Reviewer's report

Title: Arthroscopic proficiency: methods in evaluating competency

Version: 1 Date: 3 December 2012

Reviewer: Jeff Leiter

Reviewer's report:

Although not novel, evaluating skill competency in arthroscopic surgery is a very relevant and important topic to be addressed at the current time. As work restriction hours in residency programs become the norm, less time is afforded to residents in the operating room and in clinics. The practice of skill acquisition and refinement is shifting from the operating room to surgical skills laboratories. Unfortunately, as addressed in this literature review, assessment tools in this area are lacking. Overall, the literature has been synthesized well in this review, and several of the important strengths and limitations of surgical simulation training have been addressed.

Major Compulsory Revisions

1. Since the second week of January, 2012, review articles on this topic have been published. The authors should review recent literature and incorporate previous reports into their discussion.

2. The literature review has been restricted to Medline and Embase, can the authors explain the exclusion of other relevant databases such as Cochrane Central Register of Controlled Trials, Google Scholar, etc.

3. It is not clear how the articles were included. In other words, was it an abstract review, a full text review, and if so, how many reviewers rated the trials? Please clarify.

4. Please indicate article type; case report, database, debate, etc. according to BMC Medical Education Guidelines.

5. With respect to construct validity (page 9, paragraph 3), is distinguishing between novice and expert arthroscopists adequate, or do we need to be able to distinguish between different levels of novice users so that simulation can be used to train and not just credential orthopaedic residents?

6. A paragraph should be added to define the various types of validity that are relevant to simulation training. Transfer validity is discussed at the end of this section, but it is important for the reader to understand the various aspects of validity and which types of validity are addressed by the assessment tool that is being used.

7. In Table 1, ‘simulator is not a type of validity, please be more specific (i.e. construct, face, etc.)
Discretionary Revisions

8. The literature was well-synthesized in this review, and given the knowledge that was acquired during the course of this research, I would suggest that the authors add some comments to the discussion section that are potential and specific solutions to the lack of evidence in the literature. In other words, should surgical simulation be incorporated into residency programs so that a certain level of proficiency is required before the resident moves to the operating room? Should surgical simulation be used to screen potential residents?

Minor Essential Revisions

9. Abstract
Questions/purpose: please replace ‘review’ with ‘reviewed’.

Methods

10. Insert a comma after Week 2
11. Use ‘Figure’ instead of ‘Fig.’ when making reference to a figure.
12. Remove the ‘/’ before the ‘:’ in the Ovid Medline and Embase search results section
13. Page 9, 3rd paragraph: Please revise first sentence to: “In contrast to laparoscopy, the focus of the arthroscopic literature has been………”

Level of interest: An article of importance in its field

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 have a non-financial competing interest with relation to this paper. Recently, I published a systematic review and meta-analysis on the same topic. The study was entitled "The internal validity of arthroscopic simulators and their effectiveness in arthroscopic education" and was published in Knee Surgery, Sports Traumatology and Arthroscopy. Although I am confident I provided an unbiased review, I feel it is important to disclose this information.