Reviewer's report

Title: Emotional intelligence and academic performance of medical undergraduates: a cross sectional study in a selected university in Sri Lanka

Version: 0 Date: 12 Jun 2017

Reviewer: Jerrell Cassady

Reviewer's report:

The study "Emotional Intelligence and academic performance of undergraduate medical students" is a basic correlational study examining a wide variety of factors that may influence performance in medical students. The conceived study is reasonable, and the primary question has merit. However, I cannot recommend publication in the current state due to the selected analyses, limited presentation of the rationale for EI as a significant factor in this performance outcome, and over-reach of the conclusions offered in the discussion.

Literature review - the limited literature review merely a quick surface review of the broad construct of EI, and does not provide detailed examination of the various components included in the multifactor scale used in this study. I find that to be a significant concern (related to later questions about the analyses). I would recommend identifying a multifactor view of EI (e.g., Mayer and Salovey's would fit; or the GE version your scale comes from), and identify how specific aspects of EI from this model are relevant to BOTH career success for medical staff and (more importantly for this study), academic performance. The clear connection between WHY EI scores should relate to performance on a test is important - and has not been offered here in my estimation (to enough utility to make it worthy of publication).

Methods - I was interested in the timing of the data collection (May) with relation to the receipt of scores on the board license test (Jan). That is, did the participants know their performance on the test at the time they completed this survey? That may be an issue of concern for other readers.

The rating for test performance (categorical ratings) should be explained more fully. It is not clear to outside readers how these judgments are made, what the second-class divisions mean, etc. What would be required to receive a first class rating? Is the fact that nobody in this sample reached First Class significant? Does that speak to the quality of student - or is that a common outcome?
It is unclear how all the variables are related. For instance, there is a "living at home" vs "living in hostel" set of questions, where people were classified as "yes" or "no" (but the item asked for 'entire 5 years'). Looking at the responses, it seems impossible that these are not overlapping items - because the numbers don't match up. It would not be possible to say "yes" to both - but a sizable portion seemed to. This problem with all the post-hoc dichotomous data was significant.

The analyses were considerably problematic. The broad use of several t-tests creates a huge Type I error potential, and I see no controls for that. More importantly, there appears to be no reason for the analyses other than "the data were collected". Having a better rationale for why each analysis was conducted would help.

The other problem with the analyses (regression) is that the DV used in the first analysis (predicting overall EI) then is used as the IV in the second analysis...but there is no connection between the 2 analyses. The question is, is EI a mediating variable for all the things that were important in predicting EI in the first place? Or, is performance not really about EI - but really just a proxy demonstrating that was really matters are the demographic variables? In short, the analytic plan has far too many violations to assumptions to make it tenable for publication.

I'm particularly interested in the different forms of EI predicting performance. Moving forward with this work, I would suggest abandoning the "total EI" score and looking at the dimensions of EI for differential impact on performance. The fact that there is no ability to get a continuous value in the performance is a significant problem - but logistic regression can work effectively.

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

Yes

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

No

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

No
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I am able to assess the statistics

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