Archives of Surgical Research | Invited Commentary

Surgical Training in Pakistan: Challenges & Directions

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IMPORTANCE With arrival of the age of technology, surgical training in Pakistan should not fall behind, it must co-opt numerous technological measures into its century's old techniques. In a field that allows no room for mistakes, e-learning, simulation training, and virtual reality are gifts from beyond for students to make mistakes to learn from. These technological ventures have proven to be beneficial in postgraduate training and we must try our best to allocate funds to make it possible for the students of Pakistan as well.

KEYWORDS Mentorship, surgery, teaching and learning, role modeling

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Invited Commentary

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Surgery by nature requires infallibility, there is no room for mistakes. Thus, as an extension of its nature, it attracts the most ambitious and hardy personalities, making it the most competitive field in medicine. It is also a field which is expectedly quick and regular in its evolution.

A mistake in surgery is a very probable permanent alteration to a patient's life, and hence, the training provided to a surgeon is of utmost importance and should be held to the highest standards. Surgical training began with apprenticeships in the 16th century, which usually began around teenage and lasted a rough 6-7 years. Structured programs for surgical training began in present-day Germany in the 1880s, which was imported to the USA by a William S. Halsted within a decade[1].

Dr. Halsted, being impressed upon by the formal training regimens of German surgeons, produced the Halstedian model of surgical training; which emphasized on the need for mentorship, patient communication and a training which gradually became more complex, with increased responsibility and independence. The Halstedian model soon became the foundation for surgical learning in the 20th century[1].

This model and new found direction in the field of surgery attracted numerous great surgeons. The 21st century has seen an even greater expanse in surgical professionals, with more and more female medical students also opting for the specialty[2].

Medical students in Pakistan go through a rigorous program of 5 years in medical college, followed by a year of house job. Students then have to clear the FCPS (Fellowship of the College of Physicians and Surgeons) exam in order to pursue their field of specialization. The training narrows down from a general, broad based study to a choosing of a subspecialty.

This rigorous training is conducted in order to give students a broad view of the options available to them in addition to sifting out the most hard-working and passionate. Students then enter their postgraduate training which, in surgery, comprises of supervised apprenticeship. According to a special report compiled by Prof. John SG Biggs, postgraduate trainees face a special set of difficulties, ranging from inadequate supervision to a lack of prospective careers[3].

The future of the wellbeing of the country rests in surgical training. To test the quality of such a program, there are various established instruments;

- the OPRS[4], (Operative Performance Rating System), consists of 10-item procedure-specific rating instruments, including technical skills rating, operative decision making, and general items (each scaled from 1 to 5)
- the O-SCORE[5], (Ottawa Surgical Competency Operating Room Evaluation) consists of 11 items (8 items rated on the five-point competency scale, 1 yes/no question about competency to perform the procedure independently, and 2 open-ended questions for feedback) and the attending who evaluates the resident after finishing the surgical procedure
- the "Zwisch" scale[6], a scale that was originally designed by Dr. Joseph Zwischenberger, which analyzes the attendings 'and residents 'behavior during the operation. It consists of four levels of supervision: show and tell, smart help, dumb help, and no help.

In the setting of Pakistan, all 3 aforementioned scales can be used. We must use the assistance of such scales to gauge the quality of teaching we provide, in addition to postoperative feedback, involving discussions and surveys.

Moving on to the time required to become a surgeon; in the UK, a 5-6-year medical school course is followed by 2 years of foundation training after which a doctor may opt to specialize in surgery, upon which they will be admitted to 2 years of core surgical training followed by approximately 6 years of specialty training. In the USA, a student must first obtain a BSc, then graduate from medical school within the next 4 years, after which they can enter their surgery training which taken around 3-7 years, depending on the specialty. In Pakistan, however, students complete their 5 years of MBBS, 1 year of house-job, and then can enter surgical training, which lasts 5-7 years, after passing their FCPS with satisfactory marks.

Pakistan has one of the shortest time-routes to becoming a surgeon; in recent studies conducted to analyze the shortcomings of postgraduate training programs of surgeons, advisors in the UK did not recommend shortening the length of postgraduate training[7]. In another study carried out in the USA[8], 71% of respondents believed broad training was superior to a short tracking system. This study also determined that role models and mentors played the biggest part in attracting medical students to the surgical specialty.

With the arrival of the age of technology, surgical training in Pakistan should not fall behind, it must co-opt numerous technological measures into its century's old techniques. In a field that allows no room for mistakes, e-learning, simulation training, and virtual reality are gifts from beyond for students to make mistakes to learn from. These technological ventures have proven to be beneficial in postgraduate training[9] and we must try our best to allocate funds to make it possible for the students of Pakistan as well.

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