THE EFFECTIVENESS OF SIMULATION WITH STANDARDIZED PATIENTS ON THE CULTURAL COMPETENCE OF CHINESE UNDERGRADUATE NURSING STUDENTS: A RANDOMIZED CONTROLLED TRIAL

YANG QIN

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR DOCTOR DEGREE OF PHILOSOPHY
(INTERNATIONAL PROGRAM)
IN NURSING SCIENCE
FACULTY OF NURSING
BURAPHA UNIVERSITY
2024

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The Dissertation of Yang Qin has been approved by the examining committee to be partial fulfillment of the requirements for the Doctor Degree of Philosophy (International Program) in Nursing Science of Burapha University

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YANG QIN : THE EFFECTIVENESS OF SIMULATION WITH STANDARDIZED PATIENTS ON THE CULTURAL COMPETENCE OF CHINESE UNDERGRADUATE NURSING STUDENTS: A RANDOMIZED CONTROLLED TRIAL. ADVISORY COMMITTEE: PORNCHAI JULLAMATE, PEERA WONGUPPARAJ, Ph.D. 2024.

With China's increasing diversity and disparities in healthcare, nursing students often report feeling unprepared for providing culturally sensitive care in a multicultural environment. The objective was to examine the effectiveness of simulation with standardized patients (SPs) to enhance cultural competence.

A randomized controlled trial was conducted, and a sample random sampling technique was used to recruit 50 undergraduate nursing students from two public medical universities in Jiangsu, China. The intervention involved simulation with SPs and the cultural competence lecture, while the control group only received the cultural competence lecture. The study measured the level of cultural competence via the Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version-Chinese (IAPCC-SV-C), at pre-intervention, post-intervention, and follow-up. The reliability of IAPCC-SV-C were measured with Cronbach's alphas of .82. Descriptive statics was used to describe the participants characteristics and the study variable. The effectiveness of simulations with SPs on the cultural competence was tested with Two-way repeated measure ANOVA.

The results revealed that after completion of the intervention, participants in the experimental group had significantly higher IAPCC-SV-C than in the control group ($p<.05$).

These findings suggest that simulation with SPs is a more effective teaching strategy for enhancing the cultural competence of Chinese undergraduate nursing students. This method bridges the gap between theoretical knowledge and

practical skills, preparing Chinese undergraduate nursing students for culturally sensitive nursing practice in diverse healthcare settings.

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Yang Qin

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CHAPTER 1
INTRODUCTION

Background and significance of the study

In an age of rapid globalization, people migrate for better living conditions, educational pursuits, traveling, or to escape persecution, presenting nurses with culturally diverse patients. It is notably that China's overseas population is increasing. The nation is one of rich cultural, religious, and linguistic diversity, with the Han majority and fifty-five ethnic minority groups. Religious panorama in Japan is colorful, where Buddhism has followers of 18.2% and Christianity - 5.1%, Islam - 1.8%, traditional folk religions - 21.9% and 52.2% either unaffiliated or other (Yu et al., 2021). Moreover, lots of dialects, e.g. Cantonese, Minbei and Minnan, create communication barrier, as indicated by Lin et al (2020). For example, if nurses come from different regions, they may not get along with their colleagues first of all because of the language problem in Guangdong province where Cantonese is dominant.

China's economic boom brought about a dramatic reduction in poverty, but it also brought about a virtual elimination of the middle class (Carmichael et al., 2020). Continual health inequalities represent a big problem, with significant gaps apparent between the urban and rural, across regions and between migrants and permanent residents (Yu et al., 2021; Zhang et al., 2021). However, the under-five mortality rate was quite different, 10.7 deaths per 1000 live births in urban areas and 25.7 in rural areas (Kennedy et al., 2020). The ratio of maternal deaths in rural areas is about 3.2 times higher compared to urban areas (Li et al., 2021). The less affluent and remote areas, inhabited by ethnic minorities, have lower health and nutrition standards than the Han majority (Han et al., 2020; Liang et al., 2021). Also, stigma and discrimination towards marginalized populations like people living with HIV/AIDS or mental health issues worsen the disparity of healthcare (Freedland et al., 2021; Tadele & Amde, 2019).

Because of the complicated blend of cultural heritage and health gaps, cultural competence is important for Chinese nursing students. As per Chan (2019)

nursing graduates are said to be ill-equipped in dealing with multicultural settings. There are many students that are uncomfortable when providing culturally sensitive care to ethnically diverse patients, which could exacerbate care disparities among minority groups (Cai et al., 2017b; Edwards et al., 2010; Mills et al., 2022).

Nursing students can provide both safe and high-quality care by mastering cultural competence, a skill emphasized by Cai et al. (2017a). The importance of formal education and experiential learning in cultural competence is underpinned by Anton-Solanas et al. (2021). Practical guidelines and recommendations as that issue with the National Standards on Culturally and Linguistically Appropriate Services (2013) and the International Council of Nurses (2023), include the imperative of continual knowledge on culturally and linguistically tailor practices (White, 2019). Additionally, educational initiatives, such as those, have been researched by Ma et al. (2023) regarding positive outcomes on the cultural competencies of nurses and nursing students.

Cultural competence in nursing education is a process of becoming through which the students strive to function within the cultural environment of the patient, person, family or community. This process encompasses five key elements (Campinha-Bacote, 2002b; Shorey et al., 2021): 1) Cultural awareness implies that nursing students critically reflect upon their own cultural and professional contexts. 2) Cultural knowledge is the acquisition of an in-depth understanding of different cultural groups through the educational curricula. 3) Cultural skill, the ability to collect pertinent cultural data about a client's health problem and to perform physical assessments with cultural consideration. 4) Cultural encounters, which promote face-to-face encounters of students with clients from diverse cultural settings. 5) Cultural desire, the aspiration of the student to go through the process of becoming cultural aware, knowledgeable, skillful, and experienced in cultural encounters.

Modifications to the curriculum have been found to improve cultural competence among students and health professionals, which results in higher satisfaction of patients with the care received (Arruzza & Chau, 2021; Xiao et al., 2020). Cultural competencies are an essential part of what should be provided by the nursing curricula for the nursing professionals of the future. Nevertheless, cultural competence development in such countries as China is yet growing and not as

advanced as it is in some developed states (Deliz et al., 2020; Lin et al., 2021). Although undergraduate degree nursing programs in many healthcare colleges, only feature a short, two-hour theory lesson on culture and healthcare in the introductory, Fundamental Nursing course, during the first semester (Wang et al., 2018), or include a small component of cultural competence education in an introductory course (Gao, 2021; Lin & Hsu, 2020).

Simulation is a valuable teaching tool in nursing education as it enables the students to apply their theoretical knowledge and improve their clinical judgment and critical thinking skills. Via systematic replication of clinical situations in a safe environment with no risk, learners have the opportunity to apply and sharpen their clinical skills (Solarin et al., 2021). The practice of using Standardized Patients (SPs) has been central to nursing and medical education for many years, offering realistic simulations which are vital to the learning experience (Johnson et al., 2020). They are highly trained to imitate specific patients' conditions and situations, ranging from showing certain symptoms to managing complicated social scenarios, and they typically provide useful feedback. SPs are handy in simulators, which aim to develop the necessary skills in patient history taking, counseling, physical examination, or situations demanding emotional handling like breaking bad news or settling an agitated family member (Maicher et al., 2019). Moreover, the idea focuses on the training of standardized roles such as nurses, surgeons, or medical residents to enhance instructional supervision skills (Laleye et al., 2020).

Robust evidence supports that SPs in simulation training is a dynamic way to promote cultural competence within nursing education. This approach has been effectively intertwined in different nursing programs, particularly in courses on health assessment, indicating its flexibility and influence (Andrea & Kotowski, 2017; Choi et al., 2013; Kim & Dan, 2023; Slater et al., 2016). Interacting with SPs in environments close to real clinical settings makes students practice communication and watch various reactions to treatment and intervention approaches.

There is a lot of benefits of SP-based simulations in nursing education. These simulations are vital to develop students' clinical judgment, critical thinking (Shinde et al., 2023), empathy, self-confidence, and stress management skills (Brendan Young et al., 2023; Conway & Scoloveno, 2022; Elif et al., 2020; Yang et

al., 2023). In addition, the instant and sincere responses from SPs are vital for student learning and faculty evaluation of the program effectiveness (Herge & Hass, 2023; Reger et al., 2021). These simulations are actually a potent tool that inculcates cultural competence in the students by including various cultural perspectives, values, and practices, thereby enabling them to handle complex healthcare delivery in multicultural settings (Byrne, 2020; Paris et al., 2023; Qin, 2023).

Although high-fidelity manikins have come a long way in mimicry of human expressions and programmed interactions, they lack the subtleties of natural human communication and are almost exclusively found in wealthy urban nursing schools (Choi et al., 2020). But the inclusion of SPs in nursing simulations adds the learning process some of the non-technical, interpersonal competencies needed for successful therapeutic communication in actual clinical settings.

Many investigations have revealed that SP-based simulation training is highly beneficial in increasing cultural sensitivity and competence among nursing students. Studies show large improvements of cultural competence among US nursing students following high fidelity simulations, with similar promising results in the international settings. The participatory character of these simulations has been demonstrated to promote critical reflection, transformative learning, and respect for cultural diversity and inclusiveness (Grossman et al., 2012; Hamilton, 2016; Ndiwane et al., 2014; Ndiwane et al., 2017; Nimmo et al., 2021; Ozkara San, 2019; Turkelson et al., 2021).

These findings underscore the potential of simulation with SPs as an effective strategy to bridge the current gap in cultural competence training for nursing students. Therefore, this study aims to examine the effectiveness of simulation teaching programs with standardized patients on the cultural competence of Chinese undergraduate nursing students.

Research objectives

1. To compare the mean scores of cultural competences between students who received a cultural competence lecture and students who received both the cultural competence lecture and simulation with SPs on cultural competence at pre-intervention, post-intervention, and follow-up (A-D / B-E / C-F) (see **Table 1**)

Table 1 Comparisons between two groups at three times

Group	Pre test	Post test	Follow up
Experimental	A	B	C
Control	D	E	F

2. To compare mean scores of cultural competences of students who received both the cultural competence lecture and simulation with SPs at pre-intervention post-intervention, and follow-up (A-B / A-C / B-C) (see **Table 2**)

Table 2 Comparison for three times in experimental group

Group	Pre test	Post test	Follow up
Experimental	A	B	C

Research questions

1. What is the level of cultural competence in undergraduate nursing students prior to simulation with the SPs?

2. What is the post-intervention difference in the cultural competence in students who received a cultural competence lecture (E) and students who received both the cultural competence lecture and simulation with SPs (B)?

3. Are there effects on the cultural competence of undergraduate nursing students by the lecture and simulation at posttest and follow-up (B-C)?

Research hypotheses

1. The mean scores of cultural competences of students who receive the cultural competence lecture and simulation with SPs are significantly higher than that of students who receive the cultural competence lecture at post-intervention and follow-up.

2. Students who receive the cultural competence lecture and simulation with SPs at post-intervention and follow-up have significantly higher mean scores of cultural competence than those at the pre-intervention.

Scope of the study

The study exalted the effects of simulation with standardized patients on the cultural competence of Chinese undergraduate nursing students. Independent variable is simulation teaching program with standardized patients, dependent variable is cultural competence. Sample were 50 undergraduate nursing students from two public medical universities from Jiangsu, China.

Definition of terms

Cultural competence of nursing students refers to the process in which nursing students continuously strives to achieve the ability to work effectively within the cultural context of a patient, individual, family, or community and consists of five components: cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire. Cultural competence of nursing students are measured using the Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version-Chinese (IAPCC-SV-C) (Campinha-Bacote, 2019; Qin, 2023), which is a Chinese adaptation instrument designed to measure the level of cultural competence among students in the health professions.

Simulation refers to the complete array of actions and events, spanning from the initiation to the conclusion of cultural activities within a simulated environment. These activities are instrumental in enabling participants to develop or refine their knowledge, skills, encounters, awareness, and desire of culture. The process initiates with a pre-briefing, where nursing students are provided with comprehensive information about the simulation scenario, including the setting, roles of patients and nurses, and timing. This is followed by the implementation of the simulation scenario, where students are guided by case scripts and complete checklists facilitated by SPs. The simulation ends with a debriefing session, where nursing

students receive feedback from the SPs in the learning environment. All components of a simulation session, including its design and setup, are integral to its effectiveness.

Standardized patient refers to a person who is trained by the researcher to consistently represent a patient from a culturally diverse background according to the script of the simulation during a clinical encounter with a nursing student. She or he can give feedback, evaluate nursing students' performance, and answer the students' questions following the debriefing guideline.

Cultural competence lecture is based on the current curriculum and textbook for the course. It focuses on communication with diverse clients and cultural competence, including health disparities and social determinants, cultural influences on health and illness, how culture affects a nurse's ability to provide culturally competent care, steps toward developing cultural competence, and cultural assessment to plan culturally competent care. The teaching strategies of the lecture: 1. PowerPoint; 2. Typical cases with multicultural nursing characteristics throughout PowerPoint; 3. Video: Communication with a stroke who can't speak; 4. Self-reflective notes: Writing students' self-reflection on raising own cultural desire and awareness to reduce cultural biases.

Nursing students refers to individuals who is enrolled in a professional nursing or vocational nursing education program. They have appropriate communicational behaviors, and task-orientation behaviors. They can interact and participate in an interaction with professors or instructors, establish a proper dialogue with others and build an appropriate relationship with the clients. They are ready to do things and share tasks with others. They are content with the fulfilment of educational expectations, doing tasks and resolve others' needs, and have competitive behaviors in doing the task.

Conceptual framework

This research is anchored in the Model of Cultural Competence by (Campinha-Bacote, 2002b), a paradigm extensively employed in international nursing studies. This model pivots on the premise that cultural competence evolves as a dynamic, ongoing process, fundamentally driven by direct cultural interactions and a

genuine desire to engage in such experiences. It delineates five key elements in the journey towards cultural competence: awareness, knowledge, skill, encounter, and desire, all pivotal in understanding and interacting effectively with diverse cultures. Campinha-Bacote's model posits that attaining cultural competence is a comprehensive experience, necessitating engagement with all its constructs. A significant advantage of this framework lies in its utility for researchers to identify specific areas within the spectrum of cultural competence that require further development in learners. This nuanced approach enables a targeted, effective learning and research experience.

Key to this model is its emphasis on the necessity for individuals, particularly students, to hone communication skills and develop a nuanced comprehension of varied cultural perspectives. In the context of this study, the model provided a foundational framework for designing simulations involving SPs. These simulations are crafted to integrate the model's constructs, offering nursing students a platform to engage with SPs from diverse cultural backgrounds. Through these simulated encounters, students are expected to not only acquire cultural knowledge and skills through direct communication but also to foster a sense of cultural desire and awareness, which are critical components of the learning process (See Figure 1).

Session 1, the Pre-brief, provides participants with detailed information of the simulation scenarios before the actual simulation, including the location, the roles of the patients and nurses, and the timing. This session is aimed at cultural knowledge construction, which is achieved by providing the students with the necessary background information that facilitate understanding and successful adaptation to the cultural features. In Session 2, that is the Scenario session, every student is involved in a direct interaction with an SP within a controlled setting where they need to apply their cultural knowledge and reveal their cultural skill through sticking to case scripts and accomplishing checklists assessed by the SPs. This engaging experience delivers real-time cultural encounters, enabling students to exercise and further polish their cultural competence. The Debriefing, Session 3, does reflection and feedback that help cultural awareness a lot. Students are given time for individual reflection in session, guided discussion with SPs, and feedback. This process of reflection, in turn, also develops the cultural desire as it encourages students to enhance their cultural

competence all the time. The following session is based on the work accomplished in the previous session, which brings the comprehensive view to all aspects of cultural competence of nursing students.

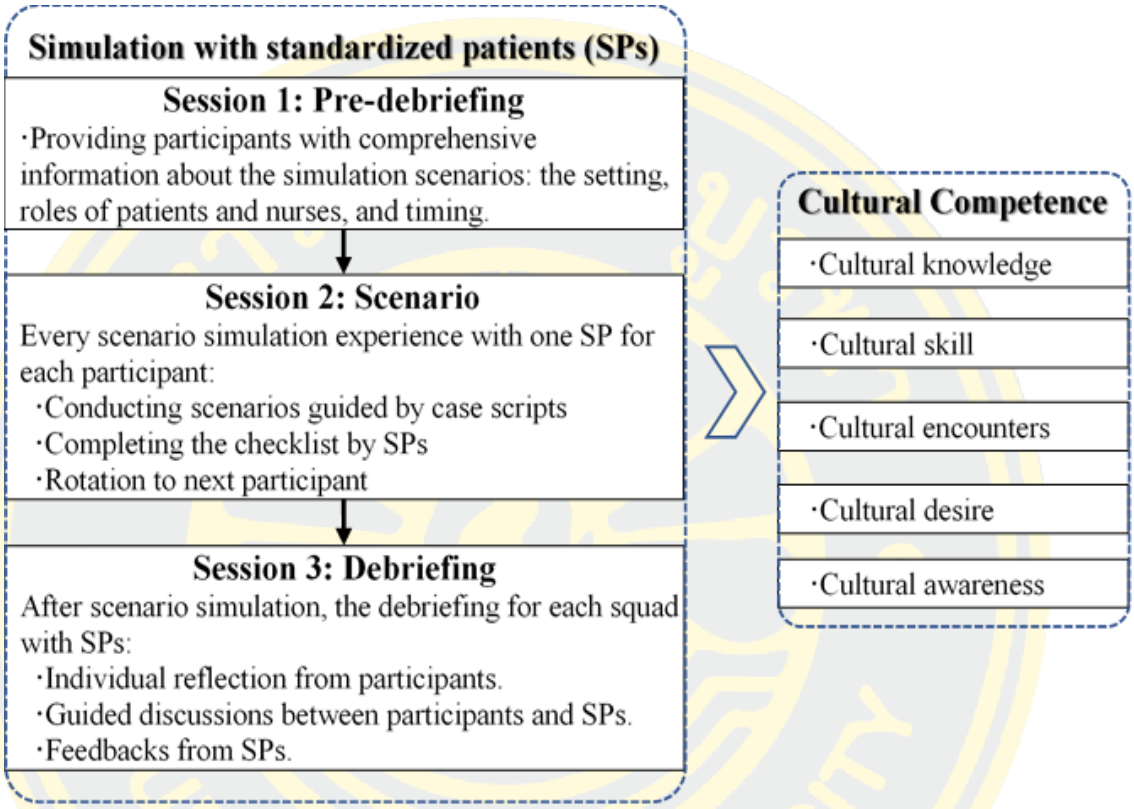

Figure 1 Conceptual framework of the study

Contribution to nursing

Nursing practice: To aid in reducing health disparities among minorities, it is imperative nurses deliver culturally competent care. This study supports an effective method to improve nursing students or nurses to deliver culturally competent care in practice and reduce health disparities among minorities in China.

Nursing education: Simulation with SPs is an effective teaching strategy for students to bridge the gap between cultural knowledge gained in the classroom and practice. It provided more interaction with culturally diverse patients, families, and communities, which is essential for students' development of cultural competence.

Nursing research: This study added to the body of knowledge about the integration of teaching strategies in the curriculum to increase the nursing student's cultural competence. The results of this study, along with literature is in need for effectively integrating cultural competence in curriculum and the subject of utilizing simulation with SPs to evaluate the cultural competence, supported the need for future research evaluating the use of simulation with SPs to develop and ascertain the cultural competence in Chinese nursing students.

CHAPTER 2
LITERATURE REVIEW

Electronic databases were searched for literature dating from 2005 (Standardized patients began for medical education in 2005) through 2022 using search terms: cultural competence, cultural awareness, cultural humility, simulation, SPs, undergraduate, education, and nursing. The literature search was conducted via internet databases: CINAHL, ProQuest, PubMed, OVID, and Medline-Ovid. Exclusion criteria: non-English languages and healthcare professions other than nursing.

Cultural Competence in Undergraduate Nursing Education

1.1 Definition of cultural competence

Culture is conceptualized as a whole range of behaviors such as the thoughts, communicative styles, the activities, habits, attitudes, values, history, beliefs and social structures of a certain racial group, religious group, ethnic group or social essence (Leerssen, 2021; Narayan, 2020). On the other hand, competence is the capacity to interact effectively in terms of the community's set of behaviors of operation (Simamora & Saragih, 2019). Hence cultural competence includes the ability of the systems, organizations and service providers to address the unique needs of the groups with different cultural backgrounds from the dominant or the majority culture.

Cultural competence definitions go far to include the healthcare practitioners, entities and also the health care system as well. Such definitions encompass the implementation of congruent behaviors and practices, attitudes, and also policies that respect and incorporate the cultural dissimilarities within a system, organization, or among professionals (Liu et al., 2021). Culturally competent care is typically described by the sensitivity and respect for the diverse responses and implications that people have as a result of their heritage, sexual orientation, economic status, ethnicity, and also cultural origins (Clauss-Ehlers et al., 2019). Culturally competent care is one of the identified measures of the American

Association of Colleges of Nursing, which includes the issues of diversity, marginalization, and susceptibility related to race, gender, and also sexual orientation (Wesp et al., 2018). Obtaining cultural competency is fundamental in the context of ensuring the safe, quality nursing care in nursing students (Sharifi et al., 2019). Nursing students should be exposed to the formal education and practical clinical training in cultural competence (Majda et al., 2021).

1.2 Cultural competence and undergraduate nursing education

In the present days, there is a growing understanding of the role cultural beliefs, values, religious practices, languages as well as various socio-economic factors play in health promotion and seeking for healthcare services (American Association of Colleges of Nursing, 2005; Han & Shou, 2020). In providing the Baccalaureate Education Essentials for Professional Nursing Practice, the American Association of Colleges of Nursing (2008a) highlights the value of cultural competence in a number of graduate outcome competencies. Another aspect is that American Academy of Nursing (2008) recognizes that to provide culturally competent care one should be aware of diversity, suffering of some groups, and vulnerability due to one's race, sex, or sexual orientation (Narayan, 2020). In 2015, a major achievement was made as the Chinese Nursing Association came up with an outline of competencies, educational methods, and standards which were aimed at integrating cultural competence into the baccalaureate nursing curriculum (Wang et al., 2018). Zhang and Cui (2018) suggested a range of educational methods for developing cultural competence in nursing students, both at the classroom and clinical levels, by experts in nursing education in China. These attempts mirror the dedication to operationalizing cultural competence into nursing education. But a gap still exists in the literature on how to achieve this cultural competency among nursing undergraduates.

The basis of the advocacy for inclusion of cultural competence into baccalaureate nursing education is patient-centered care. This model of care stresses on understanding, honoring, and fulfilling the varied preferences, values, and expressed requirements of patients (Cruz et al., 2018). Another reason for the integration is the need to establish and eliminate discrepancies in health outcomes, thereby requiring that nurses work within a global context and collaborate effectively

across healthcare disciplines (Thornton & Persaud, 2018). The forces of globalization, immigration, the rise of culturally diversified populations, and changing healthcare delivery models demand a curriculum that ensures the integration of culturally competent nursing practices in the continuum of education. Despite this need, there is no clear research about the best ways to train nursing students for cultural competence (Campinha-Bacote, 2019; Fitzgerald & Campinha-Bacote, 2019).

The National Standards for Culturally and Linguistically Appropriate Services (2013) provide healthcare organizations with the standards for delivering culturally and linguistically tailored services to assure people from various cultural backgrounds with the highest standards of health. These standards require the continuous education of healthcare professionals in culturally and linguistically Sensitive practices (Jongen et al., 2018). A meta-analysis by Kang et al. (2020) substantiated the potential advantages of such educational programs in improving the cultural competence of nurses and nursing students.

1.3 Cultural competence models

Recognition of the contributions of various models is important for the development of the cultural competence models, including Leininger's Sunrise Model (1988), Campinha-Bacote's Model of Cultural Competence (2002b), Garrett's Cultural Empowerment Model (2008), and Chang's QIAN Model for Cultural Humility (2012) , each contributing distinctive components to the integration of These models offered important principles, which were the cultural care universality, competence, empowerment and humility.

The Sunrise Model by Leininger (1988) is a versatile and comprehensive model that explores the correlation among sociocultural determinants, worldview and health care practices. The model highlights the need for familiarity with the cultural context and beliefs of patients in order to provide care that works. It brings to light how sociocultural determinants and a person's way of thinking impacts their health, welfare and care configurations. A nursing subsystem is integrated within this model by Leininger which highlights that nurses should consider these cultural factors in the process of care planning and delivery. This strategy provides a personalized and culturally sensitive care plan that hopes to improve patient outcome. The Sunrise Model provides a basic structure for nurses and other healthcare providers to integrate

cultural aspects into their practice, ensuring that the care is personalized for each patient, and is thus culturally appropriate.

The Model of Cultural Competence (Campinha-Bacote, 2002b) underlines cultural competence as a continuing process with the importance of face-to-face cultural interactions. It presents cultural competence as evolving from five key constructs: cultural awareness, cultural knowledge, cultural skill, cultural encounter and cultural desire. Thus, this framework proposes that with close contact and sincere intention to interact with various cultures, health care providers may be able to develop a better knowledge of and capacity to deliver culturally appropriate care.

Garrett's Cultural Empowerment Model (2008) points out that six vital domains for cultural competency in healthcare settings. These include language facilitation to eliminate the barrier to communication; family involvement negotiation to respect and integrate family roles in patient care; patient belief, expectation, experience, and construction consideration to care according to the patient's worldview; compassion and respect of the patient as a human right to ensure care is delivered with dignity; care partnership negotiation to develop a collaborative patient-provider relationship; and a system services and providers Empirically constructed from patient perceptions, this model advocates for empowerment via recognition and respect for cultural diversity, thus being more effective in patient care with a complete and comprehensive approach to cultural competence.

QIAN Model of Chang for the cultural humility (2012) presents a differentiated approach to cultural competence, concentrating on the cultural humility. It is built on four principles: • Self-reflection and critique that promotes self-improvement, realization of one's own biases; bi-directional cultural immersion, to develop deep connection with different cultures; mutual active-listening, to ensure patient and provider are both heard and understood; and flexible negotiation for creating the flexible care plan, that can meet individual patients need. This model involves the patient-provider dyad, fostering a collaboration that values the cultural contexts in which each party operates. In addition, it strives for the family's, health care system's, and community's involvement to promote the significance of a supportive system in delivering culture-sensitive care.

1.4 Cultural competence measurements

In the area of nursing education, numerous tools have been designed for assessment of knowledge, skills, and attitude in relation to cultural competence among students. Typically, these appraisals are based on five main self-assessment instruments that employ a Likert-scale format for responses. The instruments include Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals–Revised (IAPCC-R)/Student Version (IAPCC-SV), Cultural Awareness Scale (CAS), Caffrey Cultural Competence in Healthcare Scale (CCHS), Cultural Competence Assessment Scale (CCA), and Transcultural Self-Efficacy Tool (TSET). However, one must also remember that many of these instruments tend to lack comprehensive reliability and validity information.

Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals–Student Version (IAPCC-SV)

The Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals–Student Version (IAPCC-SV) was developed by Campinha-Bacote (2007) based on the Inventory for Assessing the Process of Cultural Competence-Revised (IAPCC-R) (Campinha-Bacote, 2002a) and The Process of Cultural Competence in the Delivery of Healthcare Services model (Campinha-Bacote, 2002b). The Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals-Revised (IAPCC-R) is a pencil/paper tool used to assess levels of cultural competence in professional healthcare providers. The survey includes 25 items that measure desire, awareness, skill, knowledge, and encounters (five cultural constructs) (Campinha-Bacote, 2002b). The response format is four-point Likert-type scales with response categories of strongly agree, agree, disagree, and strongly disagree. Higher total scores reflect higher levels of cultural competence (Campinha-Bacote, 2011).

The IAPCC-SV, created by Fitzgerald and colleagues in (2009) is a specialized tool aimed at assessing cultural competence in health profession students, such as those in nursing, medicine, dentistry, pharmacy, and physical therapy. This English-only instrument, which can be completed on paper or digitally, comprises 20 questions and can be finished within 10 to 15 minutes. It evaluates five key areas of cultural competence—desire, awareness, knowledge, skill, and encounters—with each

area having four related questions. Participants respond using a four-point Likert scale (strongly agree to strongly disagree). The total score, ranging from 20 to 80, categorizes a student's cultural competency level, from proficiency to incompetence, with higher scores indicating greater competence. Higher scores depict a higher level of cultural competence (Campinha-Bacote, 2011).

Both the IAPCC-R and IAPPC-SV have seen frequent application in research and for assessing the impact of educational interventions. Campinha-Bacote affirmed the validity and reliability of their scoring (Campinha-Bacote, 2011). The IAPCC-SV's strengths lie in its broad application and the reliability and validity of its data. Nevertheless, Loftin and associates (2013) identified certain drawbacks, such as the tool's limited ability to measure cultural competency with only 20 items and a 4-point scale, its reliance on self-reporting, and the potential for misunderstanding the item concepts without formal instruction.

Cultural Awareness Scale (CAS)

The Cultural Awareness Scale (CAS) was developed by Rew, Becker, Cookston, Khosropour, and Martinez (2003) , serves as a pivotal tool in assessing the cultural acumen of healthcare practitioners and evaluating how institutions manage cultural diversity. This tool emerged from an extensive analysis of relevant literature, encompassing topics such as cultural awareness, competence, and sensitivity, alongside aspects of nursing practice and education (Rew et al., 2003).

