Reviewer's report

Title: Validation of the 5-item Doctor-Patient Communication Competency instrument for Medical Students (DPCC-MS) using two years of assessment data

Version: 0 Date: 14 Dec 2016

Reviewer: Julie Tilson

Reviewer's report:

The authors have conducted a rigorous assessment of a newly developed assessment of doctor-patient communication competency among medical students on clinical rotations.

Major Feedback
My primary concern with the paper is the fact that the generally poor inter-rater reliability results, for both the assessment under study and the primary assessment that it is compared to, is reported in the results but not addressed in the discussion in any way. In fact, it should be addressed as an area of primary concern for this mode of assessment in general. ICC values are often interpreted as: excellent reliability \( \geq 0.8 \), moderate reliability \( =0.60-0.79 \), and questionable reliability \( <0.60 \). Thus two of the pairs would be considered questionable, one moderate, and one excellent for the DPCC-MC. The same is the case for the Côte et al. as well. Notably, one of the pairs appears to be no more in agreement than chance alone (0.03). This is obviously a substantial problem for these measures. If they aren't reliable between raters it seems inappropriate to recommend them (or in this case the DPCC-MC) for in an academic setting.

Furthermore, the methodology used also requires more attention. What type of ICC analysis was used? Was a power analysis done to determine the sample size? 2


I also strongly recommend that the authors reconsider the use of 'medical clerks' throughout the paper. I suspect that this term may not be recognized internationally. In the US a medical file clerk (often shortened to medical clerk) refers to a technician trained to assist with routine administrative activities in a physician's practice. Perhaps 'medical student' would provide better recognition of your work by the intended audience.

Additional feedback:
Abstract:
- The first sentence of the abstract makes too many assumptions about the reader's understanding of the context of the study. Indicate that the students are medical students and indicate that among many competencies doctor-patient communication competency should be assessed.
- The reference to 'Côte et al' measure is awkward in the abstract methods and results. Consider referencing it as "a 15-item instrument developed by Côte et al. (published 2001)" and from there "Côte et al. instrument".

Background
- The DPC abbreviation does not seem necessary (use as few abbreviations as possible to facilitate ease of reading). (Line 74)
- Use 'during rotations' rather than 'during these rotations' (Line 83)
- The sentence on line 83 has other issues as well: 'more comprehensive' than what? Just comprehensive is sufficient. Additionally, I would not contrast short and comprehensive with reliable and valid - I'm referring to the use of the word 'but'.
- Is there a reason <10 items was chosen as sufficiently short? It seems a bit arbitrary. Is there a sense of how much time should be spent completing the assessment? (Naturally, an assessment could have a small number of complicated items that takes an extended time to complete - though I recognize that this is not the case with the DPCC-MD.
- There is intermittent use of the terms 'medical clerkship' and 'clinical rotations' to describe the same activity. Only one should be used.

Methods
- Then sentence that runs from line 149-152 needs clarification. The second element is not clear. Consider two sentences: one dealing with positive correlation and one dealing with assessment for redundancy. The second element currently consists of a double negative that makes it hard to follow.
- I recommend against the use of the acronyms in this section (CFA, ULS, MMI).
- The explanation from line 182 through 193 is quite difficult to follow. I think it will help to put up front that the total number of videos viewed was 35 (from line 193) from a pool of, presumably, 167. Please add a sentence describing how this selection was made. Then describe how the 5 raters contributed to the data collection.
- On line 187 there is a numerical reference to the Côte paper but the name is not introduced. This assumes that the reader then checked the reference to understand the reference to the name on line 190. The reader will need more help with this.
- The reference to the Instruments section is helpful on line 188 but the numerical reference 2.2.2 is not clear.
- Given the demographics of students and patients it is rather inappropriate that the two items developed for the global assessment of doctor-patient communication skills assume that both the student and the patient are male. If this is not the case, please indicate as such. If it is the case, I recommend changing that for future studies. (lines 202-204)
- The statement on lines 210-211 are confusing. How does the global assessment score produce a score of 14? Based on what is written it seems that there are two questions scored 1-4, resulting in a maximum score of 8.
- Please explain why junior and senior scores were separated - this comes up in the Results but I don't believe it is addressed in the Methods

Results
- The comparisons made on lines 281-288 are confusing. I expected to see DPCC-MC compared to the Côte assessment and the Global assessment in succession. There is an
unexpected focus on the comparison of the Côte assessment to the Global assessment in the middle.
- The same lines are confusing in the use of the word 'both' (lines 282 and 284). Use something to the effect of 'the measures were highly correlated' rather than 'both were highly correlated' - the latter implies that two things were 'both' correlated with the DPPC-MC (which is the case but doesn't appear to be the intent of the sentences).

Discussion
- The claim that the measure has good psychometric properties (lines 307 and 309 among others) demands qualification regarding inter-rater reliability findings (see comments above). A discussion of why the inter-rater reliability results are so low is also needed.

Tables
- Please provide explanations for the abbreviations in Table 2 at the bottom of tables 2 and 3 (all tables would be appropriate for consistency).

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.
Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
No

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 recommend additional statistical review

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