2023 International Conference in HEALTHCARE SIMULATION

COLLABORATE SHARE LEARN

Summit Hotel, USJ

Book your hotel room here:
https://tinyurl.com/MPC2023HotelBooking

Professor
Paul Phrampus

Professor
Michelle Kelly

Professor
Dinker Pai

Professor
Ismail Saiboon

17 - 19 March 2023

TOPIC HIGHLIGHTS

Curriculum development
Assessment in simulation
Debriefing
In-situ simulation
Simulation in nursing
Virtual reality simulaation

& many more

CONFERENCE FEE

	Early bird (Before 28.02.23)	Standard
MaSSH members	RM 400	RM 450
Non MaSSH members	RM 450	RM 500
International (Non Malaysian residents)	USD 150	USD 160

REGISTER NOW

https://portal.massh.org.my/index.php

Organized by: MaSSH MALAYSIAN SOCIETY FOR SIMULATION IN HEALTHCARE & PASSH PAN ASIA SIMULATION SOCIETY IN HEALTHCARE

2023 International Conference in Healthcare Simulation

'Collaborate, Share & Learn'

17th-19th March 2023

Organised by:

Malaysian Society for Simulation in Healthcare
&
Pan Asian Simulation Society in Healthcare

Effectiveness of Blended Teaching with Immersive Virtual Reality Simulation (BIViRS) in Teaching Disaster Response Medicine Among Emergency Medical Officers

ISMAIL M. SAIBOON, BALARAJAN NAGARAJA, HISHAM M. ISA, MOHD JOHAR JAAFAR

Department of Emergency Medicine, Faculty of Medicine, University Kebangsaan Malaysia, Cheras, Malaysia.

**Correspondence: Dr Ismail Mohd Saiboon, ismailms@ukm.edu.my*

ABSTRACT

Introduction: Disaster response medicine (DRM) is conventionally thought via lectures, table-top exercises and role play field simulation. We set out to evaluate the effectiveness of a novel teaching approach that incorporates blended teaching with immersive virtual reality simulation (BIViRS) in teaching DRM.

Methods: A prospective cross-sectional pre- and post-intervention study were carried out among emergency department medical officers (MOs) to determine their knowledge, decision-making competency and confidence level using the BIViRS module. The module was divided into three components which include a self-directed learning package (SDLP), asynchronous discussion and immersive virtual reality session (IVRS). Knowledge and decision-making competency were evaluated using a validated single-best answer multiple-choice-questions consisting of clinical scenarios while a four-point Likert scale was used to assess confidence level.

Results: Seventy MOs participated in this study out of the 75 who were eligible. The overall pre-and post-mean score for knowledge were 55.19±13.48 and 72.04±7.34 ($p<0.001$), respectively. The simple decision-making competency in triaging demonstrated significant improvement as compared to complex decision-making competency such as treatment and transport.Confidence level also showed an increase in the median score from 2-(slightly confident) to 3-(confident) with $p<0.001$ (for all 10-items). All participants liked the BIViRS module, with the IVRS component emerging as the most liked.

Conclusion: The BIViRS module is a promising novel alternative to teaching DRM. It is effective in improving knowledge in disaster response as well as triage and decision making. This study has proved the method to be well accepted and is an

effective tool in improving knowledge in disaster response as well as triage decision making. Perhaps the BIViRS module can offer an alternative method to teach DRM during the current COVID-19 pandemic.

Keywords: Blended teaching; disaster medicine; education; simulation; virtual reality

Med & Health Jul 2023; 18(3) (Suppl): 01-12 https://doi.org/10.17576/MH.2023.s1803

Adopting Virtual Role Play in Family Medicine Training during COVID-19 Pandemic

DR KYE MON MIN SWE

Clinical Assisstant Professor, Department of Medicine, M. Kandiah Faculty of Medicine and Health Science, University Tunku Abdul Rahman (UTAR), Malaysia

ABSTRACT

Introduction: As online learning escalates during the COVID-19 pandemic, it is important for educators to explore teaching techniques that engaged students and enhanced learning at a profound level. Role-play is a widely used educational method for learning about communication in medical education and online role-playing permits successful and highly enjoyable learning experiences for medical students.

Case Description: Role-play is used as simulation training to acquire knowledge, attitudes, and skills in communication in a range of disciplines. The online role-play session has been adopted in family medicine communication skill training of year 4 medical students during the COVID-19 pandemic. The online role-playing process involves three steps: preparation, role-playing, and analysis. Preparation is a crucial step and analysis with reflection and feedback is the most beneficial for students.

Discussion: Through online role-play sessions, students acquired knowledge and attitude, by observing, understanding, assimilating information, and experiencing emotions, and obtained skills via performing and reflecting, and getting feedback. The educational theories such as Kolb experiential learning, adult learning theory, reflective practice, and feedback are relevant in role-play. Role-playing involves high-level Bloom Taxonomy, which requires students to analyze, synthesize, and reflect on the significant facts in the case.

Conclusion: Online role-playing provides the students to acquire knowledge, attitude, and skills in communication as well as engages students intimately in the learning process. The students have found online role-playing not only educational but also enjoyable.