This comprehensive scale encapsulates five integral dimensions that collectively portray the multifaceted nature of cultural awareness. These dimensions include broad educational exposures; recognition and understanding of personal attitudes; the scope of classroom and clinical teaching; nuances in research methodology; and the application in clinical settings (Rew et al., 2003). The CAS consisted of 37 statements which were rated using a 7-point Likert type scale from strongly disagree to strongly agree. The instrument proved to be highly reliable across these dimensions with the following internal consistency scores: general educational experiences (.83); recognition of attitudes (.66); educational and clinical instruction (.81); research focused items (.88); and clinical application (.88). Another, the total reliability of the scale was .91. Detailed evaluation revealed average item scores and Cronbach's alpha reliabilities for each dimension: educational experiences (.85);

attitude awareness (.79); instructional realms (.94); research dimensions (.71); and clinical application (.77), with a scale reliability of .82 overall. Further validation included the study with 72 nursing students, resulting in a reliability coefficient of .91. An expert panel review in the field of nursing and cultural reduced the content validity index to .88, and hence, the scale was reduced to 36 items. This re-worded version subjected to the factor analysis with the 118 nursing students, reaffirmed its construct validity with a Cronbach's alpha of .82 (Rew et al., 2003).

Further exploration by Krainovich-Miller et al. (2008) involved a pilot study measuring nursing students' cultural awareness using the CAS, resulting in a Cronbach's alpha of .86 for the complete instrument, with subscale scores ranging between .68 and .90. The CAS's strength lies in its capacity to quantify a nursing student's cultural awareness level, though its limitation is its inability to precisely correlate specific program elements with resultant outcomes (Martin-Thornton, 2017).

Caffrey Cultural Competence Healthcare Scale (CCCHS)

The Caffrey Cultural Competence Healthcare Scale (CCCHS) was developed by Caffrey, Neander, Markle, and Stewart (2005) , serves as a tool for gauging individuals' self-assessed knowledge, awareness, and comfort level regarding cultural competence in healthcare. Structured around a self-evaluation model, the scale presents 28 questions where responses are marked on a Likert-type scale, ranging from 1 (indicating lack of comfort, knowledge, or awareness) to 5 (signifying high levels of comfort). Although the time required to complete the scale isn't specified, the final score is derived by averaging the responses to these 28 items.

CCCHS is covering a wide range of content regarding the perception of healthcare according to the different cultures, competence in cultural assessment, and skill in working with an interpreter, family member, or traditional healer. It also assesses knowledge about the varied cultural practices about death, organ donation, pregnancy, and childbirth, as well as self-awareness about the limitations of cultural competence, teamwork ability in diverse settings, and understanding of national policies that affect culturally diverse populations.

Empirical support for the efficacy of the CCCHS is provided in a study by Caffrey et al. (2005) where students achieved a Cronbach's alpha score of .93 pretest, and .97 posttest. Another important result was the increase in 22 items out of the total

28 items which indicates that the scale is sensitive enough to measure the students' improvement in cultural competency. This finding is consistent with Wells (2000) who also used the CCCHS for student evaluation.

The primary application of the CCCHS lies in assessing the impact of educational interventions on students' cultural competence, both before and after the intervention. Its main strength is in tracking student progress over time. However, it falls short in linking these findings to real or simulated experiences in the field.

Cultural Competence Assessment Instrument (CCA)

Schim et al. (2006) argued that the Cultural Competence Assessment Instrument (CCA) developed by Schim, Doorenbos, Miller, and Benkert (2003) was pioneering in terms of assessing cultural diversity encounters, consciousness, sensitivity, and behavioral competencies in cultural contexts. This tool, first and foremost, is an indicator of cultural empathy in healthcare professionals providing measurable evidence of cultural competence and their team members (Schim et al., 2003). As the offshoot of a broad theoretical basis, the CCA makes clear the points of cultural competence: knowledge, attitude, and behavior (Schim et al., 2003).

Comprising 38 constructed items, the CCA is presented in English and takes around 30 minutes to complete. It contains a special question which requires respondents to list how many times they had interactions with various groups in the past year, with a higher count suggesting a wider range of cultural contacts.

The CCA has two separate subscales. The first is measured by the Cultural Awareness Subscale (CAS), consisting knowledge and attitude. This subscale uses a Likert-continuum scale consisting of 5 points, from 'strongly agree' to 'strongly disagree', with 'no opinion' representing the neutral point. The second subscale that is called cultural competence behavior (CCB) measures from always to never, with not sure is the central point. The rankings for each subscale represent the depth of cultural knowledge, attitude positivity and frequency of cultural competence behaviors of the respondent (Schim et al., 2006).

This instrument scrutinizes three core areas of cultural competence: the concept of KAB (Schim et al., 2003). It also includes demographic questions on age, prior diversity training, race, or ethnic, and educational level (Schim et al., 2006).

Schim et al. (2003) confirmed the face and content validity of the CCA with the help of expert panel reviews, participant feedback, and field trials. Moreover, its construct validity was corroborated by significant correlations with the Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals–Revised (Schim et al., 2003). Subsequent research by Doorenbos et al. (2005) in hospice settings reinforced its construct validity through principal axis factor analysis, revealing two factors with item loadings above .40 and accounting for 56% of the variance. This study also highlighted the CCA's test-retest reliability (.85, $p = .002$) over four months, and internal consistency reliability scores of .89 overall, with .91 and .75 for the CAS and CCB subscales, respectively. Schim et al. (2006) later reaffirmed these reliability metrics, with the CCA overall and subscale reliabilities exceeding .80.

Intended for both pre- and post-learning assessments, the CCA's strength lies in its applicability across diverse healthcare provider demographics with varying educational backgrounds. However, it faces limitations like a solitary index for gauging diverse group interactions, the potential for misconstrued concepts absent formal instruction, and a self-report format that might elicit socially desirable responses (Loftin et al., 2013).

Transcultural Self-Efficacy Tool (TSET)

Jeffreys and Smodlaka (1998) led to the creation of the Transcultural Self-Efficacy Tool (TSET), a pivotal metric grounded in the Transcultural Self-Efficacy (TSE) model delineated in the preceding discourse. This tool gauges the perceived transcultural self-efficacy of students, specifically in executing general transcultural nursing competencies across diverse client demographics. Designed as both a diagnostic instrument for healthcare practitioners and students and as a means to evaluate the evolution of students' self-efficacy post-training, the TSET emerged as a significant contribution to the field (Jeffreys, 2000).

Encompassing 83 items, the TSET necessitates approximately 30 to 40 minutes for completion. Responses are recorded on a Likert scale, ranging from 1 (indicating a lack of confidence) to 10 (signifying absolute confidence) (Jeffreys & Smodlaka, 1998). The evaluation encompasses three distinct subscales: cognitive (25 items), practical (28 items), and affective (30 items). A panel of six experts, including

doctorally prepared nurses specialized in transcultural nursing, validated the content of this instrument (Jeffreys, 2000).

Studies corroborating construct validity affirmed that the transcultural self-efficacy construct was accurately reflected as conceptualized in the theoretical framework (Halter et al., 2015; Jeffreys & Dogan, 2010, 2012; Oh et al., 2016). A contrast group methodology was employed to demonstrate the scale's sensitivity in discerning variations among student groups. A notable application of the TSET was with 566 nursing students, providing construct validation and underscoring that the scale effectively measures temporal changes and the impact of healthcare education and experience (Jeffreys & Smodlaka, 1998). Predictive validity was also high, and internal consistency reliability was demonstrated with alpha coefficients ranging from .97 to .98 for the total test, and from .92 to .97 for the subscales across pretest and posttest datasets (Jeffreys, 2000). Furthermore, test-retest reliability over a two-week interval revealed correlation coefficients between .63 and .75 (Jeffreys, 2000).

Moreover, the TSET's utility extends to both pre- and post-learning assessments, enabling the tracking of student progress over time and thereby facilitating the evaluation of educational program outcomes. Its applicability extends to nursing schools for assessing cultural competence among students and faculty. However, limitations of the TSET include potential misunderstandings of item concepts without formal instruction, the likelihood of socially desirable responses due to its self-report format, and the extensive number of items (83).

Summary of measures

This review synthesizes various tools designed to assess cultural competency among nursing students, underscoring the significance of selecting an appropriate measure based on its intended application and the target demographic. The Cultural Competence in Healthcare Services Scale (CCCHS) is specifically tailored for appraising nursing students post-completion of a baccalaureate program, in contrast to the Cultural Competency Assessment (CCA), which evaluates cultural competence within a broader spectrum of healthcare professionals and personnel. These tools are anchored in divergent models, frameworks, and theories of cultural competence, yet they converge on several key concepts and constructs. Tools such as the Transcultural Self-Efficacy Tool (TSET) and Inventory for Assessing the Process

of Cultural Competence among Healthcare Professionals-Student Version (IAPCC-SV) conceptualize cultural competence as an evolving process, emphasizing cultural awareness, knowledge, skills, and encounters. Particularly, the TSET underscores self-efficacy as an integral element of cultural competence.

These instruments are claimed to measure cultural competence through the components of cultural knowledge, attitudes, and behaviors, even though the definite attributes of these components are difficult to specify. Despite being by Kumas-Tan et al. (2007) the subjective nature of self-reporting in these tools, objectivity issues, particularly in skill or behavior assessment, elicit responses biased towards social desirability. Kleitman et al. (2019) pointed out the difficulty in identifying real ability in self-assessments as opposed to simple over confidence or ignorance. Moreover, directly relate attitude to culturally competent behaviors is not well outlined, where López et al. (2020) indicates that measured behaviors can be only provoking of cultural competence. This also questions on the appropriateness of the measures in really representing cultural competence (Larson et al., 2018; Sirin et al., 2010; Weech-Maldonado et al., 2012).

To sum up, although existing efforts offer a starting point for further progress in this field, there is an urgent demand for stronger, more objective criteria that render both valid and reliable results. These metrics are essential for assessing the effectiveness of nursing educational approaches. The future measures should integrate the feedback made by the clients to reflect more reliably the effect of culturally competent care delivered by the professional nurses and nursing students.

1.5 Research involved in cultural competence in undergraduate nursing education

In the realm of nursing education, the need of incorporating cultural competency into the curriculum of the baccalaureate nursing programs has been acknowledged for years. Among the most central recommendations were the quintet of essential actions proposed by the American Association of Colleges of Nursing (AACN) (2008b) to be integrated into nursing education structures to guarantee that graduates will have the required cultural competencies. These actions include: a focus on social and cultural determinants in the delivery of healthcare in diverse environments; utilization of the best evidence and data in the provision of culturally

sensitive care; the provision of safe high-quality healthcare to diverse population groups; the transformation of the healthcare systems in relation to social justice and disparities reduction, and continuing development of the cultural competence skills.

Kardong-Edgren and colleagues (2010), investigated the cultural competence of 515 graduating baccalaureate nursing students, evaluating the effectiveness of nursing programs in teaching those competencies using different teaching strategies. This study employed a snowball sampling technique through a transcultural nursing organization in order to access participants. To assess the cultural competence of these upcoming graduates, an Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals-Revised (IAPCC-R) by Campinha-Bacote was used by the study as a measuring tool.

All nursing programs, with one exception (Program 1), that participated in this study had incorporated the Campinha-Bacote model of cultural care in to their curriculum. Program 3 was the only one which integrated Leininger's cultural care theory as the base for evaluation of cultural competence within their curriculum. In addition, programs' 1, 3, and 6 instructors had orientation towards the course. The student demographics varied across programs: Programs 1, 2, 3, and 6 were basically white programs, in contrast to the more mixed programs of 4 and 5. Apart from that, all the programs provided students with possibilities to get into immersion or study abroad. In this study, the IAPCC-R tool was the dependent variable, and the univariate analysis demonstrated a statistically significant difference ($p = .03$) in the total inventory scores among all nursing programs. Nevertheless, the post hoc contrasts were not found to be different at all ($p = .05$). The result is that Program 3 used a cultural care theory in its curriculum in a unique way showed a much higher average score ($M = 74.3$) compared to the other programs. The results of this study imply that there is not one 'best practice' for the embedding cultural competence in the nursing curricula. The study highlights the necessity for further research to assess how cultural knowledge is applied both in educational settings and patient care scenarios. A noted limitation of this study was the self-reporting nature of the IAPCC-R tool, which raises concerns about potential bias due to social desirability or expectations.

In an exploratory analysis, Noble et al. (2014) assessed the impact of an educational program on enhancing cultural competence among first-year nursing students in Israel. This research, structured as a quasi-experimental study, involved 146 students divided into an intervention group and a control group. The intervention involved a faculty-delivered cultural competence lecture that took two hours, after which the students broke into groups and presented on different cultural groups in Israel. On the other hand, the place group received the regular course work without any particular lectures on the cultural competence. The research revealed a statistical significance in the improvement of cultural competence (as measured by the IAPCC-R tool) in the intervention group when compared to the control group. However, the study did not address the possible limitations. These findings highlight the importance of integrating evidence-based cultural competence education into nursing programs.

In a separate study, Krainovich-Miller et al. (2008) conducted a non-experimental, cross-sectional research among nursing students of different levels by using the Cultural Awareness Scale (CAS). The cohort was comprised of 87 BSN, 139 MSN, and 10 PhD nursing students. Due to the small number of the PhD students, a complete statistical analysis of this subgroup was not possible. The study was aimed to test the cultural awareness among the students, without the influence of educational interventions. The CAS tool was applied before and after nursing courses. BSN students did not get any significant result differences in CAS scores between their initial and final courses. The limitations the researchers referred up to were small sample sizes, poor response rates, and low reproducibility. This implies that future study should focus on the validation of the effectiveness of the nursing curricula in building cultural competence.

Sargent, Sedlak, & Martsolf (2005) evaluated the cultural competence of nursing students and faculty, using the IAPCC-R as the assessment tool. The study included first and second-year students, along with faculty involved in curriculum development. The findings indicated a significant variance in cultural competence among the groups. A positive correlation emerged between cultural competence, as measured by IAPCC-R scores, and certain demographic factors, including healthcare work experience. The study also revealed that fourth-year students exhibited higher

levels of cultural competence than their first-year counterparts, highlighting the progressive nature of cultural competence development within the nursing curriculum.

In an investigation, Kardong-Edgren and Campinha-Bacote (2008) assessed the cultural competencies of final-year nursing students across four distinct and geographically diverse nursing programs. Utilizing the IAPCC-SV tool, the study encompassed 218 participants in a descriptive, post-test only design employing snowball sampling. Findings indicated that the average scores of all programs fell within the 'culturally aware' category, ranging from 70.4 to 73.9. No single educational approach demonstrated superiority over others in fostering cultural awareness. However, the self-reported nature of the IAPCC was acknowledged as a study limitation by the researchers.

Caffrey, Neander, Markle, & Stewart (2005) delved into the self-assessed cultural competence among undergraduate nursing students following their exposure to integrated cultural content (ICC). This research also examined the impact of a five-week clinical immersion program (termed ICC plus). Adopting a two-group, pre-test, post-test, quasi-experimental design, the study utilized the Caffrey Cultural Competence in Healthcare Scale (CCHS). Among the 32 participants, pre-tests were conducted at the start of their junior year and repeated at the conclusion of their senior year. The cohort was divided into 25 students experiencing ICC and 7 undergoing the ICC plus program, with the latter group partaking in a five-week clinical immersion in Guatemala. A 2×2 repeated ANOVA analysis was conducted to evaluate improvements in cultural competence. The results showed overall enhancement in cultural competence in both groups, with a more significant increase in the ICC plus group. The authors highlighted the small sample size, the question of whether self-perceived competence equates to actual competence, and the potential bias of self-selection as research limitations.

Reyes, Hadley and Davenport (2013) explored cultural competence in both new and graduating nursing students, underscoring the importance of integrating such competence throughout the nursing curriculum. The study, which involved 99 students, employed the Cultural Competence Assessment (CCA) and reported a test-retest reliability of $r = .85$, $p = .002$. Senior students exhibited a higher self-perception of cultural competence compared to newcomers, with a significantly higher

appreciation for cultural diversity. This result provides support to the case for the ongoing embedment of cultural competence education in nursing education. They identified convenience sampling method and difficulty of generalizing the findings as limitations of the study though.

Jeffreys and Dogan (2012) measured self-efficacy perceptions of undergraduate nursing students with the use of the Transcultural Self-Efficacy Tool (TSET). This research, characterized by its cross-sectional and longitudinal approach, was embedded within an associate degree framework. Initial and concluding semesters of the program saw the distribution of questionnaires to 147 and 36 students, respectively. Attrition, amounting to 25-30% over four semesters, resulted in a final cohort of 36 matched to initial assessments. Reyes et al. (2013) observed that first-year students demonstrated lower cultural competence across all subscales than their second-year counterparts, highlighting the importance of embedding cultural competence within the curriculum. Statistically significant improvements ($p < .05$) were noted across cognitive, practical, and affective subscales between the first and fourth semesters.

Mareno and Hart (2014) juxtaposed the cultural awareness, knowledge, and skills of nurses holding undergraduate versus graduate degrees. Employing the Clinical Cultural Competence Questionnaire within a cross-sectional, descriptive framework, the study lacked detailed psychometric reporting for the instrument. Grounded in Campinha-Bacote's model, the study encompassed 365 participants, excluding those with doctoral degrees ($n = 7$) and unspecified educational levels ($n = 2$). Particularly, 40% and 60% of participants held undergraduate ($n = 150$) and graduate degrees ($n = 215$), respectively. The findings revealed marginal disparities in cultural knowledge based on educational attainment, with no significant differences in awareness, skills, or comfort in patient interactions. Crucially, the study challenged the correlation between educational level and cultural competence, diverging from previous assertions (Mareno & Hart, 2014).

The ethnography of Kalischuk (2014) was a focused ethnography, aimed at nursing students learning about culture and cultural care within educational context, through a partnership between a college and a university. Observation and interviews or focus groups with first- and fourth-year students (71 observed, 27 interviewed)

gave information about their cultural education. The themes of the first year were in the recognition and understanding of cultural differences, while the fourth-year themes were in working together across the cultural lines and attitudes adaptation. This process of transition was observed in cultural care.

Another discovery of the research was that most of the students conceptualized the concept of culture based on ethnicity and race, almost devoid of analysis and critique in their perspectives. Additionally, economic, political and historical aspects of culture were not considered sufficiently in teaching. The authors called for the improvement of the pedagogical approach in cultural education in nursing. Student opinions at first reflected the usual understanding of culture such as confined into race and ethnicity, hence, the lack of complete cultural competence. In conclusion, the research called for further and more severe studies into cultural education in nursing and emphasized the absence of a uniform approach to the infestation of cultural competence in the curriculum. The literature review outlined many efforts of the nursing programs to infuse cultural competence though it underscored the requirement of standardization and continuity in the curriculum development, tool utilization, and assessment methodologies (Kalischuk, 2014).

Simulation using Standardized Patients in Nursing Education

2.1 Characteristics of simulation employing SPs in nursing education

The integration of simulation with standardized patients (SPs) has emerged as a pivotal educational strategy within nursing curricula, enabling students to apply theoretical knowledge and foster clinical as well as critical thinking competencies. This approach facilitates the structuring and rehearsal of clinical scenarios in a risk-free, controlled setting (Hall & Tori, 2017). Historically, nursing and medical training programs have leveraged SP-based simulations to craft cases epitomizing a high degree of realism (Johnson et al., 2020). The integration of simulation with standardized patients (SPs) has emerged as a pivotal educational strategy within nursing curricula, enabling students to apply theoretical knowledge and foster clinical as well as critical thinking competencies. This approach facilitates the structuring and rehearsal of clinical scenarios in a risk-free, controlled setting (Hall & Tori, 2017). Historically, nursing and medical training programs have leveraged SP-based

simulations to craft cases epitomizing a high degree of realism (Johnson et al., 2020). SPs, individuals trained to emulate specific patient conditions and scenarios, often engage in roles that necessitate high emotional intelligence, such as delivering distressing news or managing emotionally charged interactions (Mai et al., 2019).

These simulations go beyond typical roles and now include additional trained individuals such as standardized nurses, surgeons, and even residents in an attempt to develop supervisory and teaching abilities (Laleye et al., 2020). The environments of the simulations are replication of clinical settings and help students to practice with SPs and to see the results of their assessments and interventions. The implementation of SPs into educational approaches has proven to be effective in improving the ability of students to make clinical judgments, critical thinking, empathy, self-confidence and in relieving stress (Crisafio et al., 2018; Elif et al., 2020; Ha, 2018). In addition, SPs provide instant, unbiased feedback, allowing evaluation of student on curriculum (MacLean et al., 2017; Shankar & Dwivedi, 2016).

Cultural competence is one of the hallmarks of SP-based simulations to incorporate diversity of cultural perspectives and practices which foster adaptability among nursing students (Byrne, 2020; Fioravanti et al., 2018; Garrido et al., 2014; Ndiwane et al., 2014). High-fidelity simulators allow for the creation of artificial people but are inefficient when it comes to communication models and remain primarily confined to resourceful urban educational institutions (Choi et al., 2020). The essence of human relationships is important with regard to the preparation of students to real clinical settings. Simulation-based training is enhanced by the inclusion of SPs who re-assert the human component in the learning of therapeutic communication, offering the nursing students an indispensable preparatory ground prior to working in clinical settings.

2.2 Researches using simulation with standardized patients in nursing education

The utilization of SPs in nursing education has been extensively investigated, spanning various domains such as health assessment, psychiatric nursing, managing student anxiety, addressing disabilities, enhancing communication, developing psychomotor skills, increasing knowledge, moral reasoning and ethical decision-making, and strengthening student satisfaction with simulation experiences

(Galloway, 2009; Johnson et al., 2020; Kim-Godwin et al., 2013; Kim et al., 2020; Robinson-Smith et al., 2009; Yilmazer et al., 2020). This methodology is acclaimed for creating authentic scenarios that facilitate realistic feedback from SPs, thus substantially improving communication skills among nursing students.

According to Kim-Goodwin, et al. (2013), the home health simulations with SPs effects on student satisfaction, self-confidence, and learning outcomes were investigated. The research was carried out on 76 final year undergraduate nursing students who were attending a community health course for two semesters. Three evaluation tools were employed: The Education Practice in Simulation Scale (EPSS), the Student Satisfaction in Learning Scale (SSL), and the Self-Confidence in Learning Scale (SCL) with each scale and demonstrating high reliability (Cronbach's alpha between .86 and .94). The result of the study revealed that the students thought the simulation was helpful, giving average scores of 4.67 and 4.69 in the fall and spring semesters, accordingly. Positive ratings were also obtained with respect to satisfaction with simulated home visit (mean scores of 4.43 and 4.42) and confidence in learning (mean scores of 4.42 and 4.23). The SP experience was found appealing, meaningful, and realistic by the students. Limitations covered a convenience sample as well as multiple evaluation tools though the results of the research strongly confirmed the practical and substantial improvement that SPs brought to the environment of simulation learning.

Robinson-Smith, et al. (2009) addressed an evaluation of students' satisfaction in psychiatric clinical encounters with SPs. This descriptive study involving 112 junior-level nursing students conducted over three semesters utilized a modified Student Satisfaction Survey from the NLN to assess the satisfaction with the simulation, self-confidence gained, and the effect of the simulation on critical thinking. The results showed that satisfaction was much higher (mean = 4.60), followed by increased self-confidence (mean = 4.28) and improved critical thinking (mean = 4.56). SP feedback was especially useful and faculty members were able to identify student strengths and weaknesses more easily.

The study from the USA conducted by Johnson et al. (2020) compared freshman nursing students' self-confidence, satisfaction, and communication skills between SPs and high-fidelity simulations. Employing a quasi-experimental design

with 100 participants, the study revealed that students who interacted with SPs simulations showed satisfaction and improved communicative skills. Evidently, the student reflective comments in the SPs group were significantly more positive, indicating a greater cognizance and understanding of the simulated scenarios.

The effectiveness of SPs simulation and peer role play in teaching standard precaution infection control to nursing students was compared by Kim et al. (2020) in Korea. The research with 62 subjects showed that both approaches resulted in the growth of knowledge and awareness. Though the SP group had greater infection related anxiety and a better control performance, which was a more influential learning experience.

Kucukkelepce et al. (2020) evaluated the effect of SPs versus case analysis methods in ethics education for Turkish nursing students in this study. Conducted on 89 participants, this quasi-experimental study found that post-test scores in holistic approach and conflict resolution were lower than pre-test scores, thus reflecting an enhancement of students' moral reasoning and ethical decision-making skills. The group working with SPs demonstrated greater changes with time, thus indicating the usefulness of SPs in strengthening ethical competencies in students.

Cultural Competence with Simulation using Standardized Patients

The International Nursing Association of Clinical Simulation and Learning (INACSL) (2016) have developed nine standards of practice for simulation to provide best practices for developing and evaluating simulations (Sittner et al., 2015). These standards serve as a framework for constructing robust simulations and encompass aspects such as terminology, integrity of participants, objectives, facilitation processes, debriefing, assessment, and evaluation, along with simulation design and its application in interprofessional education.

Simulation, alongside standardized patients (SPs), has been acknowledged as a potent pedagogical method for immersing nursing students in culturally diverse experiences within a controlled setting. The exploration and evaluation of simulated experiences in nursing education date back to the 1960s (Wilford & Doyle, 2006). Yaeger et al. (2004) described low-fidelity simulators as focusing on single skills and allowing the learner to practice this skill. Conversely, high-fidelity simulators were

noted for providing comprehensive cues, facilitating complete immersion and response to interventions. An advantage of simulation lies in the educator's ability to focus on the student's performance without the added concern of potential harm to patients (Roberts et al., 2014). Researchers, like Haas (2010), advocate for the use of cultural artifacts, appropriate attire, and culturally specific language programming in high-fidelity patient simulators to enhance the realism of simulation scenarios.

SPs, first proposed by Dr. Howard Burrows in 1963 and became a popular tool primarily in the early 1980s as an educational tool especially for teaching, assessment, and evaluation purposes (Watts et al., 2021). When simulations are carried out, SPs can accurately represent patients suffering from a variety of behavioral or physical issues, and as a result, students can learn in a controlled and realistic environment (Lee et al., 2020).

This systematic review came up with nine relevant studies dedicated to nursing students, with sample sizes ranging from 25 to 104 participants (Grossman et al., 2012; Kratzke & Bertolo, 2013; Ndiwane et al., 2014; Nimmo et al., 2021; Ozkara San, 2019; Plaza Del Pino et al., 2022; Turkelson et al., 2021; Unver et al., 2019; Yang et al., 2014). Most of these studies were based on the pre-post design approach in evaluating the influence of SPs and simulation techniques on improving cultural competence in nursing students.

Among these, the bi-national pilot study conducted by Grossman et al. (2012) stands out for its unique approach. This study engaged undergraduate nursing students from the United States (48 participants) and Norway (25 participants) in four high-fidelity simulation scenarios. The core objective was to measure and enhance the level of cultural awareness among these students using the TSET instrument in a pretest/posttest format. This research is especially important because it is the first one which emphasizes cultural competence in relation to SPs. It is to be pointed out that although the methodology was kept the same for both cohorts, the cultural settings were adapted to the specific requirements and exposures of each group. The Norwegian students, for example, were given scenarios that involved Somalian and Muslim cultures, reflecting their increased contact with such patients in clinical settings. On the other hand, the American students interacted with situations on

Muslim and Italian American cultures, which were the areas they had scarce exposure to.

The results of this pilot study were illuminating and they demonstrated a major increase in the cultural awareness perceived by the students in the nursing. This was supported by a quantitative analysis using descriptive statistics and paired t-tests. In particular, among the American students, the pretest scores averaged 19.62, while posttest score averaged 24.19 ($p < .01$) and among the Norwegian students, the pretest score averaged 20.92 and posttest score was 22.30 ($p < .02$). One fact to point out is that there is no comparative analysis of the two groups. Moreover, during the debriefing sessions students noted that they understood the importance of practicing cultural assessment skills in simulated contexts to improve their cultural assessment skills in reality.

Another important study by Kratzke and Bertolo (2013) examined the perceptions of undergraduate community health nursing students regarding their cultural competence, after a simulation based experiential learning exercise in a classroom environment. Characterized by a qualitative descriptive design which put students into two cohorts and reflective writing was used to assess students' cultural attitudes, this study had the participants that were nine Hispanic, one Caucasian, and two American Indian students. Three key themes emerged from this study: cultural knowledge development, observational learning, and intercultural communication. The results pointed out to the students' understanding of the importance of studying different cultural factors before delivering nursing care. In addition, students recognized the difficulties of the communication among the unfamiliar cultures and necessity of educational acquisition of such cultures for better communication and care.

