Reviewer's report

Title: Empathy and big five personality model in medical students and its relationship to gender and specialty preference. Cross-sectional study

Version: 0 Date: 21 Nov 2018

Reviewer: Alessandra Lamas Granero Lucchetti

Reviewer's report:

This is an observational cross-sectional study that aims to explore the relationship between empathy and personality, using three empathy scales and taking into account the gender and specialty preferences. Although this is an interesting idea, the manuscript needs to be clarified in the following topics:

Abstract:
- The article does not indicate the study’s design in the title and in the abstract. The description of the methods in the abstract needs to be expanded.

Introduction:
- In my opinion, the differences between empathy scales would be better discussed in the Methods session
- The authors should delete the sentence `We only have evidence of three studies` because it is difficult to say that there are only three studies concerning this topic. Instead of this sentence they should include that `there are few studies`.

Methods:
- Authors do not describe in detail the setting, the location, the relevant dates, including periods of recruitment, exposure, and data collection.
- Authors do not describe the eligibility criteria, and the sources and methods of selection of participants.
- All variables need to be better described. For example, it is needed to describe better the Specialty preference classification. What is the cut off for each level of the EQ? I strongly recommend authors to describe in deeper detail each instrument used for empathy, including the psychometric properties in their sample of Spanish students.
- Why did you choose 110 students? How was the sample size calculated? How many refusals? How and by whom were students approached?
Results:

- The study does not clearly describe the recruitment of students: potentially eligible students, refusals and reasons, etc …
- In the descriptive data, authors provide the readers with demographic data. Nevertheless, little is known about the population from which the sample came from. What is the total number of students in this university? How is the gender distribution in the total population of students? Why did you find a predominance of women in your sample?
- It would help the reader if authors highlight in bold the significant correlations and associations in the tables.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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