Author’s response to reviews

Title: Applications of the reflective practice questionnaire in medical education

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Point-by-point response to comments

Editor

1. Rogers should be the first author and Van Winkle the last. The corresponding author mistakenly did not see the command to change the author order when he submitted the paper using Editorial Manager. If necessary, we can submit a change in authorship form.

2. We changed ‘confidence’ to ‘over-confidence’ in the abstract.

3. We moved the section beginning ‘Our findings with medical students…’ to the end of the Background section.

4. We moved the section, on combining subcomponents of reflection into a single 16-item subscale, to the end of the first paragraph of the ‘Measures’ subsection of ‘Methods’. The subcomponents were combined into a single subscale to improve the reliability of the RPQ as a measure of reflection.

5. In regard to how we knew that mental health practitioners had training in reflection, we now state under ‘The present study’ in ‘Background’ that ‘We were uncertain how the medical students would compare with mental health practitioners as all individuals in the latter sample reported reflective capacity building as part of their professional training [1] whereas the sample of medical students did not have formal reflective capacity building.’

6. We now state at the beginning of ‘Methods’ that 100 of 150 medical students responded to the invitation to complete the RPQ. In the second paragraph of ‘Methods’ we state
how respondents were recruited in the previous (and, in the case of mental health practitioners, present) study.

7. The RPQ per se did not appear in our prior publication, and we are permitted by the publisher to reproduce without securing formal permission limited portions of the text and limited numbers of illustrations including tables. (Taylor & Francis is a signatory of the International Association of Science, Technical and Medical Publishers Permissions Agreement.) Slightly modified versions of survey items presented in table form in our prior publication are shown in the complete RPQ in section 1 of our supplement document. Nevertheless, we can work to obtain written permission to modify and use the items if you think it is necessary.

8. Statements added/amended to Statistical methods: “…and we conducted a series of one-way ANOVAs with follow-up independent samples t-tests to compare the RPQ subscales across samples. The ANOVA results are presented in online supplement section 3. For the sake of brevity, we simply report, under results (and in Table 2), the main differences that were found.”

Statement added near beginning of Results, p.9: “Factor analysis was conducted using the principal factor method in the statistical program Stata. Using this method, the factor loadings are computed using the squared multiple correlations as estimates of the communality. Since we obtained a single factor solution, no rotation was applied.”

Text for cluster-analysis in Results, p.11 edited to read: “An additional aim of the present study was to examine the RPQ scores with a hierarchical agglomerative cluster analysis using weighted average linkage method and using absolute-value distance as the dissimilarity measure. This analysis was conducted using the statistical program Stata,1 to explore whether meaningful patterns emerged” and footnote added on page 11: “1 For a detailed description of cluster analysis options using Stata please see: https://www.stata.com/manuals13/mvcluster.pdf”

9. We now state the following regarding items with low factor loading at the beginning of the ‘Results’ because we could not identify a good place for it in ‘Discussion’.

Factor analysis of the medical student, mental health practitioner, and general public RC subscales revealed single-factor solutions (Table 1). We retained all items for comparison purposes because our conclusions were the same regardless of whether the two items with factor loadings below 0.3 were included for medical students. While one of the latter items involves questioning one’s pre-existing beliefs, the other does not. Moreover, another item, concerning the impact of one’s personal thoughts and feelings, loaded well. For these reasons, we suggest items 15 and 16 in Table 1 both loaded poorly because of similarities in their wording rather than an inability of medical students to reflect on their own beliefs.

10. ‘reflective capacity subscale of’ has been added to the title of Table 1.

11. We deleted redundant information about means and standard deviations from ‘Results’ (third paragraph of Results on page 9 of the current version of the manuscript).
12. We changed ‘most’ to ‘largest number’ of participants, since 45% is not most.

13. We deleted ‘slightly less reflective’ for the dissatisfied group on page 11 but kept that they reported lower confidence in communication (CC). Means can be statistically significantly different even if their 95% CI overlap somewhat. (See also section 5 of the supplement.) We also deleted the statement that the anxious group was slightly more reflective.

14. We remind readers in the last paragraph on page 13 that desire for improvement strongly correlated with RC, and we added the correlation between job satisfaction and desire for improvement.

15. We expanded our Ethical approval section as follows;

Participants were informed that their optional and anonymous survey results would be used in this study. HIPAA permits human research without obtaining informed consent (called Authorization by HIPAA). In order to do this, the research must be reviewed and approved by a duly established Institutional Review Board (IRB). This study was reviewed and approved by the Rocky Vista University IRB. The IRB found that the research would not adversely affect individual privacy rights and welfare. There is no way to associate any participant with their survey results.

16. We now use journal title abbreviations for ‘References.’ (We have not been able to locate an abbreviation for the journal ‘Reflective Practice.’)

Reviewer 1

1. We feel that the theoretical value of the RPQ, relative to other surveys of reflection, is well justified in our manuscript and in our prior publication. According to these papers, the RPQ is a reliable new survey of reflective capacity and several other dimensions pertinent to reflection. Its validity will be tested over time as it is used for additional studies, now that we and other investigators can feel confident that the survey subscales are reliable.

2. Some additional statements have been added about Factor and cluster analysis (see response to editor point 8 above). In Discussion, p.14 statement added: “We acknowledge that our cluster analysis is based on a small specific sample and that there is limited generalizability. However, our purpose was simply to try to better understand the individual differences within our sample, with potential to provide insights which might lead to further research.”

Reviewer 2
1. We relied, in part, on Schon to develop the RPQ, and the reviewer suggests we reference Schon in our manuscript. Those references seem to fit best in section 1 of the supplement document so we now reference Schon there.

2. We now include mention of the cluster analysis at the end of the Background section to introduce that purpose of our study as the reviewer suggests.

3. The reviewer suggests including confidence intervals for effect size measures, but we feel the levels of uncertainty are already indicated by the standard deviations reported in Table 2.

4. The sampling procedures for all groups of study participants are now described in the first subsection of ‘Methods.’

5. We added the reviewer’s suggestion that self-efficacy may contribute to the positive relationships between RC and both uncertainty and stress, and we cite the reviewer (second paragraph of ‘Discussion’).

6. As mentioned above, the following statement was added to Discussion, p.14: “We acknowledge that our cluster analysis is based on a small specific sample and that there is limited generalizability. However, our purpose was simply to try to better understand the individual differences within our sample, with potential to provide insights which might lead to further research.”

In regard to how much variance was accounted for by the 5-cluster result, the Stata method of cluster analysis does not generate that statistic.

7. The word ‘reported’ has been replaced with the word ‘exhibited’ in the results section of the abstract, since students did not directly report anxiety, engagement, or dissatisfaction.