Reviewer’s report

Title: Implementation of a large-scale simulation-based cardiovascular clinical examination course for undergraduate medical students – a pilot study

Version: 0 Date: 30 Jun 2019

Reviewer: Asha N. Shenoi

Reviewer's report:

The authors have reported the findings of a large scale simulation based cardiovascular semiology teaching programs for undergraduate medical students in an academic canter in France. Cardiovascular semiology is an important and topic and skills covered (cardiac auscultation skills, Peripheral Blood pressure measurements, and semiology of heart failure) are essential skills that every medical student should acquire regardless of the specialty they chose to pursue, so I really appreciate author's efforts in designing and conducting a study on this.

This study used a surveys to collect feedback on the student's acquisition of skills and student's and educator's perception of evaluation tools. They have reported the findings from the simulation course over 2 years and compared the results. Authors have concluded that implementation of a larger scale simulation program was feasible and students' perception of the course was favorable.

Following are my comments and recommended revisions:

1. The strength of the manuscript is that it addresses an important topic. There is dearth of studies on feasibility of implementation of large scale simulation programs.

2. This manuscript was easy to read. There are some minor spelling, spacing and grammar errors. Please correct them.

Spacing - abstract session

Line 108- delete 'were'

Line 184- insert a comma after time management and delete 'and'

3. Abstract - the conclusion part could be improved. In addition to mentioning that this large scale interventions are feasible, please consider adding a sentence describing the specific findings from the study. Under Results, line 56 is confusing. Please clarify half day sessions. Did authors mean two 75 minute sessions for each group and a total of 7 sessions to cover all the learners?
4. Line 84 and 85 needs a reference.

5. Lines 85-90 - very long sentence. Please split up and number the objectives clearly.

6. Is there a formal definition for "large scale simulation training programs?"

7. Line 85- Authors state the "the objectives of this article"

What about the specific objectives of their study? What was the primary and the only aim to assess if learners reached level 1 of Kirkpatrick's model? Please specify.

8. Line 95- Please change 1h15 to 75 minutes.

9. Line 104- what was the make of the mannequins (manufacturer details)

10. Line 113-'Authors mention 'considering communication with the patient in the scenario"

Did the learners use an actual patient? Authors describe later that they practiced the session 2 skills on each other, so please clarify this.

11. Line 1487-149 -Please explain why only one question was included in educator's survey

12. Line 166- Please change 7 half day sessions to two 75 minute sessions' to keep the script uniform throughout the manuscript

13. Line 170- Authors mention that the training was mandatory. Was the survey mandatory as well? How did they ensure high response rate (very unusual rate in voluntary surveys)? Was there multiple reminders and follow up needed to ensure response? Was the survey administered on paper or electronically?

14. Line 196- How were the short scenarios developed? Were these scenarios vetted by a team of experts?

15. Please include the manufacturer details of the new mannequin the authors used - Were functionalities much different than the first one used. This could heavily influence the results.

16. Line 239-243. How can authors account for the effect of timing of the training on the result midyear vs beginning of the year? Please include this in limitations of the study.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes
**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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