Reviewer's report

Title: Medical Students' Interpersonal Behaviors and Socio-Emotional Interaction in a Virtual Clinical Encounter

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Reviewer: Hanna Järvenoja

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Review for a manuscript “Medical Students' Interpersonal Behaviors and Socio-Emotional Interaction in a Virtual Clinical Encounter” by Olivier Courteille, Anna Josephson and Lars-Olof Larsson

The manuscript focuses on a highly interesting and relevant issue on interpersonal behavior and socio-emotional interaction in medical students’ training. It emphasizes the undermined role of the role of emotions for learning, and furthermore, highlights the meaning of “emotionally driven” communication between the (future) doctors and their patients. The setting for the presented study seems to provide a unique platform to learn and practice communication skills between professionals and patients as well as between the collaborative colleagues or teams of different professionals.

Major Compulsory Revisions:

However, the analysis of the current study remains mainly on a quite superficial level. It would be interesting to see a more process-oriented analysis of the interpersonal behavior and socio-emotional interaction in addition to the coded frequencies of different variables from video observations and some quantitative analysis of these aspects. Especially, taking into consideration the relatively small number of participants who worked only 31-66min, this would be necessary to complement the presented analysis in order to increase the scientific value of this study to the field. The study seems to already have all the data needed for process-oriented analysis, such as video-observation material, and detailed categorizations of verbal and nonverbal communication and emotional reactions deriving from the content analysis. I feel that, taking into account the number of the participants, this type of analysis would reveal more relevant results and would add more to our understanding of emotions in learning than purely presenting the activity through frequencies or percentages or comparisons between male and female participants. For example, in the p. 16, the authors state that “substantial differences were found in the students’ rapport with the VP and the flow of conversation”. It could be beneficial to uncover these varying processes in order to understand what constitutes good emotional atmosphere in patient-doctor communication.

Consider also a wider literature search regarding examples of the role of emotions for learning. There seems to be lines of reasoning here; 1) emotions or
affective state plays a role in learning and cognitive achievement and 2) communication and socio-emotional skills are essential for practicing the profession of a doctor. However, these lines of reasoning are not well elaborated. Instead, the focus is on the use of virtual learning environments, in this case a virtual patient, as a platform or tool for learning and training. There seems to be a bias in here, since the analysis focuses mainly on the interactive and emotional behaviors.

Minor Essential Revisions:
1. Specific research questions are missing. Now the aims are presented, but more targeted questions are needed to respond the analyses that are carried out.
2. Provide a more detailed description of the patient case, especially in terms of how the virtual patient expressed emotional load etc.
3. The authors should check and be logical in how they report the number of participants. Now there seems to variation in the reports, which is somehow confusing. Somewhere in the flow of the text they report n (as the number of participants) to be 30, but the number of the student pairs vary between 14 and 15. If the n of the study is 30, it is not logical to be 14 or 15 later on.
4. Be explicit with the number of videotaped student pairs, and state it clearly early enough (see also above). Now this is not totally clear and the information is provided gradually here and there throughout the chapter two. This is important since from my point of view, the main body of the data lies on video records.

Discretionary Revisions:
- The authors could benefit from a small review on the research conducted on emotions for learning in the field of educational psychology. For example, there is a special issue by Linnenbrink-Garcia, L. & Pekrun, R. (2011). Students’ emotions and academic engagement: Introduction to the special issue. Contemporary Educational Psychology 36, 1-3.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**
I declare that I have no competing interests