Author’s response to reviews

Title: Gain +1 or Avoid -1: Validation of the German Regulatory Focus Questionnaire (RFQ)

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Author’s response to reviews:

Dear Madams/Sirs,

We are very grateful for the constructive criticism and the helpful remarks provided by both reviewers. We revised the manuscript according to their recommendations and are confident that the revisions have helped us to improve the manuscript. Please let me know if you need any additional information. I look forward to hearing from you and to learning about your assessment of the revised manuscript.

Paul De Boeck (Reviewer 1): This is a reasonably good manuscript, except for a few points.

- The removal of an item is fine, but one cannot compare goodness of fit indices of a smaller data set (the one without item 3) and a larger data set (the one with item 3).
Thank you for this thoughtful remark. We do not mean to imply a comparison between models using the fit indices. Aside from the BIC, we simply report the indices descriptively. However, we added an additional clarification on p.11, l. 5-6.

- Any idea why scalar invariance is violated?

  We added our suspicions as to the cause of the violation of strong measurement invariance (p.20, l.15ff).

- One cannot compare groups if scalar invariance does not apply.

  We agree with the reviewer on this important methodological aspect. As mentioned above, invariance could neither be confirmed nor refuted in the present study. Therefore, we decided to report the comparisons we calculated even if later research might reveal that they are not valid. We remind readers that they should interpret these results with caution (see p.22, l. 11ff)

- What is the motivation or the many multi-group analyses?

  Our motivation in the multigroup analyses for age and gender groups was to test for measurement invariance, which is an important statistical perquisite for meaningful comparisons of subgroups in the study and to ensure the practical usability of the questionnaire.

- Coefficient alpha is not the best measure for a factor based scale. Use one of the alternative coefficients.

  We agree with the reviewer that coefficient $\omega$ is preferable to $\alpha$. Because of the high prevalence of $\alpha$ in the literature – specifically the original RFQ publication by Higgins and colleagues (2001) - we decided to comply to this standard, but we gladly include $\omega$ in this revision.

- The regulatory focus framework is nice, but when I read the items, I do not see how they reflect the concepts. That is not the authors' fault, but it can perhaps explain the lack of divergent validity, given the validity coefficients are as high as the reliability.

  We agree with the reviewer on this important observation. Measures of regulatory focus are highly disputed in the literature. Our translation and validation of the German version of the RFQ
reiterates the need for further research on this topic. We added this issue to our discussion section (p. 20, l. 24)

David Haaga (Reviewer 2): The authors have completed a useful study of the psychometric properties of the German version of the RFQ. Their data analytic methods are well chosen. For example, the use of half the sample for an exploratory factor analysis, reserving the other half for CFA based on its results, is excellent. Also, they provide sound arguments for eliminating item 3 from the RFQ and present concurrent validity correlations for the RFQ based on having deleted this item.

I had just a couple of minor suggestions about this paper. In particular:

1. From p. 6 I could not tell if participants under 18 were actually deleted from the sample. It is indicated that they were, but then also that the age range of participants included 16 on the low end.

   We apologize for this oversight. Initially, participants in our study were at least 16 years of age, but because of differences in laws between countries we decided to exclude those under the age of 18, and made small modifications to the relevant passage to increase the clarity.

2. I thought more might have been said about the specifics of what associations would be expected, conceptually, between RFQ dimensions and Big Five traits, and why.

   Thank you for this recommendation. We added a passage to further explain the expected pattern of correlation for the Big Five (p. 5, l. 13ff). We also revised the corresponding section in the discussion (p. 21, l. 9ff).

3. The results pattern, with sizable correlations for the promotion subscale and not for the prevention subscale, is clear, but interpretation thereof perhaps less so. One pattern that is manifest in Table 3 [English versions of items] is that 4 of the 5 prevention items reference what the person was like as a child, whereas none of the promotion items do. I did not see anything in the description of the theory that requires this differential content for the two subscales, and it may be relevant to explaining the different pattern of correlations with other [presumably present-focused, not asking what the person was like growing up] personality tests.
We are grateful to the reviewer for bringing up this very good point. We fully agree that the prevention focus scale’s focus on a person’s childhood could be the reason for the low correlations found with the other questionnaires. We added a passage discussing this issue (p.20, l.24ff).

4. The Discussion of limitations of the study should perhaps mention that all measures were self-report questionnaires. There is no information from this investigation as to whether RFQ scores relate to behavior, diagnosis, or anything else about the participant aside from additional voluntary self-descriptions of what they are generally like.

Thank you for this important remark. We added a passage to the limitations section of the manuscript (p. 22, l. 25ff).