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EFFECT OF THE DIVERSE STANDARDIZED PATIENT SIMULATION (DSPS)
CULTURAL COMPETENCE EDUCATION STRATEGY
ON NURSING STUDENTS' TRANSCULTURAL SELF-EFFICACY PERCEPTIONS

by

EDA OZKARA SAN

A dissertation submitted to the Graduate Faculty in Nursing Program in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2018

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Effect of the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education
Strategy on Nursing Students' Transcultural Self-Efficacy Perceptions

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Eda Ozkara San

This manuscript has been read and accepted for the Graduate Faculty in Nursing in satisfaction
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THE CITY UNIVERSITY OF NEWYORK

Abstract

Effect of the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy on Nursing Students' Transcultural Self-Efficacy Perceptions

by

Eda Ozkara San

Advisor: Dr. Marianne R. Jeffreys

Nursing students find it challenging to provide culture-specific care for patients representing diversity in ethnicity, race, language, socioeconomic status, religion, gender, sexual orientation, immigration history, and lifestyle and frequently lack confidence in their knowledge, skills, and abilities. Simulation has become a useful strategy for teaching nursing students assessment skills, technical skills, teamwork, delegation, self-efficacy, and professional communication. An alarming gap exists within the literature concerning innovative teaching and learning strategies that are carefully designed, implemented, and evaluated and follow a conceptual model, guidelines, and standards to enhance cultural competence development of diverse student groups, who must work with patients from various backgrounds.

This longitudinal, one-group, pretest and post-test educational intervention study involved two research questions to understand changes in students' ($n = 53$) transcultural self-efficacy (TSE) following the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy. Jeffreys' (2016a) Cultural Competence and Confidence (CCC) theoretical model guided the development of the DSPS strategy. The National League for Nursing (NLN) Jeffries Simulation Theory (JST) (2015), the International Association for Clinical Simulation and Learning (INACSL) Standards of Best Practice: SimulationSM (2013; 2016), and guidelines for coaching standardized patients from Wallace (2007) were followed

closely in simulation scenario design, evaluation, implementation, and training processes. As a multidimensional strategy, the DSPS strategy carefully weaves together cognitive, practical, and affective transcultural nursing skills; encompasses assessment, planning, implementation, and evaluation; and involves the TSE appraisal process in addition to other considerations from the educational and self-efficacy literature and the CCC model. Two DSPS scenarios designed by the researcher and validated by five doctorally prepared transcultural nursing experts were implemented with 53 ADN students enrolled in a second-semester, nine-credit, 15-week medical-surgical nursing course. DSPS scenario #1 targeted culturally competent care for a Turkish Muslim patient in the preoperative setting; DSPS scenario #2 targeted culturally competent care for chronic disease management (diabetes) for a patient self-identifying with the lesbian, gay, bisexual, and/or transgender population. The Jeffreys' Transcultural Self-Efficacy Tool (TSET) (Jeffreys, 2016b, Toolkit Item 1) was administered as a pretest and post-test to assess students' changes in cognitive, practical, and affective dimensions of TSE. To obtain data specific to each scenario, two researcher-developed measures that corresponded with each TSET subscale (Cognitive, Practical, and Affective) and the total TSET were administered: The Simulation Survey and Simulation Participation Survey.

For research question 1, the students' self-efficacy strength (SEST) scores and self-efficacy level (SEL) groups (low, medium, high) changed significantly from pretest to post-test ($p < .05$) in the Cognitive and Practical subscales and total TSET. Although changes occurred in the expected direction (increase), the Affective subscale missed statistical significance on both SEST ($p = .054$) and SEL ($p = .058$) analyses. Bivariate analyses on the Simulation Survey and the Simulation Participation Survey indicated that the mean scores for cognitive, practical, affective dimensions and overall confidence questions were similar regardless of answering

immediately after the scenario or post-test TSET for both DSPS #1 and DSPS #2. A statistically significant positive correlation was observed between the specific scenario (DSPS #1 or DSPS #2) and the post-test TSET responses. For research question 2, results supported that all students, regardless of background, benefit (and require) formalized cultural competence education.

This study supports the adaptation and utilization of the DSPS cultural competence education strategy for various populations and settings to develop cultural competence and TSE. The utilization of the CCC model and its corresponding TSET, along with recommended guidelines and standards, can assist to direct future research and focus educational strategies to support students' confidence in providing cultural competent care. Consequently, this study fills a gap in the literature by providing a carefully orchestrated cultural competence educational intervention specifically utilizing the SP pedagogy that: was guided by a theoretical framework; followed international guidelines and standards for the design, implementation, evaluation, and SP training; and had content validity review. Implications and recommendations for theory, education, research, policy, and administration are presented.

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CHAPTER I

Introduction

In order to eliminate health disparities, enhance patient outcomes, recruit a diverse workforce, and prevent multicultural workplace conflicts, cultural competence in nursing care should be at the core of nursing education (American Association of Colleges of Nursing [AACN], 2008; American Nurses Association [ANA], 2015; International Council of Nurses, 2015; Jeffreys, 2010, 2016a; Jeffreys & Dogan, 2012; Marion et al., 2016; Sullivan, 2015). Nursing students find it challenging to provide culture-specific care for patients representing diversity in ethnicity, race, language, socioeconomic status, religion, gender, sexual orientation, immigration history, and lifestyle and frequently lack confidence (self-efficacy) in their knowledge, skills, and abilities (Jeffreys, 2010, 2016a; McFarland & Wehbe-Alamah, 2015; Ndiwane, Koul, & Theroux, 2014). Thus, nurse educators are challenged to find evidence-based teaching learning strategies and diverse clinical experiences to adequately prepare students to meet the needs of a changing world (Garrido, Dlugasch, & Graber, 2014; National League for Nursing [NLN], 2012), and it is essential to determine the effectiveness of specific strategies for cultural competence education.

Clinical simulation, which offers the opportunity for students to practice nursing skills in a risk-free, controlled environment and helps develop self-efficacy (confidence) within the nursing role (Grossman, Mager, Opheim, & Torbjornsen, 2012; Haas, Sekman & Rae, 2010; Jeffries, 2007, 2012, 2015; Kaakinen & Arwood, 2009), has only fairly recently been implemented for cultural competence education. Standardized patients (SPs) are used as one simulation strategy to teach a variety of skills in nursing, medicine, and other health professions. SPs are individuals who are taught to simulate patients with health concerns or conditions and

then participate as patients in students' simulated clinical experiences targeting specific objectives and outcomes (Lewis et al., 2017; Meakim et al., 2013; Wallace, 2007). Standardized patient simulation can be adapted to incorporate different cultural values, beliefs, practices, and lifestyles to assist students to develop cultural competence and transcultural self-efficacy (Byrne, 2017; Grossman et al., 2012; Ndiwane et al., 2014).

Self-efficacy has been identified as an influential factor in learning and performing skills and is situation or domain-specific (Bandura, 1986); it is also an integral component of simulation (Jeffries, 2012, 2015). Transcultural self-efficacy (TSE), the perceived confidence for learning or performing transcultural nursing skills among culturally different clients, is a major component of the Cultural Competence and Confidence (CCC) model (Jeffreys, 2006, 2010, 2016a). Here, cultural competence is defined as “a multidimensional learning process that integrates transcultural skills in all three dimensions (cognitive, practical, and affective), involves TSE as a major influencing factor, and aims to achieve culturally congruent care” (Jeffreys, 2016a, p.73). According to the model, strong self-efficacy is expected to lead to commitment, motivation, persistence, preparation, and performance of transcultural skills aimed at providing cultural congruent patient care. In contrast, individuals who are inefficacious (with low confidence) or supremely efficacious (overly confident) are at risk for not learning or performing the transcultural skills needed for culturally competent care (Jeffreys, 2016a). The model also emphasizes that TSE and transcultural skill development can change over time as a result of formalized education interventions and other learning experiences aimed at enhancing cultural competence development.

Utilizing the CCC framework and its corresponding, psychometrically validated Transcultural Self-Efficacy Tool (TSET) (Jeffreys, 2016b, Toolkit Item 1), the researcher aimed

to evaluate the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on associate degree nursing (ADN) students' TSE perceptions. Incorporating guidelines from the International Association for Clinical Simulation and Learning (INACSL) Standards of Best Practice: SimulationSM (2013, 2016) and the NLN/Jeffries Simulation Theory (JST) (2015), two DSPS scenarios designed by the researcher and validated by transcultural nursing experts were implemented with all ADN students enrolled in a second-semester, nine-credit, 15-week medical-surgical nursing course (53 students). As per INACSL Standards of Best Practice: Simulation (2013), the NLN/JST (2015) guidelines, and recommendations by SP design experts (Wallace, 2007), the DSPS scenarios incorporated five distinct phases: 1) pre-brief, 2) SP experience, 3) observation, 4) debriefing, and 5) reflection. The five phases and their components are consistent with the more recent INACSL Standards of Best Practice: SimulationSM (2013, 2016) and Standards of Best Practice (SOBP) disseminated by the Association of Standardized Patient Educators (ASPE) for educators working with SPs (Lewis et al., 2017). The TSET was administered as a pretest (at the beginning of the semester) and post-test (after implementation of the DSPS strategy, during week 13) to assess students' changes in cognitive, practical, and affective dimensions of TSE.

Statement of the Problem

Cultural competence is identified as crucial for eliminating health disparities (AACN, 2008; ANA, 2015; Institute of Medicine (IOM), 2010; Jeffreys, 2006, 2010, 2016a; Leininger, 1978, 1991, 1995, 2002, 2006; Leininger & McFarland, 2006; NLN, 2012; Marion et al., 2016; Transcultural Nursing Society [TCNS], 2015). A variety of evidence-based educational strategies are used to enhance culturally competent nursing education. These include service-learning projects, objective structured clinical examinations (OSCE), case studies, role-play, self-

reflection (Adams, 2012; Amerson, 2010; Rogers-Walker, 2014), domestic and foreign immersion experiences (Amerson, 2010; Czanderna, 2013; Larsen & Reif, 2011; Rogers-Walker, 2014; Schroeder, 2012), the use of high-fidelity manikins (Grossman et al., 2012; Halter, Grund, Fridline, See, Young, & Reece, 2014; Rutledge, Barham, Wiles, & Benjamin, 2008), the use of low-fidelity manikins (Phillips, Grant, Milligan, & Moss, 2012), and the use of SPs (Garrido et al., 2014; Ndiwane et al., 2014; Rutledge, Garzon, Scott, & Karlowicz, 2004).

Recently, the National Council of State Boards of Nursing (NCSBN) (2014) conducted a longitudinal study using a nationwide sample of ADN and Bachelor of Science in nursing (BSN) programs to evaluate the educational outcomes of 25% and 50% simulation use in place of traditional clinical hours (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014). This study supported the use of simulation as a substitute for up to 50% of traditional clinical time and made a substantial contribution to the literature in both nursing regulation and education for the use of clinical simulation (Hayden et al., 2014). Current literature about the effects of clinical simulation as an educational intervention demonstrate that it may enhance cultural awareness, communication, collaborative teamwork, critical thinking and decision-making skills, as well as cultural knowledge and assessment skills of diverse nursing students (Byrne, 2017; Grossman et al., 2012; Garrido et al., 2014; Ndiwane et al., 2014; Rutledge et al., 2008). Yet, a literature search yielded only two published studies concerning cultural competence education, clinical simulation, and TSE using the CCC model and its corresponding TSET tool (Grossman et al., 2012; Weideman et al., 2016).

Grossman et al. (2012) conducted a bi-national high-fidelity simulation study with American ($n = 48$) and Norwegian ($n = 25$) nursing students. The American students demonstrated a statistically significant difference ($p < .01$) in all TSET pretest and post-test

subscale scores; Norwegian students showed a statistically significant difference ($p < .02$) in cognitive and affective domains. The results in the practical domain were not statistically significant ($p < .07$); however, changes occurred in the expected direction. TSET score results supported that the use of cultural content during simulation increased students' perceptions of cultural awareness. More recently, in a pretest/post-test designed study ($n = 141$), Weideman and colleagues (2016) used the CCC model to design, implement, and evaluate a virtual simulation experience (VSE) to strengthen BSN students' ability to provide culturally congruent care. The researchers, from two universities, collaborated in designing prenatal and post-natal VSE with African American and Amish patients. The researchers found statistically significant changes between pretest and post-test results for each subscale ($p < .001$ and overall TSET ($p < .001$). No studies were found that explored the effectiveness of SP simulation for cultural competence education on TSE.

Educational tools such as the DSPS as a cultural competence education strategy may encourage nursing students to develop their self-efficacy for performing cognitive (knowledge), practical (interview), and affective (attitudes, values, and beliefs) transcultural nursing skills when providing care for a patient whose background is different from their own. Research literature specifically focused on SP scenarios for cultural competence education, strategy evaluation, and effects on TSE is lacking; hence, further empirical support is needed.

Aims of the Study

The researcher aimed to evaluate the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on associate degree nursing (ADN) students' TSE perceptions. Furthermore, this study aimed to contribute to the evidence regarding the effectiveness of the DSPS as an innovative educational strategy for the development of

cultural competence in ADN students. The researcher also gathered data on demographic variables, including sex, age, marital status, ethnicity, English as first language, ability to speak another language besides English, being born in the United States, religion, and previous healthcare experience, to explore the influence of selected demographic variables on students' TSE perceptions. Lastly, the researcher intended to contribute to the growing empirical evidence concerning cultural competence education, simulation, and the use of SPs; the underlying assumptions of the CCC model; and psychometric quality of the TSET.

Significance of the Study

Major organizations have identified the need to increase the amount of financial and other resources dedicated to the implementation of simulation in nursing education to prepare students to provide culturally competent care to diverse patients (ANA, 2015; AACN, 2008; INACSL Standards of Best Practice: Simulation, 2016; IOM, 2010; NLN, 2012). Without evidence, it is difficult to allocate resources and make budgetary arrangements to successfully integrate and implement clinical simulation. Development of evidence-based educational intervention studies to enhance nursing students' cultural competency is still lacking in the nursing literature. By adapting standardized, consistent, and validated cultural competence education strategies, nurse educators can meet the need of diverse student groups and promote their development of cultural competence.

Using the CCC model as the theoretical framework and incorporating recommended simulation guidelines, the researcher developed the multidimensional DSPS cultural competence education strategy. The significance of this longitudinal, pretest and post-test educational intervention study is paramount as it contributes to nursing education research by providing a structured approach for simulation design, implementation, and evaluation.

This study was specifically designed to fill the gap regarding the use of SPs in cultural competence education for ADN students with the evaluation of TSE before and after a multidimensional cultural competence education strategy. An additional purpose was to arrive at a measurable, quantitative approach to develop culturally competent scenarios and guide future expanded local and multinational studies. Developing innovative, effective, and evidence-based strategies for teaching, learning, and evaluating cultural competence education initiatives will ultimately benefit patients and society through culturally competent, high quality nursing care (INACSL Standards of Best Practice: Simulation, 2016; Jeffreys, 2016a; Jeffries, 2015; Shelestak & Voshall, 2014).

Definition of Terms

Conceptual and operational definitions of the major variables and components of the study are provided below.

Affective Learning Dimension

“A learning dimension concerned with attitudes, values, and beliefs and it is considered to be the most important in developing professional values and attitudes” (Jeffreys, 2016a, p.74). The affective learning dimension was measured by the 30-item Affective subscale score on the TSET (Jeffreys, 2016b, Toolkit Item 1).

Associate Degree Nursing (ADN) Student

An individual who is enrolled in a two-year associate degree nursing program leading to an associate degree and eligibility for the National Council Licensure Examination for Registered Nurses (NCLEX-RN) after successful completion of the program.