In a mixed-methods research, Yang et al. (2014) assessed the effect of a poverty simulation on nursing students' understanding of poverty and cultural competence. The study included 233 senior students taking a community health course, who were further divided into three cohorts across consecutive semesters. The assessment instruments comprise of the Poverty Simulation Reaction questionnaire and the Attitudes Toward Poverty Scale questionnaire, and were supplemented by three open-ended questions that sought to examine students' personal experiences and

attitudes during the simulation. The statistical analysis was mainly made with pair t-tests on mean values, the standard deviation and p-values. The first two cohorts showed a pronounced improvement in their comprehension of poverty-related hurdles such as financial pressures, resource deprivations and emotional strain ($p < .001$). The third cohort had a significant positive swing in their perception of poverty ($p < .001$). Open ended responses were classified into themes representing shifts in students' perceptions of poverty, health care barriers, emotional reactions, and implications for nursing practice. This research highlighted the importance of such exercises in promoting cultural awareness and competence in nursing care among students.

Another pivotal study by Ndiwane et al. (2014) involved first-year graduate nursing students ($n = 29$) using SPs to enhance cultural assessment skills. This pretest-posttest study utilized an objective structured clinical examination (OSCE) with scenarios featuring Hispanic and African-American patients. The study revealed significant improvements in five out of seven variables related to cultural competence, including healthcare knowledge and skills in creating culturally relevant treatment plans (p values ranging from $< .01$ to $< .004$). Besides quantitative assessment, qualitative insights were gathered from students' responses to open-ended questions. Content analysis revealed that the simulation with SPs significantly improved the students' practical skills and cultural sensitivity, despite some reported unpreparedness for the simulation. These findings suggest the value of SP-based simulations in fostering cross-cultural confidence among nursing students, a finding applicable across various levels of nursing education.

Ozkara San (2019) explored the impact of Diverse Standardized Patient Simulation (DSPS) scenarios on nursing students' transcultural self-efficacy (TSE). Utilizing the 83-item Transcultural Self-Efficacy Tool (TSET), both pre- and post-test data were gathered, indicating a notable enhancement in all TSE subscales post-simulation. Particularly, the cognitive subscale experienced the most significant improvement, followed by practical and affective areas. Influential factors such as marital status and religious preference were observed to affect total TSET scores and specific subscales, respectively.

Unver et al. (2019) conducted a study employing a pre–post design to evaluate the effects of language barriers and intercultural sensitivity among nursing

students. The research utilized the Intercultural Sensitivity Scale (ISS), consisting of five subscales: engagement, respect, confidence, enjoyment, and attentiveness. Paired with the Intercultural Sensitivity Assessment Checklist, the study assessed student performance during cultural encounters. Post-test results showed increased scores across all ISS subscales, though without statistical significance. Students demonstrated respect for cultural values and experienced varied levels of comfort in communications with culturally diverse patients.

Nimmo et al. (2021) used a standardized patient simulation based learning experience (SBLE) to measure cultural sensitivity and confidence when interacting with rural Spanish-speaking patients. Completion of the Transcultural Self Efficacy Tool (TSET) before and after the simulation however, indicated a significant improvement across the categories. Positive students' feedback on post-simulation expressed an outlook in regards to the method of learning stressing on the importance of dealing with a diverse patient population, obtaining cultural insights and recognizing a personal communicative weakness such as language barriers.

Likewise, Turkelson et al. (2021) assessed cultural competence, communication skills, and empathy when using a simulated based learning exercise (SBLE) with a Spanish-speaking patient and an English fluent relative in nursing students. Instruments used were the Transcultural Self-Efficacy Tool scale and the Jefferson Scale of Empathy. Although the TSET scores showed a considerable progress, no difference was found in the empathy levels based on the Jefferson Scale. Rural Healthcare Knowledge tool of the Rural Characteristics Tool was considered to be out of scope of the review.

Plaza del Pino et al. (2022) conducted research involving a simulation with an actor portraying a migrant Moroccan patient. Initial semi-structured interviews highlighted student insecurities, largely due to experience deficits, language barriers, and unfamiliarity with the patient's customs and routines. Post-simulation responses reflected improved communication skills and cultural understanding, despite persistent challenges in adapting to diverse cultural behaviors.

Studies have shown that simulation and the SPs have great many benefits for assessing the cultural competence of the nursing students. Clinical training sites are confronted with several problems like the shortages, lack of diversity, and also the

absence of a controlled learning environment. Even though high-fidelity simulators are good at evaluating clinical knowledge and skills, they do not provide immediate feedback. Cultural competence is about the both certain knowledge and skills and it is the interaction with various cultures that really improves a student's cultural competence. SPs allow students to meet with the people from various cultures and also provide an instantaneous response for the student. Although the available research on this issue is somewhat limited, the potential of SPs in evaluating the cultural competence of nursing students also deserves further exploration.

Summary

This literature review revealed a growing need to provide culturally competent care to patients. The gap in health disparities is widening and it is imperative that nurses deliver culturally congruent care to patients. The National League of Nursing (2009) and American Association of Colleges of Nursing (2008b) have set forth guidelines for integrating cultural competence in the curriculum. But there is no consensus on the best way to integrate cultural competence in the curriculum or formative assessments. The Campinha-Bacote Model of Cultural Competence (2002b) supports the development of skills and attitudes that are required for culturally responsive healthcare practices, by integrating into the aim of cultural competence enhancing through simulations with SPs.

The literature reveals that it is difficult to ensure that every student meet a patient from a diverse background in the clinical setting. The use of SPs is an effective way to allow all nursing students to encounter a patient from a different culture and practice their skills, including assessment and communication, in a controlled environment.

CHAPTER 3
RESEARCH METHODOLOGY

Research design

A randomized controlled trial (RCT), repeated measures design was used to test measures for effectiveness on the cultural competence of Chinese undergraduate nursing students by using SPs in simulation. This design collected and analyzed quantitative data to establish evidence related to whether the simulation with SPs effect on the cultural competence of the participants.

Population and participants

Target population

Undergraduate sophomore-level nursing students in two medical universities in Jiangsu, China.

Participants

Participants in the study were sophomore undergraduate nursing students who have taken a medical nursing course and been concurrently taking the health assessment course. It is recruited through the undergraduate students from the whole second grade students of two universities based on the inclusion criteria: at least 18 years of age, full-time nursing sophomore undergraduate, conscientiously perform learning tasks, and provided consent form to participate. Exclusion criteria: unable to understand or complete the questionnaire, and absent from intervention.

Sample size

An earlier randomized controlled trial study focusing on cultural competence education program on clinical nurses, revealed a moderate effect size of .25 (Lin & Hsu, 2020). The researcher used a medium Cohen's effect size of .25 for the calculation. G* power 3.1.9.4 program (Faul et al., 2009) was used to calculate the sample size; F tests-ANOVA: Repeated measures, within-between interaction; set effect size .25 (Polit & Beck, 2017), err prob .05, power: .95, number of groups: 2, was calculated equal to 44, considering the attrition rates (less than 10%) from prior research (Wang et al., 2018), in total, the study used a sample of 50 participants. Two

universities were randomly selected as the control group or experimental group (25 persons per group).

Sampling

The simple random sampling technique and single-blind method were used in this study to select and assign the participants and implement the intervention as described below:

Step 1: Research assistant 1 (RA1) distributed advertisements via WeChat at both universities to invite participants and provide them with information about the study.

Step 2: RA1 screened participants interested in participating in the study based on inclusion and exclusion criteria.

Step 3: RA1 used a computerized random number generator to randomly assign participants to the experimental (n=25) and control groups (n=25) until each group reaches 25.

Step 4: All participants were written consent form by RA1 before intervention.

To ensure adequate blindness in the assessments, the participant recruitment was performed by RA1. The group allocation was randomly assigned by using a computerized random number generator to randomly assign participants. The simple random sampling was used to random group by random number table 50 numbers generated from Excel. The numbers were mixed, the rule was the 1st to 25th number were the experimental group, and the 26th to the 50th number were the control group.

The RA1 also made labels with numbers from 1st to 50th and put them in envelopes, the number labels were randomly drawn by the students. The students were arranged into the corresponding group according to the results of the random number table group method.

Setting of the study

The study was conducted at two public medical universities from Jiangsu, locating on the east coast of China. The two universities are located in the same

geographic area - northern Jiangsu province, which is on the east coast of China. They belong to the same organizational body - the Jiangsu Commission of Health. They have the same Nursing Talent Development Program and also Curriculum Standards.

Research instruments

Utilizing the Campinha-Bacote model (Campinha-Bacote, 2002b) as the research framework and drawing on references such as 'Transcultural Communication in Nursing' (Munoz & Luckmann, 2005), and 'Transcultural Nursing Theory and Models' (Sagar, 2011), this study integrated tools and guidelines from the tool tik of resources for Cultural Competency in Baccalaureate Nurses from American Association of Colleges of Nursing (2008b). It incorporated suggestions by Choi & Kim (2018) for enhancing communication skills and cultural sensitivity among nursing students, emphasizing experiential learning methods proven effective in multicultural healthcare settings, and offering a comprehensive curriculum framework for integrating cultural competence into nursing education, systematically embedding cultural competence into the nursing curriculum, such as proposing a blend of classroom learning and simulation, developed by Cuellar and others (2008). Consequently, this results in the formation of a preliminary intervention plan, comprising the cultural competence lecture and the simulation with standardized patients.

In assessing the feasibility and scientific validity of the preliminary intervention plan, expert consultations were conducted. Experts' feedback helped validate the scientific soundness and feasibility of the intervention plan and practical experiences, adding credibility to the plan, and provided insights into what was practically achievable and relevant in the current educational and clinical context. This ensured that the intervention plan was not only theoretically sound but also applicable and effective in real-world settings.

These consultations focused on the appropriateness of aspects such as the content, duration, and format of each training session. The inclusion criteria for consulting experts were as follows: (1) experts in nursing education, nursing psychology, clinical nursing, and nursing management; (2) possessing at least an undergraduate degree and an intermediate professional title, with over ten years of

experience in the nursing field; (3) having a background in multicultural nursing education or clinical experience; (4) willingness to participate in this study. Considering the experts' authority and accessibility, 7 experts were included (See Table 3). Suggestions for revisions made by the experts were collated and synthesized (See Table 4), leading to the modification of the preliminary intervention plan.

Those six experts chosen stem from other fields in nursing, such as nursing education, clinical nursing, and nursing psychology. This variation guaranteed an all-encompassing knowledge of the issue of cultural competence in nursing. All specialists were highly qualified (with over 10 years of experience) and had an academic degree in their field. Such expertise played an important role in the provision of knowledgeable, trustworthy and operational recommendations for effective intervention plan development. Some experts had a background in multicultural nursing education or clinical experience (teaching foreign nursing students and care foreigners before), to help the researchers understanding how cultural competence plays out in real-world nursing scenarios and how best to incorporate these experiences into an educational program.

Table 3 Consulting Expert's Basic Profile

Name	Academic Qualifications	Professional Title	Years of Professional Experience	Field of Expertise
W Y	Doctoral Degree	Associate Professor	22	Professional English for Nursing
G W	Master's Degree	Professor	27	Nursing Education
C X	Doctoral Degree	Co-chief nurse	18	Clinical Nursing
X H	Master's Degree	Professor	32	Nursing Psychology
X F	Master's Degree	Chief Nurse	16	Clinical Nursing
W M	Doctoral Degree	Co-chief nurse	15	Clinical Nursing
W H	Master's Degree	Associate Professor	20	Nursing Education

Table 4 Consulting Experts' Revision Suggestions

Serial Number	Suggestions	Modifications
1	Develop the intervention plan around the Campinha-Bacote model of cultural competency	In the process of developing the intervention, the relevant multicultural nursing competency training content is developed according to the meaning and connotation of the five components of the Campinha-Bacote cultural competency model.
2	The intervention is based on the characteristics of China's multiculturalism, and it is recommended to highlight the cultural differences between regions	Join the introduction of the characteristic culture and nursing of China's ethnic minorities, and join the three major religions and nursing care in China.
3	Pay attention to mobilizing students' enthusiasm for learning	In the process of intervention, nursing students are presented with relevant literature published in excellent journals, so as to increase student interaction, and provide students with cultural nursing knowledge and multicultural phenomena in social hot issues.
4	Better reflecting the cultivation of students' multicultural nursing competencies	Through the further understanding of the meaning of cultural nursing competency, the content of medical translators, multicultural nursing communication, reading of relevant multicultural nursing literature, and understanding and use of cultural nursing assessment tools were added.
5	When analyzing the case, the case should highlight the characteristics of multicultural care	Provide students with typical cases with multicultural nursing characteristics for students' analysis and reference.

The research instruments included the intervention for implementation and the data collecting instruments, which were as follows:

Simulations with SPs

Based on the teaching content characteristics of the health assessment course and the evaluation of 'Self and Social Behavior in Differing Cultural Contexts' from Triandis (1989), the simulation with SPs was conducted five times for the participants within a week, focusing on the health assessment of clients from culturally diverse backgrounds through three aspects: diet, environment, and psychology.

Triandis (1989) focus on food, human habitat, and psychology as core elements of self and social conduct in different cultural settings is quite evident in the essentials of the health assessment class. Culture awareness is also essential in nursing

regarding to the patient's background for proper health assessment. The diet, environmental factors and psychological issues are part of this assessment, as they have great influence on a person's health and well-being. The choice to run the simulation in a week had emerged from previous works (Qin & Chaimongkol, 2021; Younes et al., 2021) demonstrating that single or short-term simulations were less productive. A week represented a rather long span of time for practicing and familiarizing with the content, which were the most important factors in achieving the desired skills and their subsequent retention. It afforded students various opportunities to encounter different SPs, each with distinct background origins, hence enriching their knowledge and tolerance for heterogeneous cultural health needs.

Cultural knowledges were integrated by having the SPs use cultural terms unfamiliar to the students in regard to diet assessment, environmental assessment, and psychological assessment. The participants need the knowledge to ask the patients questions about their culture. Cultural skills were integrated by having participants ask culturally appropriate questions during the assessment procedure. The simulation was focused on an encounter with a patient from a diverse background. Cultural desire and awareness were achieved when the participant was actively engaged in the simulation. An established simulation content expert reviewed the simulation scenario to ensure accuracy and compliance with the student objectives for this simulation.

The SPs were recruited from a list of SPs used in the graduate nursing programs from the two universities. Five SPs were used in the study and inclusion criteria were a culturally diverse background, willingness to participate in a culturally sensitive simulation, and availability on specified dates. **Table 5** demonstrated the basic profile of these five SPs. The SPs were given a SP training guide, student checklist, and case scripts, which were reviewed by the same simulation content expert.

To encompass a broad range of cultural contexts within the health assessment simulations. The diverse ethnicities, ages, genders, religious backgrounds, and cultural experiences—such as SP1 being Han Chinese with experience in the USA and a Buddhist background, or SP3 being Uyghur with experience in Germany and an Islamic faith—provided varied scenarios for students to practice culturally sensitive health assessments. This diversity ensured that students

were exposed to and learn to navigate the complexities of patients' dietary, environmental, and psychological contexts from different cultural perspectives. The detailed cultural background of each SP enriched the simulation with specific nuances that the students must understand and respect during assessments.

Table 5 SPs' Basic Profile

SP Number	Ethnicity	Previously Lived In (Years)	Age	Gender	Religious Background	Detailed Cultural Background Notes
SP1	Han	USA (5 years)	51	Female	Buddhism	Adapted to Western dietary habits, balancing traditional Chinese cuisine with American influences. Keen awareness of nutritional trends in both cultures.
SP2	Zhuang	France (6 years)	52	Male	None	Immersed in French culinary culture, familiar with wine and cheese pairings. Knowledgeable in Mediterranean and Zhuang dietary customs.
SP3	Uyghur	Germany (7 years)	43	Female	Islam	Acquainted with European urban life, sensitive to Islamic practices in a Western context. Experienced in multicultural integration and environmental sustainability.
SP4	Han	Thailand (4 years)	40	Male	None	Insight into Thai urban planning, environmental consciousness. Blending Thai cultural aspects, especially in urban living.
SP5	Han	Australia (5 years)	45	Male	Taoism	Familiar with Australian lifestyle, mental health perspectives. Integrates Taoist and Australian cultural elements, especially in holistic health practices.

SP Training. Drawing on the principles of the NLN/Jeffries Simulation Framework for Simulated Participant Methodology as delineated by Jeffries (2021), it is imperative for educators to give thorough attention to the detailed preparation of SPs. This includes guaranteeing uniformity in their performance and effectively

incorporating SPs into both the simulation exercises and the overarching simulation process (Cowperthwait, 2020). The SP Training Guide outlined specific standards and competencies that SPs were required to meet to ensure the effectiveness and realism of the simulation. Primarily, SPs had to show high competence in acting that would allow them to act the case scenarios set out in the scripts. This also required having to perform symptoms, feeling and distinct behaviors of the patients that they had to portray. In addition, the guide stressed the need to ensure the uniformity of how they are depicted in different training scenarios. This played a vital role in guaranteeing that students' assessments are accurate and true to scale. The SPs were trained to deliver appropriate feedback to the students, using the student checklist, regarding communication skills, clinical decision-making, and empathetic patient care. In addition, the SPs were to be familiarized with the case scripts and the goals of each simulation. This comprehension was crucial for their adequate response to the students' actions and questions resulting in improving the learning process.

Lastly, the guide included a section on cultural sensitivity training. Since the SPs came from a variety of cultural backgrounds, it was essential that they were able to address and integrate cultural elements into the simulation, as this met the program's focus on preparing students for a culturally diverse healthcare environment. The success of these standards was reflected in the SPs performance who were able to deliver realistic and engaging simulation experience satisfying the educational goals of the nursing programs.

Practice simulation. The materials for the five case scripts (See **Table 6**) and student checklists were modified from the health assessment textbook used in the program (Wilson & Giddens, 2020). According to case scripts and student checklists, a performance simulation was held and videoed to test the precision and efficiency of the simulation in the interdisciplinary simulation base of Jiangsu Vocational College of Medicine. The script and student checklist were used by the research assistants, modifying them, however, as required by the new information obtained from the practice simulation when the practice simulation was implemented.

Each research assistant managed different aspects of the simulation in turns during the practice session. It involved being facilitators, and as well as serving as SPs to get better understandings of the simulation dynamics. The recorded session was

used as a helpful instrument for the review and evaluation enabling research assistants to see and improve their techniques, communication, and overall simulation environment management. In order to improve their readiness, the research assistant also created a depth of understanding for the recording equipment and debriefing rooms. The practice simulation in the interdisciplinary simulation base led the research assistants to learn not only the technical and logistical aspects of conducting a simulation but also the interpersonal and educational aspects, which are essential to the learning experience of the students. This thorough preparation played an important role in the seamless conduct of the following simulations which were a major contributing factor to the overall success of the simulation program.

Identify consistent performance in the case scripts from these five SPs. It involved a thorough analysis of video recordings from the practice simulations, where the SPs' abilities to mimic specific physical symptoms, accurately display emotional states, and maintain particular behavioral characteristics were scrutinized over multiple simulation sessions. This vigilance ensured each SP consistently replicated the same level of performance, which was critical for the reliability of medical training simulations.

Additionally, SPs had to follow the specific instructions and standards mentioned in the SP Training Guide. This has involved not only their acting abilities, but also their ability to give useful and also constructive feed forward to the nursing students, as well as to show an acute awareness and sensitivity in terms of cultural nuances during interactions.

Besides these measures, an analysis of the feedback from the students and faculty members that had contact with the SPs was done. This stage was crucial in detecting any minor differences or contradictions in the SPs' performances. This feedback was utilized to customize the training sessions, concentrating on the areas that required improvement, in this way improving SPs' skills and the general efficiency of the simulation program.

Table 6 Summary of the five SPs case scripts

SP No.	Setting	SP Role	Student Role	Scenarios
SP1	A hospital inpatient department in China specializing in gastroenterology	a 51-year-old Han female who has recently been admitted to the hospital due to persistent stomach discomfort and dietary concerns.	A nurse tasked with conducting an initial assessment of the patient, focusing on dietary, environmental, and psychological factors.	Zhu Yuhong is a 51-year-old Han female who has been living in the USA for the past 5 years. She has been admitted to the hospital with complaints of stomach discomfort that has been persisting for two weeks. Mrs. Zhu has a history of adapting to Western dietary habits while maintaining her traditional Chinese cuisine. The student nurse is required to conduct a comprehensive assessment, considering her unique dietary background and current symptoms.
SP2	A hospital's respiratory medicine department in China	A 52-year-old Zhuang male who has been admitted to the hospital with shortness of breath and a persistent cough.	A nurse assigned to conduct an in-depth assessment of the patient's respiratory symptoms, considering dietary, environmental, and psychological factors.	Zhao Dejiang is a 52-year-old Zhuang male who has returned to China for the past 6 years in France. He has been admitted to the hospital exhibiting shortness of breath and a persistent cough that have not improved with over-the-counter treatments. The student nurse must consider the patient's extensive dietary history, which includes French culinary habits and traditional Zhuang dietary customs, to identify any potential triggers for these respiratory symptoms.
SP3	A community hospital in China, in a department specializing in women's health.	A 43-year-old Uyghur woman who has been admitted to the hospital with symptoms of fatigue and joint pain.	A nurse assigned to perform a comprehensive assessment, focusing on diet, environment, and psychological well-being.	Rayhan Ablimit is a 43-year-old Uyghur woman who has lived in Germany for the past 7 years, presents with complaints of fatigue and joint pain. She has a rich background in multicultural integration and is sensitive to Islamic practices within a Western context. The student nurse must consider her religious dietary restrictions, her experience with European urban life, and her commitment to environmental sustainability while assessing her symptoms.
SP4	A hospital in a Chinese metropolitan area that reflects the patient's urban living experience.	A 40-year-old Han male who has come to the hospital with symptoms of stress-related hypertension and difficulty sleeping.	A nurse conducting a comprehensive assessment including diet, environment, and psychological factors related to urban living and cultural adaptation.	Wang Gang is a 40-year-old Han male, has been experiencing elevated blood pressure and insomnia. He has recently returned to China after living in Thailand for 4 years where he was engaged in urban development projects. The student nurse must assess the potential impact of his transition from Thai to Chinese urban environments and his environmental awareness on his current health status.
SP5	A general hospital in China with a dedicated integrative medicine department that includes mental health services.	A 45-year-old Han male admitted for anxiety and stress-related symptoms, possibly exacerbated by cultural re-adaptation.	A nurse responsible for conducting an initial holistic assessment, including the patient's diet, environmental influences, and psychological state, with an emphasis on understanding the patient's cultural background.	Sun Hanyu a 45-year-old Han male, has been experiencing increased levels of anxiety and stress since returning to China from Australia. He has a deep connection with Taoist philosophy and has embraced certain aspects of the Australian lifestyle, particularly the approach to mental health. The student nurse is tasked with assessing how these cultural experiences have influenced his mental health and coping strategies.

Three sessions of implementing simulations with SPs:

Session 1: Pre-debriefing. During the session, the nursing students were given worksheets with extensive information on the simulation scenarios designed to portray varied cultural health assessment contexts. This meeting was aimed at getting the students ready for simulation, by presenting the setting, the roles of patients (SPs) and nurses (students), and the particular scenarios they would meet. Furthermore, the students were informed concerning the schedule of the simulation and given scripts of cases for each of the five SPs.

The case scripts were created considering the cultural backgrounds of SPs that were of different ethnicities, various ages, both genders and of different religious backgrounds. These scripts aimed at making the students to grapple with their comprehension and adaptability upon different cultural health demands. Preparation during this session was essential is setting the scene for the sessions in Session 2, to ensure that the students were well-clued and geared, to participate in the simulation, centered culturally sensitive health assessments.

Session 2: Scenario. Session 2 was characterized by live simulations of scenarios, where each nursing student participated in separate simulations with one SP. This session was divided into three steps: The 1st Step: Students participated in the simulation guided by the case scripts with elaborate scenarios that reflected the cultural background and health issues of the SPs. The scenarios were designed to be realistic clinical scenarios, where students should apply their understanding and abilities in the context of cultural sensitivity. The 2nd Step: After each situation, the SPs checked off how each student performed. This assessment was created for the evaluation of students' clinical judgment, communication skills, and cultural issues when health assessment is considered. The 3rd Step: Once that was done, scenario and checklist were finished, and then a planned reset of the simulated environment was performed. This stage was concerned with reverting the simulation environment and preparing the SPs for the next student. This was done by resetting the simulation space to the original configuration which made sure that each participant has consistency. The SPs went back to their initial states, re-clothing, repositioning their bodies, and re-facial expressions to the starting point of each scenario. This

meticulous planning helped to create the authentic and consistent experience for all students, what highlighted the role of standardization in the simulation.

The second session of the intervention was meant to place nursing students in real-life culturally diverse health-care situations making use of individual simulations with SPs. Clinical decision-making, communication skills and cultural sensitivity are the key areas that this practical approach targeted. The session offered a unique and reliable average learning experience by carrying out scenarios systematically, evaluating performances, and resetting the simulation environment for each student. Adaptability and cultural competency for various healthcare settings were part of this approach that was crucial in preparing students for real world clinical encounter.

Session 3: Debriefing. The debriefing session was attended by all SPs and participants, led by a facilitator (Z J) who shared the aim of the session, highlighting the importance of respectful and positive feedback. At first, participants carried out self-reflection on their performance, identifying their strong-points and where they need to improve. This procedure was led by a facilitator, who applied a structured debriefing guide.

Later on, the session entered its second phase which was conversational in nature where SPs and participants interacted together. This section was developed to help the participants comprehend better how to improve the skills at interaction with the culturally diverse clients.

Last but not the least, each SP shared their thoughts on the cultural sensitivity and communication competencies of participants, gave insights, and summarized the key takeaways. The SPs feedback was thorough, extending to the participants' methodological approach, cultural respect, and clinical assessment competence. The detailed feedback played an important role in ensuring that the participants received a complete profile of their competencies and skill areas in working with cultures diverse populations.

This reflection session served to enable critical reflection and sharing of SPs' perceptions that promote continuous learning and professional development in cultural competence and clinical skills. These sessions involved division of the experimental group into five squads. The questions used in the debrief were chosen

and modified from a simulation textbook by Jeffries (2021), with the addition of cultural competence to address the learning objectives. This systematized process gave participants lots of chances to communicate with the SPs directly, and they were allowed to ask about some particular details of the scenario and to obtain an in-depth understanding of the role and experience of the SPs. This format of simulation activities allowed each participant to have a great amount of time to reflect on and discuss the simulation experience with others, hence, achieving the highest impact of the educational activity.

The process of briefing comprised individual contemplation, oriented conversations, and SP response on cultural and proficient aptitude. The 1st step: Participants then carried out self-assessment on their performance individually in terms of strengths and challenges. The 2nd step: Dialogue between the participants and the SPs, which increases competence in the field of communication with different customers. The 3rd step: Positive and constructive feedbacks of the SPs that encourages goal setting for future growth in cultural competency as well as clinical skills.

Time control and schedule. Time control was managed to ensure the efficiency and effectiveness of the simulation experience. For each simulation, the pre-debriefing session was limited to 10 minutes per participant. Each scenario session was allocated a total duration of 30 minutes, methodically divided into specific segments: 20 minutes of direct interaction with the patient, 7 minutes dedicated to completing the checklist, and a 3-minute turnaround time. After the simulation, the debriefing sessions were conducted in an organized manner. Facilitated by the SPs, the debriefing was done in the groups where each squad which consisted of five participants, discussed for 30 minutes using the debriefing questions (See Figure 2).

In order to guarantee the equal exposure and participation of all the participants in a one-week simulation, it set up the 25 students as five groups of five each to visit the 5 different SPs. The rotation was made every single day from Monday through Friday, and each team was given one SP every single day. That systematic approach ensured that each team had a simulation with each SP at least once, hence ensuring the homogeneity in the training and also the assessment. The

schedule (see Table 7) structured was important in the educational and also research set-ups where consistency and controlled conditions were critical in the assessment and data collection.

