Author’s response to reviews

Title: Cross-validation of a Learning Climate Instrument in a non-Western Postgraduate Clinical Environment

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Point-by-Point Response

Below are our point by point responses to the comments, questions and suggestions of the 2 reviewers during our first submission (MEED-D-15-00232).

Reviewer no. 1

Comments

* How many in the Netherlands answered with a single value? This comment was raised in reference to the 101/843 participants who answered with a single value or identical answers which was the reason for not including them in the analysis.

Response: Unfortunately, this information is not available in the two publications related to our paper, referring to the original D-RECT study (Medical Teacher, 33: 820-827) and Revisiting the D-RECT tool (Medical Teacher, 38: 476-481), both studies were done in the Netherlands.

* Do surveys generally reflect political correctness or real concerns?

Response: For this comment we believe that a separate validation study needs to be done to be able to answer it categorically.
Questions

1. How do the Mean and SD differ from other larger studies--

Response: In the original D-RECT study with 1276 participants the SD was 0.69 to 1.27. In the Revisiting the D-RECT tool (more than 2300 participants) the standard deviation is from 0.59 to 0.81. The smaller SD in our study suggests there is more consensus (less variation around the means) among the Filipino internal medicine residents than the Dutch study, which might be culturally based, but we do not know for sure. We added a short discussion on this at page 11 in our present submission, in italics.

2. “Supervisor is an expert”

Response: I have modified the discussion already to highlight the good attributes of D-RECT as a learning climate instrument. The focus of our discussion is the fact that across two different cultural settings D-RECT has been validated to be a useful instrument. The emphasis is on the applicability of D-RECT in an Asian setting as we have validated it. This revision is in the first 2 paragraphs of the Discussion, in italics.

Suggestions

1. Include more information of varying size of residency training programs at each hospital---size in terms of number of residents?

Response: Some hospitals who have recently been accredited to start internal medicine training programs only have 2 residents per year level. The big government hospitals have as many as 20 residents per year level, which means 60 since internal medicine is a three year program in the Philippines. In the hospital where I work there are around 20 internal medicine residents. We included this information in a paragraph we added at pages 6-7 in italics.

2. Should we know about the racial mix of supervisors and trainees or homogenous we decided not to add information?

Response: It is not relevant because there is an almost homogenous population of trainees and this population reflects Filipino values. Although some hospitals have Indonesian residents but overall I would estimate the foreign residents to be between 1-2%.

3. Include some idea as to what a training program looks
Response: First year residents are assigned at the wards, 2nd year residents rotate at the Emergency Department, 2nd and 3rd year residents rotate at the ICU and answer inter-departmental referrals. A resident is required 2 researches during the 3 years of residency. Some hospitals have mentors assigned to the residents. There are regular conferences (Mortality and Morbidity conferences, Emergency Room Case-Conferences, Grand rounds, Endorsement Conferences) where residents are required to present. Once a year all the residents take the national residents in training exam (RITE). Every year residents are evaluated whether they will be promoted to the next year level. Basis of yearly evaluations and promotions are written examinations, OSCEs, compliance with research, attitude and clinical competence which are evaluated using a Likert type questionnaire filled up by consultants of the department. We added this paragraph to pages 6 and 7 in italics.

4. Put on Table 2 the cutoff values you note in the methods to show whether the fit indices show the measure is good

Response: The present Table 2 already contains the cutoff values which were the basis of “fitness”.

5. The writing is stilted and could benefit from some editing.

Response: The paper has been reviewed by a scientific English editor from Maastricht University.

6. “sound theoretical data”---is it theoretical data or just data?

Response: The “sound theoretical data” refers to the principles or concepts related to learning represented in D-RECT which were arrived at through different strategies, which gave the D-RECT a solid theoretical foundation. It was based on qualitative research, expert opinion, and a Delphi procedure before being subjected to exploratory and confirmatory factor analysis. Before D-RECT no previous study on learning climate instrument used a combination of these strategies to come up with a questionnaire that measures the learning climate.

7. Introduction line 18 – spelling RESEARCHES

Response: This has been noted accordingly.
Reviewer no. 2

1. Last paragraph of Data analysis----

Response: The intention of the paragraph on standard error of measurement (SEM) is to establish why an SEM of 0.26 was chosen and we referred to the original D-RECT study (Boor et al, 2011) which explained why they did use an SEM of .26. Another way of explaining the SEM is if this is an examination, the SEM refers to the standard deviation of scores that would have been obtained in a single student had the student been tested multiple times. In contrast, standard deviation (SD) refers to scores obtained by a group of students on a single test. In our study the SEM was chosen to be .26 and given the formula ( 1.96 x 0.26 x 2=1 ) it is equivalent to 1. If somebody answers 4 for example in any of the questions, the true score is between 3 to 5.

On page 9 in italics we included some more explanation for the SEM.

2. First paragraph of the results section indicates that 7 items were removed from the scale without indicating specifically how these items were selected to obtain a reasonable fit.

Response: In the first paragraph of Results section in italics (p.10), we included a description on how the 7 items were removed using the Modification Index. The basis of the reasonable fit are the 5 criteria we presented in Table 2 and mentioned in the result section. These criteria are standard and well accepted criteria used by many studies involving confirmatory factor analysis.

3. a The intent of the first two paragraphs of the discussion is not clear. The first paragraph seems to begin with an attempt to indicate why the 7 removed items do not fit within the culture but does not specifically refer to the 7 items or indicate how they might be in conflict with the culture.

Response: We have modified the discussion to focus on the D-RECT instrument and its strengths as a tool since the intention of the study is the D-RECT learning climate measurement. The aim was to show that D-RECT is a valid instrument across 2 different settings. We deleted the “speculation” since the removal of the 7 items were an output of several statistical computations. This can be seen in paragraph 2 of the Discussion (p.12).

As to the 7 items that were removed we did mention in the first manuscript we submitted these items and they are presented in table 5.

3. b The second paragraph includes a discussion on sociocultural aspects of learning setting, but they are not clearly central to the intent of the study to validate an instrument. Perhaps some
of this discussion belongs to the introduction as a basis for the notion of a learning climate based in a culture of learning.

Response: The intention of the sociocultural discussion is to show that D-RECT is broad in scope in terms of topics covered in the learning climate and is able to cover sociocultural aspects of learning. This is one of its attributes.