Cultural Competence

“An ongoing, multidimensional learning process that integrates transcultural skills in all three dimensions (cognitive, practical, and affective), involves TSE (confidence) as a major influencing factor, and aims to achieve culturally congruent care” (Jeffreys, 2016a, p. 75).

Cognitive Learning Dimension

“A learning dimension that focuses on knowledge outcomes, intellectual abilities, and skills” (Jeffreys, 2016a, p.74). The cognitive learning dimension was measured by the 25-item Cognitive subscale score on the TSET (Jeffreys, 2016b, Toolkit Item 1).

Practical Learning Dimension

“A learning dimension similar to the psychomotor learning domain [that] focuses on motor skills or practical application of skills. Within the context of transcultural learning, practical learning skills refer to communication skills (verbal and nonverbal) needed to interview clients of different cultural backgrounds about their values and beliefs” (Jeffreys. 2016a, p. 74). The practical learning dimension was measured by the 28-item Practical subscale score on the TSET (Jeffreys, 2016b, Toolkit Item 1).

Simulation

Activities that mimic the reality of a clinical environment and are designed to demonstrate procedures, decision-making, and critical thinking through techniques such as role-playing and the use of devices such as interactive videos or manikins (Jeffries, 2005, p. 97).

Standardized Patient (SP)

A person trained to consistently portray a patient or other individual in a scripted scenario for the purposes of instruction, practice, or evaluation (Meakim et al., 2013, p. S9).

Transcultural Self-Efficacy (TSE)

“The perceived confidence for performing or learning transcultural nursing skills. It is the degree to which individuals perceive they have the ability to perform the specific transcultural nursing skills needed for culturally competent and congruent care” (Jeffreys, 2010, p.52). The 83-item TSET was administered to measure the three dimensions of TSE (Jeffreys, 2016b, Toolkit Item 1).

Theoretical Framework

The Jeffreys’ (2016a) Cultural Competence and Confidence (CCC) model was selected to guide this study because it is the only framework that specifically addresses the teaching-learning process of cultural competence development and education (Jeffreys, 2016a; Shen, 2015); it is the most comprehensive and widely applied framework for guiding a variety of multidimensional teaching-learning strategies. Developed from a synthesis of empirical and conceptual literature from education (Bloom’s taxonomy of learning) (Anderson et al. 2001; Bloom, Englehart, Fürst, Hill, & Krathwohl, 1956), psychology (Bandura, 1982, 1986, 1997), and transcultural nursing (Jeffreys, 2000; Jeffreys & Smoldaka, 1996, 1998, 1999a, 1999b), the CCC model was designed to guide improvements in various innovative teaching and learning strategies and then evaluate the effectiveness of those strategies (Jeffreys, 2010, 2016a). Jeffreys (2010) added the rationale for a cultural model “that depicts the multidimensional components of the teaching-learning process of cultural competency,” indicating that it “could serve as a valuable map to guide educators, researchers, and learners” (pp. 45-46). The CCC model provides an explanation of the premise of educators, researchers, and students’ developing cultural competence through the construct of TSE. It consists of three multidimensional domains, namely cognitive, practical, and affective, that involve TSE as a major influencing factor to

achieve culturally competent care (Jeffreys, 2006, 2010, 2016a). The model, which may be used to evaluate the effectiveness of educational strategies such as simulation, is based on the phenomena that TSE influences cultural competence development, thereby influencing culturally congruent patient care. TSE is affected by the learning of transcultural skills (cognitive, practical, and affective), formalized cultural competence education, and other learning experiences (Jeffreys, 2006, 2010, 2016a).

The TSET (Jeffreys, 2016b, Toolkit Item 1), a corresponding and psychometrically tested 83-item instrument, is congruent with the CCC model and was administered to assess students' changes in cognitive, practical, and affective dimensions of TSE. The TSET has been administered in more than 70 nursing and healthcare studies, yielding many statistically significant findings pre- and post-cultural competence educational interventions (Jeffreys, 2016a); however, no studies have explored SP as a cultural competence educational strategy.

Research Questions

Two research questions were addressed:

1. What is the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on associate degree nursing students' transcultural self-efficacy (TSE) perceptions?
2. What is the influence of select demographic variables on TSE perceptions of associate degree nursing students?

Limitations of the Study

When initially proposing this much-needed study, the researcher acknowledged several limitations. Lunenburg and Irby (2008) explain that "limitations are factors that may have an effect on the interpretation of the findings or on the generalizability of the results" (p. 133).

First, this study was limited to the use of a convenience sample of ADN students enrolled in a second-semester, nine-credit, 15 week medical-surgical course at an urban public college in the northeast United States; therefore, findings from this study may only be generalized to ADN students in a similar community and not to other sample populations of nursing students, and the results may not be generalizable to other geographic regions.

Second, although some literature suggests a one-group longitudinal study design may be a limitation because of lack of a control group, measurement experts and other scholarly literature advocate a one-group design because "students in the longitudinal study serve as their own control, the pretest and post-test design is more powerful than having a control group that might be different from the experimental group in many ways" (Jeffreys & Dogan, 2012, p. 194). "In the absence of experimentation, only longitudinal research lends itself to the study of causation in general and reciprocal causation in particular" (Pedhazur & Schmelkin, 1991, p. 316). The participants (53 ADN students) were exposed to the DSPS cultural competency education intervention and served as their own control. Consequently, after careful deliberation and consultation with a measurement expert familiar with the TSET and several different study designs utilizing the TSET with undergraduate and graduate students, the selected one-group design was deemed appropriate (E. Dogan, personal communication, September 10, 2015).

Third, the researcher recognizes that it was difficult to minimize the possible variables within and/or outside the nursing program curriculum that would cause changes on TSE perceptions.

Finally, this study followed consistent international guidelines for all components of the DSPS, but due to the nature of the simulation, it was difficult for each participant to experience

an exactly identical learning event. The researcher took notes following each learning event to record any important learning event differences that may have occurred.

Assumptions

The 14 basic assumptions of the CCC model guided this study (Jeffreys, 2000, 2010, 2016a). Jeffreys (2016a) highlights that “some assumptions can not be validated; they are merely ‘assumptions’ or ‘tenets’ that one holds true” (p.76). Most of the assumptions of the CCC model have been supported by several research studies (Jeffreys, 2010, 2016a; Jeffreys & Smolaka, 1999a, 1999b) and are listed in Chapter II.

In addition to the CCC model’s assumptions, the following assumptions guided this study: a) the participants will respond accurately and honestly to all questionnaires; b) the participants will understand vocabulary and concepts to accurately respond to TSET items; and c) the participants will be able to meet student learning outcomes of two DSPS scenarios at the end of the simulation experience.

Organization of the Study

This research study is presented in five chapters. Chapter I introduces the study and presents the significance of the study to society and to the nursing and nursing education professions. It also presents the purpose of the study, the significance of addressing the stated problem, research questions, limitations, delimitations, assumptions of the study, and the organization of the study.

Chapter II presents the theoretical framework for the study and a synthesized critique of the pertinent literature related to the problem described in Chapter I. In addition, relevant information about the TSE is reviewed, and the rationale for selecting the Cultural Competence and Confidence Model (CCC) (Jeffreys, 2006, 2010, 2016a) as the theoretical framework for this

study is explained. Chapter III provides details of the methodology utilized during the study, the selection of the research participants, TSET instrumentation, data collection techniques, and data analyses procedures. Chapter IV presents the analysis of the data and summary of descriptive and inferential statistical test results of key demographic data. The dissertation concludes with Chapter V, which includes: a summary of the findings, discussion of the findings drawn from the data presented in Chapter IV, limitations and strengths, implications for theory, education, research, policy and administration, recommendations for practice and future research, and conclusion.

CHAPTER II

Review of the Literature

This longitudinal, one-group, pretest and post-test educational intervention study examined the effect of the Diverse Standardized Patient Simulation (DSPS) multidimensional cultural competence education strategy on 53 associate degree nursing (ADN) students' transcultural self-efficacy (TSE) perceptions. This chapter begins with an introduction of the construct of TSE and the conceptual framework, the Cultural Competence and Confidence (CCC) model (Jeffreys, 2016a), which guided this study. The review of the literature presents various innovative teaching and learning strategies and a synthesis of selected educational intervention studies that used the CCC model and Transcultural Self-Efficacy Tool (TSET) (Jeffreys, 2016a, Appendix A). Since this dissertation study focused on the impact of the DSPS strategy, a general overview about the utilization of clinical simulation and standardized patient (SP) simulation is included in the review of the literature. Related research about the impact of clinical simulation and SP simulation in cultural competence development is also discussed. A summary concludes the chapter.

Transcultural Self-Efficacy (TSE)

The transcultural self-efficacy (TSE) construct has been extensively addressed in nursing literature (Appendix R). Construct development began after Jeffreys' dissertation study (1993), entitled "The Relationship of Self-Efficacy and Select Academic and Environmental Variables on Academic Achievement and Retention." The results of the study indicated that students were least confident in communication concerning cultural issues such as interviewing clients about their finances (socioeconomic/class), religious beliefs, and ethnic food choices. Jeffreys sought an explanation about why students were less confident about communication and culture. Subsequent development of the TSE construct was guided by an extensive conceptual and

empirical literature review in education, psychology, and transcultural nursing as well as Bandura's social cognitive theory research (Bandura, 1986). Guided by Bandura's framework, the TSE construct was conceptualized as playing an important role in learning or performing transcultural nursing skills among culturally different clients (Jeffreys, 2016a).

TSE is defined as "the perceived confidence for performing or learning transcultural nursing skills" (Jeffreys, 2000, p. 128). Jeffreys believed that ongoing assessment about students' perceived self-efficacy was essential for those involved with transcultural nursing (TCN) education. As a result, several subsequent research studies were completed to assess students' perceived self-efficacy (Jeffreys, 2000; Jeffreys & Dogan, 2010, 2012; Jeffreys & Smodlaka, 1996, 1998, 1999a, 1999b). The Transcultural Self-Efficacy Tool (TSET) (Jeffreys, 2016b, Toolkit Item 1) was then designed to measure students' TSE perceptions at various baseline and learning points while students learn to provide culturally competent nursing care to diverse populations.

Based on the literature reviewed, more than 70 studies involved the application of the CCC model and/or administration of the TSET to evaluate TSE perceptions; their findings provided continued support that the TSET is a reliable and valid tool and can be used to understand differences in TSE perceptions within and between groups (Appendix R). Researchers worldwide recognized the importance of developing cultural competence education programs to provide culturally congruent care for diverse populations. They also recognized the importance of measuring outcomes and the TSET as a consistently valid and reliable instrument (Bayik & Basalan, 2006; Chen, 2014; Hyun, 2012; Kim, 2013; Kim & Lee, 2016; Sarafis & Malliarou, 2013; Sarafis, Michael, Chara, & Malliarou, 2014). The TSET has been translated into several languages including Chinese (Chen, 2014; Li, He, Lou, & Zhang, 2016), Greek

(Malliarou, Oikonomou, Nika, & Sarafis, 2017; Sarafis & Malliarou, 2013; Sarafis et al., 2014), Korean (Kim, 2013), and Turkish (Bayik & Basalan, 2006), and has been administered globally in numerous countries outside the United States, including Australia (Allen, Brown, Duff, Nesbitt, & Hepner, 2013), Canada (Matejka & Gulbransen, 2008), Norway (Grossman et al., 2012), Korea (Kim & Lee, 2016), and the Philippines (Hyun, 2012).

Not only has the TSET been utilized to measure TSE perceptions among associate degree nursing (ADN) (Appendix R – a, b) and undergraduate students (Appendix R – c, d), it has also been used among graduate (masters and doctoral) students (Appendix R – e), diverse health care professionals including nurses and physicians (Appendix R – f), and among faculty and/or academic administrators (Appendix R – g). Additionally, the TSET was found to be applicable for examining specific issues or areas needing focused attention in relation to cultural competence such as end-of-life care (Ellis, 2006), lesbian, gay, bisexual, and/or transgender (LGBTQ) education and issues (Hoyer, 2013), antidiscrimination issues (Allen et al., 2013), and ethical concerns for providing quality of care (Blackstock, 2003). In conclusion, it has been extensively recognized as an appropriate tool to evaluate TSE perceptions before and after formal and informal educational interventions such as service-learning, immersion, clinical simulation, and other clinical activities among associate, baccalaureate, masters, and doctoral nursing students (Appendix R). The following section will introduce the CCC model where TSE is described as a vital component to achieve the goal of culturally competent patient care.

Conceptual Framework: Jeffreys' Cultural Competence and Confidence (CCC) Model

Jeffreys' (2016a) Cultural Competence and Confidence (CCC) model was selected to guide this study because it is the only framework that specifically addresses the teaching-learning process of cultural competence development and education (Jeffreys, 2010, 2016a;

Shen, 2015). An overview of the CCC framework is detailed in the following sections. The TSET is briefly introduced, and its psychometric properties are discussed in detail in Chapter III.

Description

The CCC model is conceptually based on Bandura's social cognitive theory (1982, 1986, 1997), which is based on the concept of self-efficacy. The model describes the process of teaching and learning optimal cultural competence as a multidimensional process in which transcultural self-efficacy (TSE) is vital to achieve the goal of culturally congruent patient care (Jeffreys, 2006, 2010, 2016a, 2017). For the purposes of this model, cultural competence in nursing is defined as "a multidimensional learning process that integrates transcultural nursing skills in all three dimensions (cognitive, practical, and affective), involves transcultural self-efficacy (confidence), and aims to achieve culturally congruent nursing care" (Jeffreys, 2016a, p.73).

Jeffreys (2016a) emphasizes that all individuals, groups, and institutions must reach beyond minimum cultural competence by focusing on implementation of evidence-based and innovative teaching and learning strategies that promote positive cultural competence learning outcomes for diverse students, nurses, and other health care professionals to achieve optimal cultural competence. According to Jeffreys (2016a), "optimal cultural competence embraces the diversity of diversity, requires ongoing active learning, fosters multicultural workplace harmony, facilitates cultural safety, and promotes the delivery of the highest level of culturally congruent patient care" (p.74). Development of optimal cultural competence is at the core of the CCC model (Figure 1).

Figure 1 Jeffreys M. R. (2016a). *Teaching cultural competence in nursing and health care: Inquiry, action, and innovation* (3rd ed.). New York, NY: Springer. Reprinted with permission from Springer Publishing Company LLC.

In the application of the CCC model, formalized educational experiences and client learning experiences play a significant role in the learning process of cultural competence. “Carefully designed teaching and learning activities that integrate transcultural nursing skills including cognitive, practical, and affective can contribute to the development of cultural competence” (Jeffreys, 2016a, p. 80). Three dimensions of TSE (cognitive, practical, and affective) can evolve over time as a result of formalized education and other learning experiences. The cognitive dimension focuses on knowledge and understanding of cultural beliefs and practices. The practical dimension involves the application of verbal and nonverbal communication when conducting cultural assessment with clients. The affective dimension focuses on attitudes, awareness, appreciation, recognition, and advocacy. Each of the three learning domains influences the overall TSE (confidence) in the provision of culturally congruent care (Jeffreys, 2016a).