Keywords: Family medicine; medical students; virtual role play

Development of a Training Obstetric Communication Skills (TOCS) Checklist for Clinical Postgraduate Assessment

NUR LIYANA MOHD ARSHAD[1], CHEW KAH TEIK[1], ZALEHA ABDULLAH MAHDY[1], ANI AMELIA ZAINUDDIN[1], ISMAIL MOHD SAIBOON[2], NIRMALA KAMPAN[1], MOHD FAIZAL AHMAD[1], ESTHER LOH SWEET YI[1]

[1]Department of Obstetrics and Gynaecology, [2]Department of Emergency Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Yaacob Latiff, Bandar Tun Razak, 56000 Cheras, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: An obstetric communication skills checklist for an adverse event counseling can be developed with good internal consistency reliability using a modified Delphi technique. The development of such a checklist along with local sociocultural communication style is crucial for the patient's emotional comfort, and for mitigation of risk of litigation against the physician. Sociocultural peculiarities within our community imply that it may be unwise to adopt a foreign counseling checklist wholesale. This activity was also part of the output of a scholarship of teaching and learning (SOTL) workshop.

Methods: In this study, an assessment checklist was developed using a modified Delphi technique. To test internal consistency reliability, the checklist was distributed to a group of 40 independent assessors who used it to assess a clinical postgraduate trainee performing an adverse event counseling in a videotaped patient-physician counseling session with a standardized patient. The adverse event was a failed vacuum extraction, resulting in hypoxic-ischemic encephalopathy in the newborn.

Results: A total of four rounds of Delphi were required to achieve saturation point to produce 20 items in the communication skills checklist. Assessment of the videotaped counseling session by 40 independent assessors using the checklist yielded a Cronbach's alpha value of 0.94, indicating very good internal consistency reliability.

Conclusion: The modified Delphi method is a convenient and reliable method to develop a communication skills checklist. Based on the excellent internal consistency reliability, the TOCS checklist that has thus been developed can be used in both formative and summative assessment of communication skills among our obstetric trainees.

Keyword: Obstetrics & Gynecology (OBGYN); residency training; standardized/ simulated patient,

Potential User Acceptance of Virtual Reality in Healthcare Training and Practice in a Developing Country: A Cross-Sectional Survey

Abdul Jabar NAZIMI[1], Muhammad ZAIM SAHUL HAMEED[2], Mohd Nazir SHARIF[3], Mohd Hisham ISA[4], Ixora Kamisan ATAN[5], Rosnah SUTAN[6], Ismail Mohd SAIBOON[4], Zaleha Abdullah MAHDY[5]

[1]Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Universiti Kebangsaan Malaysia
[2]Deptartment of Public Health, Faculty of Medicine, Bioscience and Nursing, MAHSA University
[3]Institute of IR4.0, Universiti Kebangsaan Malaysia
[4]Department of Emergency Medicine, [5]Department of Obstetrics & Gynaecology and [6]Department of Community Health, Faculty of Medicine, Universiti Kebangsaan Malaysia

ABSTRACT

Introduction: There is scarce information investigating healthcare workers' awareness and perception for the use of virtual reality (VR) in healthcare training and practice although the enthusiasm has escalated.

Aim: The aim of the study is to investigate the level of user acceptance of the use of VR in healthcare training and practice.

Methodology: A cross-sectional survey was conducted among healthcare workers to assess their perception and opinion on the feasibility of VR usage in healthcare training and practice.

Results: A total of 207 healthcare workers responded to the survey. Despite lack of exposure, the majority were keen to use VR. Medical education was considered the area that should receive the highest investment for VR development. The main obstacles to VR use were a perception of high cost, lack of technical support, and lack of VR developers.

Discussion: Enthusiasm towards VR use in healthcare was found to be pervasive irrespective of age, gender, and years of experience. Apprehension in engaging senior respondents was also found. High expectation of VR performance and technical complexity may deter students from using VR. The leading obstacle was the perceived cost of development of VR modules, and lack of source of VR applications and local VR expertise.

Conclusion: The advent of VR technology was well accepted by respondents. VR was believed to be highly relevant in healthcare, particularly teaching and learning. There was presence of concerns especially regarding cost and technical support.

Keywords: Healthcare training; user acceptance; virtual reality

Simulation Education: Challenges and Suggested Practices as Nursing Faculty Members' Experience in the Malaysian Nursing Curriculum

NORFADZILAH A[1], TRAYNOR M[2], HAUGHEY S[3], JOHNSTON L[4]

[1]Kulliyyah of Nursing, International Islamic University Malaysia, Malaysia
[2]School of Nursing and Midwifery, Queen's University Belfast, United Kingdom
[3]School of Pharmacy, Queen's University Belfast, United Kingdom
[4]Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Canada

ABSTRACT

Introduction: The benefits of utilizing simulation in nursing education to mimic clinical environments are well known. Simulation education has been readily embraced and is increasingly expanding as an innovative approach to the teaching and learning process involved in preparing nursing students for clinical placement. To date, little of the research specifically addresses, in the Malaysian context, the experiences of nursing faculty members (NFMs) in terms of their preparation for the use of this approach.

