Reviewer's report

Title: Medical and pharmacy students' changing perceptions of interprofessional education and practice: a prospective cohort study

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Reviewer: Annemiek Linn

Reviewer's report:

This manuscript described a study of 34 MS and 15 PS who experienced IPE. The study developed a questionnaire and investigated whether participation in the IPCP clinic was associated with an increase in students’ perceptions regarding several items on the scale that the authors developed. Overall, the manuscript was written well. I believe that IPE is an interesting and important topic. My main concerns are relating to the theoretical background and the methods.

1. According to the guidelines of BMC: The Background section should be written in a way that it is accessible to researchers without specialist knowledge in that area and must clearly state - and, if helpful, illustrate - the background to the research and its aims. For me, as a health communication scientist it is unclear what the authors mean with interprofessional education. How is it structured in the IPCP? This needs clarification.

2. The introduction is a numeration of guidelines and history of IPE. I am also interested in empirical studies into the effectiveness of IPE. What are the main variables used in these studies? Most interprofessional learning methods have been adopted and adapted from one or more fields of professional education. How can you theoretically assume that IPE can be effective i.e., what kind of learning methods are used? What about the content of IPE? How does this relate to the variables tested in your study?

3. The overall aim of the paper is not clear. In the abstract it is stated that the overall aim was to assess the impact of the IPE experience on student perceptions of IPE and IPCP. As stated in the last paragraph: To evaluate the impact of IPE experience on MS and PS involved, the authors investigated the use of several validated instruments. Is this the main aim? Reading the introduction this aim comes out of the blue. I cannot find anything about inappropriate instruments and the need to develop one. Next, the authors state that their aim was to evaluate the change in perceptions. Why do they believe that IPE can change these perceptions? This aim also comes out of the blue in my opinion.

4. In the same last paragraph the authors state: a customized instrument tailored towards?? Tailoring may be defined as “any combination of strategies intended to reach one specific person, based on characteristics that are unique to that person, related to the outcome of interest” (Kreuter, Farrell, Olevitch, & Brennan,
1999, p. 176). The definition should not be used interchangeably with the concept of personalization or customization. In addition, I do not believe that tailoring is appropriate here as it does not refer to a message which is based on characteristics of MS or PS.

5. The authors describe a questionnaire which was created especially for their study. What was the theoretical background of the development of these items? The authors describe that the instrument targets three domains (perceptions?). Some items were created for this study (based on which theory??), some were based on existing scales, and three were based on an unpublished instrument. How do the authors know that these items measure these three domains? We often trying to measure things that cannot directly be measured. I would recommend a factor analysis (and principal component analysis) to identify groups or clusters. In that way, the authors can gain more insight into the structure of the variables and to reduce the data set.

6. Although the authors address these abovementioned limitations very briefly, I do believe that the authors can report a factor analysis, and an alpha. It would be better to first validate your instrument and then report the results of this instrument.

7. The authors wanted to investigate any changes between MS and PS. For me, it is not clear why the authors expect any differences.

8. The authors include 34 MS and 15 PS, there is a big difference between the two groups, did the authors control for this difference?

9. I believe that the group of 34 MS and 15 PS is small. Please include a power calculation.

10. This should start with the main conclusions of the research and give a clear explanation of their importance and relevance.

11. How do the results relate to previous studies?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

No conflict of interest