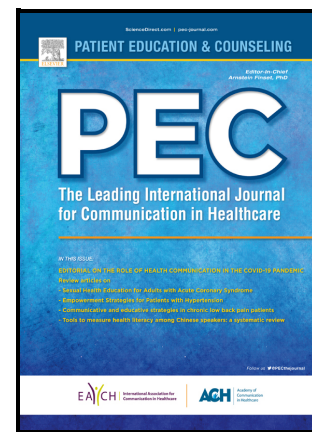


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The authors' reply: Completing the picture on student performances in OSCEs: A mixed-methods study on integration of a standardized patient rating

Andrea Lörwald, Felicitas-Maria Lahner, Daniel Stricker, Sören Huwendiek



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## **The authors' reply: Completing the picture on student performances in OSCEs: A mixed-methods study on integration of a standardized patient rating**

Andrea Lörwald <sup>a,\*</sup>, Felicitas-Maria Lahner <sup>a,b</sup>, Daniel Stricker <sup>a</sup>, Sören Huwendiek <sup>a</sup>

<sup>a</sup> Institute for Medical Education, University of Bern, Bern, Switzerland

<sup>b</sup> Department of Health Professions, University of Applied Sciences, Bern, Switzerland

Dear Sir,

We thank Miah et al. for sharing their thoughts on our article "Completing the picture on student performances in OSCEs: A mixed-methods study on integration of a standardized patient rating" [1].

We are happy they agree on the importance of the patients' or simulated patients' (SP) voices in judging student performance and will gladly address the fairness issues they raise.

Their first concern regards the standardization of the SP's role portrayal. We concur with Miah et al.'s assumption that there is a certain degree of variation in the SPs' reactions to students (and the heterogeneity of their behaviour). We are aware of this problem and try to keep it to a minimum through several measures. We train SPs to portray their role in a particular way and assess their actual role portrayals during the OSCE. We believe that the remaining minimal variation could actually be considered an advantage. Some individual reactions of the SPs to the student make the simulation authentic. Such individual reactions allow students to demonstrate their ability to address patients' concerns individually.

So far, we have only used the SP ratings for research purposes, and they have not been counted towards the students' assessment results. We are conducting further research to understand better the possible implications of including SP ratings in student assessment. We assume that just as there are hawk and dove effects with examiners, we will observe similar effects with SP ratings. One crucial assumption is that such situational effects average out across multiple stations for the individual student. In addition, the OSCE metrics [2] are a methodological tool to monitor undesired effects and to estimate their magnitude in order to be able to take corrective action if necessary. For example, between-group variance measures the proportion of variance included in the performance measure but is due to differences between groups and is therefore actually undesirable. Once OSCE stations are conducted multiple times (in series and/or in parallel) with different examiners and SPs, the proportion of variance due to grouping can be determined. According to Pell et al. [2], this variance proportion should be smaller than 30%. If the between-group variance rises above 40%, corrective measures should be considered.

We routinely calculate the OSCE metrics for all OSCEs and thus gain insight into what was measured well or less well for different performance measurement domains of the individual stations. We will also include SP ratings as a separate domain in the OSCE metrics in the future for quality control purposes. These calculations will allow us to identify stations where, for example, the between-group variance in SP ratings is too large. For such stations, we can then take appropriate measures by, for example, not considering the SP ratings for such a station for student assessment. In addition, the OSCE metrics also allow us to find clues to improve a station or even the measurement of a domain across multiple stations.

Equipped with these tools and our expertise, we are confident that we can indeed integrate the SP ratings so they account for a certain percentage of the overall result and that they will make a meaningful contribution to student assessment in a complementary way.

The second concern of Miah et al. is that masks and visors create barriers to communication, which may impede students' results. Indeed, there is evidence from a randomized controlled trial that face masks negatively affect patients' perceptions of the physicians' empathy and the physician-patient relationship [3]. Therefore, to keep the exam fair, either all or no students should wear masks and visors. Unfortunately, in the Covid-19 pandemic, face masks and visors have become part of our daily lives. They do not only impede communication during OSCEs but also in real physician-patient interactions. Therefore, we suggest training students and physicians on overcoming or at least alleviating these barriers to establish trustful physician-patient relationships even with face masks and visors.

We hope that we adequately addressed Miah et al. concerns and highlighted potential ways to integrate SP ratings in OSCEs fairly.

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