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# Creating Inclusive Learning Environments for Chinese and American Pediatric Nursing Students

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## KEYWORDS

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Cultural Competence;  
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Equity;  
Inclusion

**Abstract** During the COVID-19 pandemic, students from two schools of nursing, in China and the United States respectively, engaged in a transcultural simulation activity to explore how a global healthcare crisis has been managed within their different cultures. This article describes the development and implementation of the project and evaluates student perspectives on the simulation's influence on increasing awareness of diversity, equity, and inclusion. Data for this project were collected through student verbal and written reflections and faculty comments.

**Results:** Students reported the virtual simulation positively impacted their learning and enjoyed the opportunity to navigate through a virtual scenario collaboratively while discussing cultural similarities and differences. Faculty noted the simulation was valuable and described challenges faced during the development.

**Conclusions:** Students and faculty found the simulation was a meaningful learning experience. Findings suggests that the transcultural simulation improved student knowledge of cultural competence and understanding of diversity, equity, and inclusion constructs.

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## Background

Globalization has created the need for a culturally competent health care workforce (Bednarz, Schim, & Doorenbos, 2010; Goodman, 2020; Vahed & Rodriguez, 2021). As the

largest and most trusted segment of health care professionals, nurses must be culturally competent to promote health and address complex health needs in increasingly diverse patient populations as well as collaborate with increasingly diverse teams of health care professionals (Sommers & Bonnel, 2020; Vahed & Rodriguez, 2021). Cultural competence not only facilitates the provision of informed, optimal healthcare, it promotes inclusive and equitable working environments in which healthcare

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providers feel respected and can collaborate productively to benefit patients (Goodman, 2020; Stubbe, 2020). To ensure that future nurses understand the importance of cultural competence and are committed to pursuing and promoting it, nursing programs should design undergraduate and graduate curricular content related to cultural sensitivity, knowledge, awareness, and proficiency (Aysola, Harris, Huo, Wright, & Higginbotham, 2018; Levey, 2020; Sharifi, Adib-Hajbaghery, & Najafi, 2019).

Simulation is a well-studied teaching pedagogy which demonstrates effectiveness with nursing students' learning (Blum, Borglund, & Parcells, 2010; Kessler & Kost; Shin, Park, & Kim, 2015). Simulation exposes students to possibly unfamiliar situations and concepts in a safe and supportive environment (Davies, Sundin, Robinson, & Jacob, 2021). Several studies have shown simulation enhances student confidence in clinical skills (Costello, Prelack, Faller, & Huddleston, 2018; Lister et al., 2017), facilitates clinical decision making (Nichols et al., 2019; Shin et al., 2015), and improves understanding of other health care roles (Costello et al., 2018). While there exists extensive evidence on the effectiveness of simulations in nursing education, a lack of evidence exists for the use of virtual simulation to enhance nursing students' knowledge of the concepts of diversity, equity, and inclusion (DEI) and its ability to improve cultural competence. Needed are evidence-based evaluations of virtual simulations and reflective debriefing activities that are designed to incorporate and explore concepts of diversity, equity, and inclusion to help students assimilate culturally competent knowledge, skills, and attitudes to guide and enhance their future practice.

However, challenges exist trying to integrate cultural competency and collaborative learning experiences for students from diverse and widespread geographical regions. One model that has shown success is the Collaborative Online International Learning (COIL) model. COIL is a model where diverse student groups engage in online learning activities to learn with and about one another (Appiah-Kubi, 2020; Vahed & Rodriguez, 2021). These experiences can be conducted anywhere as the online platform removes geographical distance barriers (Vahed & Rodriguez, 2021).

The COVID-19 pandemic created an urgent need to quickly and effectively switch to online learning (Cantey, Sampson, Vaughn, & Blodgett, 2021; Díaz-Guio et al., 2021; Kuszajewski et al., 2021). Nurse educators successfully transitioned to online skills labs (Cantey et al., 2021), didactic course content education (Fawaz & Samaha, 2021; Kuganathan, Slifierz, Anderson, Alvarez, & Apatu, 2021), and simulation-based education (Díaz-Guio et al., 2021; Eubanks et al., 2020; Kuszajewski et al., 2021). However, little is known of the utility of using COIL for DEI content.

