Bringing a Global Perspective to Students via Tele-simulation

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Abstract

The aim of this Simulation Based Experience (SBE) was to replicate a global initiative via a tele-simulated environment. Due to COVID-19, all study abroad trips were canceled by both the University and the governments of both the United States and Peru. To facilitate the learning goals and objectives, faculty developed a fully functional, online module via Zoom, which simulated in-country experiences. Three four-hour Zoom sessions allowed faculty to utilize INASCL standards of best practice to facilitate SBE activities such as pre and post-operative education for an Embedded Participant (EP) playing the role of patient (Lioce et al., 2020). 80% of students attempted to speak Spanish over the course of the SBE. During the debrief process, students were asked to provide affective words regarding the SBE which indicated trepidation in utilizing the Spanish language and not understanding content. On the final day of simulation, all students found value and collaboration in the process. Tele-simulation via Zoom allowed students to be immersed in an unknown culture, and the use of breakout rooms encouraged engagement with EP one-on-one. Zoom for remote simulation is a plausible replacement for HFPS due to the COVID-19 pandemic. Research is needed to explore and compare cultural gains and sensitivity to students in-country versus through remote learning.

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Recent health concerns have jolted academia in light of a global pandemic. Travel restrictions and precautions have created a catechism in study abroad experiences leaving eager global health students at a loss for experiences. This has also created a need for experiential learning to allow students understand cultural concerns and considerations.

Background

Study abroad experiences have historically offered immersion exploring culture and social norms in other countries (Maharaja, 2018). The global health immersion experience is similar yet provides hand on experience providing medical care (Yantalo Peru Foundation, n.d.). An immersive experience was planned for an interdisciplinary team to provide care for the people in the Region of San Martin. The Clinica Adelina Soplin Yantalo is a preestablished site for global learners to practice with their faculty in in Yantaló, Peru. The team included student and faculty from the disciplines of nursing, medicine, physical therapy, pharmacy and social work.

Student nurses are selected in the fall prior to the spring trip. This allows for fundraising, planning and simulation-based education. Once selected, student nurses are enrolled in a nursing elective. The elective course provides the students with an opportunity to have college credit for their interactive, hands-on learning. The course content includes national standards for the United States (US) that is encased within a global perspective. This was needed as many policies and procedures in the are not necessarily required overseas however the goal was to provide the same level of care as in the US or better.

The importance in apply international standards was realized in an effort to create sustainability for the clinic and other global learns that practice in the same environment. World Health Organization (WHO; 2020) recommendations was the foundation for all medical treatment and surgical interventions. This also provided resources in Spanish for the clinic to utilize after the trip. Culturally and Linguistically Appropriate Services (CLAS) standards are a US lead initiative however the principles can be applied to international health delivery (US Department of Health and Human Services, n.d.). Transcultural nursing, medical Spanish, roles of the nurse while in the country were reinforced in didactic content providing a solid foundation for delivery of care. A local immersion experience was planned to facilitate the

translation of concepts related to caring for the medically underserved by pairing with a service-learning outreach to an interdisciplinary medical clinic serving a migrant farmworker population. Original course content included interprofessional SBE to enhance team collaboration and communication.

CLAS standards provide a map of equity and equality by reducing health disparities by providing education for standards of care, leadership, language assistance, engagement, quality improvement, and accountability (US Department of Health and Human Services, n.d.). WHO set global standards for surgical procedures and students completed modules on hand hygiene, time out procedures, surgical checklists, and roles of the nurse before, during, and after surgery. The objective was to allow nursing students to understand the importance of safe care even if there are limited resources (WHO, 2009).

International Safety Concerns

Rising concerns regarding international travel, health and safety due to a global pandemic resulted in all trips travelling outside the US to be canceled eight weeks prior to departure. Cancelation, due to COVID-19, was understandable however it created a void in course content. Administration provided students the opportunity to either withdraw from the course, receive no fees returned for the didactic course due to being mid semester, or continue with a tele-simulation immersion of culturally enriched simulations similar to patient encounters in Peru (Lioce et al., 2020).

Participants and Setting

Out of 240 eligible students for a global medical emersion experience, 12 students were selected in a competitive essay process to travel and care for patients seen at a rural hospital in the Amazon jungle in Yantalo, Peru. A total of six participants from both a traditional pre-licensure and accelerated (second degree seeking students) were invited to participate in preparation for global mission work with prerequisite components including pre-simulation, simulation, Spanish classes, and pre-trip team activities. Ten students remained after the cancellation of the international trip.

