Reviewer's report

Title: Clinical Psychomotor Skills among Left and Right Handed Medical Students: Are the Left-Handed Medical Students Left Out?

Version: 1 Date: 24 November 2015

Reviewer: Ryan Brydges

Reviewer's report:

Based on your assessment of the validity of the manuscript, what do you advise should be the next step?

**Reject because too small an advance to publish (note that BMC Medical Education aims to put less emphasis on interest levels, provided that the research constitutes a useful contribution to the field)

Major Compulsory Revisions

In this project, the authors tested the notion that left-handed trainees will have a more difficult time performing many clinical procedural skills as a result of the instruments having been designed for right-handed individuals. And while the authors consider the ‘safety concerns’ and ‘laterality hassles’ of this situation for left-handed trainees, they ultimately only focus on whether there are granular performance differences between left-handed and right-handed trainees. I believe this study has been done before, and thought that if the authors had instead focused on the challenges experienced by the left-handers, then this would have represented a novel contribution. In its present form, the paper uses metrics that do not necessarily align with their hypotheses and potential problems identified for left-handed performers. As a result, I feel the paper is not a sufficient contribution to the field.

Another major issue is how the results are written up. Throughout that section, the authors take many liberties in how they describe differences between the two populations, when really the data analyses show there were consistently no significant differences on most metrics. The authors have to report their data without taking such ‘editorial license’ in future reporting.

Ultimately, I found the writing was difficult to follow at times and I would suggest the authors consult with an editor who speaks English as a first language.

Minor or discretionary revisions: Please note that points to consider as minor or discretionary revisions can be found in the PDF attached below.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Needs some language corrections before being
published

**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'.