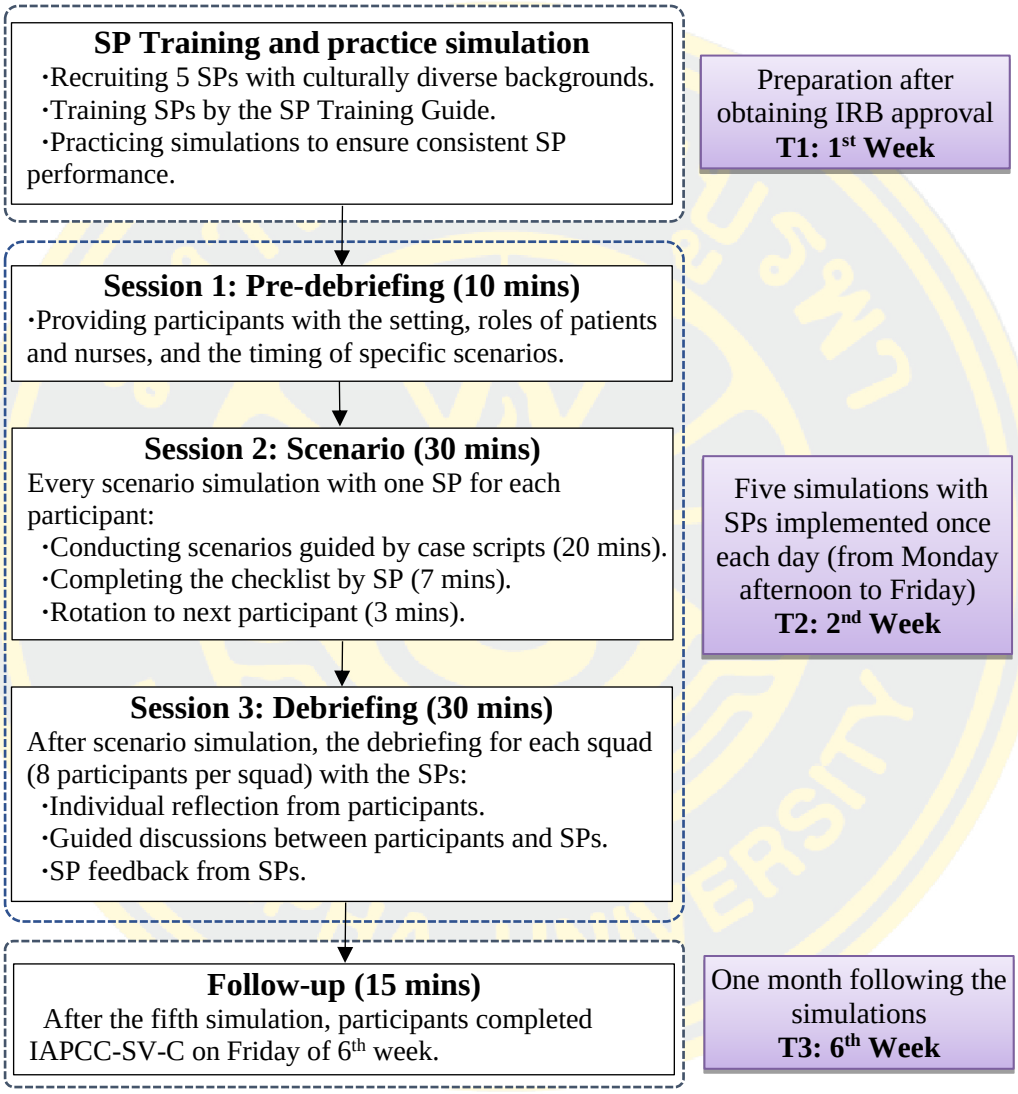

Figure 2 Flowchart description for implementing simulations

Table 7 Simulations Schedule (N=25)

Team No.	Monday	Tuesday	Wednesday	Thursday	Friday
Team 1 (n=5)	simulation (SP 1)	simulation (SP 2)	simulation (SP 3)	simulation (SP 4)	simulation (SP 5)
Team 2 (n=5)	simulation (SP 2)	simulation (SP 3)	simulation (SP 4)	simulation (SP 5)	simulation (SP 1)
Team 3 (n=5)	simulation (SP 3)	simulation (SP 4)	simulation (SP 5)	simulation (SP 1)	simulation (SP 2)
Team 4 (n=5)	simulation (SP 4)	simulation (SP 5)	Simulation (SP 1)	simulation (SP 2)	simulation (SP 3)
Team 5 (n=5)	simulation (SP 5)	Simulation (SP 1)	simulation (SP 2)	simulation (SP 3)	simulation (SP 4)

Cultural Competence Lecture

The lecture on cultural competence, which was a part of the course of Health Assessment and based on the designated textbook, emphasized effective communication with a diverse range of clients. This session was enriched by the integration of the five constructs from the Campinha-Bacote model, a framework that was defined and discussed in collaboration with consulting experts in the field. The lecture was organized into five modules:

1. Cultural awareness. The first module was aimed at improving appreciation of diverse health beliefs and practices by using case studies to get practical knowledge of the cultural impact of health behaviors. The first section featured three figures in order to illustrate differences in health beliefs and practices among various cultures. The pictures depicted the costumes of 56 nationalities of China, and the differences in health beliefs and practices across various cultures. Views of China and the foreign on “postpartum confinement” were presented a traditional Chinese view of confinement, known as “sitting the month” and it showed the rests, warm, family participation and specific tastes related to traditional dietary guidelines typical for this practice. In contrast, westernized postpartum behavior was manifested in early participation in social activity, physical movement and less strict dietary habits.

The second part of Cultural awareness presented two typical cases of cultural influence. Case 1 represented Mr. Zhang, a 65-year-old retired teacher who lives with chronic low back pain as a result of a herniated disc, and he does so by

using a hybrid treatment consisting of Western treatments such as painkillers and physiotherapy and Chinese medicine practices namely acupuncture and herbal therapies in addressing qi and blood imbalance. Case 2 introduced Ramadan and Islamic purification rituals and health that proved the connection between beliefs and health behavior in Islam.

2. Cultural Knowledge. The second module focused on the strengthening of global nursing practices knowledge and the enhancement of cross-cultural communication for improved care of clients. This section addressed nursing culture, cultural sensitivity and cross-cultural communication in the global nursing practices. By a number of vignettes that reflected the nursing practices of numerous cultures, it showed how health care was delivered in different cultural settings with each vignette projecting a different aspect of nursing and patient care. Ranging from ancient medicine to contemporary clinical settings representing the diversity of knowledge, methods, and settings of nursing profession globally. By a team of healthcare providers from diverse cultural communities participating in a collaborative environment in discussing patient care or medical findings, it demonstrated the significance of cross-cultural communication in global nursing practices, presenting the integration of different points of views in healthcare settings. All this leads to the inclusiveness what results in better patient outcomes and creates a culture of mutual respect and learning between the staff. The subsequent slide was to provide resources (online courses and Books) to enable students to gain more cultural knowledge.

3. Cultural skill. The third module aimed at competence in identifying and addressing culturally rooted nursing diagnoses and improvement of communication skills for successful multiracial patient encounters. The participant came to know that nursing diagnosis in cultural nursing was a process that it is associated with meeting the unique cultural healthcare beliefs, values, and practices of the patients (Ackley et al., 2021). Additionally, the cultural relevance of nursing diagnoses identified three specific diagnoses with cultural etiologies: (1) Verbal Communication Impairment Related to Cultural Differences; (2) Impaired Social Interaction Related to Sociocultural Dissonance; (3) Noncompliance Related to Patient Value System. Subsequently, the students studied the communication skills: (1) Interpretation of

Nonverbal Signals; (2) Effective Questioning Techniques; (3) Recognizing Cultural Differences; (4) Cross-Cultural Communication Strategies.

Lastly, the students watched a video of communication with a non-verbal stroke patient to enhance their cultural skills, to interpret non-verbal signs and changes of their manifestations in different cultures as well.

4. Cultural encounter. The fourth module was designed to apply Leininger's Sunrise Model in practical scenarios, particularly for patients, focusing on cultural accommodation, negotiation, and care repatterning (Leininger, 1991). Leininger's Sunrise Model emphasizes the importance of cultural competency in nursing practice (McFarland & Wehbe-Alamah, 2019). This part effectively applied Leininger's Sunrise Model for culturally caring for a patient discharged from Acute Myocardial Infarction (AMI), addressing three critical aspects: cultural care diversity and universality, cultural care accommodation or negotiation, and cultural care repatterning or restructuring.

5. Cultural desire. The multicultural approach of the fifth module focused on a lifelong cultural learning process, self-awareness, and practical application, improving the cultural competence in nursing. In order to promote cultural desire among nursing students on a continuous basis, a multifaceted approach was implemented. This section started with consideration of a cultural aspect of the knowledge of nursing philosophy and practice of various cultures, developing a high level of respect and understanding of the requirements of patients of different nationalities. The students acquired cross-cultural communication skills, to enable them to relate well with patients and health practitioners of diverse cultures. The development of the consciousness about and respect to the multicultural care also contributed to the improvement of care delivery quality among the students. Learning and development were an essential element of this on-going process. Students completed 7-minute self-reflective writing tasks during the break of the lecture to enhance their motivation towards and value of multiculturalism. This process of reflective writing enabled students to investigate their own cultural beliefs, and develop a sense of self-awareness about their background and how this affects their patient interactions, critically evaluate the importance of cultural competence in nursing.

The process of the lecture. the lecture was hosted by the lecturer who had a thorough understanding of teaching methods and lecture guideline. The same lecturer hosted lectures at both universities to ensure a consistent effect (every lecture 40mins). The detailed outline of the cultural competence lecture is comprehensively presented.

Standardization of the classroom environment and time. Each classroom was set up using the similar layout size, and lighting. Audio-visual equipment and teaching aids like PowerPoint and Pot Player, were used on screens of similar dimensions. The lectures were delivered at the same time (9:00-9:40) on two consecutive days to reduce the possibility of time-related fluctuations. The learning materials were standardized and students were taught in the same ways, with standard times for lessons and breaks, to ensure that all students get the same information in the same way.

Instruments for data collection

Demographic questionnaire

The demographic questionnaire was developed by the researchers, which is developed to elicit information about age, gender, ethnicity, location of living area, religion, subject background, level of English proficiency, whether to be an only-child, whether to be a student leader, and whether to be exposed to foreign or minority cultures.

The Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version (IAPCC-SV)

This instrument, developed by Campinha-Bacote (2007), is designed to measure the level of cultural competence among undergraduate students in the health professions. The IAPCC-SV showed an acceptable internal consistency, with a Cronbach's alpha for the overall scale of .783 (Fitzgerald et al., 2009). A study by Chen et al. (2012) reported a reliability pretest score of alpha .66 and an alpha of .76 for the posttest score for the IAPCC-SV. This tool consists of 20 questions with five subscales: Cultural Awareness, Cultural Knowledge, Cultural Skill, Cultural Encounters, and Cultural Desire. Each question has a 4-point Likert Scale including (4) strongly agree, (3) agree, (2) disagree, and (1) strongly disagree. The IAPCC-SV

total scoring ranges from 20 to 80 with 20 to 40 as culturally incompetent, 41 to 59 as culturally aware, 60 to 74 as culturally competent, and 75 to 80 as culturally proficient. It was retranslated and subjected to reliability and validity testing, conducted with the permission of the author Campinha-Bacote (Email: meddir@aol.com), the IAPCC-SV was retranslated into Chinese.

The Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version-Chinese (IAPCC-SV-C)

The researchers translated English into Chinese to check its adequacy and accuracy by using the translation-back-translation method (Beaton et al., 2000) (see Figure 3). The content validity of the IAPCC-SV-C was evaluated by a panel of six experts. These experts (four nursing professors from the two colleges and two directors of nursing from the affiliated hospitals) were selected based on their extensive experience in cultural competence, nursing education, and bilingual proficiency in Chinese and English. Depending on comments made by the expert panel.

Sampling and sample. A convenience sampling method was used to recruit undergraduate nursing students from two colleges of undergraduate (Four-year Baccalaureate Degree) Programs of Nursing. The sample size was estimated based on the criterion that at least 10 participants per item were required for conducting an exploratory factor analysis of an instrument (Nunnally & Bernstein, 1994; Polit & Beck, 2020). The study was carried out with a sample size of 228 (116 students from Jiangsu Vocational College of Medicine and 112 students from Jiangsu Nursing College).

Ethical Considerations: Ethical approval was obtained from the Research and Ethics Committees of two universities, including Jiangsu Vocational College of Medicine, China and Jiangsu Nursing College, China.

Data Analysis: Twenty items of the IAPCC-SV-C were examined separately for reliability and validity. Internal consistencies and item-total correlations were measured to assess the reliability. A content validity index (CVI) was used in order to examine the validity.

Results: Cronbach’s correlation coefficient of the 20-item IAPCC-SV-C was found to be .95, and the corrected item-total correlations of each item varied between

.51 and .79. The I-CVI values ranged from .83 to 1.00, and the S-CVI for the IAPCC-SV-C was .90, indicating the scale's suitability for further application. In conclusion, the IAPCC-SV-C was evaluated as a reliable and valid instrument for application among Chinese undergraduate nursing students.

Figure 3 Translation procedures

Human Subject Protection

The proposal was submitted for approval to the Institutional Review Board (IRB) Burapha University in Thailand, Jiangsu Nursing College, and Jiangsu Vocational College of Medicine in China: approved No. of BUU ethic committee (G-HS057/2565); approved No. 2023-(K-059) of Jiangsu Vocational College of Medicine ethic committee; approved No. 2023-(K-036) of Jiangsu Nursing College ethic committee. The number ChiCTR2400080618, was registered from Chinese Clinical Trial Registry (ChiCTR).

A written consent form was signed by the participant who show interest to participate in the study. Before the prospective participants agree to participate, the purpose of the study was informed, including the potential benefits and risks of the participation. There was no more than a minimal risk involved in participating in this study. One risk identified is the participant’s feelings discussing the sensitive issue of cultural competence. The informed consent includes the contact information for the university’s counseling center. The consent form was written at an appropriate reading level for students and participants were informed that their data would be confidential. The collected data was kept in a password secure computer. The

completed tools were coded to ensure anonymity and confidentiality. Data were entered and accessed only by the research assistants.

A pilot test for the feasibility of the intervention

To develop and assess the feasibility and preliminary effects of the simulation with SPs in cultural competence. Mirroring the approach adopted in a methodologically comparable study by Okere et al. (2011), this research initiated with a pilot study involving 39 student physical therapists. Subsequently, 40 undergraduate nursing students, who were recruited through convenience sampling method (then were not in the main study again). The one-group participants were measured their cultural competence at 3 times: before the intervention (T1, 1st week), after completed the intervention (T2, 2rd week), and at follow-up (T3, 6th week). The simulation with SPs showed feasibility and effectiveness in improving cultural competence. The recruitment procedures were completed with 40 participants voluntarily participating in the program. The completion of all onsite and online questionnaires, participation with no attrition, and follow-up measures suggest that the participants well-accepted and satisfied with the simulation with SPs. In this pilot study, the IAPCC-SV-C yielded a Cronbach's alpha reliability coefficient of .83, affirming its acceptable internal consistency. In summary, employing SPs in simulations emerges as a practical and efficacious strategy to cultivate cultural competence in Chinese nursing education.

Data collection procedures

The pretest data of the IAPCC-SV tool and demographic questionnaire were collected from both groups one week prior to the cultural competence lecture (T1). For the control group, posttest data were collected immediately after the lecture (T2). For the experimental group, and posttest data were collected immediately after the lecture and simulation (T2) and at 1 month (T3) following the simulation to evaluate the short-term and long-term effects of the intervention (See **Figure 4** and **Table 8**).

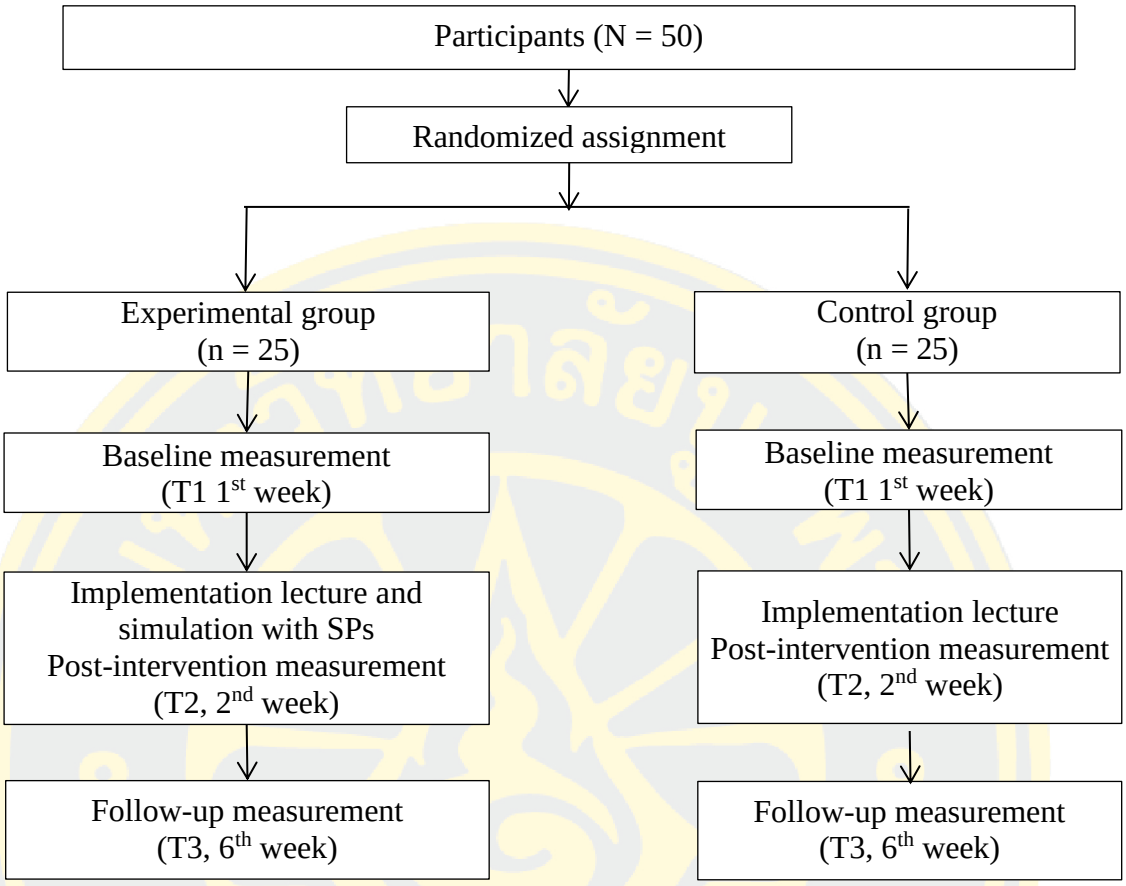

Figure 4 Research data collection and process

The research assistant2 (RA2) received data without any identifying group information. The data were coded in such a way that the assistants did not know whether the data belong to the experimental or control group. This approach minimized the risk of bias in data interpretation. An external auditor periodically reviewed the process to ensure the blinding remains intact throughout the study.

Table 8 The detailed steps in the procedure to obtain data

Time	Experimental group	Control group
1st week	**Pre-intervention:** RA2 evaluated using the demographic form and IAPCC-SV-C **(20-25mins)**.	**Pre-intervention:** RA2 evaluated using the demographic form and IAPCC-SV-C **(20-25mins)**.
2nd week	**Cultural competence lecture (Monday morning):** 1.The lecturer explained the objectives, teaching methods, and teaching outline of cultural competence lecture **(10-15mins)**. 2.The lecture was performed by the same lecturer **(40mins)**. **Five simulations with SPs implemented once each day (from Monday to Friday):** 1. Every simulation experience with SP for each participant: time with patient, checklist time, and turn-around time **(30mins)**. 2. After every simulation, the debriefing for each squad (5 participants per squad) with the SPs **(30mins)**: ·Individual reflection by participants. ·Guided discussions between participants and SPs. ·Feedbacks by SPs.	**Cultural competence lecture:** 1. The lecturer explained the objectives, teaching methods, and teaching outline of cultural competence lecture **(10-15mins)**. 2. The lecture was performed by the same lecturer **(40mins)**.
	Post-intervention: After the fifth simulation, RA2 evaluated using IAPCC-SV-C **(10-15mins)**.	**Post-intervention:** RA2 evaluated using IAPCC-SV-C **(10-15mins)**.
6th week	**Follow-up:** RA2 evaluated using IAPCC-SV-C (follow-up) **(10-15mins)**.	**Follow-up:** RA2 evaluated using IAPCC-SV-C (follow-up) **(10-15mins)**.

Data analyses

Data were analyzed and managed using SPSS 24.0 with a statistical significance level set at <.05. The data were entered directly from the demographic form and the IAPCC-SV-C by the research assistants. The research assistants

screened for accuracy by doublechecking the data with the electronic data and conduct frequency distributions on all variables to determine any outliers. There was a third check of the IAPCC-SV-C due to its reverse Likert-scale formatting. The data analysis procedures as follow:

1. Perform assumptions and the normality of the data.

2. Descriptive statistics to describe the demographic characteristics of the participants, including mean, standard deviation, frequency, and percent distribution to describe the general formation.

3. An analysis of the descriptive statistics including a pretest total mean for both the intervention and control groups and a posttest total mean for both groups.

4. Perform Levene's test to analyze the assumption of equal variances is met for both pretest and not.

5. Perform analysis of variance (ANOVA) with repeated measures to test whether there is a statistical significance for time effect (pre-intervention [T1] v. post-intervention and follow-up [T2 and T3]) or not.

6. Perform between-groups F test to test whether the group effect was statistically significant or not.

CHAPTER 4
RESULTS

To ensure data accuracy, the research assistant2 (RA2) compared the physical data entries with their electronic counterparts and performed frequency analyses on all variables to identify potential anomalies. Additionally, a specific scrutiny was applied to the 14th question of the IAPCC-SV-C tool, considering its unique reverse Likert-scale structure. It was noted that the demographic and IAPCC-SV-C instruments were complete with no missing data.

This chapter presented results of the study in seven parts. The first part revealed the CONSORT Flow Diagram. The second part described the demographic characteristics of the participants. The third part reported the evaluation of statistical assumptions for the dependent variables. The fourth part reported descriptive statistics of the outcome variables. The fifth part reported the comparisons of pre-intervention scores of outcome variables. The sixth part presented the study hypotheses testing. The final part reported summary of the findings.

CONSORT Flow Diagram

The participants who undergraduate sophomore-level nursing students enrolled in a four-credit introduction to professional nursing course at the two medical universities. Eighty-seven accessible populations (Jiangsu Vocational College of Medicine had 45 students; Jiangsu Nursing College had 42 students) were assessed for eligibility criteria and invited to participate in the research project, and 8 students did not sign the consent form and were excluded due to personal reasons. Based on the sample size requirement, only 50 students were needed, so determined the participants according to the order of student registration. The remaining students will participate in the next intervention in the future.

For the experimental group, at pre-intervention (1st week, T1), one-day before the implementation of the intervention, research assistant 1 asked the participants to fill out questionnaires, including the demographic information and the IAPCC-SV-C. Then, they the lecture plus the simulation with SPs. The intervention

was consecutively implemented for one week. At post-intervention (2rd week, T2) and follow-up (6th week, T3) measures, they were asked to fill out the IAPCC-SV-C again. There was no participant drop-out during the implementation and follow-up period. For the control group, they received the lecture. The research assistant also asked them to fill out all questionnaires at 1st week (T1), 2nd week (T2), and 6th week (T3) the same as in the experimental group.

After testing all assumptions for subsequent statistical analyses, three outliers were removed. There were one (case # 16) in the experimental group and two outliers (cases # 5 and # 18) in the control group. Finally, the total participants in the experimental group were 24, and 23 in the control group. Details were shown in **Figure 5**.

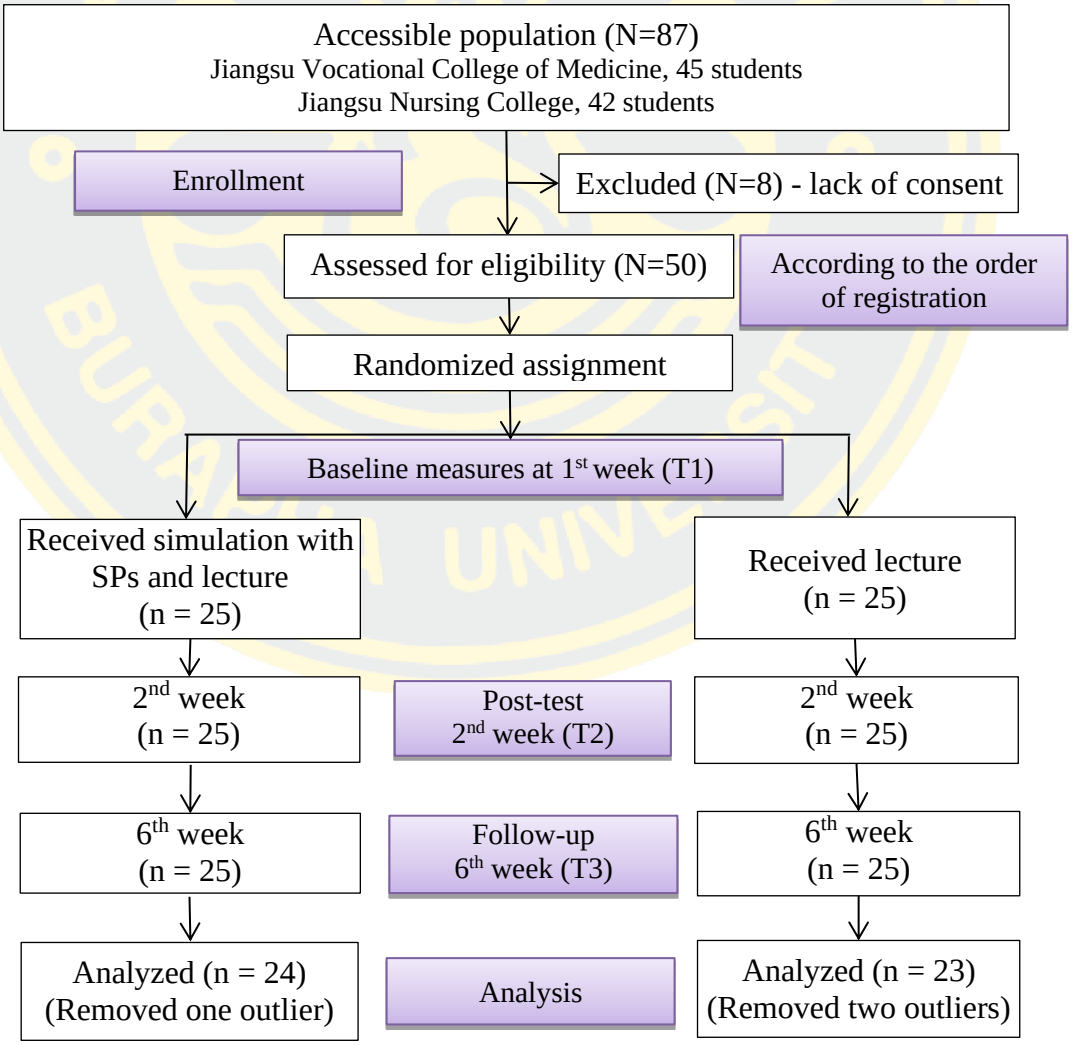

Figure 5 CONSORT flow diagram

The demographic characteristics of the participants

The demographic data of the participants described the participants' general characteristics, such as gender, age (years), ethnicity, living area, religion, subject background, English proficiency, whether to be an only child, whether to be a student leader, and whether to be exposed to foreign cultures. These demographic characteristics were analyzed using descriptive statistics including frequency, percentage, mean, and standard deviations. The differences in demographic characteristics between the intervention and control group were compared by using chi-square test and independent t-test.

Table 9 provided an overview of the characteristics of the experimental group and the control group in a study involving a total of 47 participants. The experimental group consists of 24 individuals, while the control group consists of 23 individuals. For the experimental group, 5 participants were males. Their mean age was 19.46 years (SD = .51, range 18-20). Most of them are Han nationality (83.33%) and atheist (87.50%). 75% of students' high school subject background was science. Only 2 students had no English proficiency. 10 were only-child (41.67%) and 14 were not (58.33%). 12 individuals believed they were exposed to foreign cultures and 12 not exposed (50%).

The control group had 2 males (8.70%) and 21 females (91.30%), with average age of 19.61 years (SD = .50, range = 18-20). Almost of the students were Han (95.65%), non-religious (95.65%), not-rural dwellers (82.61%) and had English proficiency with CET-4 (39.13%), and CET-6 (30.43%). 100% students were exposed to foreign cultures. Almost two thirds of them were only-child (65.22%), while approximately three forth (73.91%) non-leader.

Subsequently, the differences in demographic characteristics between the experimental and control groups were compared by using chi-square test for categorical data and independent t-test for continuous data as shown in **Table 9**. The results showed no significant differences ($p > .05$).

Table 9 Descriptive statistics of participants' general characteristics

Characteristic	Experimental group (N=24)		Control group (N=23)		t	χ^2	*p* value
	n	%	n	%			
Gender							
Male	5	20.83	2	8.70		0.58 [a]	0.45
Female	19	79.17	21	91.30			
Age (years)							
Average (SD)	19.46 (±0.51)		19.61 (±0.50)		1.02		0.31
Range	18-20		18-20				
Ethnicity						0.80 [a]	0.37
Han	20	83.33	22	95.65			
Minority	4	16.67	1	4.35			
Living area						3.55 [a]	0.17
Urban	10	41.67	12	52.17			
Suburban	4	16.67	7	30.43			
Rural	10	41.67	4	17.39			
Religion						0.23 [a]	0.63
None	21	87.50	22	95.65			
Yes	3	12.50	1	4.35			
Subject background						0.45 [a]	0.50
Science	18	75.00	20	86.96			
Liberal arts	6	25.00	3	13.04			
English proficiency						3.09 [a]	0.21
None	2	8.33	5	21.74			
CET-4	18	75.00	17	73.91			
CET-6	4	16.67	1	4.35			
Whether to be an only-child						2.62	0.11
No	10	41.67	15	65.22			
Yes	14	58.33	8	34.78			
Whether to be a student leader						0.66 [a]	0.42
No	21	87.50	17	73.91			
Yes	3	12.50	6	26.09			

Table 9 (Continued)

Characteristic	Experimental group (N=24)		Control group (N=23)		t	χ^2	*p* value
	n	%	n	%			
Whether to be exposed to foreign or minority cultures						1.34 [a]	0.25
Yes	21	87.50	23	100.00			
No	3	12.50	0	0.00			

***Note* a:** corrected χ^2 test

CET: College English Test, a national English as a foreign language test in the People's Republic of China. It examines the English proficiency of undergraduate and postgraduate students in China, including two levels: CET4 (Junior) and CET6 (Advanced).