Objective: The aim was to explore NFMs' experiences of simulation education implemented in the curriculum.

Methodology: This study adopted a qualitative design. Focus group discussions were conducted with 23 NFMs in Malaysia and recruited using purposeful sampling. The participants took part in focus group discussions and audio-recorded interviews. The data were analysed using the NVIVO software and the thematic analysis approach. The data analysis indicated they valued its positive impact on learning outcomes, the student experience and the ability to simulate more complex scenarios during training.

Results: Inadequate training, lack of resources and lack of prior planning, negatively influenced the intention to use and effectively implement simulation in the curriculum.

Discussion & Conclusion: The study indicated that NFMs perceived simulation education as a learning pedagogy that can improve students' learning if used effectively. They believed that to realise the potential of simulation, more support should be provided through training, the availability of necessary resources, and improved planning and organisation.

Keywords: Nursing Faculty; simulation; simulation experience

Technology-driven in Simulation as Teaching Strategy Improves Students Skills, Knowledge and Confidence Level in Intervarsity Competition

ROSDARA MASAYUNI MOHD SANI[1], FOO CHUAN YI[2],

[1]Monash University Malaysia, Clinical School Johor Bahru, No.8, Masjid Sultan Abu Bakar, 80100 Johor Bahru, Johor, Malaysia
[2]University Malaya Medical Centre, Jln Profesor Diraja Ungku Aziz, Lembah Pantai, 59100 Kuala Lumpur, Selangor

Introduction: Participation in a technology–driven simulation in intervarsity competition for undergraduate medical students has much to offer in medical education training. In addition, technology used in clinical simulation scenarios will placed student in learning environment that are much similar to the realistic clinical environment

Objective: The objective of this study is to investigate the role of technology–driven simulation as a teaching strategy, shaping and developing the skills, knowledge and confidence level of undergraduate medical students.

Method: This is a retrospective study that recruited 17 final year medical students. They participated in intervarsity competitions, where prior to competition, students were trained using technology-driven simulation environment. Scoring of marks in the competition involves assessment of students' knowledge, clinical judgement, management and confidence level and team dynamic. Example of simulations used include hybrid-technology simulation model, high and low fidelity simulation tool and other simulation software. Data were collected through questionnaires using the Likert's scale.

Results: Total of 17 final year students participated in this study. A high percentage of strongly agree (53%) and agree (41%) on the improvement of knowledge, skills and confidence level after the competition.

Discussion: Technology-driven simulation as a teaching strategy for undergraduate medical student in intervarsity competition is very useful, as this provide better insight into students' work and performance in building their experiential learning and improve knowledge, skills and confidence level of students.

Keywords: Hybrid simulations; simulation fidelity; technology-driven simulation

Psychomotor Skills Training using Focus Skills Station accompanied by Directly Observed Procedural Skills Assement in Undergraduate Medical Students in Universiti Teknologi MARA

NABILLA HUSNA MAD HASHIM, NUR AMALIA ALANI CHE BAHARUM, MOHAMAD ASYRAF NOR JOHARI, MOHD FAZRUL MOKHTAR, NUR ASYHRAFF MOHD NOOR, NURUL ALIMAH ABDUL NASIR, ANIS SIHAM ZAINAL ABIDIN

Department of Medical Education, Faculty of Medicine, Universiti Teknologi MARA (UiTM), Sg Buloh, Jalan Hospital, 47000 Selangor

ABSTRACT

Introduction: Psychomotor skills training focuses on the physical movement and coordination that will improve through repeated practice and exercise . The goal of psychomotor skills training is to develop muscle memory and improve overall performance through repetition hence reducing the risk of error in tasks that require precise movements. As psychomotor skills is crucial in skill based programme, including medical undergraduate programe, Focused Skills Station (FSS) was incorporated into Clinical Simulation Centre (CSC) as part of undergraduate curriculum in Faculty of Medicine UiTM.

Case Description: Clinical Year students can book a slot in the CSC website and practice any of the 33 must-know procedures of a house officer at their own leisure. Upon completing their practices, students will be assessed using Directly Observed Procedure Skills (DOPS) checklist. DOPS is a type of workplace-based assessment (WPBA), which assess the highest level of Miller 'competency' pyramid (Does). Students will perform procedure on their peers or on low fidelity manikin that simulates real perform patient and clinical settings and will be directly observed by the trainer. The trainer then immediately rates the student's performance and simultaneously gives constructive feedback to the student.

Discussion & Conclusion: As of its introduction in 2021, there had been 18157 practices had been done by the clinical year students involving 33 focused skill stations. From those practices, 2834 formative assessments were done. Feedback from the students showed that they are satisfied with the practices and skills developed. They claimed that the practices on the FSS improves their confidence in doing the procedure, and the instructional videos provided facilitate the learning process. The formative assessment of DOPS after practices showed that all of the students achieved the level of competence required by the programme. In

conclusion , the repetitive practices on the FSS improves the students confidence and pyschomotor skills , whereas DOPS ensure that students know their competence level.

Keywords: DOPS; tasktrainer; workplace based assessment