Purpose

According to Bandura’s social cognitive theory, both learning and motivation for learning are directly influenced by self-efficacy perceptions (confidence) (Jeffreys, 2016a). Consistent with Bandura’s approach, the CCC model describes the development of self-efficacy as an individualized process influenced by four information sources: actual performances, vicarious experiences, forms of persuasion, and emotional arousal (physiological indices) (Bandura, 1977, 1986; Jeffreys, 2010, 2016a). The strongest source of self-efficacy information is actual performance (Bandura, 1986; Jeffreys, 2016a). Whereas a successful performance can raise self-efficacy, a poor performance can lower self-efficacy. Low self-efficacy can cause psychological stress and negatively affect motivation, persistence, performance, and cultural competence development in nursing students, practicing nurses, and other health care professionals. The

psychological stress may also result in avoidance behaviors (Jeffreys, 2010; Jeffreys & Dogan, 2012) leading to professional, ethical, and legal issues. For instance, a student or nurse with low self-efficacy may avoid asking cultural-specific questions when taking care of a male hypoglycemic patient self-identifying with the LGBTQ population who arrives in the emergency department with their partner. When taking caring of this patient, a student or nurse with low self-efficacy avoids asking questions about the patient's cultural-religious values, beliefs, and health care practices, the partner's role in health care decisions, medication adherence, food choices, traditional health practices, access to health-related resources, barriers to healthcare, and sexual orientation; this may result in poor emotional and health outcomes for the client. Low self-efficacy can ultimately influence the student's learning, performance of an accurate cultural assessment, motivation, preparation, satisfaction, and seeking of help, thus resulting in increased anxiety. Based on the example provided, a student or nurse with strong levels of self-efficacy would put forth more effort in terms of collaborating with health care professionals, preparation, using appropriate communication style, and asking more culture-specific questions to learn more about the patient's background. A supremely efficacious (overly confident) student or nurse, on the other hand, may make assumptions that contribute to the main problem and disregard details that would significantly impact health outcomes of the patient, such as food choices, traditional healing practices, partner's support, or medication adherence. "Supremely efficacious individual would view the task without uncertainty, prepare inadequately (or not at all), and potentially jeopardize patient safety if inaccurate assessments are made and appropriate assistance is not sought" (Jeffreys, 2016a, p. 79).

Although vicarious experience or modeling affects the individual's self-efficacy perception, it is considered less influential than actual performance. The use of a structured

mentoring strategy provides an example of effective vicarious experience or modeling. Realistic, honest, positive verbal feedback, and encouragement from peers, faculty, mentors, supervisors, and significant others enhance self-efficacy (Jeffreys, 2010). Another source that contributes to the development of self-efficacy is “forms of persuasion”. This source includes positive and realistic verbal feedback from peers, teachers, supervisors, mentors, and significant others. “In order to create a positive impact, verbal encouragement should be provided carefully and honestly by various individuals” (Jeffreys, 2016a, p. 80).

Emotional arousal can also influence self-efficacy in the face of actual or perceived danger, anxiety, or stress. Physiological responses such as elevated heart rate and sweating may indicate emotional arousal such as anxiety and/or fear (Jeffreys, 2016a). A level of physiological stress that is too high can decrease self-efficacy and the individual can be more successful when not reacting to highly adverse situations (Bandura, 1986). Mild anxiety may result in some benefits in performing a task such as attention to details, recognition of the need for preparation, and requesting help, whereas lack of physiological changes would adversely impact performing the task (Jeffreys, 2016a). Self-efficacy evolves and changes throughout one’s life as one is exposed to new experiences and observations (Bandura, 1997).

Assumptions

As TSE for learning and performing transcultural nursing skills increases, the student is more likely to engage in transcultural skills needed for achieving culturally congruent care with diverse patients. Cultural competence is most effective when all three learning dimensions (cognitive, practical, and affective) are actively engaged. This can be further elaborated and expanded upon through the 14 assumptions of the CCC model. (Please note that the assumptions

are quoted from Jeffreys [2016a, p. 76] and that the asterisk refers to assumptions that were empirically tested by Jeffreys and/or other researchers.)

1. Cultural competence is an ongoing, multidimensional learning process that integrates transcultural skills in all three dimensions (cognitive, practical, and affective), involves TSE (confidence) as a major influencing factor, and aims to achieve culturally congruent care.

2. TSE is a dynamic construct that changes over time and is influenced by formalized exposure to culture care concepts (transcultural nursing).*

3. The learning of transcultural nursing skills is influenced by self-efficacy perceptions (confidence).*

4. The performance of transcultural nursing skill competencies is directly influenced by the adequate learning of such skills and by TSE perceptions.*

5. The performance of culturally congruent nursing skills is influenced by self-efficacy perceptions and by formalized educational exposure to transcultural nursing care concepts and skills throughout the educational experience.*

6. All students and nurses (regardless of age, ethnicity, gender, sexual orientation, lifestyle, religion, socioeconomic status, geographic location, or race) require formalized educational experiences to meet culture care needs of diverse individuals.*

7. The most comprehensive learning involves the integration of cognitive, practical, and affective dimensions.*

8. Learning in the cognitive, practical, and affective dimensions is paradoxically distinct yet interrelated.*

9. Learners are most confident about their attitudes (affective dimension) and least confident about their transcultural nursing knowledge (cognitive dimension).*

10. Novice learners will have lower self-efficacy perceptions than advanced learners.*

11. Inefficacious individuals are at risk for decreased motivation, lack of commitment, and/or avoidance of cultural considerations when planning and implementing nursing care.

12. Supremely efficacious (overly confident) individuals are at risk for inadequate preparation in learning the transcultural nursing skills necessary to provide culturally congruent care.

13. Early intervention with at-risk individuals will better prepare nurses to meet cultural competency.*

14. The greatest change in TSE perceptions will be detected in individuals with low self-efficacy (low confidence) initially, who have then been exposed to formalized transcultural nursing concepts and experiences.*

The CCC model specifically focuses on teaching and learning cultural competence and guides students, nurses, researchers, and other health care professionals in the development of optimal cultural competence in self and others (2006, 2010, 2016a). Nurse educators are influential in fostering optimal cultural competence development in nursing students (Jeffreys & Dogan, 2010). Jeffreys (2016a) introduced seven steps essential for achieving optimal cultural competence: 1) self-assessment, 2) active promotion, 3) systematic inquiry, 4) decisive action, 5) innovation, 6) measurement, and 7) evaluation. These steps can be used for ongoing inquiry, action, and innovation in the process of developing optimal cultural competence. The following section addresses the related literature about the CCC model, its corresponding TSET questionnaire, and various teaching and learning strategies to enhance culturally congruent nursing care.

The CCC Model, Transcultural Self-Efficacy Tool (TSET), and Teaching-Learning Strategies

The shortage of nursing faculty, a severe shortage of clinical sites, and valid concerns about patient safety and quality of provided care are some of the reasons why there is increased pressure on nursing faculty to find innovative teaching methods and educate nursing students with minimal risk for patient harm (Douglas et al., 2014; Hayden et al., 2014; IOM, 2010; Sullivan, 2015). The ANA (2015), AACN (2008a, 2008b, 2012), NLN (2005, 2009a, 2009b), the Joint Commission (2010), the Transcultural Nursing Society (TCNS, 2010, 2015), INACSL Standards of Best Practice: Simulation (2016), and other experts in culturally competent nursing care (Andrews & Boyle, 2008; Andrews et al., 2011; Campinha-Bacote, 2003a, 2003b, 2007, 2011; Giger & Davidhizar, 2008; Jeffreys, 2010, 2016a, 2017; Leininger, 1991, 1995, 2002, 2006; Leininger & McFarland, 2006; Lipson & DeSantis, 2007; McFarland & Wehbe-Alamah, 2015; Purnell, 2008; Sagar, 2012, 2014; Spector, 2004b) provide essential resources, standards, position statements, guidelines, and toolkits to guide curriculum development that ensures culturally competent nursing is threaded throughout nursing education. However, the challenge still exists to determine the efficacy of specific pedagogies utilized for teaching cultural competence.

The development of cultural competence is unlike the development of clinical skills in that cultural competence involves a lifelong developmental process that begins with cultural awareness (Jeffreys, 2016a; Sagar, 2014). Consideration of different learning styles of diverse student groups and determination of effective evidence-based teaching and learning interventions play an important role in helping students attain their educational goals. A current review of the literature revealed nurse educators implemented a variety teaching and learning strategies to

enhance ADN, BSN, masters, and doctoral nursing students' cultural competence, such as: local or international service-learning projects (Adams, 2012; Amerson, 2010, 2012; Amerson & Livingston, 2014; Rogers-Walker, 2014; Schmidt, 2012), international immersion experiences (Czanderna, 2013), domestic immersion experiences (Larsen & Reif, 2011; Schroeder, 2012), global web-conferencing (Spalla, 2012), integration of cultural competence objectives in the curriculum (Creech et al., 2017; Jeffreys & Dogan, 2012; Jeffreys & Smodlaka, 1996; 1998; 1999a; 1999b; Singleton, 2017), case studies, gaming, role play, face-to-face classrooms, and hybrid and online courses (Adams & Nevel, 2016a; Curtis, Bultas, & Green, 2011, 2016; Halter et al., 2014), *Cultural Discovery* (Jeffreys & O'Donnell, 1997; Jeffreys & Dogan, 2012; Jeffreys, O'Donnell, & Xiao, 2010, 2016a), innovative field trip experience (Jeffreys, Bertone, Douglas, Li, & Newman, 2016a), flipped cultural simulation (McArthur, Mixer, & Fancher, 2016a), the use of low- and high-fidelity patient simulation (Garrido et al., 2014; Grossman et al., 2012; Halter et al., 2014; Odreman, 2016; Phillips et al., 2012; Rutledge et al., 2008), virtual simulation experience (VSE) (Weideman et al., 2016), and the use of SPs (Byrne, 2017; Fioravanti et al., 2017; Garrido et al., 2014; Ndiwane et al., 2014; Rutledge et al., 2004).

Although the literature reveals many teaching and learning strategies to enhance students' level of cultural competence, these experiences might be limited due to finances, accessibility of service-learning and immersion sites, and lack of a controlled environment. Within the last decade, clinical simulation has been recognized as an innovative teaching and learning method in nursing education; however, there is little documented research concerning clinical simulation for cultural competence development. The literature search yielded only two published clinical simulation studies targeting BSN students (Grossman et al., 2012; Weideman et al., 2016) and utilizing the CCC model and its corresponding TSET. Both studies focused on the use of high-

fidelity patient simulation (HFPS) and virtual simulation experience (VSE) to enhance cultural competence education; they did not employ SP simulation. Limited research explored the effectiveness of SP simulation on cultural competence education by using various nursing models and tools (Byrne, 2017; Garrido et al., 2014; Fioravanti et al., 2017; Ndiwane et al., 2014; Rutledge et al., 2004). No studies were found addressing SP simulation and evaluation of TSE on ADN nursing students. The educational intervention developed for this study, the Diverse Standardized Patient Simulation (DSPS), is a multidimensional teaching and learning strategy that aims to improve students' knowledge, skills, and attitudes with regard to providing culturally competent nursing care. Thus, in addition to Grossman et al.'s (2012) and Weideman et al.'s (2016) studies, the researcher selected and analyzed studies that were: a) guided by the CCC model to develop, implement, and evaluate multidimensional teaching and learning strategies; and/or b) administered corresponding the TSET to evaluate TSE perceptions of ADN and BSN nursing students. As recommended by Lunenburg and Irby (2008), the funnel approach was applied to synthesize and report on the literature findings. For the purposes of this dissertation chapter, the pedagogical approaches most closely aligned with the DSPS strategy design and proposed implementation and evaluation are presented succinctly. A detailed appendix (Appendix R) presents citations and select details most pertinent to this study and to the psychometric quality documentation of the TSET.

Several researchers applied the CCC model to guide and develop innovative multidimensional teaching and learning strategies and evaluated ADN (Jeffreys & Smolaka, 1999a; Jeffreys & Dogan, 2012; Jeffreys, O'Donnell, & Xiao, 2010; 2016a), BSN (Adams & Nevel, 2016a; Curtis et al., 2011, 2016; Grossman et al., 2012; Halter et al., 2014; McArthur, Mixer, & Fancher, 2016a; Weideman et al., 2016), and doctoral (Singleton, 2017) nursing

students' TSE by administering the TSET as pretest and post-test. In a longitudinal study, Jeffreys and Smodlaka (1999a) explored the changes in ADN ($n = 51$) students' TSE perceptions following completion of an ADN curriculum that integrated various teaching and learning activities to enhance culturally competent care in addition to the multidimensional education strategy of *Cultural Discovery*. This strategy was developed to enhance culturally competence in nursing care and aimed to weave cognitive, practical, and affective transcultural nursing skills of ADN nursing students (Jeffreys & O'Donnell, 1997; Jeffreys, O'Donnell, & Xiao, 2016a). It was comprised of several components in conjunction with the Leininger (1991) "Acculturation Health Care Assessment Enabler for Cultural Patterns in Traditional and Nontraditional Lifeways." Components included background reading assignments, classroom activity, collaborative library introductory program, online cultural resource tutorial program, videotape program, interview, literature review, reflection, and written paper assignment. During a first-semester nursing course, this strategy was implemented over an 8-week period. For this longitudinal study, demographic variables and their impact on nursing students' TSE were explored; in addition, specific statistical tests were conducted during the data analyses. The results of the longitudinal study revealed statistically significant changes in TSE perceptions between the first and fourth semester on the Cognitive ($p = .03$) and the Practical ($p = .02$) subscales; on the Affective subscale, changes occurred in the expected direction but were not statistically significant ($p = .06$). The variables of semester (first versus fourth) and previous health care experience were found to be significant predictors on changes in TSE perceptions; gender, age, ethnicity, and income were not significant predictors on any of the subscales.

In 2012, Jeffreys and Dogan conducted a cross-sectional ($n = 147$) and a longitudinal ($n = 36$) study using the TSET to evaluate the influence of cultural competence education on TSE

perceptions of ADN students following an integrated approach to cultural competence education. The integrated approach involved introducing the targeted students to cultural competence concepts and skills incorporated throughout the curriculum in the nursing program, including *Cultural Discovery* and Integrated Skills (IS) in the first semester. Demographic data were collected on students' gender, age, race/ethnicity, first language, fluency in other language, born in the U.S., and previous healthcare experience. Statistically significant differences ($p < .05$) were found in the longitudinal study for all subscales; however, the cross-sectional study showed statistically significant differences ($p < .05$) only on the Cognitive subscale. Similar to the findings of Jeffreys and Smoldaka (1999a), the cross-sectional study also demonstrated that advanced students had higher confidence scores on all subscales than novice students. In the longitudinal study, the only statistically significant predictor was semester (novice or advance student); however, the cross-sectional study showed that both semester and previous health experience were statistically significant. Consistent with the underlying CCC model, this study provided additional support that TSE perceptions are influenced by formalized education and other learning experiences. These results indicated that self-efficacy is a dynamic construct that changes over time and is influenced by the educational experience.

Several researchers targeted BSN (Adams & Nevel, 2016a; Curtis et al., 2011, 2016; Grossman et al., 2012; Halter et al., 2014; McArthur, Mixer, & Fancher, 2016a; Weideman et al., 2016), and doctoral (Singleton, 2017) students and incorporated various multidimensional, innovative teaching and learning activities integrating the three learning dimensions of the CCC model to strengthen existing cultural curricular content. In a quasi-experimental study ($n = 58$), various methods such as case studies, face-to-face lecture, discussions, brainstorming, videos, DVDs about cultural issues, PowerPoint presentations, books and book reviews, cultural meals,

and guest speakers to promote cultural competence were utilized (Adams & Nevel, 2010). Students were also required to complete a variety of assignments including: self-heritage assessment, cultural assessment, cultural film review, cultural educational pamphlet, and an interview with a client from a different culture. The data analysis revealed that nursing students' TSE increased significantly from pretest to post-test for all three TSET subscales ($p < .001$). In 2016, Curtis et al. utilized the same methodology, similar educational activities, and administered the TSET to evaluate the effect of cultural competence educational strategies on BSN students' TSE perceptions ($n = 56$). Upon completion of the study, 32 students (28 female) completed both the pretest and post-test. Mean subscale scores increased at statistically significant levels between pretest and post-test: Cognitive ($p = .001$), Practical ($p = .001$), and Affective ($p = .009$). None of the subscale and overall mean scores differed significantly by demographic variables with the exception of the mean Practical subscale score, which differed by gender ($p = .048$). In 2014, Halter et al. conducted a longitudinal intervention study ($n = 234$) to evaluate the influence of a variety of cultural educational offerings on TSE perceptions of BSN students. The cultural educational offerings included cultural symposia, virtual simulations, cultural care content in classroom, laboratory, and clinical experiences, and cultural immersion experiences. The researchers utilized a classification and regression tree (CART) decision tree algorithm to analyze the relationship of demographic variables to TSE perceptions. The students' TSE self-efficacy strength (SEST) and self-efficacy level (SEL) scores changed significantly from pretest (beginning of first semester) to post-test (end of second semester) ($p < .001$). There were no significant differences for the variables of gender, age, income, race/ethnicity, or social orientation in relationship to TSE. The researchers only detected a significant difference ($p < .05$)

in the Cognitive subscale between students who reported previous health care experience and those without previous health care experience ($p < .05$).

