Reviewer's report

Title: Psychological distress and its correlates among dental students: a survey of 17 Colombian dental schools

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Reviewer: Reidar Tyssen

Reviewer's report:

This is a relatively unique and original sample study from Latin America about distress in dental students. The topic is important and deserves attention. The paper is however far too raw, large and redundant in its present form to be published. It operates with three distress outcomes from the same scale (SCL-90), and preferable one of these should be chosen (see below). Its rather advanced statistical approach is over-emphasized, the main analyses and tables are too many, and likewise all figures could be omitted without losing the main message. A major revision is required in order to meet these queries, and this should be done before a decision about publication can be made.

Major Compulsory Revisions

1. The Introduction is far too broad and little focused towards your chosen variables. For instance, at the end of first paragraph parameters such as “relations with faculty”, “methods of teaching” etc have been mentioned – but they are not included in this study!? It should be focused on the independent variables (or school- and student level correlates) that have been included in this very study. For instance, why have “working while studying”, “financial support”, “dentistry as first choice” (and even socio-economic stratum) etc. been included in the regression models!? And other literature and hypotheses that could account for your choice of correlates should clearer outlined.

2. Study population and sample bias? I think table 1 is instructive, but the response rates vary a lot. What kind of schools are most representative? Are there substantial differences between the 100% rr schools and those with 40% rr?!

3. Measures. With respect to the main outcome SCL-90-R, I suggest that you stick to the GSI, which is the outcome of the major regressions. Everything about PST and PSDI, which is only confusing, should be omitted. Likewise should all about the subdimensions be toned down. I think you should keep table 5, and use the linear outcome (with most variance kept) as is. You use a multi-level model here, but the random effect estimates have not been reported (I guess this is because they were not significant, but this could be mentioned in a sentence in the result chpt or as a footnote to table 5). In addition, and conventionally, all univariate associations should be reported in a left column and then the adjusted ones to the right in a multiple regression such as this. Instead of table 6 you could compute interactions with gender and all significant correlates in table 5,
and the significant ones can be reported in the text. I think you will end up with the same findings with respect to gender, and maybe even more, since you gain power. (I am aware this is a bit different approach, but in mental health you do not need to stratify for gender except for very gender-specific variables, such as alcohol drinking)

4. The analytical approach is far too detailed, and this should be abbreviated to about half. It is not necessary with all these technical details about factor analysis and the multilevel modelling.

5. The results chapter should also be shortened. Report only significant correlates. At p.13 last paragraph it wrongly says from table 6 that being married is an important correlate with 38% increase among women (this effect is not significant!). Neither are larger/smaller classes among men/women, top page 14 at all significant effects!!! If only table 5 is kept this should make it easier to report all adjusted and significant correlates very briefly.

6. Discussion. The first paragraph should report a summary of the most important findings. And all significant finding should be discussed! For instance, “working while studying” and “dentistry was first career choice” as significant correlates have not been dealt with.

7. Conclusion. This should be about the main findings of your present study and not bring in new literature and ideas not supported from your empirical study!

8. Tables and figures. Table 1, 2 and 5 (modified as suggested above) could be kept. The others give no substantial information about the major research aim and could be deleted. All figures can also be omitted.

Minor Essential Revisions

1. Abstract. Background: the notion “data from Latin America are categorically lacking” should be modified since you refer to one study in reference 20 top page 7!?

2. All estimates in table 5 could be given with only two decimals. This will make the table a much better read – also when you include the univariate estimates of the regressions to the left. You should rather report 95% CI of Beta instead of Standard errors and Std betas.

3. What are the socio-economic strata exactly in this study? This should be described under measures in methods.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
'I declare that I have no competing interests'