Author's response to reviews

Title: Correlations of self-reported knowledge, objective knowledge and preference of medical students for a specialty career: a case-study of youth health care

Authors:

  Marc BM Soethout (mbm.soethout@vumc.nl)
  Olle J Ten Cate (T.J.TenCate@umcutrecht.nl)
  Gerrit Van der Wal (g.vanderwal@vumc.nl)

Version: 6   Date: 14 November 2007

Author's response to reviews: see over
Dear editor,

Thank you very much for reading our revised manuscript ‘Correlations of self-reported knowledge, objective knowledge and preference of medical students for a specialty career: a case-study of youth health care.

We thank the reviewers for their interest and time in reviewing our manuscript and will respond to their comment point by point below. Furthermore, we integrated the improvements in an adjusted manuscript.
We hope you will be able to accept this manuscript version for publication.

With regards, on behalf of the co-authors,

MBM Soethout

**Reviewer 1: Tim Wilkinson**

This revised paper is an improvement on the original version and I think now reads much better. There are still some areas that I find confusing to read and it remains quite lengthy. The key message that career preferences aren’t always related to prior experiences, or to actual knowledge of the area, remains of significance and potential interest. I think this is really the key message and I would suggest that the paper could be shortened quite considerably to get this method across. This would not only make it more readable, but would give greater emphasis to this important message.

- We agree with your comment about the length of the paper and reduced the text by skipping tables 1 and 2. The key message, which you described very well is now a more prominent part of the paper. We also made some improvements in the conclusion of the abstract, the discussion paragraph, and title of the paper.

Specific issues:
- The abstract remains slightly obscure as there is no clear definition of “YHC profile” and the definition of objective knowledge also remains slightly hard to understand. I think the conclusion could be made much pithier.

- We removed the term YHC-profile and the definition of objective knowledge from the abstract, because they had no further meaning here. The terms are explained in more detail in the method section. We made the conclusion of the abstract pithier.

- I would suggest that the 1st paragraph of the background in which Youth Health Physicians are first introduced, that it be made quite clear at this point how this differs from Paediatrics. I suspect this would avoid confusion for new readers who are not familiar with this particular specialty.

- We added a sentence in the introduction about the difference between youth health physicians and paediatric physicians.
• Definition of objective knowledge on Page 5 as the “inverse of the distance between the student’s given YPH profile and the mean YHP profile …” still remains rather confusing as presumably a score of zero is favourable and it does seem to be rather counter intuitive. I would like to see if the authors could develop a measure that may be more easily understandable; for example, a simple percentage of answers that are correct.

- The definition of objective knowledge is made more clear in the method section. How to interpret the score about the applicability to the YHP profile is made more clear in the method section too. A simple percentage as you proposed is not possible due to the method we used, but we believe that the terms are more clear now.

• I also found the concept confusing where objective knowledge seems to show a high correspondence with the YHP profile. I thought that the objective knowledge measure was defined as a deviation from the YHP. If this is the case, then clearly correlations cannot be undertaken. If I have become confused about the issue, then this aspect needs to be much more clearly written.

- There seems to be a misunderstanding here. We did not correlate objective knowledge with the YHP profile given by YH physicians, only with subjective knowledge (which is not related to the profiles, established by YHPs of students) and career preference. We assume that the words “object knowledge” in the 2nd paragraph of the discussion caused this confusion. We revised this sentence.

Reviewer 2: Barbara Buddeberg-Fischer

General
The authors have made some improvements. However some of the suggestions they did not consider or in an inadequate way.

-----------------------------------------------
Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
Point 1 of our suggestions: repeated splitting of the sample in two subsamples with multiple comparisons causes a significant higher alpha error.
Their answer: significant level of alpha set to 0.001
Our answer: This choice is arbitrary and is not explained.

- In general a significance level of p<0.05 is used in scientific research. Mainly to reduce a multiple comparison effect we used an alpha lower than 0.05/21 =0.002, namely p<0.001. We added this explanation in the methods section.

Point 2 of our suggestions: The 47 characteristics of YHP should be analyzed by factorial analysis to reduce the amount of data.
Their answer: The number of participants is too small.
Our answer: The number of participants is more than 2000. This number is more than sufficient to conduct factorial analysis.

- We appreciate again the suggestion to conduct a factor analysis, but have three reasons why this would not be appropriate in our view.
First, our questionnaire was not designed to reflect a multidimensional psychological construct that would ask for this type of data reduction. The questions all reflect straightforward facts about the daily work. Underlying factors must be interpreted and we see no need to create indirect categories. In our revised manuscript, most emphasis is on the profile as a whole, reflecting one factor.

Secondly, the need to reduce data by factor analysis is much less, as we have reduced the list of 47 items in an other way. We chose those 21 items upon which the professionals agree most (i.e. with the least variance).

Thirdly, we agree that the number of students is more than enough to conduct factorial analysis. The results must however be compared to the results of the practising youth health physicians (N=20). We were primarily interested to know how many characteristics of the medical profession were applied to the daily practice of youth health physicians, the so called YHP-profile. We compared these results with the opinion of students at different stages of education. The number of youth health physicians was too little (N=20) to conduct factorial analysis. Even if this would be possible, we would not see how factors within this group would compare with probably different factors found in the student group.

Point 3 of our suggestions: Instead of multiple group comparisons the authors should conduct a three group comparison (one-way ANOVA): students with high preference to YHP, with low preference to YHP and actually working YHPs. Their answer: They did not answer to the suggestions and did not conduct the three group comparison.

We agree that a multiple group comparison (one-way ANOVA) is needed if three groups are compared. However, we only aimed to find differences between both student-groups as described in figure 1-3. We there for conducted T-tests for all characteristics of both student-groups and used a p<0.001 as explained before. Furthermore, we were primarily interested in the difference overall about the students groups and the practising youth health physicians.