In a pretest and post-test study ($n = 54$), Singleton (2017) examined the effectiveness of enhancing cultural competence across each semester of a new 3-year Doctor of Nursing practice (DNP) curriculum with family nurse practitioner (FNP) students. Guided by the CCC model, a consultant team assisted the program's faculty to integrate teaching and learning strategies into the classroom, online learning, student assignments, and learning assessments for each course offered in the program. A web-based learning platform was built to provide examples of resources such as: Dr. Leininger's video as she completed a cultural care assessment with a Polish American client, PowerPoint presentations, links to important reports, and relevant articles. Statistically significant changes in DNP-FNP students' TSE were found, as measured by the TSET, between the start of the enhanced cultural competence curriculum, after each year of the program, and at the completion of the program in the Cognitive, Practical, and Affective subscales and total TSET.

The literature review also identified one qualitative (McArthur, Mixer, & Fancher, 2016a) and two quantitative studies (Grossman et al., 2012; Weideman et al., 2016) in which researchers incorporated the CCC model and implemented clinical simulation to enhance BSN students' cultural competence. McArthur and colleagues (2016a) described a student-developed, multidimensional education strategy called Flipped Cultural Simulation (FCS)[®] with junior-year students. "This strategy assisted students to practice their cognitive, practical, and affective skills as they engaged in active learning using rigorous cognitive processes such as problem solving, knowledge application, analysis and evaluation" (p. 313). Qualitative analysis revealed that

students found this activity very informative and they preferred this strategy to traditional teaching methods.

Grossman and colleagues (2012) used high-fidelity patient simulation to examine the TSE of senior BSN students in a bi-national, pretest and post-test design study (United States, $n = 48$; Norway, $n = 25$). Nursing faculty from both countries developed two simulation scenarios. One scenario involved patient with respiratory failure; the other scenario involved a patient with a systemic infectious disease. Although both schools used the same scenarios, the Norwegians focused on Muslim and Somalian patients and/or families; the Americans focused on Muslim and Italian Catholic patients and/or families. American students showed statistically significant changes in all pre/post-test scores for all subscales; the Norwegian students demonstrated statistically significant differences only in the Cognitive ($p < .02$) and Affective ($p < .02$) subscales on post-test scores. Although, the Practical subscale mean score increased from for Norwegian students, the result was not statistically significant ($p < .07$). This bi-national study provided beginning evidence of how the use of cultural content and concepts during simulation increased students' perceptions of cultural awareness as measured by the TSET.

A pretest and post-test study ($n = 141$) by Weideman and colleagues (2016) explored the effect of a virtual simulation experience (VSE) on BSN nursing students' ability to provide culturally congruent care. The CCC model was used to design, implement, and evaluate the VSE. Researchers from two universities collaborated in designing prenatal or post-natal VSE with African American and Amish patients. The VSE was provided in two modules in Blackboard™ and unfolded over 2 weeks. In each module, a nurse interviewed the virtual patient to reveal key assessment findings while illuminating cultural preferences that could potentially impact the prenatal or post-natal period. Students reviewed patient assessments, interacted with patients,

worked within a team to develop culturally appropriate nursing care plans, and engaged in debriefing. Pretest and post-test data were collected via TSET and the researchers found statistically significant changes on each subscale ($p < .001$) and overall TSET ($p < .001$). Recommendations included incorporating innovative, unique, and cost-effective learning opportunities in different nursing courses with different cultures to impact students' cultural competence and confidence. As evidenced by the literature review, cultural competence of health care professionals is a worldwide concern. Implementation of different approaches and the use of innovative teaching and learning strategies have the potential to assist educators in evaluating cultural competence education initiatives.

Clinical Simulation

Simulated learning experiences assist nurse educators in a variety of nursing courses, including medical-surgical, maternity, psychiatric and mental health, community and public health, pediatrics, and fundamentals by addressing students' communication skills with specific cultures in order to create cultural awareness toward diverse patient populations (Phillips et al., 2012). Clinical simulation also provides an active learning environment by improving students' creative thinking and problem-solving skills (Jeffries, 2007; Jeffries, Rodgers, & Adamson, 2015; Ndiwane et al., 2014; Sagar, 2014). A limited but growing part of the literature also addresses the use of clinical simulation as an innovative teaching and learning strategy for enhancing culturally competent nursing care (Byrne, 2017; Grossman et al., 2012; Haas et al., 2010; Merrill & Hummel, 2010; Ndiwane et al., 2014; Rutledge et al., 2008; Waxman, 2010).

As a learner-centered educational tool, clinical simulation supports culturally competent nursing care by actively engaging nursing students in the care of patients from different cultures. By enhancing clinical simulations to include culturally significant variables such as information

about cultural background, race, or ethnicity, students can get practical experience in a safe, controlled environment that they may not get to experience in the actual clinical setting (Ozkara San, 2015). The literature review identified five types of clinical simulation in nursing education for enhancing culturally competent nursing care: high-fidelity patient simulation (HFPS) (Grossman et al., 2012; Merrill & Hummel, 2010; Rutledge et al., 2008), low-fidelity patient simulation (LFPS) (Phillips et al., 2012), SP simulation (Byrne, 2017; Fioravanti et al., 2017; Garrido et al., 2014; Ndiwane et al., 2014; Rutledge et al., 2004), virtual simulation (Weideman et al., 2016); and clinical simulation with the integration of international concepts (Foisy-Doll, 2013; Seckman & Diesel, 2013).

This study focuses on the impact of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on nursing students' TSE perceptions. There is a scarcity of publications on SP pedagogy and its impact on TSE; therefore, the following sections will first include a general overview and synthesis of studies that utilized HFPS and LFPS techniques to enhance culturally competent nursing care. A general overview about SP simulation, its utilization in nursing education, and its impact on nursing students' cultural competence development will conclude this chapter.

Cultural Competence and Clinical Simulation

The goal of increasing multicultural diversity leads to the challenge of providing culturally competent care for both nurses and patients. As nurse educators play a significant role in developing the nursing workforce, they are challenged to develop cultural awareness, knowledge, and competence in students, teaching them to provide culturally specific nursing care that is customized to fit the patient's cultural values, beliefs, traditions, practices, and lifestyles. Although the use of clinical simulation in conjunction with clinical experiences is gaining

importance in nursing education (Ozkara San, 2015), this literature review revealed that the discipline of nursing is lacking robust research and evidence that supports clinical simulation as an effective teaching and learning method for fostering culturally competent nursing care (Grossman et al., 2012; Merrill & Hummel, 2010; Phillips et al., 2012; Rutledge et al., 2008).

In 2008, Rutledge et al. utilized a case-based approach by designing an integrative program that used HFPS to enhance BSN students' cultural competency. Although exact sample size was not indicated, the researchers gathered focus groups that included African American women and men, Filipino Americans, abused women, lesbians, gays, Native Americans, members of the military, and the elderly. Based on information obtained from the focus groups and individual interviews, the researchers developed cases similar to actual situations that students might encounter in the clinical setting in terms of cultural implications, prevalence, and difficulties. One case developed for the program focused on an overweight, elderly, African American woman who had diabetes, hypertension, and joint pain and worked at a job that did not provide her with health insurance. The researchers' findings indicated that through culturally enhanced simulation, students had an opportunity to address clinical situations, perform cultural assessments, practice culturally competent nursing interventions without endangering the safety of a real patient, and enhance their communication skills in a relatively safe, non-threatening environment where they could explore the impact of their biases.

Merrill and Hummel (2010) published a mixed-method study ($n = 16$) to enhance cultural competence of nursing students with HFPS. The researchers developed simulation scenarios with "patients and families" from three different cultures, Somalian, Hmong, and Latino. The students completed the Cultural Competence Assessment (CCA) tool (Dorrenbos, Schim, Benkert, & Borse, 2005) as a pretest and post-test. After the post-test, the researchers used focus

groups to gather students' perceptions of the experience. They found an increase in cultural awareness and a decreased sense of competence in students after their experiences with patients from the three different cultural backgrounds (Merrill & Hummel, 2010). Further statistical analysis results in terms of data gathered from the CCA tool were not reported.

In a descriptive study conducted by Phillips et al. (2012), the researchers used multicultural LFPS with pre-licensure nursing students to address patient safety and culturally competent home care across the lifespan ($n = 12$). For this study, the simulated home environment was prepared to yield a variety of health and safety risks such as respiratory irritants, poor lighting, rickety stairs, throw rugs, cluttered walkways, choking and poison hazards, as well as various fire hazards that would affect patients and/or family members. The researchers placed low-fidelity manikins representing family members and residents throughout the apartment, using clothing and wigs to simulate Hispanic American family members. Before the simulated visits, students were asked to review an interactive website, Tox Town, to learn about toxic chemicals and environmental health and safety hazards and complete a Web-based learning tool related to health literacy, cultural competency, and limited English proficiency. Twelve nursing students were divided into four groups, and each group conducted simulated visits lasting 45 minutes. After the simulated visit, groups were asked to complete a group assignment that included questions based on community and public health nursing skills, health risks, healthcare barriers, educational resources, and risk factor for nurses in the community. Based on students' answers during the debriefing, it was determined that the simulated home visit provided a positive learning experience that helped students conduct an in-depth assessment of a different culture and apply concepts significant to public health nursing. The answers

reflected that the simulated environment decreased anxiety among novice nurses and provided an opportunity to apply theoretical knowledge and learn new skills.

These three studies were first steps to examine how the use of high- and low-fidelity patient simulation with cultural content may influence perceived cultural awareness, knowledge, attitudes, skills, and gaps. Evaluations of the studies were largely based on student reports (Seckman & Diesel, 2013; Phillips et al., 2012). While student reports and comments are important for obtaining information regarding the learner's experience, educators would benefit from using reliable and valid instruments to evaluate the effectiveness of interventions based on objective data.

Although high- and low-fidelity patient simulation is becoming a recognized tool to teach about the care of patients from diverse cultural backgrounds, it remains a challenge for nurse educators to develop realistic and innovative teaching and learning strategies to enhance cultural assessment and communication skills. The recent use of standardized patient (SP) provides a valuable opportunity to fill this gap, allowing nurse educators to integrate needed cultural assessments, skills, and encounters with diverse patients in more realistic environments.

Standardized Patient (SP) Simulation

Standardized patients were first introduced by Barrows in 1963 at the University of Southern California. A neurologist, Barrows (1993) developed the SP concept to improve the clinical education and evaluation of his neurology students. For that purpose, he trained patients to be "standardized" with regard to their presenting problems in a clinically relevant and realistic way. Ever since, SPs have been increasingly used in various fields of health professions education.

According to Wallace (2007), SPs are individuals trained to simulate, in an accurate and consistent manner, patients with medical or health care conditions. SP encounters are considered high-fidelity simulation experiences because they represent realistic patient problems and provide controlled interactions for students (Jeffries, 2007). As an education strategy, SP provides several advantages for faculty and students. Faculty benefit from this strategy by: targeting specific curricular objectives and developing patient-centered problems; overcoming the challenge of placing students in clinical settings; and introducing nursing students to complex concepts such as delegation, problem solving, collaboration with other health care team members, critical thinking, and prioritization while maintaining control for the complexity of the clinical problem in a safe, nonthreatening environment (Becker, Rose, Berg, Park, & Shatzer, 2006; May, Park, & Lee, 2009; Rutledge et al., 2004). The SP experience offers students the opportunity to experience actual patient responses when practicing various nursing skills, receive immediate and constructive feedback based on their performance, and discover their weaknesses and strengths in a controlled environment without fear of potential impact on patients (Lewis et al., 2017; Lin, Chen, Chao, & Chen, 2012; Robinson-Smith, Bradley, & Meakim 2009; Wallace, 2007).

The SP technique is well established as a learning and assessment tool in medical education, but it is relatively new to undergraduate and graduate nursing education (May et al., 2009; Robinson-Smith et al., 2009). Several studies in graduate nursing education demonstrate the effectiveness of SP experiences in supporting the learning of history and physical assessment skills, collaboration, differential diagnosis, clinical evaluation, and interpersonal and communication skills (Koo, Idzik, Hammersla, & Windemuth, 2013; Kowitlawakul, Chow, Salam, & Ignacio, 2015; Lin et al., 2012; Payne, 2015; Schram & Mudd, 2015). The use of SPs

for teaching undergraduate nursing skills has been integrated primarily in health assessment (Luctkar-Flude, Wilson-Keates, & Larocque, 2012), nursing fundamentals (Yoo & Yoo, 2003), psychiatric nursing (Becker et al., 2006; Rentschler, Eaton, Cappiello, McNally, & McWilliam, 2007; Robinson-Smith et al., 2009; Webster, 2014), leadership and management (McIntosh, Thomas, Allen, & Edwards, 2015), and medical-surgical courses (Fink, Linnard-Palmer, Ganley, Catolico, & Phillips, 2014). Within undergraduate nursing education literature, interaction with SPs has been linked to the development of effective communication skills (Becker et al., 2006; Robinson-Smith et al., 2009; Webster, 2014).

The literature review presented conflicting findings regarding the comparison of HFPS and SP approaches to traditional learning methods. A randomized controlled design study with a pretest and post-test evaluated undergraduate nursing students' stress and performance in worsening patient simulations, comparing HFPS with the SP experience (Ignacio et al., 2015). The researchers did not find statistically significant differences in students' performance and stress using the two techniques. Another study, by Luctkar-Flude et al. (2012), examined second-year undergraduate nursing students' self-efficacy and satisfaction with three different experiential modalities for practicing health assessment skills: HFPS, SP, and community volunteers (CV). Similar to the results by Ignacio et al. (2015), this study did not find statistically significant results in self-efficacy across the three modalities; students were less satisfied with HFPS when compared to the SP and CV modalities. In another study, Yoo and Yoo (2003) compared the use of the SP approach with traditional teaching methods in a nursing fundamentals course. Their results suggest that the SP experience was more effective than traditional classroom methods in helping learners identify patient needs, perform basic nursing skills, and communicate effectively, while also increasing self-confidence and satisfaction.

Although the use of SP simulation in conjunction with clinical experiences is gaining popularity in nursing education, this literature review revealed that the discipline of nursing is lacking robust research and evidence that supports SP simulation as an effective teaching and learning method for nurse educators to use for fostering culturally competent nursing care. A limited but growing part of the literature addresses the use of SPs for enhancing culturally competent nursing care (Ozkara San, 2015).