The focus of the SBE was perioperative care including intake, preoperative care, intraoperative care, and post-operative care. Embedded participant (EP), a trained lay person playing a role, was utilized as the non-English speaking patient in all the scenarios (Lioce et al., 2020). The EP was a member of the College of Nursing simulation club, which participates in FERPA and simulation training.

Procedure

Students were required to log into their designated course and complete pre-simulation activities. Pre-simulation activities (Rutherford-Hemmingway et al., 2019; Tylerman, 2019) included readings on transcultural nursing care, medical interpretation and basics of simulation education. Basics of simulation education was necessary since tele-simulation had not been previously done with this cohort of students.

Tele-simulation and Preparation

Tele-simulation included conducting synchronous high-fidelity simulation via an online platform. The embedded participant (EP) was a previously trained and able to participate within the confines of the SBE. An EP is a trained and scripted person purposely placed within the scenario (Lioce, et al., 2020). Faculty leading the tele-simulation had been educated in SBE and a certified healthcare simulation educator -advanced (CHSE-A). The EP was a family member of faculty member and an active member of the university's volunteer simulation club and had completed all privacy requirements.

The settings within the online platform were organized to facilitate a waiting room, faculty lounge, and a patient area. This allowed the faculty and EP to huddle prior to the SBE. The waiting area allowed the students to discuss the case as if they were in the real time clinic setting. The patient room was managed a little differently. The patient and the current student nurse were the only ones permitted to have their camera on. This created a higher level of fidelity and realism for the learners.

The faculty served as the facilitators and created "hands". The faculty that was with the EP, dressed as a student and were the "hands" of the student caring for the EP. A student caring for the EP would talk and interview the patient. When an intervention was required such as blood pressure or lung auscultation, the student would request the live "hands" to conduct the assessment and report to the student. The student was required to be specific as to where placement of the stethoscope, intravenous pole and positioning of equipment as needed.

Education on translation, interpreters, peer to peer interpretation and trained medical interpreters were provided. Interpretation consists of using a person to translate spoken word from English into Spanis, the identified target language for the EP (Moura-Pompeu & Cavallo, 2019). A translator is transferring written words into the target language. The SBE utilized existing content from the WHO as a validated source or written material.

Prebrief

Prebriefing occurred daily prior to each scenario (INACSL, McDermott, Ludlow, et al., 2021a, Díaz & Anderson, 2021, Rutherford-Hemmingway et al.,

2019). Students were reminded of psychological safety within the synchronous environment (Rudolph et al, 2014). Encouragement to utilize their language skills was necessary as not all participants had command of the target language. The session was closed to non-course participants; however, students consented to sharing the recording of the SBE with the local media.

Simulation

The original SBE was piloted in 2019, minor adjustments were made due to the transfer to tele-simulation. INACSL Standards of Best Practice (2016) were followed as the new Healthcare Simulation Standards of Best Practice 2021 were not available.A series of three unfolding simulations were validated by two CHSE-A delivered. Each simulation had individual SMART objectives (INACSL Standards Committee, Miller, Decker, et al., 2021b). Objectives were based on the required information needed to care for a patient from a different culture and community, intraprofessional communication and interprofessional communication via an interpreter.

The scenarios were designed to mimic care and processes that would have ensued in Peru. On Day One, the simulation focused on explanation of roles in Peru, understanding the role of a trained medical interpreter, investigating the WHO modules for surgical procedures, and interviewing the EP (surgical patient). The initial simulation included an intake of a Peruvian male that wanted to be seen regarding a possible hernia and pre-operative testing with evaluation.

Scenario two had a focus on the pre-operative surgical checklist, discussion of previously encountered complications, nursing handoff, and how to establish a relationship with the patient in the presence of a trained medical interpreter. The emotional response culture plays in simulation was explored as each student then was given the opportunity to ask their own pre-operative questions to guide nursing care, planning, and education to the embedded patient.

Postoperative care was the educational content delivered in the final SBE module. Students were given the patient report during the pre-simulation time frame. In report the patient was entering the post-anesthesia care unit (PACU). Each student was then given the ability to assess the patient privately and report back to the group. This was facilitated by the use of breakout rooms, in which the student could offer education, care, and nursing interventions. All conversations with the EP were conducted in Spanish, with or without the use of a peer interpreter.

