Reviewer’s report

Title: A randomised-controlled trial of two educational modes for undergraduate evidence-based medicine teaching and learning

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Reviewer: Hubertina H Wolfhagen

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Manuscript

A randomized-controlled trial of two educational modes for undergraduate evidence-based medicine teaching and learning.

The paper entitled “A randomized-controlled trial of two educational modes for undergraduate evidence-based medicine teaching and learning” reports interesting data. The articles compared the effectiveness of two teaching methods (PBL-non-PBL) in an Asian setting. The authors believe that the Asian setting is different from the Western setting and this is the explanation that different outcomes were found in comparison with other (western) studies.

In my opinion the article needs major improvement.

Major improvement

Introduction

- Add a very short description of what you mean by EBM in the context of this article. I have the feeling that you use different definitions for EBM such as educational research, integrative based learning, statistics and epidemiology as apart of the medical curriculum, two different EBM teaching methods (usual teaching versus PBL).

- In the introduction you make a link from EBM to PBL (rule 6). Make the link more clear.

- In the introduction you mention that “there is little evidence to support the generalisability of these findings across cultures”. I agree with this finding, but it is not clear if this statement is also part of your research question or whether you use this statement to express that the research you did is relevant? Make it part or link it with the research question (see last comment about research question).

- In the article two different teaching methods are compared.

You use the term “usual teaching”. Later on in your article you use the term “hybrid” teaching instead of usual teaching. Do hybrid or usual teaching belong to teacher-centered education? Better describe what you mean with this form of teaching and use one word.
PBL belongs to student-centered education. You mention already a lot of theoretical reason why PBL is student-centered. I agree with his. But, do the same for teacher-centered education. Better make clear what is actually meant here.

- The introduction should be more clear if you formulate your research question(s) very explicit in your introduction? In general, the introduction section should more clearly lead to the research questions formulated.

Methods

- Page 5. “of the 129 eligible students, 25 were individually approached and invited to participate, 15 agreed and 9 attended the first focus group session and 5 the second”. You add a (too complex) figure of how the study is designed. I suggest to leave this figure out. Describe in a few words how many students in total participate in the first group session and how many in the second group session. The non-response rate is rather high. Do you have an explanation for this? Add information about the non-respons rate.

- Page 5 “Focusgroups allowed us to explore different learning experiences of the students in the two intervention arms”. On page 8 you write: “Three focus groups (comprised of students from each intervention arm).” Is this inconsistent information?

- Page 8. You use three focusgroups to explore student opinions about their previous experience with EBM teaching as well as perceptions regarding usual teaching and PBL for EBM learning. In the article, not enough information is included about the method used/the focusgroup approach.

Who is moderator of the session? (one of the authors of this article?). An important part of focusgroups is that saturation needs to be reached. I can not find information in your article about the level of saturation and whether saturation did take place after the interviews conducted (ie new themes emerged). What is the starting point for the focusgroup? (Do you use questions, topics)? Read more about focus group methodology in : Barbour R.S. (2005). Making sense of focusgroups. Medical education, 39, 742-750

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“All references to learning were coded by two independent coders”. Describe the process of coding. Include information about the consensus between the two raters.

Results

Three main themes were identified in the focusgroup. My advice is to explain the three themes more in detail and to illustrate each theme with comments of the students. Now, there is no general conclusions (only citations of the students are given).

Discussion

In the discussion you suggest that EBM teaching within an Asian environment should adopt a hybrid format.......(pag. 11). I am wondering if you have enough
empirical evidence for this conclusion/statement because it is not really part of your research question.

Suggestion:

Title:
The added value of this article should be that the authors will link the results of this study to the Asian context. Include this idea in the title.

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.