Cultural Competence and Standardized Patient (SP) Simulation

The literature review revealed five studies that utilized SP simulation to foster culturally competent nursing care (Bryne, 2017; Fioravanti et al., 2017; Garrido et al., 2014; Ndiwane et al., 2014; Rutledge et al., 2004). These studies mainly targeted enhancing the cultural competence of graduate (Garrido et al., 2014; Ndiwane et al., 2014; Rutledge et al., 2004) and undergraduate nursing students (Bryne, 2017; Fioravanti et al., 2017). Rutledge et al. (2004) used culturally enhanced SP cases to teach and evaluate nurse practitioner students' cultural competency; the sample size for this study was not indicated. These researchers used three different formats to train and evaluate performance in providing culturally competent care: the group training interview, group physical assessment, and one-on-one interaction. The group training interview focused on educating students in history gathering on sensitive issues such as chronic illness, alternative lifestyle, death and dying, and spirituality. For the group physical assessment, three students had the opportunity to learn physical examination with a trained SP. The third format, one-on-one interaction, consisted of one NP student with one SP, conducting a culturally appropriate assessment and physical examination that last 40 minutes to 90 minutes. Study results indicated that the integration of SP experiences in an advanced practice nursing curriculum enabled practice times to be more efficiently used, aided students to develop comfort

and confidence in performing a complete history and physical examination and offered better assessment and feedback on the development of students' clinical skills. Based on the study results, researchers found the SP experience beneficial for nursing education and listed its advantages as consistency of clinical encounters, feedback to faculty and students, decreasing student anxiety, and videotaping of encounters.

In a pretest and post-test design study, Garrido et al. (2014) incorporated interprofessional and cultural competencies in a graduate family nurse practitioner (FNP) and health care sciences curriculum by using SPs. Participants included 29 second-year FNP students, 55 first-year physical therapy students, and 24 second-year athletic training students. Using NLN and Laerdal Medical simulation templates (2010), they designed culturally competent interprofessional scenarios. Each scenario included a patient with a health issue from a distinct subculture including Korean, Mexican, and Bahamian Jehovah's Witness. Students were provided with preparation materials 4 to 6 weeks before the simulation. Preparation materials included interprofessional education modules, a simulation orientation video, and information about the general disease content and cultural topics. All the disciplines involved in the study completed a pre/post Attitudes toward Health Care Teams Scale (ATHCTS) by Heinemann, Schmitt, Farrell, and Brallier (1999); 20 FNP students were asked to complete an additional pre/post Cultural Awareness Scale (CAS) by Rew, Becker, Cookston, Khosropour, and Martinez (2003). Results for the CAS indicated that only the behaviors and/or comfort with interactions ($p = .022$) subscale was statistically significant; no statistically significant changes were found for general knowledge, cognitive awareness, research issues, and patient care and/or clinical issues. The researchers also analyzed 16 FNP students' reflection essays and found that students gained knowledge and understanding about diverse cultural groups, accepted and

respected beliefs and practices, used culturally specific information, and became more skilled at cultural inquiry.

A one-group, pretest and post-test study by Ndiwane and colleagues (2014) used culturally diverse SPs with 29 first-year graduate nursing students. The researchers developed three case studies as part of an objective structured clinical exam (OSCE) to assess cultural competency of students; the cases involved a pregnant Latina, an African-American man with hypertension, and a Latina with diabetes. The Cultural Assessment Survey (CAS) by Godkin and Savageau (2003) and the Student Satisfaction Survey by Robinson-Smith et al. (2009) were administered as a pretest and post-test. Findings indicated that although students were satisfied with the learning experience and there was a statistically significant increase in their knowledge level in terms of cultural assessment, there were no statistically significant changes with regard to opinions and attitudes. The results on the CAS showed statistically significant changes for students with regard to knowledge level in health care needs ($p = .001$), prevailing health care beliefs ($p = .003$), obstacles in seeking health care ($p = .010$), cultural beliefs ($p = .030$), and used languages ($p = .05$).

Fioravanti et al. (2017) conducted a pretest and post-test SP simulation study ($n = 119$) with junior-level nursing students who were enrolled in a psychiatric-mental health nursing course. This study combined cultural competence education, simulation, and the use of a public health model designed by Mitchell and colleagues (2013) to educate students to use screening, brief intervention, and referral to treatment (SBIRT) for alcohol and other drug use. Three culturally diverse simulation scenarios were developed that targeted African American, Middle Eastern, and Caucasian backgrounds. An SP and a small group of students participated in making videos that contained common culturally sensitive mistakes that health care providers make with

patients. Debriefing discussions focused on religious belief practices, nutritional preferences, communication styles, patient care issues, and handling of death. The Cultural Competence Assessment (CCA) tool (Doorenbos, Schim, Benkert, & Borse, 2005) was used to collect data for the pretest and post-test. Statistically significant differences on students' self-ratings of cultural awareness and sensitivity ($p < .001$) and cultural competence and behavior ($p < .001$) were found on the post-test. The researchers recommended more thorough preparation of SP materials, detailed SP training, and the use of a script when working with SPs to maintain consistency and standardization of the learning experience.

A more recent quasi-experimental mixed-method doctoral dissertation study by Byrne (2017) explored the use of SP simulation to enhance sophomore-level undergraduate nursing students' ($n = 38$) cultural competence. The control group received a specifically designed lecture on cultural competence. The intervention group received both the lecture and a specifically designed simulation using SPs from diverse backgrounds; the simulation consisted of a mini-nutritional assessment, physical assessment, and brief health history. The Inventory Assessing the Process for Cultural Competence Among Healthcare Professionals – Student Version (IAPCC-SV) tool was used during pretest and post-test data collection for both the intervention and control groups. Several open-ended questions were also used to gather qualitative data. Students in both the control group and the intervention group experienced significant increases in mean scores of cultural competence; however, neither group differed significantly on the post-test scores ($p = .73$). Open-ended questions revealed students perceived the strategies helped with developing communication skills.

Although, the five SP studies reviewed above provide beginning evidence that the SP experience can be a valuable teaching-learning experience for the development of cultural

competence education, they specifically targeted baccalaureate and graduate nursing students. The literature review did not reveal any studies for the utilization of SP simulation for fostering cultural competence and/or TSE in ADN students. More research is needed focusing on the integration of the SP simulation into nursing education to improve culturally competence education.

Summary

This chapter included the conceptual framework and a literature review relevant to this longitudinal, pretest and post-test, educational intervention study. The review of the literature included the evaluation of the TSE construct and pertinent literature concerning various teaching and learning strategies utilized by nurse educators to enhance nursing students' TSE perceptions. Next, the literature reflected on how clinical simulation has been used to support effective, culturally competent nursing care. Moreover, high- and low-fidelity patient simulation was presented as an effective teaching and learning strategy for cultural competence education in nursing courses. Then, pertinent SP simulation literature was introduced, and its specific usage in cultural competence development was explained.

In conclusion, results of this literature review revealed that first steps have been taken to examine how clinical simulation with cultural content may influence perceived cultural awareness, knowledge, attitudes, skills, and gaps. The literature review revealed substantial gaps in the nursing and cultural competence education literature and the use of SPs, further supporting the timeliness and need for this study.

CHAPTER III

Methodology

Chapter III describes the research design and methodology used to answer two research questions: 1) What is the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on associate degree nursing students' transcultural self-efficacy (TSE) perceptions? 2) What is the influence of select demographic variables on TSE perceptions of associate degree nursing students? The multidimensional DSPS strategy aimed to positively influence nursing students' self-efficacy for performing cognitive, practical, and affective transcultural nursing skills by means of interactions with trained, culturally diverse SPs representing underrepresented patient populations. The DSPS strategy was developed by the researcher based on the Cultural Competence and Confidence (CCC) Model (Jeffreys, 2016a). The NLN Jeffries Simulation Theory (JST) (2015) (Appendix K), the INACLS Standards of Best Practice: SimulationSM (2013, 2016), and guidelines for coaching standardized patients from Wallace (2007) were followed closely in simulation scenario design, implementation, evaluation, and SP training processes.

The DSPS strategy included two different simulation scenarios to be utilized by all ADN students enrolled in a second-semester, nine-credit, 15-week medical-surgical course with culturally diverse SPs. The research design followed a one-group, pretest and post-test educational intervention study design (Figure 2). This methodology chapter is organized into six main sections: a) target population and sample, b) instrumentation, c) educational intervention, d) protection of human subjects, e) procedures for data collection, and f) data analysis. It is followed by a chapter summary.

Figure 2 Research design

Target Population and Sample

A nonprobability, convenience sample was selected for this study to explore the effect of an educational intervention on nursing students' transcultural self-efficacy perceptions.

Nonprobability samples, such as convenience samples, are often used in self-efficacy studies and nursing studies (Jeffreys, 2016a). Convenience sampling involves including in the sample whoever happens to be available at the time (Cohen, 1977; Nieswiadomy, 2012) and meets inclusion criteria. The convenience sample was derived from all ($n = 69$) ADN students enrolled in a second-semester, nine-credit, 15-week medical-surgical course at an urban public university in the Northeast United States. It consisted of all consenting students with usable and matching data ($n = 53$).

A power analysis estimate completed via G*Power (<http://www.pscho.uni-duesseldorf.de/abteilungen/aap/gpower3/>) revealed that a sample of 35 subjects is needed to distinguish a medium effect size ($ES = .50$), with a power of .80 (probability of making Type I error), and with a significance level of .05. Therefore, a minimum sample size of 35 found to be adequate to provide significant results and decrease probability of a Type II error (wrongly accepting a *false* null hypothesis). Review of relevant TSET literature related to educational intervention studies and the consulting statistician's recommendations, power calculations for an estimated correlation coefficient supported use of this anticipated sample size. Using a desired power coefficient of .80 when significance level was .05 resulted in a medium effect size of .62 based on the final sample size ($n = 53$) of this study.

The setting and the sample were selected for several reasons. First, the nursing program was located in a very diverse area; diversity extends to the student population in terms of age, ethnicity, English as a second (other) language, immigration status, and previous healthcare

experiences. These variables fit one purpose of TSET, which aims to “measure and evaluate students’ confidence for performing general transcultural nursing skills among diverse populations” (Jeffreys, 2016a, p.94). Second, the nursing department’s well-equipped clinical simulation laboratory, based on core standards and guidelines by INACLS (2013,2016) and Society for Simulation in Healthcare (2015), had not yet utilized SPs for associate degree simulations or implemented simulations focused on cultural competence. Third, the medical-surgical nursing course was selected because it contained the most credit hours and clinical experiences of any course in the curriculum. The course also built upon the concepts, skills, and values introduced in the first-semester fundamentals course, where students participated in multidimensional course activities incorporating transcultural nursing such as *Cultural Discovery* learning activities (Jeffreys & O’Donnell, 1997; Jeffreys, O’Donnell, & Xiao, 2010) and an integrated skills (IS) lab day at the end of the semester whereby diverse patient backgrounds were incorporated within the medical record and patient report (Jeffreys, 2016a).

Student participation was voluntary; confidentiality was protected through a personal coding system for anonymity and matching questionnaires, and only aggregate data were reported. All students were asked to read the consent forms for the pretest and post-test; willingness to complete the questionnaires indicated informed consent. The consent form consisted of: a) the intended purpose and nature of the study; b) a brief description of the questionnaire forms; c) a brief description of confidentiality procedures; d) any associated risks and benefits; e) the estimated questionnaire completion time; and f) the researcher’s contact information. Appendix N and Appendix O present the consent forms for the pretest and post-test.

Instrumentation

Quantitative data were gathered by the administration of four instruments: a) the 83-item Transcultural Self-Efficacy Tool (TSET) (Jeffreys, 2016b, Toolkit Item 1) (Appendix A); b) the nine-item adapted Demographic Data Sheet-Undergraduate (DDS-U) (Jeffreys, 2016b, Toolkit Item 8) (Appendix B); c) Simulation Survey (4-item) (Appendix C); and Simulation Participation Survey (10-item) (Appendix D). The TSET was administered to gather data on TSE perceptions of ADN students before and after participating in two DSPS scenarios. The adapted DDS-U was administered along with the TSET pretest to gather data about sample demographics. The researcher-developed Simulation Survey was administered immediately after the debriefing session for both DSPS scenarios with all 14 simulation groups anonymously. The Simulation Participation Survey was administered along with the TSET during post-test data collection. Each questionnaire is detailed with a general description and information about validity and reliability.

Transcultural Self-Efficacy Tool (TSET)

The Transcultural Self-Efficacy Tool (TSET) was developed by Jeffreys in 1994 to measure and evaluate “students’ TSE for performing general transcultural nursing skills among diverse populations” (Jeffreys, 2016a, p. 94). It is selected for this current study for several reasons. First, the TSET is a valid, reliable tool effectively used to measure changes in TSE perceptions of nursing students and nurses following educational interventions (Appendix R, a; Jeffreys, 2000, 2010a; Jeffreys & Dogan, 2010, 2012; Jeffreys & Smoldaka, 1996, 1998, 1999a, 1999b). It meets the current study’s target population and purpose. Second, the TSET was specifically designed to measure undergraduate nursing students’ TSE, and it has been used worldwide in more than 70 nursing and healthcare studies with graduate students, nurses, faculty

and administrative members, and other healthcare professionals or staff members (Appendix R). Third, the TSET matches (or corresponds with) the current study's underlying conceptual framework, specifically, the Jeffreys (2016a, 2016b, Toolkit Item 13) Cultural Competence and Confidence (CCC) model.

The TSET was designed based on the conceptual and empirical literature in psychology, education, and transcultural nursing (Jeffreys, 2000). Jeffreys(2016a) used Bandura's social cognitive theory (1986) for the development of the self-efficacy construct. The 83-item instrument measures transcultural self-efficacy (TSE) perceptions for performing general transcultural skills among diverse client populations in three dimensions: Cognitive (25 items), Practical (28 items), and Affective (30 items). TSE is defined as "the perceived confidence for performing or learning transcultural nursing skills" (Jeffreys, 2000, p. 128). The TSET has three subscales: the Cognitive subscale, which "asks respondents to rate their confidence about their knowledge concerning the ways cultural factors may influence nursing care"; the Practical subscale, which "asks respondents to rate their confidence for interviewing clients of different cultural backgrounds to learn about their values and beliefs"; and the Affective subscale, which "addresses students' attitudes, values, and beliefs are addressed in the Affective subscale" (Jeffreys, 2016a, p. 95). Based on a two-phase evaluation study by Jeffreys and Smolaka (1996), the TSET uses a 10-point rating scale starting with 1 (not confident) to 10 (totally confident). Approximate completion time of the TSET is 20 minutes (Jeffreys, 2016a).

Consistent with the literature review of other self-efficacy instruments and Bandura's recommendations (1989), scoring of the TSET has included self-efficacy strength (SEST) scores and self-efficacy level (SEL) grouping for each subscale (Jeffreys, 2016a). SEST scores, frequently used in self-efficacy studies, are determined by totaling "subscale item responses and

dividing by the number of subscale items, resulting in the mean score” (Jeffreys, 2016a, p. 118). SEST scores were suggested for examining changes in scores over time and comparisons with a demographic variable or within the group. Calculation for each of the TSET subscales is routinely recommended whenever the TSET is used (Jeffreys, 2016a, p. 128).

Consistent with Bandura’s work and other self-efficacy studies’ recommendations, the author of the TSET did not include instructions for calculating the total TSET score within the Cultural Competence Education Resource (CCER) toolkit (2016b). The total TSET refers to the average strength of self-efficacy perceptions aggregated across all dimensions (Jeffreys, 2016a). Although it is not recommended by Jeffreys, total TSET scores have been reported in the transcultural nursing literature (Burrell, 2010; Grossman et al., 2012; Halter et al., 2014; Mesler, 2014; Singleton, 2017). In addition to the analysis of each subscale, the researcher preferred to include total TSET score calculations for the SEST and SEL analysis with the purpose of contributing to the literature (Table 1). Similar to other studies that reported total TSET scores, total scores are measured by the overall 83-item mean score on the TSET.

