International Journal of Surgery 70 (2019) 26–27

Contents lists available at ScienceDirect

International Journal of Surgery

journal homepage: www.elsevier.com/locate/ijsu

Invited Commentary

Commentary on "Correlation between students' and trainers' evaluations while learning delegated surgical procedures: A prospective cohort study"

Health delivery is now a collaborative process involving the efficient and coordinated efforts of a team of diverse health care professionals. In complex and critical settings such as operating rooms, there is need for each member of the trained multidisciplinary team to execute designated components of the task at hand flawlessly and in a timely manner. Surgical operative efficiency improves when components of the task are delegated to colleagues with different job designations including trained nursing staff and scrub nurses [1]. Their training to the pitch of the skills required by the task at hand becomes critically important.

Unlike traditional teaching, the delivery of clinical and surgical operation related education, especially in the field of imparting technical skills is a difficult and challenging task.[2] As the outcome of having well trained team members is so valuable, evaluation of the effectiveness of clinical and operative teaching should include metrics to identify its strengths and weaknesses [2], even though this may be difficult.

Simulation technology is a 'central thread' in the fabric of team task teaching [3] as in clinical fields, as it allows experiential learning with feedback and opportunities for repetition, leading to consolidation of learning and development of competence, without risk to patients. Simulation training can be conducted for small groups, de-structuring the tasks to simple steps that trainees can learn to the point of demonstrable 'automatism'.

Operative *teaching by simulation* provides opportunities for development of attitudes and behaviors in addition to the learning of knowledge and skills, when the learning environment is made conducive to social learning [2]. In-situ simulation' i.e. simulation in real clinical areas such as operating rooms have many concerns from logistics and safety point of view [3].

In the paper by Cedric et al.[4] the authors have measured the quality of training and correlated the evaluation of training by graduate scrub nursing students with that done by the trainer. The training comprised of a mixed cognitive and motor gestures learning for some delegated surgical procedures and was carried out at scrub nurse school involving a diverse group of students and teachers. The methodology included didactic sessions and simulation training incorporating focused skill sets such as endoscopic surgery assistance, hemostasis, stitches and drains as example [4]. Cedric et al.'s efforts to measure outcome of their educational intervention via reliable data is important as it evaluates the effectiveness of teaching strategy. [5] Studies have shown that reliability of such response data is higher as compared to one measured by direct observational ratings of the trainee's performances. Similarly, unguided, self-evaluation of performance does not provide sufficient information for the assessment.

It is commendable that in the study by Cedric et al. [4] the quality of training was evaluated using a 26-item validated evaluation questionnaire- Stanford Faculty Development Program (SFDP26) filled by both the students and trainers. SFDP26 is a robust performance evaluation instrument consisting of items covering 7 dimensions of teaching quality and an overall Global assessment. All of these items are measured on a five-point Likert scale. The authors achieved a very high response rate for both the students and trainers. Obtaining evaluation from 2 sources has advantage of bringing to attention differing viewpoints, enhancing the accuracy and adding to the value of feedback as it provides multiple perspectives.

In this study, the authors reported that both students' and trainers' self-evaluations had strong correlation and were not significantly different. They noted an overall teaching effectiveness rated from 'good' to 'very good' by 96% of students and 86% of trainers; and a self-confidence in 98% of students in their ability to put new skills into clinical practice. Whilst they reported significant increase in level of knowledge and skills for both students and trainers, they did not mention the scale/tool to measure this important outcome.

Acquisition of clinical and operative skills is one of the most important beneficial outcomes of simulation based teaching. As teaching the deliberate surgical procedures constitutes a component of a 'competency based training', it will be also valuable to (i) measure competency development particularly to note whether skills acquired during course work were transferred into clinical practices; and (ii) institute strategies to prevent decay of these skills with time. Whilst studies required to measure these outcomes lie in the more difficult realm of 'translational research', they are very valuable as ultimately, simulation training results in safer and improved patient care and outcomes [3]. As a further development, where students are very experienced, a focused group discussion regarding their understanding and reflection on experience would allow researchers and educationists to modify approaches and apply new training styles and methods.

References

[1] J. Cook, The delegation of surgical responsibility, J. Med. Ethics 6 (2) (1980 Jun) 68–70.
[2] E.M. Huffman, J.R. Martin, D. Stefanidis, Teaching technical surgery, Surgery (2019 Jul 8), https://doi.org/10.1016/j.surg.2019.05.026 pii: S0039-6060(19)30288-0.
[3] H.Y. So, P.P. Chen, G.K.C. Wong, T.T.N. Chan, Simulation in medical education, J. R. Coll. Phys. Edinb. 49 (1) (2019 Mar) 52–57, https://doi.org/10.4997/JRCPE.2019.

DOI of original article: https://doi.org/10.1016/j.ijsu.2019.07.009

https://doi.org/10.1016/j.ijsu.2019.08.012

Available online 10 August 2019

112.
[4] M. Cédric, M. Sophie, B. Malik, W. Arnaud, Correlation between students' and trainers' evaluations while learning delegated surgical procedures: a prospective cohort study, pii: S1743-9191(19)30161-X, Int. J. Surg. (2019 Jul 15), https://doi.org/10.1016/j.ijsu.2019.07.009 ([Epub ahead of print]).
[5] C.R. Fluit, S. Bolhuis, R. Grol, R. Laan, M. Wensing, Assessing the quality of clinical teachers: a systematic review of content and quality of questionnaires for assessing clinical teachers, J. Gen. Intern. Med. 25 (12) (2010 Dec) 1337–1345, https://doi.org/10.1007/s11606-010-1458-y.

Syed Muhammad Nazim, Jamsheer Jehangir Talati*
Department of Surgery, The Aga Khan University Hospital, Karachi, Pakistan
E-mail address: jamsheer.talati@aku.edu (J.J. Talati).

* Corresponding author. Department of Surgery, Aga Khan University, Stadium Road, Karachi.