This paper presents a COIL educational experience designed for students from two schools of nursing, one in China and one in the United States. Nursing Students en-

gaged in the transcultural simulation activity to explore how a contemporary global health care crisis has been managed within their different cultures. We describe the development and implementation of the transcultural virtual simulation activity and evaluated the nursing students' reflections of how this simulation experience advanced their awareness and knowledge of DEI. The objectives for the simulation were to: (a) engage nursing students virtually in a contemporary globalized health care crisis, (b) establish a connection among nursing students to allow exploration of cultural commonalities and differences in nursing care, and (c) develop nursing student knowledge related to constructs of DEI that are the foundation of cultural competence.

## Theoretical Framework

An overview of the Theory of Culture Care Diversity and Universality, also known as Leininger's Culture Care Theory, was presented during an introductory session for this transcultural educational experience. Using this as a theoretical framework explained the interdependence of care and culture phenomena with differences and similarities between and among cultures (Leininger, 1988; McFarland & Wehbe-Alamah, 2019). Students explored the relationship between nurses and patients and remained open to acquiring knowledge of various cultural practices and views of the world. Faculty role-modeled positive attitudes towards celebrating differences in cultures throughout the experience, thus bridging gaps and exploring delivery of holistic care. Students' exposure to understanding a patient's cultural background leads to best practice for providing holistic care to every patient.

## Methods

The Ethical Review Board approved this educational activity as an exempt study. The simulation project was a part of a larger four-session elective course offered over four-weeks to nursing students at a Chinese and an American school of nursing. The simulation was conducted during the third week of an elective course entitled *Transcultural Nursing Through Virtual Simulation*. Faculty and simulationists from both institutions collaborated to co-design the simulation. The COVID-19 pandemic was chosen as the simulation topic because: (a) it was a contemporary and compelling health care issue relevant to the nursing students in both countries, and (b) the resurgence of the delta variant highlighted the need for ongoing nursing involvement and education on this topic.

The course was designed and implemented using the Collaborative Online International Learning (COIL) model. We chose the COIL method because it is an evidence-based model that fosters learning by allowing diverse student groups to engage online to learn from one another

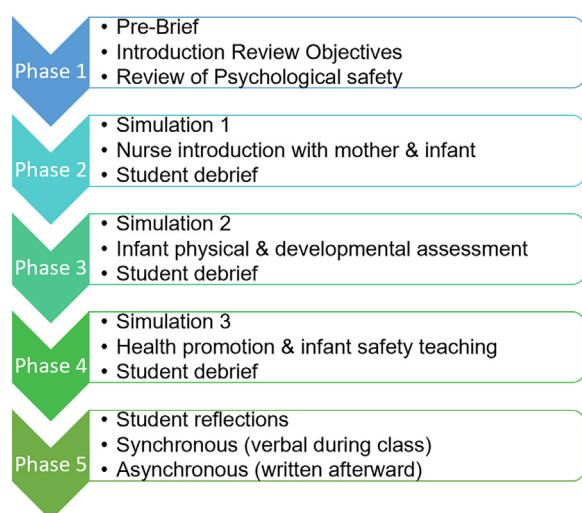


Figure 1 Simulation Schema.

(Appiah-Kubi, 2020; Vahed & Rodriguez, 2021). The course was offered on the Zoom virtual platform because faculty and students from both schools were familiar with the technology and it was available for use in both countries. The course was taught in English since both groups of students were familiar with the language. Twelve students (six from China, six from the United States) completed three pediatric telehealth scenarios in one synchronous two-hour virtual session. Figure 1 outlines the scenario progression which included obtaining an infant's health history with a mother, conducting an infant assessment (i.e., developmental assessment, physical assessment), and providing COVID-19 education to a mother. Students watched the recorded videos (approximately 5-10 minutes each) and engaged in subsequent discussions. Faculty provided a prebriefed session that oriented students to the scenario, objectives, technology, and environment. Prebriefing is an essential component of simulation designed to increase learner engagement and learning (Dileone, Chyun, Diaz, & Maruca, 2020; M, Ludlow, Horsley, & Meakim, 2021). Faculty also guided the reflective debrief for each scenario using a hybrid plus/delta and the "Gather Analyze, Summarize" method (INACSL Standards Committee, 2016a; Kang & Yu, 2018). This approach was a reflective process that helped students better understand the content and facilitated discussions actively. At the end of virtual session, open-ended reflection questions were used to explore students' perceptions of the simulated experience and how it influenced their knowledge of DEI concepts. Reflective practice is a purposeful method that nurses can use to critically evaluate and learn from their experiences (Johnson, 2019; Taplay, O'Keefe-Mccarthy, Tyrer, Mills, & Macnaught, 2021). Faculty perceptions of the teaching development process were explored through a debrief at the end of the course. Data for this project were collected through student written and verbal reflections and faculty verbal feedback.