Self-efficacy level (SEL) refers to the number of items perceived at a specified minimum level of confidence (Jeffreys, 2016a, p. 118). TSET SEL scores are an additional approach for analyzing data. Jeffreys (2006, 2016a) recommended different methods that can be employed to group individuals into low, medium, and high groups for the purpose of identifying at-risk individuals and tracking changes for the SEL analysis. Halter and colleagues (2014) used the quartile method as one of the recommended methods suggested by Jeffreys (2006) for SEL grouping. In their study, 25% of the sample were grouped as low, 50% were grouped as medium, and 25% were grouped as high. By using the quartile method, Halter and colleagues (2014) found statistically significant changes between pretest and post-test consistent with the CCC

model. The decision to include the SEL grouping analysis for this study was based upon: statistically significant findings by Halter et al., 2014; this study's purpose and sample; the consulting statistician's suggestions; and recent recommendations by Jeffreys (2016a). Both SEST and SEL calculation were used in this study to detect changes in nursing students' TSE over time.

Initial estimates of the psychometric properties of the TSET resulted from four studies (Jeffreys & Smoldlaka, 1996, 1998, 1999a, 1999b). Validity was established through: a) content validity, b) construct validity, c) criterion-related validity, and d) literature review reports. These topics are explained in the following sections.

Content validity is the degree to which an instrument measures an intended content area (Lunenburg & Irby, 2008). For content validity of the TSET, Jeffreys asked if TSET items were representative of the desired content area (Jeffreys, 2016a, p. 97). Transcultural nursing skills were identified as the intended content area for the TSET. For content validity, six experts with doctoral preparation in the field of transcultural nursing reviewed the tool. The results indicated that items were representative of the desired content area and were appropriate and readable for use with novice undergraduate nursing students (Jeffreys & Smoldlaka, 1996).

Construct validity refers to the extent to which the TSET provides data that accurately depict the constructs of TSE (Norwood, 2010). This process sought answers for validation attempts for the tool's original theoretical concepts and the proposed relationships among concepts (Jeffreys, 2016a). To complete the construct validity process, the author utilized a contrasted group approach (Jeffreys & Smoldlaka, 1999a, 1999b) and factor analysis (Jeffreys & Smoldlaka, 1998; Jeffreys & Dogan, 2010). By using a contrasted group approach to estimate construct validity, two studies by Jeffreys & Smoldlaka (1999a, $n = 566$; 1999b, $n = 51$) tested

several underlying assumptions of TSE; these studies demonstrated statistically significant differences in TSE perceptions of ADN students within groups and between groups on all subscales as conceptually expected. Additionally, a total of 23 studies employed a contrasted group approach in both academic and clinical settings; they provided continued support for the TSET's construct validity by detecting significant differences on TSE perceptions before and after the use of an educational intervention (Appendix R).

Factor analysis is a statistical method used to evaluate the degree to which individual items cluster around one or more conceptual dimensions to become a "factor" (Grove, Burns, & Gray, 2013; Polit, 2010). The TSET's construct validity was further determined by conducting principal components analysis (PCA) with varimax rotation (Jeffreys & Smodlaka, 1998) and common exploratory factor analysis (CEFA) (Jeffreys & Dogan, 2010). Both studies explored the factorial composition of the TSET and demonstrated results that were similar to the original conceptualization of the three subscales (cognitive, practical, and affective) consistent with the CCC model and the literature for transcultural nursing and self-efficacy. Moreover, researchers around the world who explored factor analysis of the TSET (TSET - Chinese, Chen, 2014; TSET - Greek, Sarafis et al., 2014; TSET - Turkish, Bayik & Basalan, 2006; TSET- Korean, Kim 2013; Kim & Lee, 2016) provided continued support for the factor structure of the TSET being consistent with the underlying CCC framework and related literature.

Criterion-related validity refers to the relationship between scores on the measurement tool and the actual behavior (Polit 2010); it has two forms: concurrent and predictive (Lunenburg & Irby, 2008). In the initial longitudinal study (Jeffreys & Smodlaka, 1999a), predictive validity was explored to understand the degree of correlation on TSE measurement before and after a formalized educational intervention; the study provided statistically significant changes on TSE

between the first and last (fourth) clinical semester. In the initial cross-sectional study (Jeffreys & Smoldaka, 1999b); the researchers also examined the impact of other variables on TSE perceptions. Study results demonstrated that demographic variables such as age, gender, income, ethnicity, and racial group identity did not influence transcultural self-efficacy perceptions.

Reliability refers to the extent to which an instrument provides the same results on repeated uses (Polit, 2010). Concerning the reliability of TSET, Jeffreys (2016a) reported both internal consistency and stability testing results. Internal consistency refers to the degree to which test items measure the same construct (Grove et al., 2013; Polit, 2010). Cronbach's alpha (coefficient alpha) and split-half reliability were used for initial reliability testing. A reliability coefficient (Cronbach's alpha scores) $> .70$ is considered satisfactory for a new instrument, but a coefficient $> .80$ would be preferable (Polit, 2010). The TSET had a high estimated reliability with coefficient alphas of .92 to .98 on its subscales and total TSET in several studies (Jeffreys, 2000). Additional later studies involving the TSET in the United States and other countries reported a high internal consistency with coefficient alphas ranging from .85 to .99 on the total instrument and its subscales (see Appendix R). For split-half reliability testing, one half of the instrument or subscale is compared with the other half and this approach often yields lower results (Polit, 2010). During the initial evaluation, split-half reliability results on the total TSET and its subscales ranged between .76 and .92. Stability was assessed through a test-retest method with a two-week interval between administrations. Jeffreys (2016a) reported TSET test-retest coefficients ranging from .63 to .75, suggesting moderate stability. "Because test-retest reliability is considered the least conclusive measure of reliability, it was anticipated that results would be lower than with the split half or Cronbach's alpha methods" (Jeffreys, 2016a, 117).

The TSET's extensive and thorough psychometric properties have been recognized by various review studies. Integrated review articles (Gozu et al., 2007; Lin, Lee, & Huang, 2017; Loftin, Hartin, Branson, & Reyes, 2013; Shen, 2015) support that the TSET consistently established high psychometric properties through various, rigorous tests and retests of validity and reliability.

Demographic Data Sheet

The Demographic Data Sheet-Undergraduate (DDS-U) was adapted as permitted through purchase of the Cultural Competence Education Resource Toolkit permission license from Springer Publishing Company (Jeffreys, 2016b, Toolkit Item 8; Appendix B) to collect demographic data on all students participating in the study. It consisted of nine questions: sex, age, marital status, ethnicity, English as first language, ability to speak another language besides English, born in the United States, religion, and previous healthcare experience. Jeffreys (2006, 2010, 2016a) recommends researchers continue gathering appropriate and relevant demographic data to add to the body of knowledge concerning the TSET and cultural competence education. Several researchers support that gathering data on demographic variables assists in the interpretation of the sample and helps in developing future educational interventions by identifying demographic-based variables that may predispose students to decreased cultural sensitivity (Adams, 2012; Halter et al., 2014; Jeffreys & Dogan, 2012; Kim, 2013; Kim & Lee, 2016). After reviewing the sixth underlying assumption of the conceptual framework used for this study and related literature concerning TSET administration (Appendix R), the researcher aimed to target selected demographic variables and analyze their relationships with TSE. Approximate completion time of the adapted DDS-U was 2 minutes.

Simulation Survey

All students who participated in DSPS scenarios completed the researcher-developed Simulation Survey (4-item) (Appendix C) anonymously and immediately after each debriefing session. The Simulation Survey was specifically administered to obtain students' feedback on the perceived effects of a specific intervention (DSPS #1 and #2 separately) immediately after the intervention. Consistent with the TSET, the Simulation Survey used a 10-point rating scale with scores ranging from 1 (*not at all*) to 10 (*to a great extent*). This survey contained four questions that corresponded with the TSET's subscales (Cognitive, Practical, and Affective) and the total TSET. Each question asked students to provide feedback about the impact of the DSPS on their knowledge of how cultural factors may influence nursing care (question 1); cultural assessment and interview skills (question 2); culturally sensitive attitudes, values, and beliefs (question 3); and overall confidence in caring for culturally diverse patient populations (question 4).

Approximate completion of the Simulation Survey was 2 minutes.

Simulation Participation Survey

The researcher-developed Simulation Participation Survey (10-item) (Appendix D) was included as an additional page after the post-test TSET. The first part of the Simulation Participation Survey on Part A and Part B contained a Yes/No question intended to determine if the student was present for one, both, or none of the DSPS scenarios. The second part of the survey presented the same four questions as the Simulation Survey for each of the two scenarios. The Simulation Participation Survey attempted to: a) establish student participation in DSPS scenarios, and b) control for other types of educational activities such as assignments, clinical setting, and classroom activities to which students were exposed during the semester, that could potentially affect their overall performance of achieving culturally competent nursing care and

mask the actual impact of the DSPS cultural competence education strategy. Approximate completion time of the Simulation Participation Survey (10-item) was 4 minutes.

Educational Intervention

Teaching and learning activities that help nurse professionals build skills in clinical nursing practice must be accurate and based on research evidence and best practice (INACSL Standards of Best Practice: SimulationSM, 2013, 2016; Jeffreys, 2016a; Jeffries, 2015; Lewis et al., 2017; Shelestak & Voshall, 2014; Waxman, 2010). The researcher developed the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy based on the Cultural Competence and Confidence model (CCC) (Figure 3). The National League for Nursing (NLN) Jeffries Simulation Theory (JST) (2015) (Appendix K), the INACSL Standards of Best Practice: Simulation (2013, 2016), and guidelines and standards for coaching standardized patients from Wallace (2007) were followed closely in the simulation scenario design, evaluation, implementation, and training processes. As a multidimensional teaching and learning strategy, the DSPS was intended to improve students' knowledge, skills, and attitudes with regard to providing culturally competent nursing care. This strategy integrated key concepts of Healthy People 2020 such as communication skills, patient teaching, health literacy, health promotion, management of chronic illnesses, and cultural competence among marginalized populations (U.S. Department of Health and Human Services [USDHHS], 2010).

The DSPS strategy included two different simulation scenarios to be utilized in a second-semester, nine-credit, 15-week medical-surgical course with culturally diverse standardized patients (SPs). Consistent with the INACSL (2013, 2016) guidelines, each scenario also involved comprehensive student preparation activities developed by the researcher after collaborating with the coordinators of the medical-surgical course. The DSPS #1 concentrated on conducting a

focused cultural assessment by using Leininger's Sunrise Enabler as a framework and providing culturally competent perioperative teaching for a 65-year-old patient with Turkish Muslim heritage (Appendix P). For the DSPS #1, student preparation activities consisted of reviewing the following: a) the student version of the scenario with learning objectives; b) a selected journal article by Ezenkwele and Roodsari, 2013; c) two researcher-developed narrated PowerPoint videos (Culturally Competent Patient Teaching: Perioperative Nursing Management – Part 1 (7 min) and Part 2 (13 min), and d) completing the pre-simulation assignment (Figure 2; Figure 3). As part of the DSPS #1 preparation, Part 1 of the narrated PowerPoint video introduced the scenario objectives, scenario content, definition of culture and cultural competence, and Leininger's Sunrise Enabler model; Part 2 provided cultural assessment examples for students to practice and discussed the components of culturally competent perioperative patient education in detail.

The DSPS #2 focused on developing a culturally congruent education plan for a 55-year-old patient with a chronic illness (diabetes) who self-identified with the lesbian, gay, bisexual, transgender, and/or queer (LGBTQ) population and was a first-generation American of Irish and Italian heritage and Methodist religion (Appendix Q). The patient's partner, who self-identified as Puerto Rican and Catholic, was at the bedside. Students communicated with both the patient and partner for the scenario. Preparation activities for the DSPS #2 involved: a) review of student version of the scenario with learning objectives; b) review of assigned journal article by Garner, 2010; c) view of one narrated PowerPoint video (20 min) (Culturally Competent Patient Teaching: Health Promotion and Management of Chronic Illness); and d) completion of pre-simulation assignment (Figure 2; Figure 3).

Both DSPS scenarios aimed to positively influence nursing students' self-efficacy for performing cognitive, practical, and affective transcultural nursing skills by interacting with trained, culturally diverse SPs representing under-represented patient populations. The following sections provide more detailed information about scenario development, the content validity process, recruitment and training of SPs, and implementation of the DSPS cultural competence education strategy.

Figure 3 Application of Jeffreys' Cultural Competence and Confidence Model: Diverse Standardized Patient Simulation. **Figure 3** is adapted and reprinted from Figure 11.1 of “Application of Jeffreys' Cultural Competence and Confidence (CCC) Model: Innovative Field Trip Experience” in M. R. Jeffreys (Ed.), *Teaching cultural competence in nursing and health care: Inquiry, action, and innovation* (3rd ed., pp. 369). New York, NY: Springer Publishing. The CCC Model is reprinted with the permission from the Springer Publishing Company LLC.

Scenario Development

According to the “Standards of Best Practice: Simulation Standard IX: Simulation Design” (INACSL, 2013, 2016; INACSL Standards Committee, 2016; Lioce et al., 2015), and the NLN JST (2015), a needs assessment is the first step for development of a well-designed scenario. The researcher conducted a needs assessment that included a review of the nursing program’s course syllabus; an overview of the structure of the second-semester medical-surgical nursing course; existing clinical activities; and learner characteristics of the student group. To complete this first step, the researcher visited the school of nursing’s simulation laboratory and met with the medical-surgical course coordinators and chief college simulation laboratory technician. During the meeting, the course coordinators expressed that integration of a culturally competent teaching learning strategy into the existing course would be useful for building on students’ previous learning and experience about culturally competent nursing care, promoting their readiness for clinical practice, and addressing the unique needs of students whose academic needs, cultural values and beliefs, age, and lifestyle are quite diverse. The medical-surgical nursing course incorporated four simulation activities by using medium-/high-fidelity manikins with the capability of programming vital signs, lung sounds, and bowel sounds. These simulation activities targeted the nursing management of patients with preoperative needs, heart failure, Crohn’s disease, and diabetes. The researcher and the course coordinators agreed that perioperative and chronic disease management themes would most align with existing course content and DSPS goals.

After conducting the needs assessment and selecting the general theme for each scenario, the researcher established a structure (Appendix P and Q) for the process of writing, validating, and distributing the scenarios to experts consistent with NLN guidelines (2015). To maintain

consistency and standardization, the same structure was used for the development of both DSPS scenarios. This structure included three separate packets specifically designed for the preparation of the students, faculty, and SPs. Instructions were included within each scenario packet to maximize the preparation of students, faculty, and SPs and successfully address the simulation objectives.

The students' packet contained: the student version of the scenario, the journal article, a narrated PowerPoint video, and the pre-simulation assignment (Figure 2; Figure 3; Appendix P – g, d, e, f; Appendix Q – g, d, e, f). The faculty packet contained: pre-conference instructions for faculty, a handoff report, the faculty version of the scenario, debriefing instructions for faculty, and a wristband and allergy band (Appendix P – h, i, j, k, l & Appendix Q – h, i, j, k, l). The SP packet contained: the scenario background and sample scenario script, a layout for SP training sessions, and an SP checklist (Appendix P – m, n, o & Appendix Q – m, n, o, p). The purpose of creating a sample script for both scenarios was to maintain consistency and standardization, increase scenario repeatability/reliability, and assist SPs for effective preparation of the simulation scenario.