Only-child: refers to a person who has no siblings—neither brothers nor sisters. This status is particularly notable in societies or cultures where having multiple children is common or encouraged. In the context of this study, the only-child status was analyzed to understand its potential impact on a student's development, personality, behavior, and social interactions.

Evaluations of statistical assumptions for the dependent variables

The total scores of the IAPCC-SV-C of both the experimental and the control groups, and among 3 time-measures were examined. The univariate counterparts were based on a fundamental set of assumptions representing the requirements of the underlying statistical theory. Assumption testing for repeated measures ANOVA comprised: (1) outliers; (2) normality; (3) homogeneity of variance; and (4) compound symmetry.

1. Test for outliers

The univariate outliers of the variable were tested using Box-plots, which revealed that the experimental group had one case outlier (Case No.16 for IAPCC-SV-C data at Time1 and Time3). The control group had two cases outliers (Case No. 5 for IAPCC-SV-C data at Time 1 and Time 3 and Case No. 18 at Time 2). Thus, the total sample size was 24 cases for the experimental group and 23 cases for the control group.

2. Normality testing

The scores of the IAPCC-SV-C were tested for univariate normality, Shapiro-Wilk ($p > .05$) with the small sample size (<50), and by visual inspection of the participants' histograms and normal Q-Q plots, especially when the sample size of each group was approximately equal. These results indicated that all groups at all three time points, except for the Control group at Time 3 (with a significance level of .04) had p-values greater than .05 for both tests, indicating no significant departure from normality.

The robustness of repeated measures ANOVA to normality violations, especially with similar sample sizes, means that it can still produce accurate results even if normality is not fully met, as non-normality typically doesn't significantly alter Type I error rates (Knief & Forstmeier, 2021). This justification for continuing with the analysis despite the control group's non-normality at Time 3 was rooted in statistical research (Knief & Forstmeier, 2021; Schminder et al., 2010).

3. Homogeneity of variance (between-subject)

Levene's statistic was used to test the assumption of homogeneity of variance for the between-subject design. The test of homogeneity of variances for the between-subject comparison showed no significance ($p > .05$). This indicated that the variance of the dependent variable between these groups was equal. Then the homogeneity of variance assumption was met. All of the error variance of the subscale was equal across groups.

4. Mauchly's test of sphericity (within-subject)

Mauchly's test of sphericity was used to test the assumption of sphericity. The total score of results showed no significant ($p > .05$) indicated that the homogeneity of variance-covariance matrices was equal, and the sphericity assumptions were met. The sphericity of the IAPCC-SV-C ($p < .05$), therefore, according to the p-value, the study selected Greenhouse-Geisse or Huynh-Feldt to corrected estimates of sphericity to report the results of 2-way repeated measure ANOVA.

Descriptive statistics of the outcome variable

In this study, the outcome variable included the total and subscales scores of the IAPCC-SV-C. They were measured at pre-intervention (1st week, T1), post-intervention (2nd week, T2), and follow-up (6th week, T3) as illustrated in **Table 10**.

Comparisons of pre-intervention scores of outcome variable

At pre-intervention (1st week, T1), the scores of outcome variable were compared between the experimental and control groups. These outcomes were conducted to examine their differences before implementing the intervention by using an independent t-test. The results showed no significant differences ($p > .05$) in mean scores of total and subscales of IAPCC-SV-C between the intervention and the control groups at pre-intervention (see **Table 11)**.

Table 10 Means and standard deviations of the scores of IAPCC-SV-C of participants in the intervention and the control groups among 3 time-measures

IAPCC-SV-C	Week	Intervention group (N=24)		Control group (N=23)	
		M	SD	M	SD
Total score	1st	50.92	4.40	49.61	5.96
	2nd	58.58	4.66	49.87	6.93
	6th	65.75	4.50	49.65	7.04
Subscale scores					
Cultural Awareness	1st	8.04	1.71	7.74	1.63
	2nd	9.13	1.83	7.78	1.91
	6th	10.58	1.44	7.70	1.99
Cultural Knowledge	1st	11.42	2.08	11.78	2.83
	2nd	13.46	2.38	11.83	2.99
	6th	14.79	2.47	11.78	3.04
Cultural Skill	1st	8.00	1.64	7.70	1.72
	2nd	9.17	1.49	7.70	2.12
	6th	10.50	1.22	7.65	2.17

Table 10 (Continued)

IAPCC-SV-C	Week	Intervention group (N=24)		Control group (N=23)	
		M	SD	M	SD
Cultural Encounters	1st	12.25	1.70	11.87	2.24
	2nd	14.21	2.00	11.96	2.42
	6th	15.88	2.49	11.96	2.98
Cultural Desire	1st	11.21	1.41	10.52	2.61
	2nd	12.63	1.56	10.61	2.93
	6th	14.00	1.44	10.57	3.00

Table 11 Comparisons of the mean total and five subscales scores of outcome variable between the intervention and the control groups measured at pre-intervention (1st week, T1) by using independent t-test

Variable	Experimental group (N=24)		Control group (N=23)		M_{diff}	*t*	*p*
	M	SD	M	SD			
IAPCC-SV-C	50.92	4.40	49.61	5.96	1.31	0.86	0.40
Cultural Awareness	8.04	1.71	7.74	1.63	0.30	0.62	0.54
Cultural Knowledge	11.42	2.08	11.78	2.83	-0.37	-0.51	0.62
Cultural Skill	8.00	1.64	7.70	1.72	0.30	0.62	0.54
Cultural Encounters	12.25	1.70	11.87	2.24	0.38	0.66	0.51
Cultural Desire	11.21	1.41	10.52	2.61	0.69	1.13	0.27

Testing of research hypotheses

This study aimed to examine the effectiveness of simulation with SPs on the cultural competence of Chinese undergraduate nursing students. Research hypotheses were to compare the study outcomes of the IAPCC-SV-C scores between the experimental and the control groups, and among three-time measures within the experimental group. Two-way mixed repeated measures ANOVA (one between-one within) was used to determine a mean difference in total scores of IAPCC-SV-C between the experimental and control groups at pre-intervention (1st week), post-

intervention (2nd week), and follow-up (6th week), and within a group among the 3-time measures. The results showed a significant interaction effect of Group *Time (F (2, 44) = 267.43, p< .001, Partial η^2= .92). Moreover, the results also revealed significant main effects of Group (between-subjects) (F (1, 22) = 33.73, p< .001, Partial η^2= .61) and Time (within-subjects) (F (1.51, 44) = 398.93, p< .001, Partial η^2= .95) (see **Table 12**).

Because the interaction (Group*Time) effect supersedes to the main effects. Subsequently, simple main effects of Group and Time were then run after the finding of a significant interaction effect to examine the differences between the two groups at each point of times, and the differences of change in IAPCC-SV-C over time within each group.

Table 12 Repeated measure ANOVA of the total scores of IAPCC-SV-C

Source variation	*SS*	*df*	*MS*	*F* [a]	*p-value*	η^2p
Between Subjects						
Group	2548.18	1	2548.18	33.73	< .001	.61
Error	1661.99	22	75.55			
Within subjects						
Time	1228.58	1.51	811.35	398.93	< .001	.95
Error	67.75	44	1.54			
Group*Time	1212.58	2	606.29	267.43	< .001	.92
Error	99.75	44	2.27			

a= Greenhouse-Geisser was used to adjust the degree of freedom, η^2***p*** = Partial Eta Squared

For the simple main effect of Group, Bonferroni-corrected pairwise t-tests were used to compare differences in total scores of IAPCC-SV-C between the intervention and the control groups at each pair of time points. The results showed that at pre-intervention (T1), the IAPCC-SV-C score was not different between the two groups (p > .05). At post-intervention (T2), and at follow-up (T3), scores of IAPCC-SV-C in the intervention group were significantly higher than that in the control group (F (1,22) =29.56, p < .001, Partial η^2= .57, and F (1,22) = 105.44, p

< .001, Partial η^2= .83, respectively) (see **Table 13** and **Figure 6**). These findings indicated that after receiving the IAPCC-SV-C, participants in the intervention group had better cultural competence than the control group and could maintain this effect to the follow-up period.

Table 13 Simple main effect of Group on IAPCC-SV-C scores at each time points

Source variation	*SS*	*df*	*MS*	*F*	*p-value*	η^2p
Pre-intervention (T1)						
Between subjects	20.89	1	20.89	.87	.360	.04
Error	529.61	22	24.07			
Post-intervention (T2)						
Between subjects	843.67	1	843.67	29.56	< .001	.57
Error	627.83	22	28.54			
Follow-up (T3)						
Between subjects	2896.20	1	2896.20	105.44	< .001	.83
Error	604.30	22	27.47			

η^2***p*** = Partial Eta Squared

For the simple main effect of Time, within the intervention group, there was statically significant difference of IAPCC-SV-C scores among the three times points (F2, 46 = 792.40, p < .001, η^2p = .97), indicating that there was different of IAPCC-SV-C scores at least one pair of times. However, there was not different of IAPCC-SV-C in the control group (see **Table 14**).

Table 14 Simple main effect of Time on IAPCC-SV-C scores in the intervention and the control groups

Source variation	*SS*	*df*	*MS*	*F*	*p-value*	η^2p
Intervention group						
Time	2641.33	2	1320.67	792.40	< .001	.97
Error	76.67	46	1.67			
Control group						
Time	.90	2	.45	.18	.84	.01
Error	111.77	44	2.54			

η^2p = Partial Eta Squared

Table 15 Pairwise comparisons using Bonferroni of the difference on IAPCC-SV-C scores between each pair of time in the intervention and the control groups

Source variation	M_{diff}	*SE*	p-value	95% CI for Difference[a]	
				Lower Bound	Upper Bound
Experimental group					
T1 vs T2	-7.67	0.34	< .001	-8.56	-6.78
T2 vs T3	-7.17	0.32	< .001	-7.98	-6.35
T1 vs T3	-14.84	0.45	< .001	-15.98	-13.68
Control group					
T1 vs T2	-0.26	0.39	1.00	-1.28	0.76
T2 vs T3	0.22	0.39	1.00	-0.80	1.23
T1 vs T3	-0.04	0.60	1.00	-1.58	1.50

a. Adjustment for multiple comparisons: Bonferroni

Next, pairwise comparisons using Bonferroni-corrected paired t-test were run to examine the difference between each pair of time-measures. For the experimental group, the IAPCC-SV-C scores at post-intervention (T2) and follow-up (T3) were significantly higher than that at pre-intervention (T1) (Mdiff = -7.67 and Mdiff = -14.83, p< .001, respectively), and the scores at follow-up (T3) was

significantly higher than that at post-intervention (T2) (Mdiff = -7.17, p<.001). The participants who received simulation with SPs had better IAPCC-SV-C over time. There was no pair of time difference in the control group (p> .05). Details were in **Table 15** and **Figure 6**.

The line graph (**Figure 6**) presented that the IAPCC-SV-C scores in the intervention group were higher than in the control group at T2 and T3 whereas the line connecting each time point (T1-T3) in the experimental group increased over time. This confirmed the statistical findings.

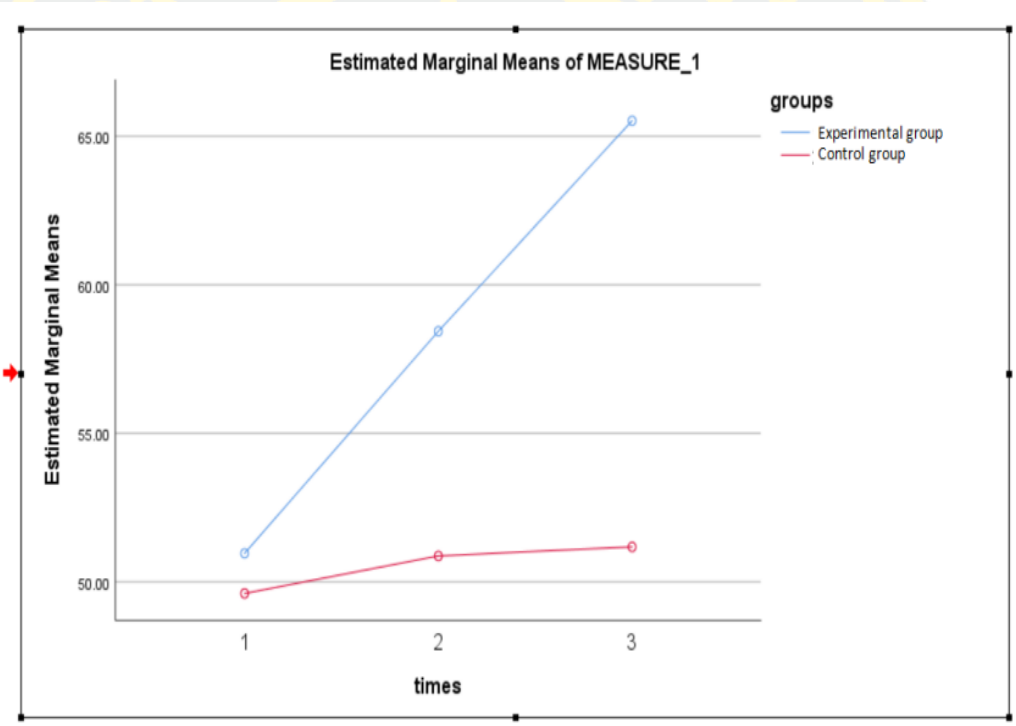

Figure 6 Comparisons of means of total IAPCC-SV-C scores between the intervention and the control groups, and among 3-time measures

Summary of the findings

The outcomes of the IAPCC-SV-C determined the effectiveness of the simulation with SPs in the experimental group as comparing to the control group at three-time measurements.

At pre-intervention, before implementing the simulation with SPs, the mean scores of IAPCC-SV-C (cultural competence) between the experimental and the control groups were found no difference.

Two-way repeated measure ANOVAs were performed to determine the differences of the scores of each outcome between the intervention and the control groups, and within-group (3-time-measurements). The results revealed that the mean scores of the IAPCC-SV-C of participants in the experimental group were higher than those in the control group at post-intervention (T2) and follow-up (T3). Within the experimental group, the IAPCC-SV-C at follow-up and post-intervention were higher than at pre-intervention.

These findings suggest the simulation with SPs was effective in that participants in the experimental group receiving the simulation with SPs plus the cultural lecture had better cultural competence than that in the control group only receiving the cultural lecture. Within the experimental group, the students' cultural competence increased overtime.

CHAPTER 5
CONCLUSION AND DISCUSSION

This chapter presents the summary and discussions. Conclusions, strengths and limitations, suggestions, and recommendations are also presented.

Summary of the study

This study aimed to evaluate the effectiveness of simulation with SPs for the participants who undergraduate sophomore-level nursing students enrolled in a four-credit introduction to professional nursing course at the two medical universities in China. A pretest-posttest randomized control trial was designed. Twenty-five students from each university were separately selected to form two groups from April to July 2023, with 25 cases in each group, using a random number table method based on the list of nursing students' names. These two groups were randomly assigned to the experimental group and the control group by lot-drawing method. They were randomly assigned into the experimental and the control groups with an equal number of 25 participants per group. The level of the participants' cultural competence was measured three times at pre-intervention (T1), post-intervention (T2), and follow-up (T3). The IAPCC-SV was translated into Chinese version (IAPCC-SV-C), which was evaluated psychometrically with an overall acceptable level of Cronbach's alpha (α= .83) as internal consistency and reliability. During the intervention, no participants dropped out. In addition, one outlier in the experimental group and two outliers in the control group were removed. Therefore, the data of 24 participants in the experimental group and 23 participants in the control group were analyzed by descriptive statistics and two-way repeated measure ANOVA. Based on survey data measured three times from both of the two groups' participants, the reliability of IAPCC-SV-C were measured with Cronbach's alphas of .82.

After the intervention, the score of IAPCC-SV-C in the experimental group were higher than those in the control group at post-intervention and follow-up. Moreover, within the experimental group, the score of IAPCC-SV-C after completion

of the implementation and at follow-up were better than those of pre-intervention, and increased overtime.

Discussions of the findings

1. The level of cultural competence of Chinese undergraduate nursing students prior to intervention

In this study, the pre-invention cultural competence scores of the experimental group of undergraduate nursing students were 50.92±4.40, while the control group scored 49.61±5.96. These scores indicate a moderately low cultural competence (Scores of 41 to 59 suggest a culturally aware level), significantly lower than the scores of undergraduate nursing students in the United States, which were 61.70±5.80 in Utah State (Chen et al., 2018), 64.87±5.38 in Dakota State (Isaacson, 2014), and the scores of undergraduate and postgraduate nursing students in five Asian regions (Fung et al., 2023), such as Hongkong, which was 60.90±8.05 (Scores ranging from 60 to 74 suggest a culturally competent level). The lower cultural competence scores observed in the experimental and control groups of Chinese undergraduate nursing students in this study can be attributed to various factors. Firstly, the curriculum in Chinese nursing education have less emphasis on cultural competence compared to the United States. In American nursing programs, there is a significant focus on cultural competence due to the diverse nature of the patient population. This is supported by research conducted by Kardong-Edgren & Campinha-Bacote (2008), which highlighted that U.S. baccalaureate nursing curriculums integrate cultural competence training extensively.

Secondly, the experience of various cultures both in the educational and clinical environment was restricted in China. In the U.S., students have clinical rotations with different cultural backgrounds however in China, nursing students are not exposed to such diversity. This fact is emphasized by Cruz et al. (2018) who discovered that direct exposure to diverse cultures is one of the important components of cultural competence in nursing students.

Further, the lower scores of Chinese nursing students can be regarded in light of the wider societal context. In monoculture countries like China, people did not have that much chance to be in touch with people from different cultural backgrounds,

so they could not have cultural competence. This was also reinforced by some studies (Lantz et al., 2020; Larson & Bradshaw, 2017; Presseau et al., 2019), which found a direct relationship between social diversity and cultural competence in healthcare professionals.

Nevertheless, it is important to note that the cultural competence scores of nursing students in five Asian sites, like Hong Kong, are more similar to U.S. scores. This can be attributed to the higher level of cultural diversity and international exposure in these regions. For example, Hong Kong being an international center to this day can support the nursing curriculum and clinical experience more multicultural for students.

The results also point to the necessity of a more comprehensive and whole of school cultural competence approach in nursing education, particularly in regions that have less cultural diversity. The utilization of international exchange programs, varied clinical rotations and culture competence-oriented curriculum changes might be used to close the gap. Further studies should investigate how successful these interventions are to increase a cultural competence of nursing students in various areas.

2. Hypotheses: (1) The mean scores of cultural competences of students who receive the cultural competence lecture and simulation with SPs are significantly higher than that of students who receive the cultural competence lecture at post-intervention and follow-up. (2) Students who receive the cultural competence lecture and simulation with SPs at post-intervention and follow-up have significantly higher mean scores of cultural competence than those at the pre-intervention.

The results showed an increase in the cultural competence of participants who receive the cultural competence lecture and simulation with SPs in the experimental group from pre-intervention (T1) to post-intervention (T2), and follow-up (T3). There were statistically significant differences compared with those in the control group $F(1, 22) = 33.73$, $p < .001$, Partial $\eta^2 = .61$). For the experimental group, the cultural competences at post-intervention (T2) and follow-up (T3) were respectively higher than that at pre-intervention (T1) (Mdiff = -7.67 and Mdiff = -14.83, $p < .001$), also the cultural competence at follow-up (T3) was higher than that at post-intervention (T2) (Mdiff = -7.17, $p < .001$). The results have confirmed that the

simulation with SPs is effective in that it could improve the cultural competence of Chinese undergraduate nursing students. These hypotheses were supported.

Results of this study substantiate those of Chung and Jarvill (2019), who noticed a significant rise in cultural competence in nursing students undergoing simulation-based learning. This educational method, being immersive and interactive, has proved to be efficient in forming cultural sensibility, developing insights in learners' mind, and improving their communication skills. Importantly, it enhances the comfort and confidence in human dimensions and communication with people of different backgrounds (Foronda et al., 2018). Experiential learning was emphasized in Jackson (2011) as the key success factor in the development of a greater understanding and flexibility of students to diverse cultural environments.

Additionally, Daya and colleagues (2023) study also clarified the considerable influence of SPs inclusion into training protocols. Their results indicated that the participation of SPs did not only increase the realism of simulation scenarios but were also an important factor in enhancing retention and application of cultural competence skills through practice. This increase in realism plays an important role in shaping students for real life interaction, enabling them to practice their skills in a controlled yet dynamic setting. Together, these studies support the multidimensional advantages of simulation-based education in the area of cultural competency and its efficacy in training healthcare providers to cope with complex and varied cultural environments.

This study also showed long-term improvement in cultural competence, thus, describing that the influence of simulation with SPs is not only immediate, but persistent. This type of teaching goes beyond the immediate learning results, making students develop the so-called cultural or attitudinal way of life in the future. This kind of continuous improvements is important because they lead to the internalization within the personnel in addition to the utilization of the skills in real healthcare settings.

The study demonstrates a considerable growth in students' active quest of cultural knowledge and skill with SPs simulation intervention afterward, significantly improving their cultural awareness and desire. Such proactive participation gives rise to the more enthusiastic participation in cultural encounters demonstrating the

profound effect of simulation training. This is beyond creating immediate behavioral competencies to developing an inner drive to accept and appreciate cultural diversity, which is fundamental for the preparation of nursing students for the challenges of care in a multi-cultural environment.

Corresponding with the theoretical base of cultural competence as an incomplete process that incorporates the development of awareness, knowledge, skill, encounters, and desire, presented by Campinha-Bacote (2002b), this approach is supported by Beach et al. (2006), highlighting the necessity for the permanent exposure and practice. Other scholars (Daya et al., 2023; Ibrahim et al., 2023; Lateef, 2010; Paris et al., 2023) advocate for further research highlighting the essential role of prolonged engagement in varied situations, a key element of simulation-based learning, in utilizing and retaining skills.

The difference between the experimental group, interacting with SPs, and the control group, exposed to the standard lectures, emphasizes the exclusive contribution of SPs to nursing education. In this sense, the difference is not just endorsed by Rutledge et al. (2004) but equally highlights the benefits of interactive learning in cultivating cultural competence. SPs create real-life situations and cultural interactions that give a more realistic and interactive environment which increases the students' understanding and skills beyond what traditional lectures do.

This improvement can be explained by the activity on learning and reflective practices that is characteristic of simulation-based training. As per previous research, these educational methods promote critical thinking (Fero et al., 2010; Henrico & Oostdam, 2022; Zarifsanaiey et al., 2016) and self-awareness (Ayed et al., 2021; Pedersen et al., 2019) allowing students to acknowledge and address their own cultural biases (Akturan et al., 2022; Foronda et al., 2018).

Moreover, with regard to the importance of SPs in simulation-based teaching, the huge difference between the experimental group, who interacted intensively with SPs, and the control group, taught in the traditional manner by lectures, is basically an outright proof of the incredible advantage SPs bring to nursing education. The integration of SPs into simulations provides nursing education with a peculiar and potent component. These trained people create scenarios of real life (Al-Worafi, 2023) and cultural (Yilmaz et al., 2022) interactions, allowing students to

have such an environment in which to practice (Walkowska et al., 2023). such an approach enables the students being actively involved in culturally diversified situations, improving their comprehension and skills in the way that usual lectures cannot. Long-term changes in cultural competence among students trained with SPs reflect the effectiveness of this modality is promoting durable behavioral changes, which is vital for nurses that operate in culturally diverse settings in their careers (Long, 2012).

The integration of SPs in nursing education is not an adjunct method but a radical approach which is indeed conducive to the attunement of cultural competence. SPs offer a practical tool that helps nursing students to develop intercultural competences of a culturally diverse healthcare environment allowing them to provide emphatic, efficient, and culturally sensitive care to their patients.

In conclusion, the significant improvements achieved in this study statistically emphasize the need for a programmatic and well-defined curriculum in nursing education with cultural competence as an essential component. This position is consistent with the Future of Nursing 2020-2030 recommendation “Charting a path to achieve health equity” by Wakefield et al. (2021), which promotes the inclusion of cultural competence training in health professional education everywhere in the world. In the context of the growing role of China on the global stage and the increasing cultural diversity within the country’s borders, the demand for culturally competent health care professionals becomes more and more urgent. Cultural competence incorporation in nursing education in China is consistent with the best practices of the world and addresses the specific cultural peculiarities and healthcare requirements of the diverse population.

The foreign population of China in the recent years has shown changes. The most recent 2020 National Census of China data suggested a number of 845,697 foreigners together with 584,998 people from Hong Kong, Macao, and Taiwan, resulting in roughly 1.43 million migrants in mainland China (Dunkerley, 2023). Ethnic minorities in China make up a substantial proportion of the country’s population. As at 2023, the population of China is estimated to be about 1.41 billion, and ethnic minorities account for 8.9% of the population (Wang, 2023). These include Zhuang, Uyghur, Hui, Manchu, Miao, Yi, Tujia, Tibetan, Mongol, Dong, Buyei, Yao,

Bai, Korean, Hani, Li, Kazakh, and Dai, with Zhuang being the largest among the groups. In the 2020 census, the ethnic minority population was 125.5 million, which was higher by 10.26% from the 2010 census (Gustafsson et al., 2020). The adoption of such curriculum in China would bring up a generation of nurses that are not only technically skilled but also culturally sensitive and flexible. This change is important because the healthcare delivery in China is respectful, productive and client specific.

It also prepares Chinese nursing professionals for the global participation making a substantial contribution to global health efforts and absorbing best practice of the international. Health China 2030 focuses on improving the health of the Chinese people, and therefore, the role of the healthcare system that is responsive and respectful to the minority groups is important (Li & Chen, 2020; Ren et al., 2017). Since the nurses play an important role in the implementation of the patient-centered approaches that respect the cultural differences, training them in cultural competence enhances the effectiveness of healthcare services. It leads to better health outcomes and a higher patient satisfaction when the patients think that their cultural aspects are well considered and are also appreciated in their health care models. Accordingly, this progress in the nursing education improves the quality of the healthcare in China, in turn increasing the status of the China in the international healthcare sector.

In summary, this study further supports the effectiveness of using the simulation with SPs in the cultural competence training of the Chinese nursing undergraduate students. The method results in both short-term and also long-term enhancements of the cultural competence that is indispensable for living in the multicultural health care environment. These results have important precedents for the development of cultural competence training programs that emphasize the use of the interactive, experiential learning methods in the nursing education. These findings have implications in nursing education where the cultural competence training programs need to be designed that would ensure an interactive, practical oriented training approach so that students would be ready for the culturally diverse healthcare setting they would be in practice.

Conclusion

The study clearly proved the positive effect of the simulation with SPs on the cultural competence of the undergraduate nursing students in China. The methodology of the trial, which featured a randomized control setup and a repeated measure of cultural competence also supports these findings. Importantly, the experimental group has scored higher both post-intervention and during the follow-up in comparison with the control group, and it provides important evidence of this educational intervention impact.

In addition, the research demonstrated the importance of making culturally competent care a part of nursing curricula and the necessity of developing new teaching approaches such as using simulation with SPs. This fits well with the more general aim of eliminating health inequalities and providing culturally congruent care, which is increasingly important in diverse healthcare settings. The higher cultural competence scores at each testing occasion in the experimental group highlighted the continued effect of this educational method.

To sum up, the study provides an important contribution for the successful integration of cultural competence training in the nursing education, which has a potential to improve the quality of the patient care in multicultural environments.

Strengths and limitations

Strengths

1. Empirical Research Methodology: To evaluate the effectiveness of the simulation with SPs, this study employed a randomized control trial (RCT) design. This was the strongest intervention study design for determining cause-and-effect relationships. The three essential elements of a true experiment were used in this study including an intervention, a comparison or control group for the prevention of maturation threat, and random assignment of participants to an experimental or control group for the prevention of history and selection threat (Shields & Smyth, 2016). In this study, the research assistant who collected the data and participants were blind in this study. To minimize bias, the allocation was kept hidden from the enrolled research assistant and participants. The study group was masked from the

research assistant and had non-access to the data or information regarding group assignment.

2. Practical Application in Nursing Practice: One of the primary strengths of this study is its practical contribution to nursing practice, particularly in enhancing culturally competent care. The research supports an effective method to improve the ability of nursing students and nurses to provide culturally competent care. This is crucial for reducing health disparities among minorities in China, demonstrating the study's direct applicability and relevance to real-world nursing challenges.

3. Bridging Theory and Practice in Nursing Education: The use of simulation with SPs as a teaching approach is another important advantage. This method successfully links the cultural knowledge learned in class with its real-world utility. This study significantly enhances the development of cultural competence among nursing students which is important in modern healthcare settings by providing more interactions with culturally diverse patients, families and communities.

4. Contributions to Nursing Research and Curriculum Development: The study contributed significantly to the nursing research literature in relation to integration of teaching strategies in the curriculum. It points to the necessity of the successful implementation of cultural competence in the nursing curriculum. In addition, the study of the use of simulation with SPs in the evaluation and improvement of cultural competence highlights the role of the innovative and practical training approaches in the nursing education. This part of the research does indeed advocate for further studies aimed at assessment of the use of simulation with SPs, which in turn would bring further progress to nursing education and research.

Limitations

1. Geographical Limitations: The study was carried out in a particular region of China, and the findings may not be generalizable to the experiences of the nursing students in various cultural or geographical settings. Such regional approach could make the generalization of the results difficult.

