

Virtual reality — A means to train surgeons of tomorrow amidst Covid-19Muhammad Umar Nasir,¹ Zuha Majid,² Zara Shahzad³

Madam, it is to be noted that surgical training has been adversely affected around the globe, as well as in Pakistan, due to the training hospitals prioritizing the treatment of COVID-19 patients. Over 80% of the residents reported that their hands-on and clinical training has been adversely impacted and more than half feared either acquiring or transmitting the virus, further affecting their mental state.¹

To maintain the integrity of surgical training many alternatives have been introduced worldwide including but not limited to virtual classrooms, telehealth clinics, and surgical videos.² eLearning and writing scenario-based questions can also be useful tools, but what interested us the most was the use of surgical skills simulation training³ i.e., using virtual reality to train residents. While not a complete substitute for active training, it can be used to bridge the gap between theory and practice as it provides significant realism to surgical scenarios.

A systematic review conducted by Zubair and Zubair (2020) compared the benefits of simulation-based training with the traditional apprenticeship model and found statistically significant results in favour of simulation-based training.⁴ Simulation-based training gives control over the complexity of the procedure, the option to isolate certain components of the procedure for case simplification, and the possibility of correcting and learning from the mistakes made during the procedure.⁵ Since the COVID-19 pandemic shows no signs of slowing down, there is a dire need for an alternative simulation-based training method to be employed in Pakistani surgical training programmes so that surgical residents may use their time optimally. Simulators are not only cost

effective in the long run but there is also an absence of ethical dilemmas as encountered with the usage of animal and cadaver models.⁵ However, challenges like limitations in technology, lack of medical professionals' familiarity with technology, and lack of expertise and expense of designing and maintaining such technology might be faced in implementing such programmes in Pakistan. Following international standards, validation of any such tool requires rigorous research and expert assessment.⁶ The need of the hour is to employ simulation-based training tools like Virtual Reality to train surgical residents in Pakistan — a nation that is not only facing the limitations brought on by the raging pandemic but is also failing to catch up with the rapidly advancing technology in other training programmes around the globe.

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