Next, consistent with the NLN JST (2015), the INACLS (2013; 2016) standards, and guidelines from Wallace (2007), general objectives were prepared to share with students; a more detailed description of the objectives was prepared for faculty (Lioce et al., 2015; O'Donnell, Decker, Howard, Levett-Jones, & Miller, 2014). The targeted nursing student group level and technical skills were taken into consideration prior to developing each scenario's learning objectives (Appendix P – g and Appendix Q – g). The researcher designed the overall DSPS scenarios in order to achieve determined learning objectives. Key components for the scenario design on INACSL Standard IX were followed for each DSPS scenario case development

including development of the situation and back-story, clinical progression and cues, time frames, script, roles, and identification of critical actions (Lioce et al., 2015). Following completion of the scenario development, the researcher prepared a detailed packet for content validity experts to facilitate the review and evaluation process of the scenario materials. The following section explains the crucial part of scenario development: the content validity process.

Content Validation Process

Five doctorally prepared experts reviewed the materials for both DSPS scenarios for content evaluation. The experts, whose expertise varied with regard to transcultural nursing, medical-surgical nursing, undergraduate nursing education, research, pedagogy, simulation, SP simulation, and diverse student and patient populations, reviewed both DSPS scenarios. As an active member of the Transcultural Nursing Society (TCNS), the researcher participated in Northeast Chapter meetings and the 40th TCNS International Conference. Two transcultural nursing scholars and experts, agreed to serve as content validity experts from the connections made during the conference. An additional three doctorally prepared experts agreed to review educational materials. Two had completed a graduate-level course in transcultural nursing; one had completed a doctoral-level course inclusive of the CCC model, cultural competence teaching-learning strategies, and the TSET; and all had expertise in medical-surgical nursing and teaching culturally diverse associate degree students.

To facilitate the review of scenario materials, the researcher developed two separate expert reviewer evaluation forms: a) Expert Reviewer Evaluation Form: Faculty and Student Materials, and b) Expert Reviewer Evaluation Form: Standardized Patient Materials (see Appendix P – b, c & Appendix Q – b, c). Both evaluation forms were developed based on the literature review and recommendations about the content evaluation of a well-designed

simulation scenario (Jeffries, 2015; Lioce et al., 2015; Shelestak & Voshall, 2014; Wallace 2007; Waxman, 2010). The researcher electronically distributed the student, faculty, SP materials, and two expert reviewer evaluation forms in a zip file with written instructions to each expert and requested review and return in 1 month. Experts were asked to judge the relevance of each evaluation form item using a 1 to 4 scale (1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree) and provide written feedback and comments directly on the evaluation forms. Consistent with recommendations from the literature (Shelestak & Voshall, 2014; Waxman, 2010), the researcher determined that an average rating < 3 would warrant scenario revision based on raters' feedback. The researcher calculated the mean score for each item on the evaluation forms by adding all five numbers, then dividing the total number by five. For both DSPS scenarios, the mean score for each item on both evaluation forms were > 3 .

To establish a more precise measure of validity, item-level content validity index (I-CVI) scores were calculated on each item for both the DSPS scenario #1 and DSPS scenario #2 content evaluation forms. The I-CVI score was computed as the number of experts giving a rating of either 3 or 4 (thus dichotomizing the ordinal scale into relevant and not relevant), divided by the total number of experts. For an item to be judged as having excellent content validity, it would have an I-CVI score of .80 or higher (Polit, Beck, & Owen, 2007). For the DSPS #1, the I-CVI score was between .80 - 1.0 for the faculty and student materials evaluation form; 1.0 on the SP materials evaluation form. For the DSPS #2, the I-CVI score was between .80 - 1.0 on the faculty and student materials evaluation form; 1.0 on the SP materials evaluation form.

The researcher carefully analyzed each expert's individual written feedback and comments and consulted with her research advisor. Based on the feedback received from experts,

both scenarios needed minor grammatical revisions on faculty and SP materials. For the first DSPS scenario, the patient's first language was Turkish; for that reason, the researcher did not revise grammatical errors on the sample SP script. For the second DSPS scenario, the researcher left some grammatical errors and slang to fit with colloquial conversation in the local New York City area and with the selected demographic profiles. Grammatical revisions were corrected on faculty materials. The researcher worked on final adjustments to ensure the simulation experience provided an accurate and consistent measure of students' skills and knowledge.

After the development of the DSPS intervention, simulation standards were updated by INACSL Standards of Best Practice: Simulation (2016) and the Association of Standardized Patient Educators (ASPE) disseminated the Standards of Best Practice (SOBP) for educators working with SPs (Lewis et al., 2017). Review of these recent publications revealed that the DSPS strategy was still consistent with new guidelines and standards. The next section explains the recruitment and training of SPs.

Recruitment and Training of Standardized Patients (SPs)

Wallace (2007) and other educational researchers recommended standardization of the SP experience for the benefit of faculty and students (Becker et al., 2006; Lin et al., 2012; Jeffries, 2007; Robinson-Smith et al., 2009). As part of the standardization of the experience, the selection of the SP needs to be carefully conducted and the selected SP needs well-structured training to present realistic patient problems in a controlled environment (Lewis et al., 2017; Jeffries, 2007; Wallace 2007). The literature specified that training requirements or steps should be determined based on the purpose of the SP experience, complexity of the case, previous experience of the SP, the skill set of the SP, basic training abilities of the coach, and complexity of the expected written or verbal feedback requirements from the SP. In support of the literature,

the ASPE published Standards of Best Practice (SOBP) for educators working with SPs who interact with learners in a wide range of experiential learning and assessment contexts (Lewis et al., 2017).

Following the literature-based recommendations, this researcher collaborated with other nurse researchers and educators for suggestions concerning the hiring and training of SPs; SPs with prior experience as SPs and/or actors who were members of the ASPE were preferred. Two sets of interviews were arranged for interested SP candidates, and all interviews were conducted in the simulation center of the participating school. Since there were seven different course clinical/simulation sections, necessitating scenario implementation seven times for each DSPS scenario, it was deemed essential to the study to have sufficient well-trained SPs on site and ready to assume acting role in case of unforeseen circumstances. Thus, after two sets of interviews with several different applicants, one primary and one understudy SP were hired for DSPS #1, and two primary SPs and two understudy SPs were hired for DSPS #2; all hired SPs were trained for the study. The researcher completed the SP hiring and training process in August 2016. Several small grants awarded to the researcher were applied toward SP training and wages.

In terms of the SP hiring process, all interviewed SPs were informed that scenarios mainly focused on communication skills, did not involve a physical assessment, and that the patient role required the SP to wear a hospital gown. Some of the important inclusion criteria for selecting SPs for both DSPS scenarios involved: having previous SP experience, ability to read aloud and follow the sample script, willingness to participate in a culturally sensitive simulation, willingness to commit time for the 8-hour training for scenario preparation, and availability on specified dates. Additionally, the researcher made sure that the interviewed SPs were able to

portray the role convincingly consistent with the scenarios, did not have any apparent health conditions or physical characteristics that would interfere with the scripted role, and had reliable transportation to the college campus. Specifically, for DSPS #1, the researcher made sure that the selected SPs (both the primary and understudy SPs) did not have any visible tattoos or piercings since the scenario portrayed a traditional 65-year-old female Muslim patient. For the DSPS #2 patient role, the prospective SP needed to be agreeable to the use of a simulated wound since the patient had a diabetic wound on his right foot.

Consistent with the NLN JST (2015), the INACLS Standards of Best Practice: Simulation (2013, 2016), and guidelines for coaching standardized patients from Wallace (2007), the researcher provided detailed case materials (Appendix P – n & Q – n) and an evaluation checklist (Appendix P – o & Q – o, p) at least one week before the planned simulation training day to SPs. Three primary SPs and three understudy SPs were trained in separate sessions through five training steps: a) familiarization with the case, b) learning to use the evaluation checklist, c) putting it all together (performance, checklist, feedback), d) dress rehearsal faculty verification of SPs' authenticity, and (e) actual scenario practice (Appendix P – m & Q – m). The approximate total training time was 8 hours for each SP. A mock DSPS was conducted approximately 2 days before the actual simulation day with simulation technician in order to ensure that the SP accurately and realistically portrayed the patient.

Implementation

All students registered for the second-semester, nine-credit, 15 week medical-surgical course participated in the DSPS cultural competence education strategy as part of their course requirement. As mentioned in earlier sections, the DSPS strategy consisted of two simulation scenarios with SP experience (Figure 2; Figure 3). Each DSPS scenario was conducted with

seven separate course sections (ranging from 8 to 10 students per section). In total, 14 simulation sessions were planned. The dates of the simulations were determined based on students' clinical schedule and the availability of the simulation laboratory. The DSPS #1 was implemented during the first 4 to 6 weeks of the semester; the DSPS #2 was implemented during weeks 10 to 12 of the semester. In addition to the DSPS strategy, students participated in two other medium-/high-fidelity manikin simulation activities focused on heart failure (week 7 – 9) and Crohn's disease (week 12 – 14) as part of their medical-surgical course. The following paragraphs present scenario implementation details in three parts: prior to the scenario implementation day; a week before the scheduled simulation day; and the day of the simulation.

Prior to the Scenario Implementation Day

Early in the beginning of the semester, the researcher attended the medical-surgical course faculty meeting. Two course coordinators and the researcher informed all clinical instructors about the integration of the DSPS cultural competence education strategy into the medical-surgical course. The instructors were provided details about the clinical group schedule, needed preparation with regard to the DSPS strategy, how to access the DSPS preparation materials, and expectations for when they bring their clinical group to the simulation center. Although the researcher facilitated all components of the 3-hour DSPS strategy, clinical instructors were provided with student and faculty preparation materials for each DSPS scenario and were encouraged to review the materials before the scheduled simulation day (Appendix P and Q).

A Week Before the Scheduled Simulation Day

All student preparation materials were submitted to the learning management system (Blackboard) by the course coordinators for review by students and clinical instructors. Students

completed the pre-simulation assignment and brought their assignment to the class on the day of the simulation. Assignment questions were addressed during the pre-briefing phase. The clinical instructors collected students' completed assignments at the end of the debriefing session for review and providing feedback.

On the Scheduled Simulation Day

The researcher arrived at least an hour before the implementation of the DSPS to ensure accurate, consistent simulation setup including student handouts, props, technology, and the presence of the SPs. Once all the preparation was complete and students were present at the simulation center, the researcher oriented the student group to the SP experience, the environment, and components of the pre-briefing and debriefing sessions. The researcher facilitated each DSPS scenario with 14 different simulation groups by following the standardized approach described in earlier sections. The researcher conducted all 14 simulation sessions for several reasons. First, the researcher held a simulation instructor certificate from New York Simulation Center (NYSIM) and had training about the principles of simulation-based education, including training methods, course design and concepts, and debriefing strategies, through the use of hands-on techniques. Second, since 2013, the researcher has been coordinating and teaching several simulation classes in various nursing schools with undergraduate nursing students across a wide range of nursing courses including medical-surgical, leadership and management, communication, maternity, pediatric nursing, and pharmacology. Third, each group experienced consistent and standardized pre-briefing, simulation, and debriefing with the same instructor. Such consistency helped maintain control of the DSPS. Fourth, the researcher was able to maintain consistency by noting any differences or extraneous variables that had the possibility of interfering with learning and/or the simulation during each session. Each DSPS

scenario implementation incorporated five distinct phases: a) pre-briefing, b) SP experience, c) observation, d) debriefing, and e) feedback. The total DSPS experience with pre-briefing and debriefing was 3 hours. Next, five distinct phases of each DSPS scenario implementation are detailed.

Pre-briefing. From pre-briefing to the debriefing phase, one of the course coordinators and the clinical instructor of each clinical group were present at the simulation center to observe the implementation of the DSPS strategy. During the pre-briefing, since seven sessions were to be implemented for each DSPS scenario, students were asked not to share DSPS experience details with their classmates in order to respect their learning experience. The 25-minute pre-briefing phase encompassed: orientation of the students to the environment and equipment; description of SP method; description of the roles (participants/facilitator/SP); random student role assignment (primary, secondary, medication/documentation nurse); clarification of the time allotment; discussion about the scenario learning objectives, the case, and pre-simulation assignment questions (Durham, Cato, & Lasater, 2014; Lioece et al, 2015).

SP Experience. The DSPS design expected each student to participate in the actual simulation as part of his or her course requirement. Each DSPS scenario contained three continuing states for the actual simulation experience. For each state, three to four students interacted with the SP based on randomly assigned nursing roles: primary nurse, secondary nurse, medication nurse, and documentation nurse. Each state enabled the students to interact with a culturally diverse patient (15 minutes), practice reporting a situation, background, assessment, and recommendation (SBAR) report (5 minutes) and reflect on the experience by completing the reflection paper questions anonymously (10 minutes). Each state took approximately 30 minutes and the total SP experience was completed within 90 minutes. The

primary SPs and the understudy SPs both completed the SP checklist while students completed their observation sheet. Both SPs individually provided detailed feedback to each student group by following the components of the checklist during the debriefing phase.

The consistency and standardization of the SP experience were maintained with all groups with minor exceptions. For DSPS #2, the primary SP portraying the patient role reported sick for one section, and the trained understudy SP was used instead. In a separate group (for DSPS #2), the simulation group (nine students and their clinical instructor) arrived 30 minutes late due to traffic delays. Both primary and understudy SPs were informed about the problem; the SP experience took the allotted 90 minutes without any significant impact on completion of the scenario outcomes.

Observation. During the observation phase, students were encouraged to take notes on their observation document within the student version of the scenario (Appendix P – g & Q – g) while viewing the scenario live during the actual simulation action. The observation document contained two sections for positive findings and improvement areas and listed scenario objectives on the bottom of the document. During the simulation “run time,” the simulation instructor (researcher) and the clinical instructor observed and documented each student group’s performance with regard to patient care decisions, communication, delegation, and supervision according to scope of practice, accurate patient teaching related to the scenario, teamwork, and cultural competence. Students’ observation sheets were collected and reviewed after completion of the debriefing phase. For DSPS #1, the majority of students reported similar comments on their observation sheets such as “I felt very nervous and anxious,” “I never worked with an actor before, it freaked me out,” “I was worried that I will forget what I will ask,” and “Although I was so anxious, actor was very realistic.” For the DSPS #2, students were observed to be more

relaxed and comfortable with the strategy since they were familiar with the format and structure of the DSPS experience as a result of participating in the first scenario. Some comments on the observation sheets for DSPS #2 were: “This was less stressful, since I knew what to expect,” “I felt more comfortable to ask questions to the patient and his partner,” “I felt more comfortable to ask culture-related questions when compared to the first scenario we had,” and “Felt a little more comfortable with this scenario.”

Debriefing and Feedback. After the simulation experience, the whole student group gathered in a classroom setting for the 45-minutes to 1-hour debriefing and feedback phase. This phase is considered the most important component of a simulation-based learning experience as it aims to provide the students the opportunity to delve into their own critical thinking, reflection what happened, investigate the reasons teams performed well or poorly, and connect the experience to clinical practice (Decker et al., 2013; Jeffries, 2015; INACSL, 2013; 2016, INACLS Standards Committee, 2016). As described in the NLN JST (2015), the instructor acted as a facilitator and embraced a learner-centered, “guide on the side” approach by maintaining a dynamic relationship with students during this phase.

This phase included five subsequent sections: SP feedback, student reaction, summary of each state, understanding, and summary (Jeffries, 2015). First, primary and understudy SPs joined the group in the class and provided thoughtful, beneficial, and effective verbal feedback based on the outcomes of the SP checklist from the portrayed patient’s point of view. Following the SP’s feedback for each group, the instructor addressed students’ emotional reactions about their interaction with a culturally diverse patient. Next, students were encouraged to provide a short summary about each state of the DSPS scenario using the SBAR report beginning from the first state. The next section included an exchange of information about the DSPS experience for

the purpose of understanding the underlying causes of actions. The instructor explored students' perspectives on the identified topic to assist participants with the opportunity to make independent decisions and act based upon those decisions. Students were encouraged to share their observation notes during the interactive discussion. Lastly, students were encouraged to discuss what they gained from this experience and what they would like to incorporate into clinical practice based on the DSPS scenario. The Simulation Survey was completed anonymously by each student at the end of the debriefing session with all simulation groups. Total time period for the debriefing session was approximately 45-minutes to 1-hour for each simulation group.

