

Peer Review Report

Review Report on Emotional Intelligence, Depression, Stress and Anxiety Amongst Undergraduate Dental Students during the COVID-19 Pandemic

Original Article, Int J Public Health

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EVALUATION

Q 1 Please summarize the main findings of the study.

The authors main finding was higher rates and severity of DAS in their sample of university dental students in Malaysia. Additionally, a gender difference was found in the data, with female students reporting higher levels of stress and anxiety than their male peers. Furthermore, stress was mostly attributed to academic related stressors, the foremost being "fear of failing a course or year," followed by "completing graduation requirements," "fear of being unable to catch up if behind," and "lack of confidence to be a successful dentist." A statistically significant negative association between the COVID-19 pandemic and physical, emotional and academic health/well-being indicating that COVID-19 was likely responsible for increasing stress and anxiety amongst dental students. Lastly, the study found that emotional intelligence (EI) was negatively correlated with depression, stress, and anxiety (DAS) suggesting that EI could be serve as a valuable and effective coping mechanism.

Q 2 Please highlight the limitations and strengths.

Strengths of the study include how informative and valuable the qualitative data the study collected was. Gaining information on DAS from college dental students in Malaysia is an understudied population in the literature and I found it was a highly valuable compilation of data especially the statistical trends found among the sample. The research study's aim to look for possible protective factors such as the role emotional intelligence (EI) is an innovative endeavor with the potential for concrete implications in college settings. Further, there were no objective errors and the conclusions were mostly well supported if the speculative statements used as supporting evidence is amended. The sample size of Malaysian dental students was large aiding in ensuring high statistical power and minimizing Type II errors.

Limitations include addressing the ambiguities and gaps present in the study. First, the article's writing exhibits poor knowledge and familiarity with the English language that makes an unnecessarily strenuous read. There are various grammar, punctuation and structural issues including excessive wordiness, use of inappropriate modifiers and words, run-on's and more. Please see the file attached with my recommended corrections. Furthermore, main variables like emotional intelligence (EI) and chronic stress are not defined, so their operationalization remains ambiguous though they are quantifiable via the scales used by the authors. How the authors define variables of interest like emotional intelligence is not explained.

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Major

- Use scholarly, reliable, credible sources to support statements
- o For example, on pg 11 the authors give reasons to explain why academic focused stressors had the highest prevalence stating: "As part of clinical training, students are expected to be prepared to manage a diverse

complement of patients. Students may experience stress due to their lack of preparation and their clinical lecturers' high expectations. Students who lacked confidence may spend more time thinking and worrying about what other classmates have achieved than focusing on their own competence and potential. Subsequently, those who have poor management of time will feel that the burden of clinical requirement and academic exams as a major source of stressor."

o This wording assumes full certainty, while this is more speculative. Alternatively, the authors could say, "A possible explanation for this high prevalence is the number and intensity of daily stressor dental students face such as ..."

- For the self-reported online questionnaire how did you ensure your questions were "non-biased"? What methods for testing and evaluating your survey questions did you use? Did you avoid leading words, double-barreled questions, absolute questions? Was the survey pretested to identify any major problems?

- What was the exclusion/inclusion criteria for survey participants?

- The use of SPSS, two-way analysis of variance (ANOVA) and logistical regression analysis appear to be applicable methods to analyze the data

- Were terms like 'stress', 'depression', 'anxiety' operationalized? Or did the survey let students self-interpret these terms based on their experience?

- Acknowledging and addressing potential bias

o The potential threat to external validity of having a majority female sample (81%)

- Including the online survey used in the experiment in the appendix may be helpful for readers to look at when it is referenced in the text and aid in study replicability

- The authors state "emotional intelligence (EI) was measured using a scale developed by Schutte et al. [32] which was also tested for its' structure, predictive and discriminative validity" - how was this test of validity conducted?

