Reviewer’s report

Title: Applications of the reflective practice questionnaire in medical education

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Reviewer: Silvia Mamede

Reviewer’s report:

The manuscript reports on a study of the appropriateness of a recently developed questionnaire for assessing medical students' reflective capacity. Many medical schools presently include the development of students' ability to reflect upon their own experiences among their educational goals. A tool that can be used for measuring students' progress towards this goal could certainly be helpful. However, as the authors noticed, many questionnaires already exist, which raises the question on the value of the additional contribution that the manuscript brings. The authors face the challenge of showing that the present tool has advantages relative to existing ones, which depends not only on its theoretical consistency and practical value but also on how it has been tested in the present study. I have doubts on both aspects. Please see my comments below.

Many tools for the assessment of reflective practice have been developed and tested in addition to the ones mentioned by the authors (e.g. Kember's Reflection Questionnaire, Boenink questionnaire, O'Sullivan rubric). Many of the existing self-reported questionnaires built upon the literature on reflection and reflective practice, have been recognized as theoretically sound and have been tested in studies involving large number of participants, several professions and levels of learners. These studies have shown the psychometric properties of these tools and provided support for their validity. The authors argue that the rationale for the development of the new questionnaire was the need for a "more comprehensive" assessment of reflective practice, one that includes a broader set of constructs that are relevant to reflective practice. This seems to have led to inclusion in the "Reflective Practice Questionnaire" (RPQ) of constructs such as "job satisfaction", "confidence in communication" etc. I am not convinced that such RPQ actually measures what has been conceived as reflective practice, at least not as the construct has been understood within medical education and professional expertise domains. The manuscript presents measures verifying the reliability of the questionnaire, but I have not seen a discussion of construct validity. It seems to me that assuming that reflective practice is related with job satisfaction or confidence in communication with clients (or with stress etc.) does not make it justifiable to include job satisfaction as a subscale in a measurement of reflective practice. It looks like including a subscale assessing job performance in a scale of personality traits because it is known that conscientiousness is related with performance. The relationship between the different constructs could, of course, be subject of studies investigating for instance whether reflective practice is related with (higher or lower) job satisfaction. But the latter construct is not, in my view (and, as far as I know in many others') a component of the former one. The theoretical background of the questionnaire is still, in my view, to be presented, and a consistent, theory-based explanation of how it differs from (and has advantages over) existing tools needs to be added.
In addition to this fundamental issue, I have doubts about methods and results, and more information seems to me to be necessary. The factor analysis is not described in the Methods section, and there is no information about criteria used for extracting factors, method of rotation used etc.. The cluster analysis has been only mentioned without any further description that would allow readers to understand how the analysis has been conducted. Multivariate analysis has been conducted with extremely small groups, which raises doubts about how valid the findings actually are. The Discussion section statements that cannot be made based on the study results, such as inferences made from the correlational analysis that go, in my view, far beyond what it allows for (e.g. page 12, lines 50-55 or page 13, lines 7-9).

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

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No

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I am able to assess the statistics

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