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Simulation Based Inter-Professional Education – Integrating Theory, Practice and Healthcare Professionals

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Simulation based learning refers to the representation of an artificial environment similar to a real one to students for achieving learning objectives through experiential learning instead of apprenticeship. The use of simulation for professional training has a well-established history in many professions including military, aviation and health professional education.[1,2] Healthcare workers can learn in a safe environment without fear of harming patients. In Pakistan, approximately 500,000 people, including women and children die annually due to medical errors according to local newspaper report. According to a research study done in Pakistan the medical errors rate reported was 5.5% out of which medication errors were 2.6%, one study reported medical errors rate of 39.28% in tertiary care hospital annually. There is limited research on exact incidence of medical errors in Pakistan, but medical errors are one of leading cause of death in tertiary care hospitals of Pakistan. Common root cause of medical errors are communication gap, inadequate information flow, lack of coordination between healthcare workers, inappropriate patient identification, insufficient patient education, inadequate staff and technical failure.[3,4] Most of root causes of medical errors can be controlled by implementation of simulation based interprofessional education in undergraduate and post graduate health professional education. Simulation-based interprofessional medical education is future of health professional education and will help overcome challenges of patient safety and improve patient outcome.[5]A major concern regarding implementation of simulation-based interprofessional education is limited resources and deficiency of research in Pakistan on simulations. But medical errors adds a huge amount of cost to healthcare which should instead be utilized in training healthcare professional through simulation based learning, to decrease frequency of medical errors. Initiative should be taken to develop and introduce curriculum of simulation based interprofessional education in health professional education to achieve educational outcome which will improve patient outcome. There is also need to collect data and analyze patient reported outcome and patient experience outcome in tertiary care setting by simple questionnaire or electronic software. To implement simulations, the cost is usually main factor under consideration. However, cost of simulator vary according to degree of fidelity and, if used properly can be cost-effective. So attitude towards simulation need to be changed in order to implement it.[6] To design cost effective low and medium fidelity simulators content experts and simulation analyst should work in collaboration. Simulation technology should be developed by consulting all stakeholders especially end users. There are three main concepts which should be taken under consideration during designing simulation: system design process, conceptual framework or philosophy, and specification of the simulator. Simulations are usually based on clinical or hospital environment but majority of population of Pakistan lives in rural settings. To educate students for community setting, a community simulated environment can be created with village model containing houses and other living spaces.[7] Majority of studies demonstrated effectiveness of simulation to improve procedural skills, communication skills and teamwork. However, simulation-based interprofessional education is step ahead, incorporating these features with understanding other professional's role and responsibilities as well as creating ethical values. Failure to perform desired task in clinical practice leads to feeling of discontent in the students; disapproved by the, supervisor in front of patients and colleagues. There is great possibility to encounter difficulty, lack of confidence with same task if performed later on. Educators also face challenges with patients getting aware of students working as a trainee in settings.

Dental simulations are very important as dental procedures incorporate mainly motor skills. However dental simulations are task specific. In dentistry computer aided and augmented reality simulation are being widely used now a days.[8,9] Virtual clinical simulation in nursing education provides immersive self-regulated training to nursing students, reproducing real-life experiences and feedback, in a virtual environment that is safe, interactive, active and pleasant.[10] These learning activities should be integrated with medical students to enhance learning and create high- fidelity simulation activity, usually it is advisable to integrate first year nursing students with third year medical student.

It is important to conduct research on medical errors,

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interprofessional education and simulation to create awareness among health care professional on its importance. Simulation-based interprofessional education provides an environment to learn from experiences of facilitators and students during simulation-based learning and improve patient outcome and healthcare practices. Healthcare simulation community also needs mutual research project and integrated simulation designs to enhance simulation development.

Authors Contribution:
Khadija Farrukh: Design, writeup

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