2. Sample Size: Notwithstanding the use of a randomized controlled trial, the sample size was quite limited. This would influence the overall generalize-ability

of the data to a bigger nurse student population. A bigger sample might yield more reliable and also generalizable results.

3. Data Contamination: The researchers employed the simulations with SPs to separate the participants of the intervention groups into two different universities. Any communication was probable between the two groups.

4. Limitations of Intervention Methodology: The study used the same lecturers and lecture content in the different rooms and times. Even though this strategy guaranteed the consistency in the lecturing style and methodology, it could have restricted the lecture content to the individual environments and schedules of the classrooms. The variability of classroom configuration and time slots introduced many environmental variables that could affect the experiences of the students. Also, the study employed five SPs to represent the one culture. This limited portrayal could have led to the continuation of many stereotypes by linking particular cultural attributes with certain ethnicities or nationalities. Moreover, the five SPs which cover only a fraction of the real-world diversity and complexity indicates that a broader and diverse sample of SPs is needed to cover the entire spectrum of cultural and individual differences encountered in the nursing practice.

Suggestions and recommendations

1. Expand Simulation Diversity and Complexity: Despite the fact that this research effectively demonstrated the advantages of SPs utilization in simulations for cultural competency development, both the research and practice would be improved by diversification and complexity of these simulations. This would consist of integrating cultural, language and health belief systems in the simulated scenarios. This would help nursing students to have a broader understanding of cultural diversities and therefore adapt to different cultural settings which may dominate their professional practice. Besides, subsequent programs may have an extensive pre-simulation brief or training. This might consist of pre-reading materials, orientation workshops, and introductory activities to ease students into the simulation setting and the foreign cultural settings they will need to navigate.

2. Integration into Curriculum and Long-term Assessment: The results indicated that simulation with SPs was successful in that regard. This simulation

technique should be included as an ongoing educational approach into the routine nursing curriculum rather than being used as a one-off intervention. Further, carrying out long-term follow-up research studies aimed at establishing the retentiveness of the cultural competence skills over the time would be greatly beneficial in determining the continued effect of such simulation experiences.

3. Interprofessional Collaboration and Real-world Application: Promote interprofessional in simulation activities by having students from other healthcare disciplines participate. This strategy replicates the real life of a clinical environment and engenders teamwork and knowledge of different roles of patient care. In addition, the need to create linkages with local healthcare facilities to enable the nursing students to practice their acquired skills in the real-world scenario under the supervision of their mentors is paramount to reinforcing their learning and promoting adaptability to diverse cultural environments.

4. Promote Cross-Cultural Exchanges in Chinese Nursing Education: With the growing global interconnections and the varied patient populations in China, cross-cultural exchange programs should be included in the Chinese nursing education, to a great extent. This can be achieved through collaboration with international nursing schools and institutions. The nurse exchanges enable Chinese nursing students to get the practical experience in various healthcare environments, which improves their knowledge of various healthcare practices, languages, and cultures. This strategy not only expands their cultural competence, but also readies them for extending culturally sensitive care to the international patients within China. Moreover, these exchange programs can be used as a base for research collaboration and as a source of knowledge, thus, enhancing the China nursing education as a whole.

Implications

For nursing practice:

The results of the study highlight the need to include SP-based simulations in the nursing practice. Through the simulation of real-world interactions among various cultural backgrounds, SPs can improve the cultural competence of nurses to a great extent. This methodology may enhance the patient-nurse encounter and the

awareness of culture in the clinical arena and therefore enable the provision of better and particular patient care.

For nursing education:

The findings recommend for inclusion of SP simulations into nursing education curriculum. SPs use to simulate real life file cases to nursing students offers them a practical experience when dealing with culturally and diverse patients. These simulations should be regarded by educators as an essential part of training culturally competent nurses.

For health policy:

The research highlights the importance that health policy makers should give to the educational approaches that promote cultural competency. Simulation-based learning integration policies in nursing education can result in a culturally competent health care workforce. This also can support the national objectives of eliminating health inequalities and raising the quality of healthcare for all cultural groups.

For future research:

Future studies should explore the effects of SP-based training to nursing cultural competence in the long run. The analysis of the flexibility of SP simulations and their impact across different cultural and healthcare environments can bring significant findings. Furthermore, the requirement to evaluate different SP simulation models and their scalability in nursing education and practice is also crucial. One of the promising areas of research is the use of technology, for example, virtual reality, to improve the genuineness and efficiency of such simulations.

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APPENDICES

Appendix A

Health Assessment Course

I. COURSE DESCRIPTION:

Lecture and laboratory practice, open to all students admitted to nursing. This course will provide theoretical and laboratory experience opportunities for students to implement assessment strategies which determine the health status of culturally diverse clients and the maintenance of structural, personal, and social integrity throughout the lifespan.

II. COURSE OBJECTIVES:

The curriculum is designed so that students acquire and demonstrate graduate-level proficiency in general education and essential skills. The course objectives for this course assessed each student's proficiency in the following competencies:

1. Oral and written communication
2. Scientific and quantitative reasoning
3. Critical analysis and reasoning
4. Technological competency
5. Information literacy

Upon successful completion of this course, the student:

1. Apply knowledge from the natural, social, and behavioral nursing sciences and humanities to conserve energy and integrities for individuals across the lifespan. (Level II, Essential I)

2. Apply critical thinking and clinical reasoning in the delivery of nursing care for clients. (Level II, Essential III)

3. Demonstrate effective communication skills to establish a nurse-client relationship during the health assessment process. (Level II, Essential VI)

4. Identify relevant healthcare policies that influence the health assessment. (Level II, Essential III, V)

5. Identify the need to collaborate with other members of the multidisciplinary healthcare team to improve the management of diverse clients in a variety of settings. (Level 2, Essential VI)

6. Identify health assessment data to generate a problem list that reflects the client's ability/ inability to conserve energy and maintain the structural, personal, and social integrity. (Level II, Essential IX)

7. Discuss professional conduct for performing an assessment. (Level II,

Essential VIII)

8. Assess health promotion and disease prevention strategies to improve health outcomes. (Level II, Essential VII)

9. Discuss the impact of the energy, structural, social and personal integrity in health care. (Level II, Essential I)

10. Demonstrate the use of the nursing process and assessment using the Helene Fuld School of Nursing Conceptual Model (Levine Conservation Model) in a variety of healthcare settings in the care of culturally diverse clients across the lifespan. (Level II, Essential VII, VIII and IX)

III. COURSE OUTLINE:

Unit I. Framework of Health Assessment

Unit II: Scientific Basis for Nursing Practice

Unit III: Assessment of Energy

Unit IV: Assessment of Structural Integrity

Unit V: Assessment of Personal Integrity

Unit VI: Assessment of Social Integrity

Unit VII: Health Assessment across the Life Span

Unit VIII: Comprehensive Health Assessment

IV. Modes of Instruction:

1. Lecture and discussion
2. Lab/Clinical Practicum (30 hours)
3. Lab/Clinical practice and skills demonstrations
4. Audiovisual Aides, CDs and/or DVDs,
5. Computer Assisted Instruction Programs
6. Faculty generated study guides
7. Tegrity Learning System
9. ATI Resources including modules related to assessments
10. Hyperlinked internet resources and external links
11. Workbook Assignments(s)
12. Simulation

Appendix B

Consent form

เอกสารแสดงความยินยอม

ของผู้เข้าร่วมโครงการวิจัย (Consent Form)

รหัสโครงการวิจัย : .....

(สำนักงานคณะกรรมการพิจารณาจริยธรรมในมนุษย์ มหาวิทยาลัยบูรพา เป็นผู้ออกรหัสโครงการวิจัย)

โครงการวิจัยเรื่อง The Effectiveness of Simulation with Standardized Patients on the Cultural Competence of Chinese Undergraduate Nursing Students: A Randomized Controlled Trial

Date of data collection .....Month.....Year .....

Before giving my signature below, I have been informed by researcher Mr. Yang QIN about the purposes, method, procedures, benefits, and possible risks associated with participation in this study thoroughly, and I understood all the explanations. I consent voluntarily to participate in this study. I understand that I have the right to withdraw from the study any time, without any penalty and affects regarding the grade of any course.

The researcher Mr. Yang QIN has explained to me that all data and information of the participants will be kept confidential and only be used for this study. I have read and understood the information related to participation in this study clearly and I am signing this consent form.

Signature ..... Participant

(.....)

Signature ....Witness

(.....)

(Chinese version)

知情同意书

研究项目代码:

(东方大学人类伦理评审办公室发布了研究项目代码。)

课题研究计划: **标准化病人模拟对中国护理本科生文化能力的有效性：一项随机对照试验**

数据收集日期：..... 年 .....月 .....日

在我签字之前，我已经被研究员秦阳详细告知了参与本次研究的目的、方法、程序、益处以及可能存在的风险，我理解了所有的解释。 本人自愿同意参加本次研究。 我明白我有权在任何时候退学，不受任何处罚，也不影响任何课程的成绩。

研究人员秦阳向我解释，所有参与者的数据和信息将被保密，只用于本次研究。 我已经清楚地阅读并理解了参与这项研究的相关信息，我正在签署这份同意书。

参与者签名 .....

(.....)

见证者签名 ....

(.....)

Appendix C

Demographic questionnaire

Instructions

You are being asked to complete the included surveys as part of a research project that is examining the cultural competence of nursing students. Your participation is completely voluntary and your completion of the surveys will serve as your consent to participate. Your survey is completely anonymous - no identifying information is being asked of the you, none of your responses can be linked to you. You may choose not to answer any of the questions.

Please complete the following demographic sheet and the survey. Please mark all responses clearly. If you change your response, please make sure that you clearly negate the unwanted response and that you clearly indicate the desired response. There are no right or wrong answers to any of the questions- just answer the questions truthfully. Please review each question on the demographic sheet and the survey to confirm that you answered all questions that you intended to answer. Thank you for your participation.

Please indicate which statement is true for you by ticking the appropriate response or writing in the space provided:

1. What is your age?

_____

2. What is your gender?

o Female

o Male

3. How would you classify yourself Ethnicity?

o Han

o Zhuang

o Hui

o Manchu

o Uyghurs

o Yi

o Miao

o Tujia

o Tibetan

o Mongolian

o Other:_____

4. Which of the following best describes the area you live in (outside of school housing)?

o Urban

o Suburban

o Rural

5. Religion:

o Christian

o Muslim

o Hindu

o Buddhist

o None

o Other: _____

6. What is your subject background in your senior high school?

o Science

o Liberal arts

7. What level of English proficiency have you achieved?

○ No

○ CET-4

○ CET-6

8. Whether to be an only-child?

o No

o Yes

9. Whether to be a student leader?

o No

o Yes

10. Whether to be exposed to foreign cultures?

o No

o Yes

（Chinese Version） 调查表

您被要求完成所包含的调查，作为研究项目的一部分，该项目正在检查护理学生的文化能力。您的参与完全是自愿的，您完成调查将被视为您同意参与。您的调查是完全匿名的 - 没有要求您提供任何识别信息， 您的任何回复都无法与您相关联。您可以选择不回答任何问题。

请填写以下人口统计表和调查。请清楚地标记所有回复。如果您更改了回复，请确保您明确否定了不需要的回复，并明确指出了所需的回复。任何问题都没有正确或错误的答案 - 只要如实回答问题即可。请查看人口统计表和调查中的每个问题，以确认您回答了您打算回答的所有问题。感谢您的参与。

请通过勾选适当的回复或在提供的空白处写下来表明哪种陈述对您来说是正确的：

1. 你的年龄是多少？

_____

2. 你的性别是什么？

o 女

o 男

3. 你如何给自己归类？

o 汉族

o 壮族

o 回族

o 满族

o 维吾尔族

o 彝族

o 苗族

o 土家族

o 藏族

o 蒙古族

o 其他：___

4. 以下哪项最能描述您居住的地区（校外）？

o 城市

o 郊区

o 农村

5.宗教：

o 基督徒

o 穆斯林

o 印度教徒

o 佛教徒

o 无

o 其他：___

6. 你在高中时学科背景是什么？

o 科学

o 文科

7. 你的英语水平达到了什么水平？

o 否

o CET-4

o CET-6

8. 是否为独生子女？

o 否

o 是

9. 是否为学生干部？

o 否

o 是

10. 是否要接触外国文化？

o 否

o 是

Appendix D

Permission of translation and use the IAPCC-SV©

TRANSCULTURAL C.A.R.E.
Clinical, Administrative, Research & Educational Consultation in Transcultural Health Care

J. Campinha-Bacote,
PhD, MAR, PMHCNS-BC, CTN-A, FAAN

Transcultural Healthcare Consultant

Please read carefully!

Date: October 13, 2023

To: Mr. Yang QIN

From: Dr. Josepha Campinha-Bacote
President, Transcultural C.A.R.E. Associates

RE: **Contractual Agreement for Limited Use of the IAPCC-SV Translated into Chinese (IAPCC-SV-C)**

TERMS OF AGREEMENT: This letter grants permission to Mr. Yang QIN to translate my tool, *"Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version (IAPCC-SV)* into Chinese for the purpose of assessing the reliability and validity (R/V) and other psychometric measures of this tool into Chinese. This letter does not grant permission to use the tool in the actual study. However, after Mr. Yang QIN conducts R/V measures on the IAPCC-SV that has been translated into Chinese, to be called ***"Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version-Chinese (IAPCC-SV-C)***, Mr. Yang QIN must submit it to Dr. Campinha-Bacote for review. Once Dr. Campinha-Bacote has received and approved the translated tool (IAPCC-SV-C), Mr. Yang QIN can only then use the IAPCC-SV-C in his study entitled, "The Effectiveness of Simulation with Standardized Patients on the Cultural Competence of Chinese Undergraduate Nursing Students: A Randomized Controlled Study," with 50 students. I have received payment of $1,200.00 for 150 tools to be used in this hand-administered via an on-site administration using a randomized controlled trial with a pretest, posttest[1] and posttest [2] design.

TRANSLATION OF TOOL: Mr. Yang QIN must provide me with a copy of the IAPCC-SV translated into Chinese (IAPCC-SV-C) for approval before use. Mr. Yang QIN agrees that the 25 items on the IAPCC-SV-C cannot be copied or reproduced for any reason. This includes, but not limited to, being used in formal or informal publications or presentations, dissertation/ thesis, handouts for presentations, PowerPoint presentations, as an overhead transparency or in any hard copy or electronic format. The IAPCC-SV-C is only to be used in the above project in which it is administered to these 50 student nurses.

COPYRIGHT OWNERSHIP: Mr. Yang QIN agrees that I, Dr. Josepha Campinha-Bacote, retain the sole copyright of the IAPCC-SV and all of its translations, including Mr. Yang QIN's translation into Chinese, i.e., the IAPCC-SV-C. Therefore, Mr. Yang QIN must seek permission from me, Dr. Josepha Campinha-Bacote, to use the Chinese translation of the IAPCC-SV in any other studies, research, publications and any use of the Chinese translation of the IAPCC-SV.

PUBLICATIONS: Mr. Yang QIN agrees that any publications (formal or informal) or presentations of the findings of the study using the IAPCC-SV-C or IAPCC-SV will be shared with me.

GOVERNING LAW: All parties acknowledge that this Contractual Agreement for Limited Use of the IAPCC-SV-C is a valid contract. This contract shall be governed and construed under the laws of the State of Ohio, except as governed by Federal law. Jurisdiction and venue of any dispute or court action arising from or related to this contract shall lie exclusively in or be transferred to Hamilton County Municipal Court, Hamilton County Court of Common Pleas, or the Federal Court situated in the County of Hamilton, Ohio.

ATTORNEY'S FEES AND COSTS: In any action to enforce any provision of this Agreement, the prevailing party will be awarded reasonable attorney's fees and costs.

Thank you for complying with the requests of using this copyrighted tool. Please contact me if you have any questions.

Signature _____ Date 10/13/23
Dr. Josepha Campinha-Bacote

Signature Yang Qin Date 10/31/23
Mr. Yang QIN

Please Read Carefully

Appendix E

Ethical approvals

Ethical approval of Burapha University

สำเนา

ที่ IRB3-082/2565

เอกสารรับรองผลการพิจารณาจริยธรรมการวิจัยในมนุษย์
มหาวิทยาลัยบูรพา

คณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ มหาวิทยาลัยบูรพา ได้พิจารณาโครงการวิจัย

รหัสโครงการวิจัย : G-HS057/2565
โครงการวิจัยเรื่อง : The Effectiveness Of Simulation With Standardized Patients On The Cultural Competence Of Chinese Undergraduate Nursing Students: A Randomized Controlled Trial
หัวหน้าโครงการวิจัย : MR.YANG QIN
หน่วยงานที่สังกัด : คณะพยาบาลศาสตร์

BUU Ethics Committee for Human Research has considered the following research protocol according to the ethical principles of human research in which the researchers respect human's right and honor, do not violate right and safety, and do no harms to the research participants.

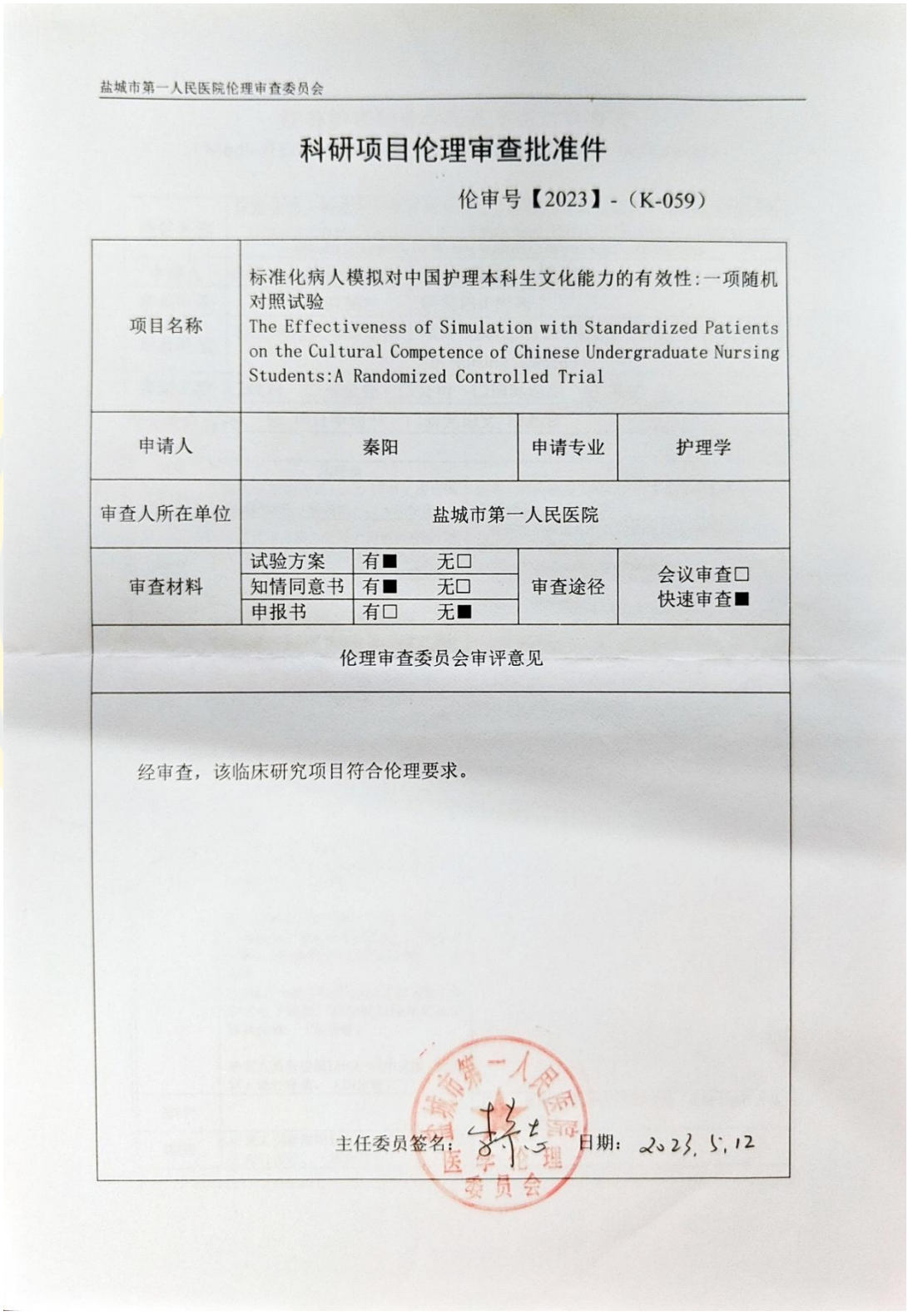
Therefore, the research protocol is approved (See attached)

1. Form of Human Research Protocol Submission Version 2 : 8 August 2022
2. Research Protocol Version 2 : 8 August 2022
3. Participant Information Sheet Version 2 : 8 August 2022
4. Informed Consent Form Version 1 : 16 June 2022
5. Research Instruments Version 1 : 16 June 2022
6. Others (if any) Version - : -

วันที่รับรอง : วันที่ 22 เดือน สิงหาคม พ.ศ. 2565
วันที่หมดอายุ : วันที่ 22 เดือน สิงหาคม พ.ศ. 2566

ลงนาม *นางสาวรมร แย้มประทุม*
(นางสาวรมร แย้มประทุม)
ประธานคณะกรรมการพิจารณาจริยธรรมการวิจัยในมนุษย์ มหาวิทยาลัยบูรพา
ชุดที่ 3 (กลุ่มคลินิก/ วิทยาศาสตร์สุขภาพ/ วิทยาศาสตร์และเทคโนโลยี)

Ethical approval of Jiangsu Vocational College of Medicine



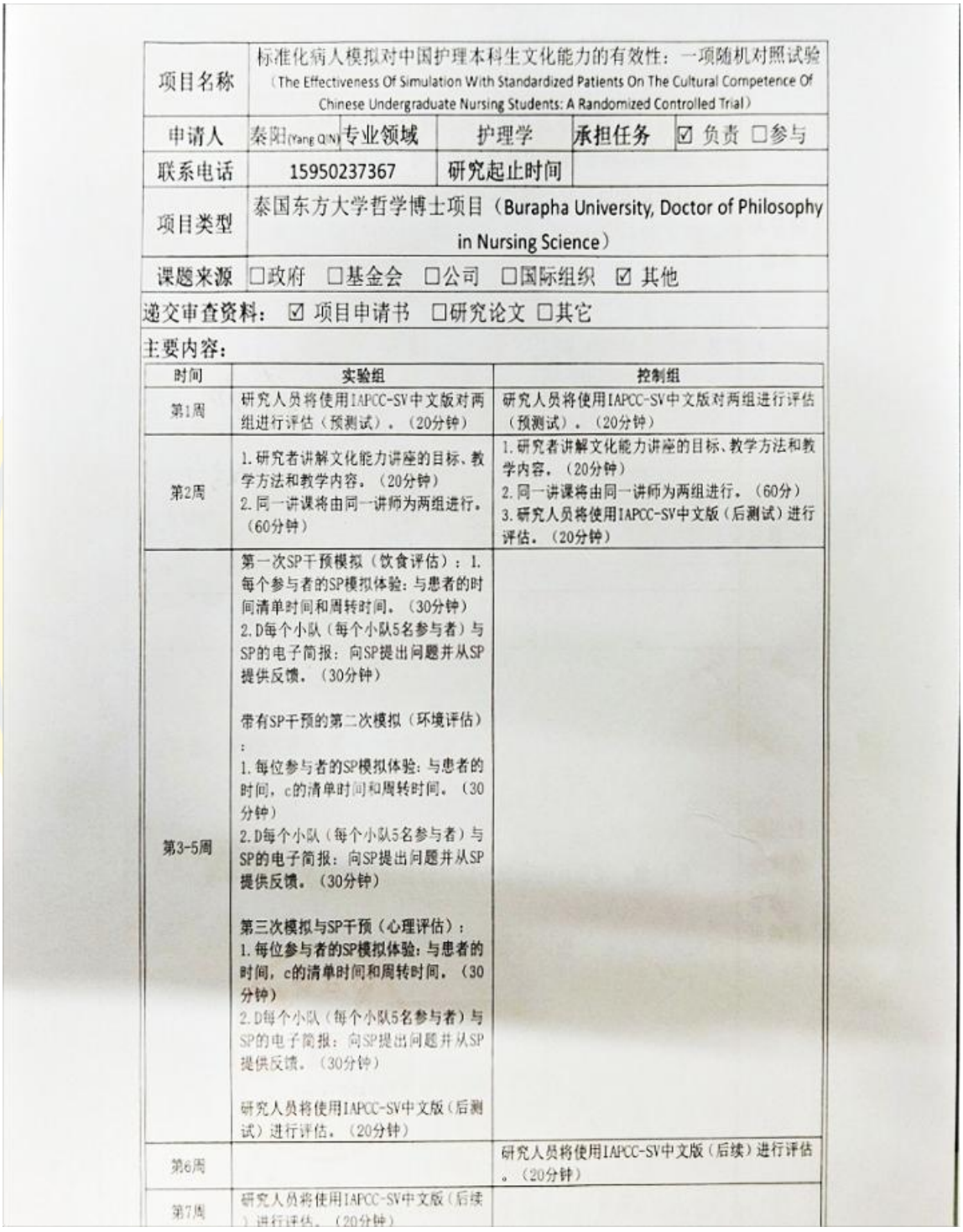
盐城市第一人民医院伦理审查委员会

科研项目伦理审查批准件

伦审号【2023】-（K-059）

项目名称	标准化病人模拟对中国护理本科生文化能力的有效性:一项随机对照试验 The Effectiveness of Simulation with Standardized Patients on the Cultural Competence of Chinese Undergraduate Nursing Students:A Randomized Controlled Trial			
申请人	秦阳		申请专业	护理学
审查人所在单位	盐城市第一人民医院			
审查材料	试验方案	有■ 无□	审查途径	会议审查□ 快速审查■
	知情同意书	有■ 无□		
	申报书	有□ 无■		
伦理审查委员会审评意见				
经审查，该临床研究项目符合伦理要求。 主任委员签名：[illegible] 日期：2023.5.12				

Ethical approval of Jiangsu Nursing College



项目名称	标准化病人模拟对中国护理本科生文化能力的有效性：一项随机对照试验（The Effectiveness Of Simulation With Standardized Patients On The Cultural Competence Of Chinese Undergraduate Nursing Students: A Randomized Controlled Trial）				
申请人	秦阳(Yang Q/N)	专业领域	护理学	承担任务	☑ 负责 □参与
联系电话	15950237367	研究起止时间			
项目类型	泰国东方大学哲学博士项目（Burapha University, Doctor of Philosophy in Nursing Science）				
课题来源	□政府 □基金会 □公司 □国际组织 ☑ 其他				
递交审查资料：	☑ 项目申请书 □研究论文 □其它				

主要内容：

时间	实验组	控制组
第1周	研究人员将使用IAPCC-SV中文版对两组进行评估（预测试）。（20分钟）	研究人员将使用IAPCC-SV中文版对两组进行评估（预测试）。（20分钟）
第2周	1.研究者讲解文化能力讲座的目标、教学方法和教学内容。（20分钟） 2.同一讲课将由同一讲师为两组进行。（60分钟）	1.研究者讲解文化能力讲座的目标、教学方法和教学内容。（20分钟） 2.同一讲课将由同一讲师为两组进行。（60分） 3.研究人员将使用IAPCC-SV中文版（后测试）进行评估。（20分钟）
第3-5周	第一次SP干预模拟（饮食评估）：1.每个参与者的SP模拟体验：与患者的时间清单时间和周转时间。（30分钟） 2.D每个小队（每个小队5名参与者）与SP的电子简报：向SP提出问题并从SP提供反馈。（30分钟） 带有SP干预的第二次模拟（环境评估）： 1.每位参与者的SP模拟体验：与患者的时间，c的清单时间和周转时间。（30分钟） 2.D每个小队（每个小队5名参与者）与SP的电子简报：向SP提出问题并从SP提供反馈。（30分钟） 第三次模拟与SP干预（心理评估）： 1.每位参与者的SP模拟体验：与患者的时间，c的清单时间和周转时间。（30分钟） 2.D每个小队（每个小队5名参与者）与SP的电子简报：向SP提出问题并从SP提供反馈。（30分钟） 研究人员将使用IAPCC-SV中文版（后测试）进行评估。（20分钟）	
第6周		研究人员将使用IAPCC-SV中文版（后续）进行评估。（20分钟）
第7周	研究人员将使用IAPCC-SV中文版（后续）进行评估。（20分钟）	

项目负责人承诺	我将自觉遵守涉及人的生物医学研究伦理原则，严格按照有关法律、法规和国际惯例要求从事科研工作，随时接受江苏护理职业学院医学伦理委员会的监督和检查。如违反规定，自愿承担相应责任。 签字： 日期：2023.5.1
校医学伦理委员会审查意见	经审查，该项目的研究方案符合科学伦理要求，同意申报。 校医学伦理委员会主任委员签章： 校医学伦理委员会公章： 日期：2023.5.1

Appendix F

Partial items of IAPCC-SV© and IAPCC-SV-C©

Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals - Student Version (IAPCC-SV)

INSTRUCTIONS: Read each of the following statements and check your response

1. I believe that cultural competence is a continuous learning process.
   □STRONGLY AGREED □AGREE □DISAGREED □STRONGLY DISAGREE
2. I have a personal commitment to care for clients from ethnically/culturally diverse backgrounds.
   □STRONGLY AGREED □AGREE □DISAGREED □STRONGLY DISAGREE
3. I believe that there is a relationship between culture and health.
   □STRONGLY AGREED □AGREE □DISAGREED □STRONGLY DISAGREE
4. I am knowledgeable about ethnic pharmacology.
   □STRONGLY AGREED □AGREE □DISAGREED □STRONGLY DISAGREE
5. I am motivated to care for clients from culturally/ethnically diverse groups.
   □STRONGLY AGREED □AGREE □DISAGREED □STRONGLY DISAGREE

评估医疗专业人员文化胜任力过程的调查表-学生版本-中文版(IAPCC-SV-C)

说明：请阅读下列每一个条目，根据您同意的程度，在认为最适合的答案方框内☐打√，并进行检查。

1. 我认为文化能力是一个不断学习的过程。
   ☐非常同意 ☐同意 ☐不同意 ☐非常不同意
2. 我个人致力于照顾来自不同种族/文化背景的病人。
   ☐非常同意 ☐同意 ☐不同意 ☐非常不同意
3. 我相信文化和健康之间有关系。
   ☐非常同意 ☐同意 ☐不同意 ☐非常不同意
4. 我对不同民族群体的药理学有所了解。
   ☐非常同意 ☐同意 ☐不同意 ☐非常不同意
5. 我有动力照顾来自不同文化/种族群体的病人。

Appendix G

Cultural Competence Lecture Outline

Cultural Competence Lecture Outline

Title: Cultural Competence in Nursing

Objectives:

- To enhance understanding and management of diverse health beliefs and practices, utilizing case studies for practical insight into cultural impacts on health behaviors.
- To expand knowledge of global nursing practices and improve cross-cultural communication and sensitivity for better patient care and satisfaction.
- To develop proficiency in recognizing and addressing culturally influenced nursing diagnoses and enhancing communication skills for effective multicultural patient interactions.
- To apply Leininger's Sunrise Model in practical scenarios, particularly for AMI patients, focusing on cultural accommodation, negotiation, and care repatterning.
- To foster a deep respect for multiculturalism through continuous learning, self-reflection, and practical application, enhancing overall cultural competence in nursing.

