Reviewer’s report

Title: Virtual reality technology for teaching neurosurgery of skull base tumor

Version: 0 Date: 25 Jul 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?
Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?
Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: It is not clear to me who comprised the study group. Are these medical students? Or are they all of different levels of training? Presumptively some might have had endoscopic experience, or prior training in anatomy. Were these factors different between the traditional and virtual groups? It would also be interesting to know if each group was aware of the methodologies offer to the other group.

It should be more clear in the methodology (under the clinical case information) that the 10 cases of skull base tumors were reconstructed by simulation.

It seems that one primary conclusion is that the students felt that the virtual teaching was valuable. Although important, it would seem more impactful if each group of students was blinded to the other arm.
Although it appears that the teaching methods addressed knowledge of the anatomy and proximity of critical structures to one another, it is not clear whether this is learning that would extend to surgical anatomy as viewed either directly and/or endoscopically.

REQUESTED REVISIONS:
Also, the discussion digresses into issues such as autopsy (cadaver) dissection but misses some potentially relevant references.


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.

Yes

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

No

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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