Reviewer's report

Title: Using an ACTIVE teaching format versus a standard lecture format for increasing resident interaction during noon conference: a prospective, controlled study

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Reviewer: Gerald Wibbecke

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Discretionary Revisions:

Introduction and conceptual framework

The intention of the introduction is to show there is a need for replacing the traditional lecture within a noon conference setting. It would be interesting to learn more about the conceptual framework of this conclusion as no theoretical background is mentioned. A variety of educational frameworks could have been used to justify the assertion that the ACTIVE teaching format leads to more beneficial outcomes. The authors cite a number of papers, yet this point remains unclear.

Major Compulsory Revisions:

Title and Abstract

The title suggests that the authors advocate establishing a teaching format mainly aiming at the stimulation of resident interaction. In the abstract, the focus is placed on the construct “educational outcomes”, which is an unspecific term. The results and the conclusion section clearly indicate, that the focus of the study is placed both on perceived engagement and knowledge achievement. It appears to be that true both variables can influence one other. Yet each variable can also be influenced independently by an intervention. A clearer conceptualization would be helpful.

Methods

The procedure for investigating the effects of the ACTIVE teaching format – as applied by the authors - is appropriate. The description of the format is clear. Existing literature confirms that such a structured methodological approach contributes positively to learning outcomes. What is quite surprising is that residents seek a change from the traditional lecture, although it seems that traditional lectures are well liked by many medical students, possibly also by residents. It would be interesting to learn more about the didactic preferences of residents.

The scale of the survey remains unclear. There is no description which likert-
scale was used to assess “Resident Satisfaction” (probably 1-5?).

The description of the participants is misleading. Unfortunately table 2 does not seem to reflect the full number of participants (N = 54 instead of N = 69). The same problem occurs in table 3. The distribution of participants in the sessions relative to the absolute number of participants and residents remains unclear. A more detailed and precised description is necessary.

Results

Although some of the results reach statistical significance, all in all the difference between the groups is very small. Maybe a more conservative testing would be more appropriate. If the authors would have uses two-sided testing, there would not be any statistical significance. The use of a one-tailed t-test is questionable. Another possible way is to present effect-sizes of the differences.

Discussion

The Discussion section supports the view that the ACTIVE teaching format presents a suitable alternative to the traditional lecture. The description of the faculty satisfaction is important information, because a new teaching format should be accepted by the teachers. Here it would be interesting to learn more about possible contradictions or negative side-effects which may have occurred during this study.

The authors conclusion is not adequately supported by the data. In the beginning the authors argue that the traditional lecture leads to no improvements in knowledge retention. When we look at the data, it can be seen that the control group has an overall achievement score of 69 %. Although this result is smaller in comparison to the ACTIVE group, the difference is not that big, especially when we consider the limitations of the study. Additionally, there is no difference in the perceived knowledge gain of the residents. The results on long-term knowledge retention show that there is no difference between residents who attended the format and residents who did not attend any lectures in the study month. With regard to the evidences presented, the conclusion that the ACTIVE teaching format should be an alternative to the standard lecture is not convincing. It would be better to state that the ACTIVE teaching format was regarded rather as an additional format than an alternative. Nevertheless I entirely agree that the format should be promoted and be subject to further research.

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

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