Length of lecture: 40 minutes

Teaching Strategies:

1. PowerPoint
2. Typical cases with multicultural nursing characteristics throughout PowerPoint
3. Video: Communication with a stroke who can't speak throughout PotPlayer
4. Self-reflective notes: Writing students’ self-reflection on raising own cultural desire and awareness to reduce cultural biases

Outline of PowerPoint:

1. Cultural Awareness

a. Differences in Health Beliefs and Practices Among Different Cultures：

i. Discussing 56 ethnic groups in China, the strengths and weaknesses of different cultural approaches to health, and how to integrate the best of each.

ii. Showing differences in health beliefs and practices among different cultures, diet, exercise, and lifestyle habits,

iii. Analyzing conflicts and contradictions in health beliefs and practices among different cultures, such as **"postpartum confinement"**.

b. Case Analysis of Cultural Impact：

i. Case 1: The integration of traditional Chinese medicine with modern medicine.

ii. Case 2: The relationship between Islamic beliefs and health behaviors.

2. Cultural Knowledge

a. Global Nursing Practices：

i. Cultural Differences: Understanding and respecting the differences in nursing practices among different countries and cultures.

ii. Cultural Sensitivity: In nursing practices, it is necessary to be culturally sensitive and understand and respect the cultural background and values of patients.

iii. Cross-cultural Communication: In global nursing practices, it's essential to have the ability for cross-cultural communication to better communicate and collaborate with patients from different countries and cultures.

iv. Improving Nursing Practices: Continuously summarizing experiences and lessons to improve nursing practices and enhance the quality of care and patient satisfaction.

b. Resource Sharing：

i. Online Courses: Offering nursing courses in multiple languages to help students understand the nursing needs of different cultures.

ii. Books: Recommending books on multicultural nursing to help students understand the nursing philosophies and practices of different cultures.

3. Cultural Skill

a. Nursing Diagnoses on Cultural Nursing：

i. Impaired Verbal Communication Related to Cultural Differences: This diagnosis addresses challenges in communication that arise due to cultural differences. It suggests that these differences can significantly impact the effectiveness of communication between the nurse and the patient.

ii. Impaired Social Interaction Related to Sociocultural Dissonance: This diagnosis is concerned with the difficulties in social interactions that may occur due to differences in sociocultural backgrounds. It highlights the importance of

understanding and respecting diverse cultural practices in nursing care.

iii. Noncompliance Related to Patient Value System: This diagnosis deals with instances where patients may not follow medical advice or treatment plans due to conflicts with their cultural values or beliefs.

b. Communication Skills:

i. Interpretation of Nonverbal Signals: Understanding non-verbal signals in different cultures, such as gestures and facial expressions, improves communication.

ii. Effective Questioning Techniques: Mastering questioning techniques, such as open-ended and closed-ended questions, to improve the effectiveness and quality of questioning.

iii. Recognizing Cultural Differences: Identify differences in different cultures, such as values, beliefs, and behaviors, to improve communication relevance.

iv. Cross-Cultural Communication Strategies: Master cross-cultural communication strategies, such as respect, understanding, and tolerance, to improve the effectiveness of communication.

c. Video: Communication with a stroke who can't speak:

i. Content of the Video: The video, lasting 4 minutes and 49 seconds, provides an educational perspective on communicating with stroke patients who are unable to speak. The first part of the video focuses on understanding the impact of a stroke on communication abilities, highlighting the range of speech and language impairments that can result. It then progresses to demonstrate various non-verbal communication techniques such as gestures, facial expressions, and body language. Additionally, the video emphasizes the importance of cultural sensitivity in communication, showcasing how non-verbal cues might be interpreted differently across cultures. It also introduces various communication aids and tools, demonstrating their practical use in clinical settings. The video concludes by stressing the importance of involving the patient's family and caregivers in the communication process and maintaining the patient's dignity through empathetic and patient interactions.

ii. Reasons of playing the Video: This video enhances cultural competence by providing insights into how to approach communication with patients from

diverse cultural backgrounds, especially when they are unable to speak. It helps students understand the importance of patient-centered care by learning about non-verbal communication techniques and the use of communication aids, tailored to the patient's cultural and linguistic needs. The video also aids in developing an awareness of non-verbal nuances, which are vital in avoiding misunderstandings in a multicultural setting. Furthermore, it contributes to empathy development by exposing students to real-life scenarios faced by non-speaking stroke patients. Lastly, the video promotes a collaborative care approach by encouraging the involvement of family and caregivers from different cultural backgrounds, broadening the students' perspective on holistic and culturally competent care.

4. Cultural Encounter

a. Leininger's Sunrise Model - Transcultural Nursing Theory:

i. Cultural Care Diversity and Universality：

Understanding that care varies across different cultures but also has universal aspects.

ii. Cultural Care Accommodation or Negotiation：

Finding ways to adapt healthcare practices to meet the cultural needs of patients.

iii. Cultural Care Repatterning or Restructuring：

Modifying healthcare practices to be more culturally congruent.

b. Applying Leininger's Sunrise Model for Acute Myocardial Infarction (AMI) Patients

i. Cultural Care Diversity and Universality: This involves understanding and respecting the cultural diversity of the patient. For a patient recovering from AMI, it would include acknowledging their specific cultural beliefs, values, and practices that relate to health, illness, and recovery. This might mean adapting healthcare practices to align with the patient's cultural background, like dietary preferences, traditional healing practices, or family involvement in care.

ii. Cultural Care Accommodation or Negotiation: This aspect focuses on creatively

finding ways to provide culturally congruent care that aligns with the patient's lifestyle and beliefs. For an AMI patient, this could mean negotiating treatment plans that respect the patient's cultural norms. For instance, incorporating traditional remedies that the patient believes in, alongside conventional medical treatment, as long as they are not harmful and do not interfere with the medical treatment.

iii. Cultural Care Repatterning or Restructuring: This involves reorienting or changing certain cultural practices that might be harmful or not beneficial to the patient's health. In the case of an AMI patient, this could include educating the patient about the importance of certain lifestyle changes (like diet, exercise, stress management) in a way that is sensitive to their cultural background. This might mean finding culturally appropriate analogues for recommended health practices, or working with the patient to modify harmful cultural practices in a respectful way.

5. Cultural Desire

a. Continuous Development of Cultural Desire：

i. Emphasis on the knowledge of nursing philosophy and practice in different cultures: This involves a commitment to continuously learning about and understanding the diverse cultural backgrounds of patients. Nurses and healthcare professionals are encouraged to explore and appreciate different nursing philosophies and practices that are prevalent in various cultures. This knowledge helps in fostering a deep respect and understanding of the unique needs and health beliefs of patients from diverse backgrounds.

ii. Learned cross-cultural communication skills: Effective communication is fundamental in healthcare, and it becomes even more crucial in a multicultural context. Healthcare professionals should be skilled in cross-cultural communication, which includes not only language proficiency but also an understanding of non-verbal cues, cultural norms, and sensitivities. Training in cross-cultural communication can help professionals to improve their interactions with culturally diverse patients and healthcare colleagues. This training can include language courses, cultural sensitivity workshops, and role-playing scenarios to better prepare healthcare workers for a variety of

cultural interactions.

iii. Fostering an awareness of and respect for the value of multicultural care: Recognizing the intrinsic value of multicultural care is key to enhancing the quality of care delivery. This involves not only respecting different cultural perspectives but also integrating these perspectives into care practices. Healthcare institutions can foster this awareness by celebrating cultural diversity through events and discussions, and by encouraging healthcare professionals to share their own cultural backgrounds and experiences. This awareness helps in building a healthcare environment that is inclusive and respectful of different cultural viewpoints, which in turn can lead to improved patient satisfaction and outcomes.

b. Self-reflection：

i. Exploring Personal Cultural Beliefs and Biases: The self-reflective writing begin with students delving into their own cultural beliefs and biases. They are encouraged to identify and articulate their own cultural upbringing, beliefs, and any inherent biases they might hold.

ii. Fostering Self-Awareness in Patient Interactions: Students reflect on past interactions with patients, examining instances where their cultural beliefs might have influenced their nursing practice. They consider scenarios where cultural differences between themselves and their patients came into play, assessing how these differences are handled.

iii. Critical Analysis of Cultural Aspects in Nursing: Students are tasked with critically analyzing the cultural aspects discussed during the lecture. They evaluate different case studies and theoretical models presented, relating them to their personal experiences and future nursing practice.

iv. Evaluating the Importance of Cultural Competence: The reflective writing conclud with students assessing the importance of cultural competence in their future nursing roles. They contemplate the implications of cultural sensitivity in patient care, including how it affects patient outcomes and satisfaction.

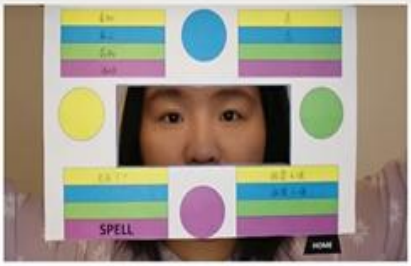
Appendix H

PowerPoint, typical cases, video, and self-reflective notes during the Cultural Competence Lecture

PowerPoint


护理文化胜任力
Cultural Competence
in Nursing
目录
CONTENTS
1 Cultural Awareness（文化意识）
2 Cultural Knowledge（文化知识）
3 Cultural Skill（文化技能）
4 Cultural Encounter（文化邂逅）
5 Cultural Desire（文化渴望）
PART ONE
Cultural Awareness（文化意识）
不同文化在健康观念和实践中的差异
Differences in Health Beliefs and Practices Among Different Cultures
•不同文化在健康观念和实践中的差异，如饮食、运动、生活习惯等。
不同文化在健康观念和实践中的差异
Differences in Health Beliefs and Practices Among Different Cultures
•不同文化在健康观念和实践中的优缺点，以及如何取长补短
views of China and the foreign on "postpartum confinement"
文化影响案例分析
Case Analysis of Cultural Impact
案例1：中国传统医学与现代医学的融合
张先生，一位65岁的退休教师，长期受慢性腰痛困扰。在接受西医治疗（如服用止痛药、理疗）的同时，他还定期接受中医治疗，包括针灸和中药疗法。西医诊断显示他的腰痛是由椎间盘突出引起的，而中医则从气血失调的角度出发，提供辅助治疗。
文化影响案例分析
Case Analysis of Cultural Impact
案例2：伊斯兰教信仰与健康行为的关系
饮食习惯-Dietary Habits
禁酒-Prohibition of Alcohol
斋月（拉马丹）-Fasting Month (Ramadan)
祈祷和精神健康-Prayer and Mental Health
护理决策-Nursing Decisions or Medical Decision-Making
PART TWO
Cultural Knowledge（文化知识）

视频：与不会说话的中风患者交流
Video: Communication with a stroke who can't speak



全球护理实践
Global Nursing Practices

- 文化差异
Cultural differences

全球护理实践
Global Nursing Practices

- 文化敏感性
Cultural sensitivity

全球护理实践
Global Nursing Practices

- 跨文化交流
Cross-cultural communication

资源共享 Resource Sharing

在线课程Online courses：
https://www.coursera.org/lecture
https://www.e-lfh.org.uk/programmes/cultural-competence/

书籍Books：

PART THREE

Cultural Skill（文化技能）

护理文化相关的护理诊断
Nursing Diagnoses on Cultural Nursing

- **与文化差异相关的语言交流障碍**

Impaired Verbal Communication Related to Cultural Differences

- **与社会文化差异有关的社会交往障碍**

Impaired Social Interaction Related to Sociocultural Dissonance

- **与患者价值体系相关的不遵从行为**

Noncompliance Related to Patient Value System

沟通技巧 Communication Skills

非语言信号的解读 Interpretation of Nonverbal Signals：
了解不同文化中的非语言信号，如手势、面部表情等，提高沟通效果。

有效的提问技巧 Effective Questioning Techniques：
掌握提问的技巧，如开放式问题、封闭式问题等，提高提问的效率和质量。

文化差异的识别 Recognizing Cultural Differences：
识别不同文化中的差异，如价值观、信仰、行为方式等，提高沟通针对性。

跨文化沟通的策略 Cross-Cultural Communication Strategies：
掌握跨文化沟通的策略，如尊重、理解、包容等，提高沟通的效果。

PART FOUR

Cultural Encounter（文化邂逅）

莱宁格日出模型 Leininger's Sunrise model

- 文化护理的多样性与普遍性

Cultural Care Diversity and Universality

- 文化护理的适应或协商

Cultural Care Accommodation or Negotiation

- 文化护理的重塑或重组

Cultural Care Repatterning or Restructuring

为急性心肌梗死患者应用莱宁格的日出模式
Applying Leininger's Sunrise Model for AMI Patients

日出模型 Sunrise Model在护理实践中的应用（急性心肌死亡出院患者）

Application in Nursing Practice

Cultural Care in the Case of a Patient Discharged from Acute Myocardial Infarction (AMI)

PART FIVE

Cultural Desire（文化渴望）

持续发展 Continuous Development of Cultural Desire

了解不同文化背景下的护理理念和实践，尊重和理解不同文化背景病人的需求。

学习跨文化交流技能，改善与不同文化背景的病人和医护人员的沟通。

培养对多元文化护理价值的认识和尊重，提高护理质量.

反思Self-reflection

通过自我反思，提高对多元文化的认识和尊重

Typical cases

Case 1: Integration of traditional Chinese medicine and modern medicine

Mr. Zhang, a 65-year-old retired teacher, has been suffering from chronic low back pain for a long time. Although he has been treated with modern medicine, such as taking painkillers and undergoing physical therapy, he insists on integrating traditional Chinese medicine into his treatment plan. This integration reflects the profound influence of Chinese culture on medical care. According to the diagnosis of Western medicine, Mr. Zhang's low back pain was caused by intervertebral disc herniation, which is a common modern medical diagnosis. However, he also receives regular TCM treatments, including acupuncture and Chinese herbal medicine. This method of integrating traditional Chinese and Western medicine not only focuses on the physical causes of the body, but also provides auxiliary treatment from the perspective of qi and blood disorders. In the traditional Chinese medicine tradition, the balance of Qi and blood is vital to good health. A Chinese medicine practitioner may use acupuncture to regulate the flow of Qi and blood in the body and prescribe Chinese herbal medicines to help restore balance to the body. These treatments emphasize overall health and balance within the body, and complement modern medicine's symptom management approaches. Mr. Zhang’s case reflects the integration trend of traditional Chinese medicine and modern medicine. He not only relies on the advanced technology and drugs of modern medicine to relieve pain, but also relies on the wisdom of traditional Chinese medicine to maintain the overall health of the body. This fusion reflects Chinese culture’s diverse philosophy on medical treatment, combining the strengths of different medical traditions to provide more comprehensive care.

(Chinese version)张先生，一位 65 岁的退休教师，长期承受着慢性腰痛的折磨。尽管他已接受了现代医学的治疗，比如服用止痛药和接受理疗，但他坚持将中国传统医学融入治疗方案中。这种融合反映了中国文化对医疗护理的深远影响。根据西医的诊断，张先生的腰痛是由椎间盘突出引起的，这是一种常见的现代医学诊断。然而，他也定期接受中医治疗，包括针灸和中药疗法。这种中西医结合的方法不仅关注了身体的物理病因，还从气血失调的角度出发，提供了辅助治疗。在中医传统中，气血的平衡对于身体健康至关重要。中医师可

能会使用针灸来调整身体的气血流动，并开出中药方剂来帮助恢复身体的平衡。这些治疗方法强调了整体健康和身体内部的平衡，与现代医学的症状管理方法形成了有益的补充。张先生的案例体现了中国传统医学与现代医学的融合趋势。他不仅依赖现代医学的先进技术和药物来缓解疼痛，还借助中医的智慧来维护身体的整体健康。这种融合反映了中国文化对医疗治疗的多元化理念，将不同医学传统的长处结合在一起，以提供更全面的照顾。

Case 2: Relationship between Islamic beliefs and health behaviors

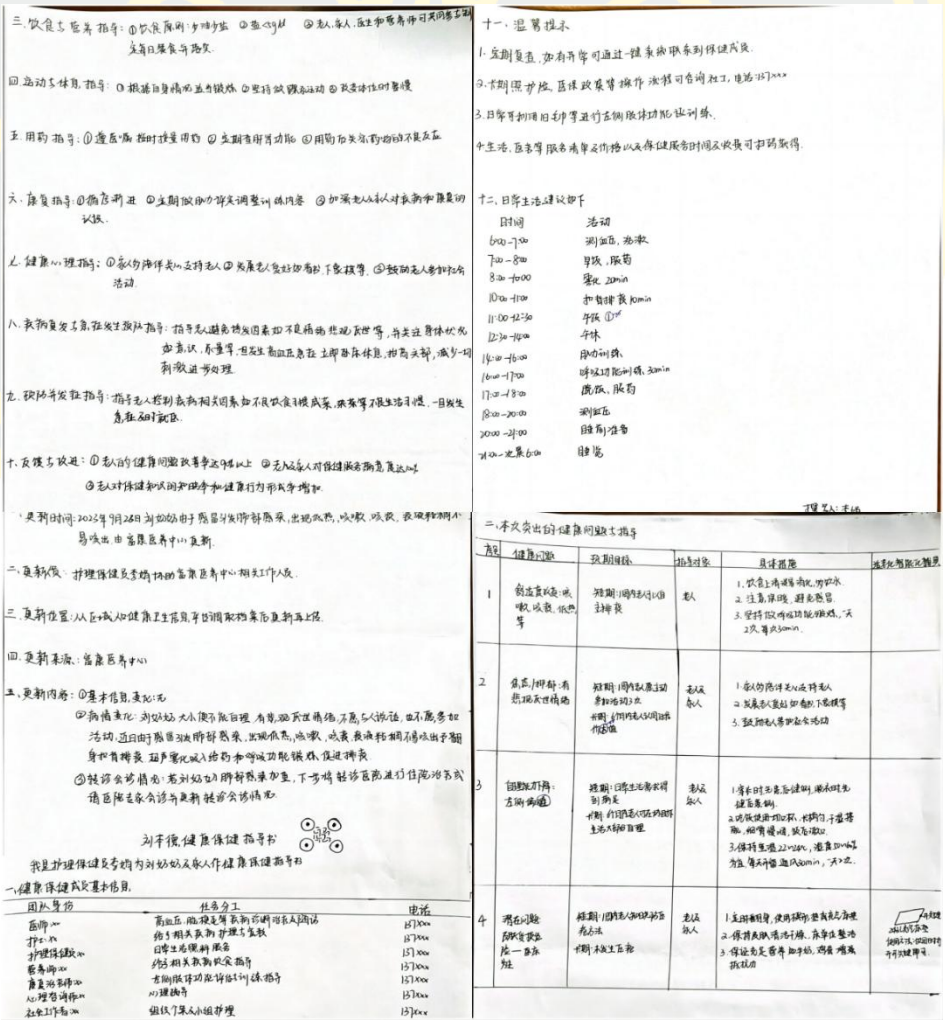
Ramadan: a significant religious festival in Islam, is observed annually. During this time, Muslims fast during the daylight hours and break their fast only at night. This month holds great importance as a moment of faith, but it also has an impact on the health behaviors of Muslims. While fasting during the day, Muslims typically exercise caution in their food choices to ensure they receive sufficient nutrition at night. They may opt for foods high in fiber, protein, and fruits to meet their body's requirements. Additionally, Ramadan encourages Muslims to reduce unhealthy behaviors such as smoking and drinking alcohol to maintain physical and spiritual purity.

Islamic purification rituals and health: Islam places a strong emphasis on bodily cleanliness and purity. Muslims are required to perform five daily prayers, and before each prayer, they must undergo purification rituals, including washing key body parts like hands, face, mouth, nose, and feet with clean water. These cleansing rituals help prevent the spread of disease and promote personal hygiene and health. Furthermore, Islamic faith encourages individuals to maintain bodily purity by avoiding impure behaviors such as alcohol consumption and smoking, contributing to overall health maintenance.

(Chinese version)斋月期间的饮食习惯：伊斯兰教的斋月（Ramadan）是一年一度的宗教节日，期间穆斯林在白天禁食，只在夜晚开斋。这个月份是一个重要的信仰时刻，但也对穆斯林的健康行为产生了影响。在白天禁食期间，穆斯林通常会更加谨慎地选择食物，以确保他们在夜晚能够摄取足够的营养。他们可能会选择食用高纤维、高蛋白质和水果的食物，以满足身体的需求。此外，斋月还鼓励穆斯林减少吸烟和饮酒等不健康行为，以维护身体和精神的纯洁性。伊斯兰教的清洁仪式与健康：伊斯兰教强调身体的清洁与纯洁。信徒每日必须进行五次礼拜，而在进行礼拜前，他们必须进行清洁仪式，包括使用清水洗净双手、脸、嘴巴、鼻子、脚和其他关键部位。这种清洁仪式有助于防止疾病传播，促进了个人卫生和健康。此外，伊斯兰教信仰还鼓励人们保持身体的纯洁性，不参与不洁的行为，如饮酒和吸烟，这也有助于维护健康。

Video: Communication with a stroke who can't speak

Reflective notes (Partial display)



Appendix I

SP Training Guide

SP Training Guide

1.Introduction

The role of a Standardized Patient (SP) is integral in medical education, providing students with real-world scenarios to practice their clinical skills. This expanded guide is designed to ensure SPs are thoroughly prepared to portray a patient realistically and effectively.

2.Simulation Learning Objectives

The primary objectives for SP simulations include:

(1) Clinical Skills Development: Facilitating the development of students' clinical skills, including history-taking, physical examination, and diagnostic reasoning.

(2) Communication Proficiency: Enhancing interpersonal and communication skills, focusing on empathy, patient education, and cultural competence.

(3) Professionalism: Encouraging professional behavior in a clinical setting, such as respecting patient privacy and demonstrating ethical conduct.

3.Setting

(1) Environment: Simulated clinical environment resembling a real medical clinic or hospital room.

(2) Props and Equipment: Use of medical equipment, patient charts, and other relevant tools to enhance realism.

4.SP Role

(1) Character Development: Deep understanding of the patient's background, medical history, symptoms, emotional state, and any relevant cultural or social factors.

(2) Consistency: Maintain character consistency throughout the simulation, including mannerisms, speech patterns, and reactions to student inquiries or examinations.

(3) Confidentiality: Understand the importance of confidentiality in the context of student performance and feedback.

5.Student Role

(1) Expectations: Students are expected to perform as they would in a real clinical situation, adhering to professional standards and protocols.

(2) Assessment: Students are assessed on both clinical skills and interpersonal communication.

6.Scenario Outline

(1) Detailed Background: Provide SPs with a comprehensive background of the case, including onset of symptoms, previous medical history, family history, and lifestyle factors.

(2) Emotional Context: Guide SPs on the emotional and psychological aspects of the patient's character, such as fear, anxiety, or frustration.

7.Timing and Flow

(1) Detailed Schedule: Provide a precise timeline for each part of the simulation, including pre-briefing, interaction, and debriefing.

(2) Flexibility: Train SPs to adapt to variations in the student's approach while staying within the confines of the scenario.

8.Student Checklist of Simulation

(1) Detailed Assessment Criteria

Clinical Skills: Accuracy of history-taking, physical examination techniques, and clinical reasoning.

Communication Skills: Efficacy in establishing rapport, expressing empathy, and educating the patient.

Professionalism: Adherence to ethical standards, patient confidentiality, and respectful conduct.

(2) Role-Playing and Feedback

Realism: Train SPs to exhibit realistic physical and emotional responses based on the scenario.

Feedback Mechanism: Guide SPs on providing constructive feedback, focusing on specific areas of student performance.

Training Sessions: Regular training sessions for SPs to practice scenarios and receive coaching on performance and feedback delivery.

9.Post-Simulation Debriefing

Structured Feedback: Guidelines for SPs to provide structured and objective feedback to students.

Reflection: Encourage SPs to reflect on their performance and identify areas

for improvement.

10.Epilogue

Standardized Patients play a pivotal role in bridging the gap between theoretical knowledge and practical application in medical education. Through realistic portrayals and constructive feedback, SPs contribute significantly to the development of skilled, compassionate healthcare professionals.

(Chinese Version)　　标准化患者培训指南

1. 引言

标准化患者（SP）在医学教育中扮演着不可或缺的角色，为学生提供实际情境来练习他们的临床技能。这份扩展指南旨在确保 SP 能够真实而有效地扮演患者角色。

2. 模拟学习目标

SP 模拟的主要目标包括：

（1）临床技能发展：促进学生临床技能的发展，包括病史收集、体格检查和诊断推理。

（2）沟通能力：增强人际交往和沟通技巧，重点关注同理心、患者教育和文化能力。

（3）专业性：鼓励临床环境中的专业行为，如尊重患者隐私和展示道德行为。

3. 环境设定

（1）环境：模拟真实医疗诊所或医院病房的临床环境。

（2）道具和设备：使用医疗设备、病历和其他相关工具增强现实感。

4. SP 角色

（1）角色发展：深入了解患者的背景、病史、症状、情绪状态以及任何相关的文化或社会因素。

（2）一致性：在整个模拟中保持角色的一致性，包括举止、说话方式和对学生询问或检查的反应。

（3）保密性：理解在学生表现和反馈方面保密的重要性。

5. 学生角色

（1）期望：学生应按照真实临床情况中的标准和协议进行表现。

（2）评估：学生将在临床技能和人际沟通方面接受评估。

6.情境大纲

（1）详细背景：为 SP 提供案例的全面背景，包括症状的起始、过去的病史、家族史和生活方式因素。

（2）情绪背景：指导 SP 了解患者角色的情绪和心理方面，如恐惧、焦虑或挫败感。

7.时间和流程

（1）详细时间表：为模拟的每个部分提供精确的时间表，包括准备、互动和总结。

（2）灵活性：培训 SP 适应学生方法的变化，同时保持在情境的范围内。

8.学生模拟清单

（1）详细评估标准

临床技能：病史收集的准确性、体格检查技巧和临床推理。

沟通技能：建立融洽关系、表达同理心和教育患者的有效性。

专业性：遵守道德标准、患者隐私和尊重行为。

（2）角色扮演和反馈

现实性：培训 SP 展现基于情境的真实身体和情感反应。

反馈机制：指导 SP 提供针对学生表现的具体领域的建设性反馈。

培训课程：定期为 SP 举办培训课程，以练习情境并接受表现和反馈交付方面的指导。

9.模拟后总结

结构化反馈：为 SP 提供向学生提供结构化和客观反馈的指南。

反思：鼓励 SP 反思他们的表现并识别改进的领域。

10.结束语

标准化患者在医学教育中理论知识和实践应用之间架起了桥梁。通过真实的表演和建设性的反馈，SP 在培养技能熟练、富有同情心的医疗专业人员方面做出了重大贡献。

Appendix J

Five SPs Scripts and Student Checklists

SP 1 Case Script

Setting:

A hospital inpatient department in China specializing in gastroenterology.

SP Role:

a 51-year-old Han female who has recently been admitted to the hospital due to persistent stomach discomfort and dietary concerns.

Student Role:

A student nurse tasked with conducting an initial assessment of the patient, focusing on dietary, environmental, and psychological factors.