To promote an inclusive environment for this simulation students participated in prioritization and obstetrics simulations at week one and two of the course. This allowed them to get to know one another and gain familiarity with one another. They were provided an electronic brochure with student pictures and brief introductions one week before the elective course and had a 30-minute group discussion (four students per group) at the end of class each week. In addition, reflection at the end of the debrief promoted an inclusive space for sharing ideas with one another.

## Simulation Design and Development

Two Chinese and three American course faculty met monthly to: (a) develop the simulation script using the International Nursing Association for Clinical Simulation and Learning (INACSL) Standards of Best Practice, (INACSL Standards Committee, 2016b) (b) evaluate prebriefing resources, and (c) record and review the video simulation. During the first meeting, faculty agreed on the scenario topic, a simulated COVID-19 informed telehealth well child assessment for a four-month-old infant. One of the simulationists at the American school volunteered to outline an initial "script" for the simulation. The initial simulation scenario was designed as a virtual (telehealth) well infant assessment visit for an infant in the U.S. whose mother was COVID-19 positive. The scenario was re-designed to have the infant's father as COVID-19 positive, after it was discovered quarantine guidelines from both countries were different and may lead to confusion for the students and affect the fidelity of the simulation.

The course faculty developed scripted scenarios for the virtual simulation which were filmed using the United States nursing school's simulation lab resources (technology assistance, camera) and recorded via Zoom using volunteer actors (nurse educator as the nurse, a nursing student and her four-month-old infant as the mother and patient). The three scenarios, introduction, physical and developmental assessment, and parent teaching were recorded in less than two hours.

The scenario was filmed in the home setting of the mother and infant. The camera was positioned directly in front of the infant, providing a complete view of the infant on the mother's lap. The camera was easily repositioned as needed when the infant was repositioned for supine assessments. Each scenario was closed captioned in English.

Students participated synchronously in the virtual simulation. At the conclusion of the debrief, students were asked to reflect on their overall experience discuss their perceptions on their participation in the simulation and its influence on their thoughts regarding DEI concepts. Some students volunteered to share their self-reflections verbally with the entire group, and others elected to write their self-reflections. Reflections were captured both immediately after the simulation and a week later, allowing

**Table 1** Nursing Student Reflections*Chinese Nursing students:*

This experience opened my eyes to exploring new ways to care for patients in China. Trying to find a different modality, we can use some good experience we learned from other countries.

Through this collaboration, I learned so much about another culture first-hand. In the past, similarities or differences stayed only in a textbook or on social media, but now [they are] more truthful and thoughtful. The strengths we have point out future directions to protect and encourage nurses.

The guidelines change quickly nowadays, so as a nursing student, we need to have a good command of the skills of literature [to search] and carry out health education based on the evidence.

The use of telemedicine has greatly increased the opportunities of patients' treatment and care, but with the corresponding updating of nursing knowledge, we should continue to learn, according to the latest guidelines for the guidance of related nursing and health education, to provide patients with higher quality of care.

From this class, I now know about the tele-medicine in America. It is different from China. We need to improve constantly.

As new models of health care evolve, we should do what we can to keep up with the times and update our own nursing practices according to the latest guidelines.

During the discussion, I realized that the two countries were deeply different in many aspects, such as the use of guidelines, the opinion of masks, etc. But nurses always play an important role in the public's quest for health wherever they are. It is the responsibility of health care workers to provide people with the right and effective medical education.

