Reviewer's report

Title: Development and Preliminary Psychometric Properties of a Well-Being Index for Medical Students

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Reviewer: Horng-Shiuann Wu

Reviewer's report:

Comments:
Authors provide a clear description of all steps and procedures related to development and content-validation of a new instrument “Well-Being Index for Medical Students” (MSWBI). This paper provides an overall well written report using rigor procedures to develop a new instrument to measure medical students' welling-being. This paper would benefit from some minor revisions.

1. As the authors described in the abstract, the data from 2253 medical students was used to test reliability of MSWBI. The sample size is inconsistent with 2248 as stated on p.9 and p.14, please clarify the sample size. Also, please briefly describe those 2253 or 2248 medical students, if demographic information is available.

2. The term “internal structure validity” was used in the abstract (p.2) and discussion section (p.15). What type of the validity is it? The only type of validity tested in the study was “content validity.” Construct validity, which is usually used test the structure of an instrument, had not been established in the study. Please be clear and congruent to type of the validity being tested.

3. On p.5, who are the 2 external experts (e.g. physicians, psychologists)?

4. What is authors’ interpretation of the findings on Table 2? What is the cutoff point for item CVIs?

5. Which version of MSWBI was answered by 2253 or 2248 medical students for internal consistency reliability testing? It will be helpful to have a few sentences to describe each draft MSWBI as a result of each developmental stage. For example how many items, type of scale, and changes made as a result of preceding stage.

6. What is authors' comment on low internal consistency reliability (#=0.68)?

7. The findings of “pair-wise agreements” on Table 3 (p. 14 and 24) are confusing. Were the 2253 or 2248 medical students also asked to judge item relevancy and representativeness? If not, why “pair-wise agreements”?

8. Please have a paragraph to describe how sensitivity and specificity of MSWBI were tested. In addition to report the findings, please also interpret the results.
9. The discussion section needs major revision. First, please summarize the findings and briefly describe the instrument (MSWBI) as the result of the study. Any further changes need to be made? What are the strengths and limitations should be considered as an instrumentation study.

The 2nd paragraph (p.15-16) is poorly written. For example, the 1st sentence “Establishing construct validity requires multiple evidentiary sources,” not sure what is the main idea here? The statement “Response process validity… by SAS” is unclear. So is the other statement “no validity evidence of consequences…. is unknown.” If the authors attempt to address the issues of “predictive validity,” as suggested in the following paragraph that “suicidal ideation,” “leaving training,” and “substance abuse” are the adverse consequences; therefore can be the 3 future indicators for testing predictive validity of MSWBI.

10. Reference #18, the access date was a year old and the link should be revalidated.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests.