10G  Short Communication:
Simulation 2
Location: MR 113 – Pi

#10Gi (134161)
Occupational Therapy Students’ Experiences of Simulation

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Background: The evidence for the use of simulation as a learning and teaching tool is dominated by medicine and nursing with less published in relation to allied health professions (AHPs). It is recognised that caution is needed when attempting to generalise research findings between disciplines and varying types of activities. There is therefore a need to understand the use and potential benefits of simulation for AHPs.

Summary of Work: The aim of this qualitative study was to use focus groups (n=3) to explore student experiences of participating in simulation as part of an undergraduate Occupational Therapy (OT) programme. Participants were 13 final year OT students who had been involved in one or more simulated learning activities with standardised patients. The focus groups were audio recorded and transcribed; data were analysed using interpretive description.

Summary of Results: Students described simulation as a bridge between university and practice and strongly endorsed learning via simulation. They described heightened emotional states some days before as well as immediately after participation. A strategic approach to managing preparation for, and conduct of, the exercise was evident.

Discussion: To manage anxiety prior to the simulation some students described using superficial and strategic approaches to minimise error. This presents a challenge for facilitators of simulation as the method aims to promote a deeper, experiential approach to learning where learners should feel safe to learn from mistakes or challenges. The findings highlight the importance of pre-briefing as well as debriefing in the construction of a ‘safe’ space for the activity.

Conclusion: Emotional responses to simulation influence the learning experience of undergraduate OTs.

Take Home Messages: This study adds to the literature on simulation in clinical education by adding the perceptions of OT students and, in particular, by emphasising the need to consider students’ emotional responses to simulation and the impact this has on approaches to learning.

#10G2 (135694)
TverrSim; Medical simulation as an interdisciplinary change space for medical and healthcare students - initiating community of practice

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Background: There is an increasing understanding of the need for interprofessional training in health education. From a pedagogical perspective, Medical Simulation provides an arena for the development of a professional identity and an opportunity for the learners to be initiated to a community of practice; to develop shared skills, knowledge and values. It addresses the highly complex theory-practice relationship and also provides a space for individual experience, critical reflection and awareness of context. Employing the threshold concept framework as a lens for observation is increasingly seen to offer new perspectives but is yet rarely discussed in medical and healthcare education.

Summary of Work: We report a three-day pilot and a full scale project conducted from September 2015 to March 2016 involving 130 final year medical-, nursing- and radiography students. Interprofessional groups of 5-8 students were introduced to 4 scenarios; two basic and two advanced. Learning objectives; shared situation awareness, professional roles, team functioning and interprofessional communication. Scenarios and debriefing sessions were videotaped and analyzed.

Summary of Results: Preliminary video analysis outline the potential changes among students; the novice – expert dynamic, the individual – collaborative dynamic, the uncertainty – confidence to challenge dynamic, the mono – interdisciplinary dynamic, and the socialization of identity dynamic.

Discussion: This presentation reflects on student experiences where the medical simulation environment is their change space.

Conclusion: To the students, the simulation laboratory represents a temporary and many-faceted liminal space interfacing the educational system and the real world.

Take Home Messages: Interprofessional medical simulation training seems to represent a change space initiating students’ to a community of practice, contributing to the development of students’ professional identity.
Simulation based medical education: Teaching normal delivery on medium fidelity simulator!

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Background: Simulation is a virtual reality. Trial and error on human patients is morally and ethically unacceptable. Learning delivery is stressful in labor room and conflicts with maternal/neonatal safety. Simulation offers a suitable alternative. Pakistan has high maternal mortality during delivery. Therefore it is imperative that medical students learn the art and science of normal delivery to prevent mortality.

Summary of Work: To assess the effectiveness of Simulator in teaching normal labour/delivery. A Quasi Experimental, quantitative study in which two groups of third year medical students were compared on their knowledge (pre/post test), skills (OSCE) and perceptions with regards to the traditional (PowerPoint) and new teaching method (Simulator).

Summary of Results: 76 third year students participated, 36 in control and 41 in intervention group. The data was entered and analyzed on SPSS. The Pretest and posttest scores were comparable and p value was not statistically significant. This also persisted for perception scores as both groups rated the workshops highly. However, checklist/OSCE scores were statistically significant with p-value of less than 0.01.

Discussion: Medical literature highlights the importance of simulation in high risk situation but little is documented on normal procedures like deliveries. Normal procedures like delivery can become high risk, as two lives are at stake that of mother and neonate. Maternal morbidity and mortalities are unpredictable and do occur in low risk women. Maternal mortality is very high during labour and delivery

Conclusion: This study demonstrated that simulation based medical education is better learning modality for skills like labour and delivery.

Take Home Messages: Low cost Simulator based labour delivery teaching/learning methodology should be incorporated in undergraduate curriculum.

A Qualitative Enquiry into Medical Students’ Attitudes Towards Simulation Training

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Background: Feedback from undergraduate medical students has highlighted how apprehensive they are prior to simulation training. But they also claim it to be enjoyable, interesting and often would prefer greater amounts of simulation based work in the curriculum. In order to better understand attitudes relating to simulation, in depth student views were sought.

Summary of Work: Six focus groups were conducted with 3rd year students’ before and after simulation training in the care of the acutely ill patient. Following transcription, two researchers independently undertook an iterative analysis of the data. An open coding methodology was employed to identify emergent themes and sub-themes, followed by comparison and consensus.

Summary of Results: Two overriding themes emerged; 1- The stated theme of apprehension Students were concerned about ‘embarrassing’ themselves in front of peers. 2- The latent theme of professionalism sub themes - Integrity - Personal Reflection – Altruism. The students were expecting it to be a ‘scary’ and ‘embarrassing’ experience but in spite of that they were keen to participate, as they perceived the simulation training would bring potential benefit to them and their future patients. ‘it’s going to be scary and stuff but… to just think that we’re learning from it’

Discussion: The professionalism and dedication shown by the students was very encouraging. Their commitment to the learning experience and willingness to put their anxiety aside, for what they perceived the simulation training would bring potential benefit to them and their future patients.

Conclusion: Medical students in our study act as dedicated professionals when faced with a simulation programme. We must make efforts to ensure we can build curricula that tap into the desire of students to become ‘good doctors’.

Take Home Messages: Professionalism amongst students allows them to engage with and learn from simulation overcoming their initial apprehension.
Pilot testing a national multidisciplinary operating room simulation intervention to improve patient outcomes

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Background: The complex environment of the operating room (OR) requires excellent teamwork and communication, but opportunities to develop resilient teams may be limited by the way work is organized, individualistic clinician attitudes and entrenched hierarchies. The Multidisciplinary Operating Room Simulation intervention (MORSim) integrates surgical and anaesthesia simulators in realistic clinical cases to improve teamwork.

Summary of Work: We ran MORSim with 20 full OR teams from two major teaching hospitals. We undertook semi-structured interviews with a random sample of participants three months later, to explore their experiences when attempting to introduce changes in attitudes and behaviours learnt from MORSim in clinical practice, and their recommendations for a successful national implementation strategy. Interviews continued to the point of data saturation. Transcribed interviews were analysed using a general inductive approach.

Summary of Results: We conducted 48 interviews (11 anaesthetists, 7 surgeons, 20 nurses, 10 OR technicians). Interviewees reported positive experiences of change in communication, culture and collaboration. They described sharing MORSim concepts with colleagues and using them in the WHO Surgical Safety Checklist administration, teaching and new staff orientation. Reported barriers included lack of awareness of the importance of good teamwork in patient safety, professional hierarchies, insufficient numbers of staff exposed to MORSim and failure at an individual and organisational level to prioritise time for sharing information between team members.

Discussion: MORSim had lasting effects on attitudes and behaviours in clinical practice. Factors for successful implementation will include linking the intervention with existing initiatives such as the Surgical Safety Checklist and exposing sufficient staff numbers.

Conclusion: MORSim will be the first program its kind to be introduced at a national level. The potential impact on patient outcomes is considerable.

Take Home Messages: A change in attitude is needed in healthcare to acknowledge the critical importance of teamwork in patient safety. Interventions such as MORSim may facilitate this change.

Expecting the Unexpected: to what extent does simulation help healthcare professionals prepare for rare, critical events in childbirth?

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Background: Pregnancy and childbirth presents both rare and critical events (RCE) for which healthcare professionals are required to acquire and maintain competent clinical skills. Simulation is an accepted approach to facilitate habitual development of such skills; in theory, a skill simulated will transfer into practice competently and confidently; its strength appears to lie in its validity with clinical context. However, evidence shows that some professionals have difficulty responding appropriately to unexpected critical events.

Summary of Work: Questions: 1. How do healthcare practitioners develop skills in order to prepare for and respond to (RCE) during childbirth? 2. What are healthcare practitioners’ experiences of simulated practice? An explanatory sequential mixed methods approach, examined preparation for rare/critical events. A quantitative systematic review was combined using framework analysis of curricula documentation. A conceptual framework of simulation was explored in phase two with qualitative interviews; analysis adopted attribution theory.

Summary of Results: Fidelity was important when feedback was received during cardiac arrest scenarios. With obstetric focus fidelity was less important. Realism of scenarios affected engagement; not associated with ‘real life’ and related to play this negatively influenced the value placed on simulation. Practising safely; useful due to limited clinical exposure, paradoxically, confidence was linked to clinical exposure and not simulation. Confidence increased initially following training, decayed over time, although the timeframe for diminution was unclear. Overwhelmingly, simulation was perceived as anxiety provoking.

Discussion: Simulation is positioned in the ability to ’practise’ within ‘safe’ parameters and there is contradiction between this theory and observed reality. There were many perspectives on simulation and preparedness, yet evidence relating to what works, for whom and in what circumstances remains unclear. Data highlights a lexical ambiguity between the theoretical principles of simulation and the practical application.

Conclusion: There is an evolving conceptualisation of ‘preparedness’ which merges simulation (incorporating multiple-learning strategies) with deliberate practice.

Take Home Messages: The focus should now be on simulation choreography to reduce anxiety and varied approaches to training dependent on differing roles.
#10G7 (133271)
Using interprofessional simulation to understand how clinical judgment, leadership and collaboration develop in new nurse graduates working in critical care

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Background: Recently, critical care units hire newly graduated nurses (NGN). Integrating with the critical care team is a challenge for NGN. Clinical simulations contribute to improved clinical team efficacy for patient safety and quality of care. Simulation also allows for observations about how NGN practice interprofessional collaboration (IC), nursing clinical judgment (NCJ) and leadership (NCL).

Summary of Work: A research pilot project was conducted to create, with the use of clinical simulation, an assessment tool that describes NGN’s competency development during the first year of practice in emergency (ED) and intensive care units (ICU). Ten simulation scenarios were elaborated with an interdisciplinary critical care team. NGN (N=20) in their first year of practice in ED or ICU participated within these intra and interprofessional clinical simulations.

Summary of Results: The competencies’ assessment tool describes the development of IC, NCJ and NCL during the first year of nursing practice in critical care. Three developmental stages were identified. The NGN reach their first level of development after 2 to 3 months of clinical practice in critical care, the second level after 6 months and the third level after one year.

Discussion: The assessment tool clarifies NGN expectations in critical care. In an environment where continuous professional development is crucial to quality care, the tool can be used for auto-evaluation and feedback by the unit’s team. The tool can also be used by critical care nursing educators to plan and realize activities to respond to education and support needs of the NGN.

Conclusion: This instrument can be useful to understand and guide NGN’s competencies development when starting to practice in critical care. Using this instrument to ensure follow-up contributes to their integration in care teams and restrict turnover.

Take Home Messages: Critical care interprofessional clinical simulation is a teaching and learning activity that facilitates the integration of NGN in critical care environments.