- Use of proper terminology:

o On page 12, the term "sexual orientation" is conflated with "gender". To clarify, "sexual orientation is about who you're attracted to and who you feel drawn to romantically, emotionally, and sexually. It's different than gender identity. Gender identity isn't about who you're attracted to, but about who you ARE - male, female, genderqueer, etc." (Planned Parenthood).

- Strong recommendation to reconsider the "innate mental distinction between sexual orientations" as a reason to explain study findings demonstrating female students reporting higher levels of stress and anxiety.

o There is a large body of research and gender theory that problematizes the idea that differences between male and female rates and reactions to stress are "innate". Social environment plays a significant role in socializing people into roles and responsibilities that influence how individual's respond, express and react to stress.

Examples in the literature include:

1. Mayor E. Gender roles and traits in stress and health. *Front Psychol.* 2015 Jun 9;6:779. doi: 10.3389/fpsyg.2015.00779. PMID: 26106354; PMCID: PMC4460297.

"Here, we briefly examine the literature on women's disadvantage in health and stress. Beyond biological considerations, we follow with socio-cognitive explanations of gender differences in health and stress. We show that gender roles and traits (masculinity in particular) explain part of the gender differences in stress, notably cognitive appraisal and coping. Stress in turn degrades health. Implications are discussed. In conclusion, traditional socialization is advantageous for men in terms of health."

2. Abramson LY, Seligman ME, Teasdale JD. Learned helplessness in humans: critique and reformulation. *J Abnorm Psychol.* 1978 Feb;87(1):49-74. PMID: 649856.

3. Aneshensel, C. S., & Pearlin, L. I. (1987). Structural contexts of sex differences in stress. In R. C. Barnett, L. Biener, & G. K. Baruch (Eds.), *Gender and stress* (pp. 75-95). Free Press.

4. Bardwick, J. M., & Douvan, E. (1971). Ambivalence: The socialization of women. *Women in sexist society*, 225-241.

5. Barnett, R. C., Biener, L., & Baruch, G. K. (Eds.). (1987). *Gender and stress*. Free Press.

"Gender and Stress illuminates the female experience of stress and offers a new paradigm for research on stress in both men and women. The book challenges prevailing assumptions, biases, and myths about the stress process, indicating that men and women not only find different situations stressful, but respond in different ways to perceived stress."

- Including pre-pandemic statistics of dental college students' rates of DAS would provide a more complete representation of their mental health changes as a result of COVID and serve as a baseline for comparison
- Why omit the names of the universities? Wouldn't student confidentiality be maintained even if the institutions were identified? If this is not the case, a brief explanation for the logic behind it would allow for greater transparency
- Who are the "Professional bodies" who govern the undergraduate dental curriculum in Malaysian dental schools the article mentions on page 6? Further elaboration on their role and elucidating why this detail is salient and relevant to understanding the study population is needed.
- How was the online survey shared? What methods of dissemination were used (i.e., social media, flyers around campus, professors giving extra credit for participation or students being compensated in some way for their participation)
- The authors found that "A significant association was found between gender and anxiety where females reported higher mean anxiety scores (12.41 SD ± 8.82) as compared to the males" - since 81% of the sample was female, wouldn't this play a role in

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

Yes, I would just add the word "the" before "COVID-19 pandemic"

Q 5 Are the keywords appropriate?

Yes, the keywords used are appropriate and comprehensive of the study

Q 6 Is the English language of sufficient quality?

There are many English language errors including but not limited to incorrect grammar, punctuation and sentence structure throughout the article which makes it difficult to follow. The unsatisfactory use of the English language confiscates the author's ideas as less legible and clear. Please see attached file with recommended edits.

Q 7 Is the quality of the figures and tables satisfactory?

Yes.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?

Yes, the authors use a range of literature that is mostly recent from the past five years and applicable to Malaysia

QUALITY ASSESSMENT

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|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| Q 9 Originality | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Q 10 Rigor | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Q 11 Significance to the field | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Q 12 Interest to a general audience | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Q 13 Quality of the writing | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Q 14 Overall scientific quality of the study



REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Major revisions.