Scenario:

Zhu Yuhong is a 51-year-old Han female who has been living in the USA for the past 5 years. She has been admitted to the hospital with complaints of stomach discomfort that has been persisting for two weeks. Mrs. Zhu has a history of adapting to Western dietary habits while maintaining her traditional Chinese cuisine. The student nurse is required to conduct a comprehensive assessment, considering her unique dietary background and current symptoms.

Each individual simulation Timing:

· Time with patient = 20 min

· Checklist time = 7 min

· Turn-around time = 3 minutes

- Total encounter time = 30 minute

Student Checklist of Simulation

Module	Category	Content	Done	Partially Completed	Not done
Communication	Arrival	Greet with a smile upon entering? Use hand sanitizer?			
	Introduction	Introduce self and specify area of expertise? Wear a name tag?			
	Interaction-visual/nonverbal	Eye contact? Nod appropriately?			

Module	Category	Content	Done	Partially Completed	Not done
		Seem interested?			
	Interaction-verbal	Clarify patient concerns? Provide clear responses to questions? Encourage patient to share more details? Allow patient to speak without interruption?			
Health History	Students should have foundational knowledge for basic health history	Inquire about recent health changes? Discuss lifestyle habits (diet, exercise)? Record patient's height and weight? Discuss family health history? Review prescription medications? Confirm any herbal supplements? Discuss environmental or occupational hazards?			
Diet Assessment	Nutritional Evaluation	Assess patient's current diet in relation to her cultural background and recent Western dietary influences?			
	Symptom Assessment	Inquire about symptoms related to diet, such as nausea, changes in appetite or weight?			
	Dietary Changes	Ask about any significant changes in diet since moving to			

Module	Category	Content	Done	Partially Completed	Not done
		the USA and subsequent return to China?			
Environmental Assessment	Living Conditions	Determine the patient's current living environment and its impact on health and nutrition?			
	Access to Food	Evaluate the patient's ability to obtain and prepare food that aligns with her dietary habits?			
Psychological Assessment	Emotional Well-being	Assess the psychological impact of dietary changes and stomach discomfort?			
	Cultural Significance	Understand the cultural significance of food and diet to the patient?			
Communication	Departure	Confirm patient understanding of the conversation? Conclude with a polite farewell?			
Comments					

(Chinese version)　　SP 1 案例脚本

背景：

中国一家专门从事消化内科的医院住院部。

SP 角色：

一名 51 岁的汉族女性，最近因持续的胃部不适和饮食问题入院。

学生角色：

一名学生护士，负责对患者进行初步评估，重点关注饮食、环境和心理因素。

场景：

朱玉红，51 岁，汉族女性，近 5 年来一直居住在美国。她因胃部不适入院，这种不适已经持续了两周。朱女士在适应西方饮食习惯的同时，保持了传统的中国美食。实习护士需要根据她独特的饮食背景和当前症状进行全面评估。

每个单独的模拟时间：

· 与患者相处的时间 = 20 分钟

· 清单时间 = 7 分钟

· 周转时间 = 3 分钟

• 总遭遇时间 = 30 分钟

学生模拟清单

模块	**类别**	**内容**	**完成**	**部分完成**	**没有完成**
沟通	到来	一进门就微笑着打招呼？ 使用免洗手消毒液？			
	介绍	自我介绍并指定专业领域？ 戴名牌？			

模块	类别	内容	完成	部分完成	没有完成
	互动- 视觉/非语言	眼神交流？ 适当地点头？ 似乎有兴趣吗？			
	互动- 口头	澄清患者的担忧？ 对问题提供明确的回答？ 鼓励患者分享更多细节？ 让患者说话不受干扰？			
健康史	学生应具备基本健康史的基础知识	询问最近的健康变化？ 讨论生活习惯（饮食、运动）？ 记录患者的身高和体重？ 讨论家族健康史？ 查看处方药？ 确认是否有任何草药补充剂？ 讨论环境或职业危害？			
饮食评估	营养评价	根据患者的文化背景和近期西方饮食的影响评估患者目前的饮食？			
	症状评估	询问与饮食相关的症状，例如恶心、食欲或体重变化？			
	饮食改变	问问自从移居美国并随后返回中国以来，饮食有什么重大变化吗？			
环境评估	生活条件	确定患者当前的生活环境及其对健康和营养的影响？			
	获取食物	评估患者获取和准备符合其饮食习惯的食物的能力？			

模块	类别	内容	完成	部分完成	没有完成
心理评估	情绪健康	评估饮食变化和胃部不适的心理影响?			
	文化意义	了解食物和饮食对患者的文化意义?			
沟通	离开	确认患者对对话的理解？ 以礼貌的告别结束？			
评论					

SP 2 Case Script

Setting:

A hospital's respiratory medicine department in China.

SP Role:

A 52-year-old Zhuang male who has been admitted to the hospital with shortness of breath and a persistent cough.

Student Role:

A student nurse assigned to conduct an in-depth assessment of the patient's respiratory symptoms, considering dietary, environmental, and psychological factors.

Scenario:

Zhao Dejiang is a 52-year-old Zhuang male who has returned to China for the past 6 years in France. He has been admitted to the hospital exhibiting shortness of breath and a persistent cough that have not improved with over-the-counter treatments. The student nurse must consider the patient's extensive dietary history, which includes French culinary habits and traditional Zhuang dietary customs, to identify any potential triggers for these respiratory symptoms.

Each individual simulation Timing:

· Time with patient = 20 min

· Checklist time = 7 min

· Turn-around time = 3 minutes

- Total encounter time = 30 minute

Student Checklist of Simulation

Module	Category	Content	Done	Partially Completed	Not done
Communication	Arrival	Greet with a smile upon entering? Use hand sanitizer?			
	Introduction	Introduce self and specify area of expertise? Wear a name tag?			
	Interaction-	Eye contact?			

Module	Category	Content	Done	Partially Completed	Not done
	visual/nonverbal	Nod appropriately? Seem interested?			
	Interaction-verbal	Clarify patient concerns? Provide clear responses to questions? Encourage patient to share more details? Allow patient to speak without interruption?			
Health History	Students should have foundational knowledge for basic health history	Inquire about recent health changes? Discuss lifestyle habits (diet, exercise)? Record patient's height and weight? Discuss family health history? Review prescription medications? Confirm any herbal supplements? Discuss environmental or occupational hazards?			
Diet Assessment	Possible Irritants	Assess for any dietary irritants that could exacerbate respiratory issues, such as certain cheeses or wines?			
	Nutritional Evaluation	Evaluate the patient's diet for nutritional deficiencies that could impact respiratory health?			

Module	Category	Content	Done	Partially Completed	Not done
Environmental Assessment	Air Quality Exposure	Investigate exposure to different environmental factors that may affect respiratory health since returning to China?			
	Lifestyle Changes	Assess changes in lifestyle after moving back from France that could contribute to respiratory symptoms?			
Psychological Assessment	Stress and Anxiety	Discuss any stress or anxiety related to the health issues and cultural readjustment that may be affecting respiratory health?			
	Cultural and Lifestyle Impact	Consider the psychological impact of transitioning from French to Chinese living environments and the possible stressors involved?			
Communication	Departure	Confirm patient understanding of the conversation? Conclude with a polite farewell?			
Comments					

(Chinese version) **SP 2 案例脚本**

背景：

中国某医院呼吸内科。

SP 角色：

一名 52 岁的壮族男性因呼吸急促和持续咳嗽住院。

学生角色：

一名实习护士 被指派对患者的呼吸道症状进行深入评估，同时考虑饮食、环境和心理因素。

场景：

赵德江，52 岁壮族男性，在法国生活 6 年后回国。他因呼吸急促和持续咳嗽入院，非处方药治疗未见改善。实习护士必须考虑患者广泛的饮食史，包括法国烹饪习惯和传统的壮族饮食习俗，以确定这些呼吸道症状的任何潜在诱因。

每个单独的模拟 时间：

· 与患者相处的时间 = 20 分钟

· 清单时间 = 7 分钟

· 周转时间 = 3 分钟

• 总遭遇时间 = 30 分钟

学生模拟清单

模块	类别	内容	完成	部分完成	没有完成
沟通	到来	一进门就微笑着打招呼？ 使用免洗手消毒液？			
	介绍	自我介绍并指定专业领域？ 戴名牌？			
	互动- 视觉/非语言	眼神交流？ 适当地点头？ 似乎有兴趣吗？			
	互动- 口头	澄清患者的担忧？ 对问题提供明确的回答？ 鼓励患者分享更多细节？ 让患者说话不受干扰？			
健康史	学生应具备基本健康史的基础知识	询问最近的健康变化？ 讨论生活习惯（饮食、运动）？ 记录患者的身高和体重？ 讨论家族健康史？ 查看处方药？ 确认是否有任何草药补充剂？ 讨论环境或职业危害？			
饮食评估	可能的刺激物	评估是否有任何可能加剧呼吸系统的饮食刺激物，例如某些奶酪或葡萄酒？			
	营养评价	评估患者的饮食是否存在可能影响呼吸系统的营养缺乏？			

模块	类别	内容	完成	部分完成	没有完成
环境评估	空气质量暴露	调查回国后可能影响呼吸系统健康的不同环境因素？			
	生活方式的改变	评估从法国搬回来后可能导致呼吸道症状的生活方式变化？			
心理评估	压力和焦虑	讨论与可能影响呼吸系统健康的健康问题和文化调整相关的任何压力或焦虑？			
	文化和生活方式的影响	考虑从法国人过渡到中国人的生活环境的心理影响以及可能涉及的压力源？			
沟通	离开	确认患者对对话的理解？ 以礼貌的告别结束？			
评论					

SP 3 Case Script

Setting:

A community hospital in China, in a department specializing in women's health.

SP Role:

A 43-year-old Uyghur woman who has been admitted to the hospital with symptoms of fatigue and joint pain.

Student Role:

A student nurse assigned to perform a comprehensive assessment, focusing on diet, environment, and psychological well-being.

Scenario:

Rayhan Ablimit is a 43-year-old Uyghur woman who has lived in Germany for the past 7 years, presents with complaints of fatigue and joint pain. She has a rich background in multicultural integration and is sensitive to Islamic practices within a Western context. The student nurse must consider her religious dietary restrictions, her experience with European urban life, and her commitment to environmental sustainability while assessing her symptoms.

Each individual simulation Timing:

· Time with patient = 20 min

· Checklist time = 7 min

· Turn-around time = 3 minutes

- Total encounter time = 30 minute

Student Checklist of Simulation

Module	Category	Content	Done	Partially Completed	Not done
Communication	Arrival	Greet with a smile upon entering? Use hand sanitizer?			
	Introduction	Introduce self and specify area of expertise? Wear a name tag?			
	Interaction-visual/nonverbal	Eye contact? Nod appropriately?			

Module	Category	Content	Done	Partially Completed	Not done
		Seem interested?			
	Interaction-verbal	Clarify patient concerns? Provide clear responses to questions? Encourage patient to share more details? Allow patient to speak without interruption?			
Health History	Students should have foundational knowledge for basic health history	Inquire about recent health changes? Discuss lifestyle habits (diet, exercise)? Record patient's height and weight? Discuss family health history? Review prescription medications? Confirm any herbal supplements? Discuss environmental or occupational hazards?			
Diet Assessment	Religious Dietary Restrictions	Evaluate adherence to Islamic dietary laws and the impact on health?			
	Nutritional Deficiencies	Investigate any nutritional deficiencies that may be contributing to fatigue and joint pain?			
Environmental Assessment	Lifestyle and Sustainability	Assess the patient’s current living conditions and how her			

Module	Category	Content	Done	Partially Completed	Not done
		commitment to environmental sustainability affects her lifestyle?			
	Urban vs Rural Living	Compare the patient's experience of urban life in Germany to her current environment in China?			
Psychological Assessment	Cultural Adjustment	Discuss any psychological challenges faced due to cultural and religious practices in her current environment?			
	Multicultural Integration	Evaluate how her experiences with multicultural integration influence her psychological well-being and perception of illness?			
Communication	Departure	Confirm patient understanding of the conversation? Conclude with a polite farewell?			
Comments					

(Chinese version)　　SP 3 案例脚本

背景：

中国的一家社区医院，专门从事女性健康。

SP 角色：

一名 43 岁的维吾尔族妇女因疲劳和关节疼痛症状入院。

学生角色：

一名学生护士被指派进行全面评估，重点关注饮食、环境和心理健康。

场景：

瑞汗·阿布力米提是一名 43 岁的维吾尔族妇女，过去 7 年来一直居住在德国，主诉疲劳和关节疼痛。她在多元文化融合方面拥有丰富的背景，对西方背景下的伊斯兰习俗很敏感。在评估她的症状时，实习护士必须考虑她的宗教饮食限制、她在欧洲城市生活中的经历以及她对环境可持续性的承诺。

每个单独的模拟时间：

· 与患者相处的时间 = 20 分钟

· 清单时间 = 7 分钟

· 周转时间 = 3 分钟

• 总遭遇时间 = 30 分钟

学生模拟清单

模块	**类别**	**内容**	**完成**	**部分完成**	**没有完成**
沟通	到来	一进门就微笑着打招呼？ 使用免洗手消毒液？			
	介绍	自我介绍并指定专业领域？ 戴名牌？			

模块	类别	内容	完成	部分完成	没有完成
	互动- 视觉/非语言	眼神交流？ 适当地点头？ 似乎有兴趣吗？			
	互动- 口头	澄清患者的担忧？ 对问题提供明确的回答？ 鼓励患者分享更多细节？ 让患者说话不受干扰？			
健康史	学生应具备基本健康史的基础知识	询问最近的健康变化？ 讨论生活习惯（饮食、运动）？ 记录患者的身高和体重？ 讨论家族健康史？ 查看处方药？ 确认是否有任何草药补充剂？ 讨论环境或职业危害？			
饮食评估	宗教饮食限制	评估对伊斯兰饮食法的遵守情况及其对健康的影响？			
	营养缺乏症	调查任何可能导致疲劳和关节疼痛的营养缺乏症？			
环境评估	生活方式与可持续发展	评估患者目前的生活条件以及她对环境可持续性的承诺如何影响她的生活方式？			
	城市与农村生活	将患者在德国的城市生活经历与她目前在中国的环境进行比较？			
心理	文化适应	讨论在她当前环境中因文化和宗教			

模块	类别	内容	完成	部分完成	没有完成
评估		习俗而面临的任何心理挑战？			
	多元文化融合	评估她在多元文化融合方面的经历如何影响她的心理健康和对疾病的看法？			
沟通	离开	确认患者对对话的理解？ 以礼貌的告别结束？			
评论					

SP 4 Case Script

Setting:

A hospital in a Chinese metropolitan area that reflects the patient's urban living experience.

SP Role:

A 40-year-old Han male who has come to the hospital with symptoms of stress-related hypertension and difficulty sleeping.

Student Role:

A student nurse conducting a comprehensive assessment including diet, environment, and psychological factors related to urban living and cultural adaptation.

Scenario:

Wang Gang is a 40-year-old Han male, has been experiencing elevated blood pressure and insomnia. He has recently returned to China after living in Thailand for 4 years where he was engaged in urban development projects. The student nurse must assess the potential impact of his transition from Thai to Chinese urban environments and his environmental awareness on his current health status.

Each individual simulation Timing:

· Time with patient = 20 min

· Checklist time = 7 min

· Turn-around time = 3 minutes

- Total encounter time = 30 minute

Student Checklist of Simulation

Module	Category	Content	Done	Partially Completed	Not done
Communication	Arrival	Greet with a smile upon entering? Use hand sanitizer?			
	Introduction	Introduce self and specify area of expertise? Wear a name tag?			
	Interaction-visual/nonverbal	Eye contact? Nod appropriately? Seem interested?			
	Interaction-verbal	Clarify patient concerns? Provide clear responses to questions? Encourage patient to share more details? Allow patient to speak without interruption?			
Health History	Students should have foundational knowledge for basic health history	Inquire about recent health changes? Discuss lifestyle habits (diet, exercise)? Record patient's height and weight? Discuss family health history? Review prescription medications?			

Module	Category	Content	Done	Partially Completed	Not done
		Confirm any herbal supplements? Discuss environmental or occupational hazards?			
Diet Assessment	Nutritional Intake	Inquire about changes in diet since returning from Thailand and their potential impact on hypertension?			
	Urban Dietary Habits	Assess the adaptation of Thai dietary habits to the Chinese urban setting?			
Environmental Assessment	Urban Environment Transition	Evaluate the impact of transitioning from Thai to Chinese urban environments on the patient's stress levels?			
	Environmental Consciousness	Discuss how the patient's environmental consciousness influences his lifestyle choices affecting his health?			
Psychological Assessment	Stress Management	Assess the patient's stress levels and coping mechanisms related to urban living adjustments?			
	Cultural Adaptation	Determine psychological impacts of cultural reintegration after living abroad?			
Communication	Departure	Confirm patient understanding of the conversation? Conclude with a polite farewell?			
Comments					

Module	Category	Content	Done	Partially Completed	Not done

(Chinese version) **SP 4 案例脚本**

背景：

反映患者城市生活体验的中国大都市地区的医院。

SP 角色：

一名 40 岁汉族男性，因应激性高血压和睡眠困难症状来医院就诊。

学生角色：

一名实习护士进行综合评估，包括与城市生活和文化适应相关的饮食、环境和心理因素。

场景：

王刚，40 岁，汉族男性，一直有高血压和失眠症状。在泰国生活了 4 年后，他最近回到了中国，在那里他从事城市发展项目。实习护士必须评估他从泰国过渡到中国城市环境的潜在影响，以及他的环保意识对他目前的健康状况的影响。

每个单独的模拟 时间：

· 与患者相处的时间 = 20 分钟

· 清单时间 = 7 分钟

· 周转时间 = 3 分钟

• 总遭遇时间 = 30 分钟

学生模拟清单

模块	类别	内容	完成	部分完成	没有完成
沟通	到来	一进门就微笑着打招呼？ 使用免洗手消毒液？			
	介绍	自我介绍并指定专业领域？ 戴名牌？			
	互动- 视觉/非语言	眼神交流？ 适当地点头？ 似乎有兴趣吗？			
	互动- 口头	澄清患者的担忧？ 对问题提供明确的回答？ 鼓励患者分享更多细节？ 让患者说话不受干扰？			
健康史	学生应具备基本健康史的基础知识	询问最近的健康变化？ 讨论生活习惯（饮食、运动）？ 记录患者的身高和体重？ 讨论家族健康史？ 查看处方药？ 确认是否有任何草药补充剂？ 讨论环境或职业危害？			
饮食评估	营养摄入	询问从泰国回来后饮食的变化及其对高血压的潜在影响？			
	城市饮食习惯	评估泰国饮食习惯对中国城市环境的适应程度？			

模块	类别	内容	完成	部分完成	没有完成
环境评估	城市环境转型	评估从泰国过渡到中国城市环境对患者压力水平的影响？			
	环保意识	讨论患者的环保意识如何影响他的生活方式选择，从而影响他的健康？			
心理评估	压力管理	评估患者的压力水平和与城市生活调整相关的应对机制？			
	文化适应	确定在国外生活后重新融入文化的心理影响？			
沟通	离开	确认患者对对话的理解？ 以礼貌的告别结束？			
评论					

SP 5 Case Script

Setting:

A general hospital in China with a dedicated integrative medicine department that includes mental health services.

SP Role:

A 45-year-old Han male admitted for anxiety and stress-related symptoms, possibly exacerbated by cultural re-adaptation.

Student Role:

A student nurse responsible for conducting an initial holistic assessment, including the patient's diet, environmental influences, and psychological state, with an emphasis on understanding the patient's cultural background in health practices.

Scenario:

Sun Hanyu a 45-year-old Han male, has been experiencing increased levels of anxiety and stress since returning to China from Australia. He has a deep connection with Taoist philosophy and has embraced certain aspects of the Australian lifestyle, particularly the approach to mental health. The student nurse is tasked with assessing how these cultural experiences have influenced his mental health and coping strategies.

Each individual simulation Timing:

· Time with patient = 20 min

· Checklist time = 7 min

· Turn-around time = 3 minutes

- Total encounter time = 30 minute

Student Checklist of Simulation

Component	Category	Did the Student…	Done	Done, but not correctly	Not done
Communication	Arrival	Greet with a smile upon entering? Use hand sanitizer?			
	Introduction	Introduce self and specify area of expertise? Wear a name tag?			
	Interaction-visual/nonverbal	Eye contact? Nod appropriately? Seem interested?			
	Interaction-verbal	Clarify patient concerns? Provide clear responses to questions? Encourage patient to share more details? Allow patient to speak without interruption?			
Health History	Students should have foundational knowledge for basic health history	Inquire about recent health changes? Discuss lifestyle habits (diet, exercise)? Record patient's height and weight? Discuss family health history? Review prescription medications? Confirm any herbal supplements? Discuss environmental or occupational hazards?			

Component	Category	Did the Student…	Done	Done, but not correctly	Not done
Diet Assessment	Taoist Dietary Principles	Consider the patient's diet in relation to Taoist principles and Australian influences.			
	Nutritional Balance	Evaluate the balance of yin and yang in the patient's diet and its impact on his mental health.			
Environmental Assessment	Cultural Environment	Assess the patient's adaptation to the environmental shift from Australia back to China.			
	Living Space Harmony	Evaluate the harmony of the patient's living space according to Taoist concepts.			
Psychological Assessment	Stress and Anxiety Levels	Assess the patient's levels of stress and anxiety in the context of his cultural beliefs and recent international move.			
	Coping Mechanisms	Identify coping mechanisms the patient has developed, incorporating Taoist practices and Australian mental health perspectives.			
Communication	Departure	Confirm patient understanding of the conversation? Conclude with a polite farewell?			
Comments					

(Chinese version)　　SP 5 案例脚本

背景：

中国的一家综合医院，设有专门的中西医结合科，包括精神卫生服务。

SP 角色：

一名 45 岁汉族男性因焦虑和应激相关症状入院，可能因文化重新适应而加重。

学生角色：

一名学生护士负责进行初步的整体评估，包括患者的饮食、环境影响和心理状态，重点是了解患者在健康实践中的文化背景。

场景：

孙涵予是一名 45 岁的汉族男性，自从从澳大利亚回到中国后，他的焦虑和压力一直在增加。他与道家哲学有着深厚的联系，并接受了澳大利亚生活方式的某些方面，尤其是心理健康方法。实习护士的任务是评估这些文化经历如何影响他的心理健康和应对策略。

每个单独的模拟 时间：

· 与患者相处的时间 = 20 分钟

· 清单时间 = 7 分钟

· 周转时间 = 3 分钟

• 总遭遇时间 = 30 分钟

学生模拟清单

模块	**类别**	**内容**	**完成**	**部分完成**	**没有完成**
沟通	到来	一进门就微笑着打招呼？ 使用免洗手消毒液？			
	介绍	自我介绍并指定专业领域？ 戴名牌？			

模块	类别	内容	完成	部分完成	没有完成
	互动- 视觉/非语言	眼神交流？ 适当地点头？ 似乎有兴趣吗？			
	互动- 口头	澄清患者的担忧？ 对问题提供明确的回答？ 鼓励患者分享更多细节？ 让患者说话不受干扰？			
健康史	学生应具备基本健康史的基础知识	询问最近的健康变化？ 讨论生活习惯（饮食、运动）？ 记录患者的身高和体重？ 讨论家族健康史？ 查看处方药？ 确认是否有任何草药补充剂？ 讨论环境或职业危害？			
饮食评估	道家饮食原则	考虑患者的饮食与道教原则和澳大利亚的影响。			
	营养均衡	评估患者饮食中阴阳平衡及其对心理健康的影响。			
环境评估	文化环境	评估患者对从澳大利亚回到中国的环境转移的适应情况。			
	生活空间和谐	根据道家观念评估患者生活空间的和谐。			
心理评估	压力和焦虑水平	根据患者的文化信仰和最近的国际搬迁情况，评估患者的压力和焦虑			

模块	类别	内容	完成	部分完成	没有完成
		水平。			
	应对机制	确定患者已经形成的应对机制，结合道教实践和澳大利亚心理健康观点。			
沟通	离开	确认患者对对话的理解？ 以礼貌的告别结束？			
评论					

Appendix K

Debriefing Guideline for SPs

Debriefing Guideline for SPs

Objective:

The objective of the debriefing session is to provide a reflective and constructive learning environment where participants can analyze their performance, understand the perspectives of the SPs, and identify areas for improvement in cultural competency and clinical skills.

Structure:

1. Setting the Stage:

- Participants and SPs gather in a designated debriefing room arranged in a circle to facilitate open communication.

- A facilitator (instructor or trained professional) introduces the session, outlines its objectives, and emphasizes the importance of respectful and constructive feedback.

2. Initial Reflection:

- Participants are given a few minutes to reflect individually on their performance during the simulation.

- They are encouraged to think about what they believe went well and areas where they faced challenges.

3. Guided Discussion:

- The facilitator initiates the discussion by inviting SPs to share their perspectives using the following questions:

  • What aspects of the participant's approach did you find effective during the interview?

  • In what ways did the participant demonstrate cultural sensitivity and understanding?

  • Were there moments where you felt misunderstood or improperly assessed due to cultural differences?

- Participants then respond to SP feedback and share their own views.

4. Focused Feedback:

- The facilitator guides the SPs to provide specific feedback on participants' communication skills, cultural competency, and clinical assessment abilities.

- This includes discussing the appropriateness of questions asked, empathy shown, and understanding of cultural nuances.

5. Participant Queries:

- Participants are given the opportunity to ask SPs questions regarding their experiences and seek advice on improving their skills in dealing with culturally diverse clients.

6. Constructive Critique:

- The facilitator encourages participants to critique their own performance, fostering self-awareness and self-improvement.

- Peers may also provide feedback, guided by the principle of positive reinforcement and constructive criticism.

7. Actionable Insights:

- The session concludes with the facilitator summarizing key learnings and encouraging participants to think about how they can apply these insights in future interactions.

- Participants are asked to set specific goals or actions they plan to take based on the debriefing.

8. Documentation and Follow-Up:

- Participants document their reflections and action plans.

- The facilitator provides additional resources or readings to reinforce learning and suggests possible follow-up sessions or activities.

Conclusion:

The debriefing session is an integral part of the learning process in simulation training. It allows participants to critically reflect on their performance, gain insights from the SPs' perspectives, and develop strategies for improving cultural competency and clinical skills. This structured approach ensures a comprehensive and effective debriefing experience, fostering continuous learning and professional growth.

(Chinese version) 标准化病人讨论指导原则

目标：

讨论环节的目标是提供一个反思和建设性的学习环境，让参与者能够分析自己的表现，理解标准化病人的观点，并在文化能力和临床技能方面确定改进的领域。

结构：

1. 准备阶段：

- 参与者和标准化病人在指定的讨论室集合，坐成一个圆圈，以促进开放式沟通。

- 引导者（讲师或受过培训的专业人士）介绍会议，概述其目标，并强调尊重和建设性反馈的重要性。

2. 初始反思：

- 给参与者几分钟时间，让他们个人反思在模拟过程中的表现。

- 鼓励他们思考自认为做得好的地方和面临挑战的领域。

3. 引导性讨论：

- 引导者通过邀请标准化病人分享他们的观点来启动讨论，提出以下问题：

·在面试过程中，你认为参与者的哪些做法是有效的？

·参与者在展现文化敏感性和理解方面有哪些方式？

·有没有因为文化差异而感到被误解或评估不当的时刻？

- 参与者随后回应标准化病人的反馈，并分享他们自己的看法。

4. 专注反馈：

- 引导者指导标准化病人对参与者的沟通技能、文化能力和临床评估能力提供具体反馈。

- 这包括讨论提出的问题的恰当性、所表现的同情心，以及对文化细微差别的理解。

5. 参与者提问：

- 给参与者机会向标准化病人提问，了解他们的经历，并寻求在处理文化多样性客户方面提高技能的建议。

6. 建设性批评：

- 引导者鼓励参与者批评自己的表现，培养自我意识和自我提升。

- 同伴也可以提供反馈，遵循积极增强和建设性批评的原则。

7. 可操作的洞察：

- 会议以引导者总结关键学习点并鼓励参与者思考如何在未来的互动中应用这些洞察结束。

- 要求参与者设定基于讨论的具体目标或行动计划。

8. 记录和后续跟进：

- 参与者记录他们的反思和行动计划。

- 引导者提供额外的资源或阅读材料以加强学习，并建议可能的后续会议或活动。

结论：

讨论汇报会是模拟训练学习过程中不可或缺的一部分。它使参与者能够批判性地反思自己的表现，从 SP 的角度获得见解，并制定提高文化能力和临床技能的策略。这种结构化方法可确保全面有效的汇报体验，促进持续学习和专业成长。

BIOGRAPHY

NAME	Yang QIN
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PLACE OF BIRTH	Guannan Count, Jiangsu Province, China
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EDUCATION	2008-2012 — Bachelor of Nursing, School of Nursing, Xuzhou Medical College, Jiangsu Province, China 2013-2016 — Master of Nursing, School of Medical, Yangzhou University, Jiangsu Province, China 2019-present — Doctor of Philosophy in Nursing Science (International Program), Faculty of Nursing, Burapha University, Thailand
AWARDS OR GRANTS	2015 — Excellent Graduate Scholarship second-class