*American nursing students:*

I have had so much fun collaborating with our Chinese colleagues and learned so much. I think one of the things that was the most enriching thing I will carry forward was the interaction. We were sitting together having a conversation and it was a back and forth like "oh, what is it like for this, and why" then starting to have a dialogue about how things are done differently. We were talking about interesting things and realizing we might be able to do something similar here. Looking at strengths from both cultures and drawing from them.

This virtual simulation with students in China who are at the same stage as I am in nursing has been very valuable. We learned how to come together on a common platform focused on evidence-based practices. We had a conversation to explore and learn from one another. I've absolutely enjoyed it.

As a nurse, we are in a world that is increasingly global. I don't need to travel to China to work with a family or colleague who is from China.

[Learning this way] gives me knowledge that will help me be a great advocate and educator for my patients, understanding that their view how to do certain things and navigate a hospital system may be very different.

It was valuable to look at nursing care from another perspective and I think that is a strength. So many lenses [with which] to view nursing. What I am learning here in the US is just as valid as the way any other culture views nursing. Remember to never get stagnant. Look at medicine from many points of view and have many dialogues.

We can learn from each other's successes and spark new idea of ways to do things differently to further our own practices.

This was an informative and inclusive experience that will strengthen our practice.

students additional time to reflect. [Table 1](#) highlights some nursing student perceptions.

## Results

Six prelicensure nursing students from each university enrolled in the course. Eleven were female and one was male. At the end of the simulation debrief, a guided reflection took place and students were encouraged to verbally share their perspectives on the lessons learned. Students were also allowed to write out their reflections if they found it easier due to the language barrier. The simulation generated a dynamic discussion among students and course faculty. Using content analysis, authors (JV, YL, MM, HY) evaluated the verbal and written reflections and identified common issues and themes (Hsieh & Shannon, 2005; Zhang & Wildemuth, 2009). Themes that were discussed in depth included: differences in guidelines for patients and

family members diagnosed with COVID-19, breastfeeding, use of telehealth, nursing care, and access to care. Students were able to identify cultural differences and similarities regarding these major themes. Reflections and feedback from students indicated that interacting with peers from another culture was a meaningful experience and increased their awareness of cultural competence. [Table 1](#) highlights nursing students' reflections. At the conclusion of the educational activity faculty reviewed successes and barriers to implementation and provided input for future work.

## Discussion

Online synchronize clinical simulations are gaining momentum as effective learning models (Díaz-Guio et al., 2021; Kuszajewski et al., 2021). This paper describes the development and implementation of a transcultural virtual simulation COIL activity to promote the development of



cultural competence for Chinese and American nursing students. We also evaluated student perspectives on the simulation's influence on building skills and increasing awareness of DEI concepts. The objectives for the virtual simulation were to give students an opportunity to: (a) engage in an inclusive and informative experience, (b) examine nursing in the context of a global health care crisis, and (c) connect with students from another culture to explore cultural commonalities and differences. The simulation took place in 'real-time' so that students from different countries could communicate and interact simultaneously.

According to Leininger, "Culture and care together are predicted to be powerful theoretical constructs essential to human health, wellbeing, and survival" (2008). Our transcultural simulation experience, framed by Leininger's Theory of Culture Care Diversity and Universality, offered nursing students an opportunity to explore new perspectives regarding the delivery of nursing care, expand their worldview, and enhance their awareness of cultural similarities and differences in patient care during a pandemic.

This culturally diverse interactive experience provided students with important nursing knowledge beyond what could be obtained from a textbook. Students engaged in self-reflection and discussions about how to create inclusive environments while caring for patients and working with one another. Through these rich discussions, they connected with and gained knowledge from international colleagues that: (a) influenced their perceptions of cultural awareness and sensitivity, (b) helped them to appreciate culturally diverse ways of implementing care during a global health crisis, and (c) allowed them to discover ways in which cultural competence can shape nursing actions and inform their future clinical practice.

Through online interaction, COIL projects provide multicultural students opportunities to collaborate and discuss with one another to develop intercultural competences (Appiah-Kubi, 2020; Vahed & Rodriguez, 2021). Students expressed that examining nursing care from a different cultural perspective had been immensely valuable and reflected on how this opportunity would enrich their future interactions with patients and colleagues. The simulation increased their appreciation of the importance of the nurse's role in creating inclusive health care environments for diverse patient groups. Students enjoyed learning about nursing practices in another country; their comments emphasized that the experience had been both enlightening and enjoyable!

