Reviewer's report

Title: Learning Styles of Medical Students, General Surgery Residents, and General Surgeons: Implications for Surgical Education

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Reviewer: Roger Kneebone

Reviewer's report:

This paper addresses the issue of learning styles within surgical training. The paper is based on Kolb's Learning Style Inventory and uses a survey of undergraduate medical students, surgical residents and surgical faculty as a basis for discussion. The authors' conclusion is that there are differences in predominant learning styles between medical students and surgeons, and they go on to make suggestions for surgical education.

The paper is well written and interesting. The survey is reported clearly and the authors put forward suggestions for how their paper may relate to surgical training.

1. I have some concerns. I think this paper would be much strengthened by greater criticality. The authors' starting point seems to be that Kolb's Learning Cycle can be applied to surgical learning. Yet there is considerable debate about the value of such an approach, and the weight which should be given to self-reported preferences. I suggest that the authors give a balanced appraisal of Kolb's approach, including its limitations, and an overview of alternative conceptual models that could have been drawn upon.

The authors raise the important question of whether applicants have already selected themselves based on their learning style. However, there are many other issues which could contribute to career decision and it would be helpful to have further discussion about these.

The authors make a number of statements which require further justification.

For example: 'Despite the modern challenges of surgical trainees and evolution of the demands of modern surgeons, there is very little evidence or research on how to train surgeons or even on how they learn' (p 5), citing one reference from 1999. This seems a wide claim, which overlooks a considerable body of more recent literature.

For example: '... educational techniques used in undergraduate medical education should not be arbitrarily applied to surgical training without further validation' (p 8). I'm not convinced that this is the case, and the authors supply no evidence to support this assertion.

2. There are a few minor typos (eg 'trail' for 'trial', p 9; predominate for predominant).
Overall I think this is a clearly written paper which raises important issues for surgical education, but that its starting point needs to be more clearly justified and alternative positions considered.

**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.

**Declaration of competing interests:**

I declare that I have no competing interests