lines of research on how health care providers' empathic tendencies and communication skills can be improved with the ultimate goal of improving clinical outcomes, and can lead to new projects using methods that strengthen the likelihood of observational studies revealing actual “truths” about practice.
Please see this reflection to the conclusion section (page14, paragraph 2).

REVIEWER 2:

Christophe Berkhout, M.D. (Reviewer 5): Occupational burnout and empathy influence blood pressure control in primary care physicians.

Thank you for this innovative and interesting paper. The association between psychological characteristics of health practitioners (burnout level and empathy) and outcomes in their patients is not usual in literature and healthcare quality and safety issues related to these characteristics are important facts to study, as most primary health providers neglect their own (mental) health. For these reasons, it is of my opinion that this paper should be published.

Thank you very much for your comment, which encourages us to continue working on this line on the impact of empathy and burnout under clinical conditions.

Nonetheless, I have two suggestions for the authors

1) The background section is too long and should be shortened. Mainly, the two paragraphs about the working conditions of health professionals in Spain as being a possible explanation of burnout (p.6, lines 24-45) sound more political than scientific and do not add anything to the core of the paper regarding association of burnout, empathy and systolic BP.

Following your recommendations we have reduced the introduction. Our intention was to show, as we were told by other reviewers, the importance of empathy, burn out and the prevalence of hypertension. You can see how it is now.

Please see the introductions section (pages 2 to 4).
2) The validity of burnout and empathy measurements using the MBI and JSPE scales is (too?) widely described in the background and the methods sections and correctly discussed in the discussion section. It is not the case of the BP measurement. How was BP measured?

The reviewer is very right in his comment. For that reason we have written in the methodology section that the apparatuses of measuring blood pressure are the same in all the health centers of the region in which we have analyzed these results, and that the protocol determines its periodic review that all have the same calibration.

All the primary care centers have the same tensiometer and are periodically revised to make the same records and to ensure quality of measurements, and usually placed in the same way to ensure similar measurements.

Please see this reflection to the methods section (page 6, paragraph 1).

3) It is widely described that the way BP is measured is generally heterogenous in primary care (different measure devices, patient standing, sitting, laying, with or without a rest of different durations...). Is it sure that burned out and not empathic health providers measure BP in the same way than not burned out and empathic health providers (mainly regarding rest time)? Data are originated from patients' records where this heterogeneity cannot be assessed, unless all primary care health providers in Spain measure BP with the same devices and the same measure protocol (and I can hardly believe this). The BP measurement heterogeneity is thus a serious limitation to the validity of the results that should be announced in the methods section and discussed in the discussion section. It should also nuance the conclusion.

We certainly had not thought of this point of view and we think it very interesting to add his reflection. We have included this reflection in the limitations of the study.

Moreover, the BP measurement heterogeneity can be considered as a limitation because we cannot assure that all the professionals measure BP in the same way (patient standing, sitting, laying, with or without a rest of different durations)

Please see this reflection to the discussion section (page 12, paragraph 4).