Given the challenge of changing COVID-19 guidelines (Fogg et al., 2020; Kuganathan et al., 2021), students from both schools noted the importance of staying abreast of current information and using the best evidence available to provide informed and sensitive health care. They also noted differences in evidence-based protocols employed in the two countries, including mask mandates, quarantine and isolation requirements, and testing procedures.

This virtual simulation fostered student awareness of how technology combined with nursing practice could be used globally to improve health care. For example, the Chinese students felt that telehealth afforded an opportunity to reach more patients in need of health care but policy and structural changes would be required to implement it successfully. Students determined that such issues likely affected innovations in nursing practice in both countries.

Although the transcultural virtual simulation experience proved valuable overall, faculty identified some challenges and solutions with the implementation:

1. The simulation was conducted in English, so the language barrier presented a challenge for some of the students from China. We addressed this by using closed captioning for the videos, speaking slowly when addressing students, typing the important questions or key words in the Zoom chat, and allowing students to write out their reflections and revise them at a later class meeting.
2. To create an inclusive learning environment for students, simulationists and faculty needed to collaborate on detailed simulation scripts that accurately reflected cultural norms. When developing the simulation scenario, faculty identified cultural differences in the management of patients who were COVID-19 positive. In the United States, a person who is COVID-19 positive and asymptomatic can quarantine at home. In China, a person who is COVID-19 positive, whether symptomatic or asymptomatic, quarantines in a hospital. Family members of a person confirmed to be COVID-19 positive are considered close contacts and must quarantine at home. The faculty revised the scenario so that the father of the infant was presented as COVID-19 positive and quarantining at home or in a hospital and the mother and infant were asymptomatic. Faculty learned with and from one another as they created the scenario.
3. Differences in health care delivery between the two countries were discovered while faculty were designing the simulation experience. In the United States, virtual or telehealth visits have become an accepted platform for health care delivery since the onset of COVID-19 (Ashcraft et al., 2021). In China, however, telehealth has been rarely used, even during the COVID-19 pandemic; patients are seen in person if they need care. Faculty incorporated relevant contextual prebrief materials such as an introduction to telehealth to the simulation design to address this difference.

To promote better transcultural communication, we included a facilitator who is a graduate of both schools and a bilingual speaker. This person played an important role in connecting faculty and students from the two schools; decreasing misunderstanding due to language barriers; and promoting comfortable and accessible class preparations, discussions, and reflections. The facilitator made an electronic brochure with

student pictures and brief student introductions and disseminated it a week before the class began to help students get to know one another.

4. Different time zones presented a challenge. The 12-hour difference made it difficult to schedule the synchronous simulation course. Two times (0700 and 1900) were identified as ideal for faculty and students. This required faculty planning months in advance circumvent this barrier and have all students present during the class.

## Implications for future practice

The creation of inclusive learning environments and discussions that promote cultural competence can be transformative for future health care providers. Simulated experiences provide rich opportunities for education sharing between students and faculty from different cultures and should be considered a vital component of nursing education.

## Conclusion

This article highlights how an innovative educational activity co-designed with faculty from both schools increased nursing students' awareness of DEI in nursing. We described the development and implementation of an engaging transcultural virtual simulation educational activity designed to enhance cultural competence for Chinese and American nursing students. Student perspectives on the simulation's influence on building skills and increasing awareness of DEI constructs were evaluated. The findings suggest that the transcultural simulation can be presented in a COIL format and was a collaborative activity that improved student awareness of cultural competence to promote knowledge and understanding of DEI constructs that ground cultural competence in nursing. Additional future research is warranted to conduct a formal evaluation with larger sample size to determine effectiveness.

Opportunities for nursing students to experience other cultures contribute to the promotion of inclusive health care environments and should be essential elements of nursing programs. Virtual simulation is one way to engage students in active learning that brings different cultures together to achieve this purpose. In a time with strict COVID-19 travel restrictions in place, this virtual simulation experience provided a global health type of experience for students and faculty without the current risks inherent of travel.

## Declaration of Competing Interest

The authors declare no conflict of interest

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