Debrief

All simulations were conducted by facilitators that viewed the SBE. A Rapid-Fire Huddle (Díaz et al., 2017; Díaz and Anderson, 2021) began each debrief. The rapid-fire huddle provides an opportunity for students to discuss the case with each other prior to the structured debrief. Students were asked to give one affective word which described how they felt prior to the structured debrief. The novice facilitator worked with Plus/Delta and the CHSE-A utilized Debriefing for Meaningful Learning™ (DML; Dreifuerst, 2015). Within the Plus/Delta debrief, students were encouraged to discuss what they each thought went well, what did not go well, and what they would like to see changed in future simulations (AHRQ, 2019). Utilizing DML, students were encouraged to critically think and reflect through the use of socratic questioning and active learning (Dreifuerst, 2015). Both facilitators and EP attended all debriefs of the student groups. The debriefs lasted approximately 40 minutes each day.

Results

Reflective statements were collected for quality purposes. Permission from students were granted for dissemination as exemplars. All students completed a reflective journal using Personal Feeling, Quality, Reflection of something specific, Strength of the simulation, and Threat/weakness (PQRST) format. All students indicated fear of the language and understanding content messaging from the EP. Particular note should be made that there were no comments related to technology and the use of tele-simulation. Of the 10 students, only two stated that they felt comfortable speaking Spanish on day one. One student was fluent, and the other had an intermediate level of proficiency. However, all but two students tried speaking to the patient using Spanish they knew or practiced over the days of simulation. Six students used affective words that indicated anxiety on the first SBE, while four felt confident. On Day three, all ten reported feeling as if the experience was valuable and collaborative.

Discussion

On the first day of simulation, faculty spent time discussing and dissolving the preconceived fallacies that the students voiced about the Peruvian culture and people. There was a particular focus on the White Knight Syndrome of medical missions (Ammar & Bernstein, 2014). The university is focused on creating sustainable partnerships such as values and ethics, while also creating an educational practice environment within Peru. In addressing the concerns of the students regarding language acquisition, specific medical terms were explained, as were the differences between medical interpreter and medical translator.

Students had prepared for day two by having the ability to ask questions regarding medications and laboratory procedures, while also inquiring about

how COVID-19 would change the way medicine was practiced both in and out of the US. The students interacted with the EP to discuss his pre-op checklist and questioned his support system for post-operative care. This brought us to a place where emotional responses were seen, even via Zoom, from the students to the responses of the EP, indicating a relationship between culture and emotion.

The final day allowed the students to educate and provide nursing interventions to the EP in the PACU. In reflection, students indicated that they were surprised how emotional they got working with a patient via Zoom, and how this environment truly allowed them to mimic actual patient care. There was also authenticity to Peruvian medicine as equipment was not high tech. Collaboration had greatly improved amongst the students, and they began to scaffold information for the care that was needed to be provided for the EP.

Limitations

Student perceptions of the loss of hands-on care needed to be discussed prior to simulation. The lack of actual patient care made it difficult to direct faculty hands to assess and treat the EP. Technology was not always stable for each student. There was no immersive cultural perspective from students, it was only from the faculty.

Conclusion

Tele-simulation provided an opportunity for student immersion into an unknown culture. The use of independent rooms with the patient promoted suspension of disbelief and allowed the learner to actively engage with the EP. The virtual platform as remote simulation (Burkett- St. Laurent et al., 2014) was a plausible replacement for HFPS-in person in light of the pandemic. Research is needed to explore the cultural sensitivity gains from remote learning as compared to in-country experiences.

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Author Biographies

Heather Peralta, DHSc, MSN, RN. As a fierce champion for growing the next generation of nurse professionals, Heather Peralta has embraced her role as a nurse educator. She has focused much of her time and efforts on interprofessional collaboration and education, migrant health disparities and needs, global health initiatives, and social justice concerns. She has worked

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Rubén Díaz, MAT. A United States Naval Submarine Veteran, Rubén Díaz has developed a strong foundation of linguistic excellence, while serving as a Trained Linguist in Cuba, during the migrant crisis. He is master Spanish educator, language consultant, cultural broker, and electronics expert. He has worked nationally and internationally in a multitude of settings. He has been a trained embedded participant for over ten years. He works with simulationist to provide education and language related services for research and their review board.

Desiree A. Díaz, PhD, FNP-BC, CNE-A, ANEF, FAAN. As a nurse educator for the past 14 years, Desiree Díaz has focused her career and research on simulation. Her research, which has been widely published and presented, combines the cutting-edge technology of simulation with the deeper human emotion of empathy to train health care providers to more effectively care for vulnerable and underserved patient populations, including correctional health care, limited English proficient patients and transgender patients. She remains innovative and relevant as she is currently part of the team that has a patent pending on virtual-human patient, co -authored the Simulation Dictionary, multiple pod casts and works with interdisciplinary members in global simulations. She completed a simulation research post-doctorate fellowship at Johns Hopkins University working with Dr. Pamela Jeffries.