Protection of Human Subjects

Approval to conduct this research was obtained from the Institutional Review Board (IRB) at the participating school. The researcher completed required modules for human subjects protection through the Collaborative Institutional Training Initiative (CITI), which provided research training for the institution where data were collected for this study. After explaining the nature of the study, approval of the study was obtained from the participating school's department chairperson, medical-surgical course coordinators, and chief college laboratory technician (Appendix L, M). The course coordinators agreed to present the research packet for pretest and post-test data collection to students during the targeted semester in the prescribed fashion. A packet consisting of a cover letter describing the nature of the study with a detailed instruction sheet for instrument administration and pretest and post-test data collection, a student consent form for pretest and post-test data collection (Appendix N, O), and the questionnaires were distributed to faculty before data collection.

All ADN students who were registered for the second-semester, nine-credit, 15-week medical-surgical nursing course were asked to volunteer for this study. No other recruitment processes were implemented. Students were informed by their course coordinators that there would be no association between participation and any components of the nursing course. Students were also informed that there were no known risks associated with participation in the study and benefits of participation included providing data and support for future educational strategies designed to enhance students' cultural competence and improve patient care. Confidentiality was protected through an anonymous coding system for matching questionnaires (Jeffreys, 2016a, Toolkit Item 10, and Appendix E).

Data Collection

Data collection took place at two different times (pretest and post-test) (Figure 2 & Figure 3). Pretest data collection occurred during the first week of the medical-surgical course at the beginning of the first mandatory didactic (theory) class session. For pretest data collection, the research packet included: a) the Student Consent Form: Pretest (Appendix N), b) the 83-item TSET (Jeffreys, 2016b, Toolkit Item 1, Appendix A), and c) the adapted Demographic Data Sheet-Undergraduate (DDS-U) (Appendix B). All materials were put in an envelope with a detailed written instruction sheet pasted on the outside. The course coordinators followed the written instructions for instrument administration and distributed the research packet to nursing students; they stepped outside the classroom while students completed questionnaires voluntarily. A personal coding system (Appendix E) was used to match questionnaires while still maintaining anonymity. Students were directed to place completed and/or non-completed questionnaires and consent forms in the designated collection box; course instructors returned all

the materials in the collection box to the researcher right after the data collection. Approximate time for the pretest data collection was 25 minutes.

Post-test data collection occurred after the completion of seven simulation sessions for the DSPS #2 during the didactic (theory) class session on week 13. For post-test data collection, the research packet contained: a) the Student Consent Form: Post-test (Appendix O); b) the TSET (Appendix A), and c) the Simulation Participation Survey (10-item) (Appendix D). The researcher put all materials in a sealed envelope with a detailed written instruction sheet pasted on the outside. The course coordinators followed the written instructions for instrument administration and distributed the research packet to nursing students and then stepped outside the classroom while students completed the questionnaires voluntarily. The same personal coding system (Appendix E) used for the pretest data collection was used to match questionnaires while still maintaining anonymity. Students were directed to place completed and/or non-completed questionnaires and consent forms in the designated collection box; course instructors returned all materials in the collection box to the researcher right after data collection. Approximate time for post-test data collection was approximately 25 minutes. As part of the post-test data collection for DSPS #1, 68 students, divided in seven course sections, participated in the scenario and completed the Simulation Survey anonymously, immediately after each debriefing session. For DSPS #2, 64 students, divided in seven course sections, participated in the scenario and completed the Simulation Survey anonymously.

Data Analysis

Quantitative measures were used to analyze the effectiveness of using DSPS cultural competence education strategy on ADN students' perceived TSE. The data analysis plan was determined by review of various educational intervention studies and recommendations of a

consulting statistician who had expertise in educational measurement, evaluation, scoring, and data analysis with the TSET. The data were entered into the Statistical Package for the Social Sciences (SPSS) version 24 directly from the measurements used in this study by the researcher. The researcher screened the data for accuracy by double-checking the hard data with the electronic data and conducting frequency distributions on all variables to determine any outliers and missing values.

Prior to conducting any statistical analysis, the researcher established the student participation in both DSPS scenarios as measured by the Simulation Participation Survey for Part A and Part B – Question 1. After this important confirmation, the final data set included 53 matched pretest and post-test TSET scores with matched Simulation Participation Survey. Before answering the two research questions, Cronbach's alpha was calculated for the three subscales and the total TSET on the pretest and post-test data to determine how valid and reliable the TSET was with this target population, to allow future researchers to compare this study's results with previous psychometric properties, and to add to the body of knowledge regarding the internal consistency of the TSET. In addition, intercorrelations between TSET subscales were assessed to evaluate the TSET's consistency with Bandura's (1986) expectations that: a) self-efficacy tools should have different subscales to measure confidence for different dimensions within a content domain and b) that subscales should be distinct yet moderately intercorrelated (Jeffreys, 2016a). Furthermore, a variety of descriptive and inferential statistical tests were used to answer the two research questions that guided this study (Table 1). The two research questions, measurements, and their corresponding analysis with the targeted goals are listed in Table 1. The researcher used the significance level of $p < .05$ as the criterion for statistical

significance for all statistical analyses. The rationales on selecting specific statistical tests are discussed in detail in chapter IV.

Table 1

Research Questions, Measurements, and Corresponding Analysis

Research Questions & Goals	Pretest Data Collection	Post-test Data Collection	Data Analysis
<p>Question (1): What is the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on associate degree nursing students' transcultural self-efficacy (TSE) perceptions?</p> <p><u>Goal:</u> After completion of the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy participants will have a change in TSE perceptions for performing general transcultural nursing skills among diverse client populations.</p>	<p>Personal Coding Page</p> <p>Transcultural Self-Efficacy Tool (TSET)</p>	<p>Personal Coding Page</p> <p>Transcultural Self-Efficacy Tool (TSET)</p> <p>*Simulation Participation Survey (10-item)</p> <p>**Simulation Survey (4-item)</p>	<p>Calculation of self-efficacy strengths (SEST) scores for each TSET subscale and total TSET and the use of paired sample <i>t</i>-test.</p> <p>Calculation of Self-Efficacy Level (SEL) scores using the quartile method for each TSET subscale and total TSET and the use of McNemar's test.</p> <p>Bivariate analyses on data collected via the Simulation Survey and Simulation Participation Survey (Table 7).</p>
<p>Question (2): What is the influence of select demographic variables on TSE perceptions of associate degree nursing students?</p> <p><u>Goal:</u> There will be no relationship between select demographic variables and changes in TSE perceptions on the total TSET and each subscale.</p>	<p>The Adapted Demographic Data Sheet- Undergraduate (DDS – U)</p>		<p>Calculation of frequency and % and the use of Mann-Whitney <i>U</i>-test.</p>

*Simulation Participation Survey (10-item) was administered as part of post-test packet and attached after the TSET.

**Simulation Survey (4-item) was administered anonymously immediately after each scenario.

Summary

Chapter III described the research questions, research design, target population and sample, protection of human subjects, instrumentation, educational intervention, data collection, and data analysis for this longitudinal, one-group pretest and post-test educational intervention study. The population and sample included 53 ADN students enrolled in a second-semester, nine-credit, 15-week medical-surgical course at the selected institution. For pretest data collection, the Student Consent Form: Pretest, the 83-item TSET, and the adapted DDS-U were collected by the course coordinators during the first week of the medical-surgical course at the beginning of first mandatory didactic (theory) class session. Two Diverse Standardized Patient Simulation (DSPS) scenarios designed by the researcher, validated by five doctorally prepared nursing experts, and approved by the medical-surgical nursing course leaders were implemented over a 3-hour session (each DSPS) with all students enrolled in the targeted course. For post-test data collection, the Student Consent Form: Post-test and the 83 item TSET along with the Simulation Participation Survey (10-item) were collected by the course coordinators after all groups completed DSPS #2 (week 13), at the end of their didactic (theory) course session. Additionally, the Simulation Survey was administered immediately after each debriefing session with all students who participated in DSPS cultural competence strategy. The data were analyzed by using descriptive and inferential statistics. Chapter IV presents the data analysis findings.

CHAPTER IV

Introduction

This longitudinal, one-group, pretest and post-test, educational intervention study examined the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on 53 associate degree nursing (ADN) students' TSE perceptions. This chapter presents the results of the data analysis to answer two research questions. Prior to answering two research questions, the final sample size ($n = 53$) was confirmed by establishing the student participation in both DSPS scenarios as measured by the Simulation Participation Survey - Part A and Part B – Question 1 (Appendix D).

Research question 1 examined the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on ADN students' TSE perceptions as measured by the Transcultural Self-Efficacy Tool (TSET). Three different types of analyses were conducted to answer research questions 1: a) self-efficacy strength (SEST) score analysis; b) comparison of self-efficacy level (SEL) groups between pretest and post-test; and c) bivariate analyses on two researcher-developed measures (Simulation Survey and Simulation Participation Survey). Research question 2 was developed to examine if any of the nine independent variables, sex, age, marital status, ethnicity, English as first language, ability to speak another language besides English, born in the United States, religion, and previous healthcare experience, influenced students' TSE perceptions on each subscale and total TSET. The nonparametric Mann-Whitney *U*-test results were reported on individual student demographic variables to determine what, if any, impact these variables had on each subscale and total TSET. The data analyses were performed using IBM SPSS 24 after completion of the data screening. Statistical data analyses are presented and discussed in relation to the two research questions. A concise summary of the results concludes the chapter.

Sample Size

A convenience sample was selected for this study. All students enrolled in the targeted second-semester, nine-credit, 15-week medical-surgical nursing course ($n = 69$) who were present on the first day of class ($n = 68$) were invited to participate in the study and complete surveys. For pretest data collection, all 68 students agreed to participate and submitted useable surveys. Two respondents had the same identification (ID) codes in both pretest and post-test data. Data from these two respondents were removed from the data set because the researcher was not able to differentiate and match up the results. After removing these identical codes, 66 unique ID codes were captured for the pretest without any missing values.

Prior to post-test data collection, two students withdrew from the course. All students who were present on the day of the post-test data collection ($n = 60$) were invited to participate in the study and complete surveys. All 60 students agreed to participate, submitted usable surveys, and claimed to have participated in both DSPS #1 and #2. Participation was determined by affirmative responses on the Simulation Participation Survey - Part A and Part B – Question 1 (Appendix D; Table 7). After removing the cases with identical IDs mentioned earlier, 58 unique IDs were captured for the post-test data; however, two pretest ID codes could not be matched with post-test IDs, resulting in 56 matched data sets. Next, the Cognitive, Practical, and Affective subscales were analyzed for the distribution of missing values. Four ID codes had missing values; these included one, four, six, and eight missing values. For the ID code with one missing value, imputation was done by replacing the one missing response with the mean response of the given student for all other items in the survey's 25-item Cognitive subscale. The other three cases with missing values were removed because of low matching capability. The final sample size was 53 students who participated in both DSPS #1 and DSPS #2.

Participant Demographics

As per instructions in the Cultural Competence Education Resource (CCER) toolkit, adaptations were made to accommodate the demographic data needed for this sample using the Demographic Data Sheet-Undergraduate (DDS-U) (Jeffreys, 2016b, Toolkit Item 8). The adapted DDS-U consisted of nine questions with specific instructions related to sex, age, marital status, ethnicity, English as first language, ability to speak another language besides English, being born in the United States, religion, and previous healthcare experience. All 53 students in the sample provided useable responses to the DDS-U. Table 2 presents a summary of the demographic data.

Table 2

Participant Demographics

Participant Demographics	n	%
Sex		
Female	41	77%
Male	12	23%
Age (years)		
<25	37	70%
25-30	11	21%
30-34	3	6%
35-39	1	2%
40-44	0	0
45-49	1	2%
50-54	0	0
55-59	0	0
60 and over	0	0
Marital Status		
Single	46	87%
Living with partner	3	6%
Married	4	7%
Separated	0	0
Divorced	0	0
Widowed	0	0

Race/ethnicity		
American Indian or Alaskan Native	0	0
Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai)	7	13%
Other Asian	0	0
Black or African American	4	8%
Hispanic or Latino	6	11%
Native Hawaiian or other Pacific Islander	0	0
White	32	60%
Multiracial	2	4%
Other	2	4%
English as first language?		
Yes	41	77%
No	12	23%
Speak a language other than English fluently?		
Yes	20	38%
No	33	62%
Born in the United States		
Yes	39	74%
No	14	26%
Religious Preference		
Agnostic	1	2%
Atheist	0	0
Catholic	29	55%
Jewish	5	9%
Mormon	0	0
Muslim	3	6%
Protestant/Other Christian	11	21%
Other non-Christian religion	1	2%
None	3	6%
Previous health care experience		
None	33	62%
LPN	2	4%
Other	18	34%

The overall sample ($n = 53$) consisted of 77% female and 23% male. The majority of the participants (70%) in this sample were below the age of 25 ($n = 37$), and single (87%). Although diversity in race/ethnicity was present, the majority of the sample self-identified as White (60%), reported English was their first language (77%), and were born in the US (74%). Fluency in a second language was reported by more than a third of the sample. In terms of religious affiliation, although the participants reported diverse affiliations, most (55%) reported their

religious preference as Catholic. The majority of the participants (62%) reported no previous healthcare experience.

TSET Reliability

Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability (Plichta & Kelvin, 2013). Generally, a reliability coefficient of .70 is acceptable for new instruments. A minimum reliability coefficient of .80 is considered adequate for well-established instruments. In several initial instrument development studies, the TSET demonstrated high estimated reliability with coefficient alphas of .92 to .98 on its subscales and total TSET (Jeffreys, 2016a). In addition, approximately 25 studies involving the TSET in the United States and other countries reported a high internal consistency with coefficient alphas ranging from .85 to .99 on TSET subscales and the total instrument (see Appendix R). For this study, Cronbach's alpha scores were calculated for each subscale and total TSET for both pretest and post-test datasets. For the pretest data set, Cronbach's alpha scores for each subscale and total TSET ranged from .96 to .98. For the post-test data set, Cronbach's alpha scores of .98 to .99 were obtained (Table 3). As a well-established tool; the findings suggested high Cronbach's alpha scores for both pretest and post-test data sets.

Table 3

TSET Reliability

Measure	Cronbach's Alpha (<i>n</i> = 53)
Pretest	
Cognitive Subscale	.97
Practical Subscale	.98
Affective Subscale	.96
Total TSET	.97
Post-test	
Cognitive Subscale	.98
Practical Subscale	.99
Affective Subscale	.98
Total TSET	.99

Intercorrelations between TSET Subscales

Pearson's correlation was used to assess intercorrelations between subscales of the TSET to evaluate the TSET's consistency with Bandura's (1986) expectations that (a) self-efficacy tools should have different subscales to measure confidence for different dimensions within a content domain, and (b) that subscales should be distinct yet moderately intercorrelated (Jeffreys, 2016). The findings in this study yielded statistically significant ($p < .05$) intercorrelations between all combinations (Table 4). Intercorrelations between pretest subscales ranged from .28 (Cognitive and Affective) to .38 (Cognitive and Practical) to .52 (Practical and Affective). Intercorrelations between post-test subscales ranged from .70 (Cognitive and Affective) to .80 (Cognitive and Practical) to .85 (Practical and Affective).

Table 4

Intercorrelations between TSET Subscales ($p = .05$)*

	Cognitive Pretest	Practical Pretest	Affective Pretest
Cognitive Pretest	1		
Practical Pretest	.38*	1	
Affective Pretest	.28*	.52*	1
	Cognitive Post-test	Practical Post-test	Affective Post-test
Cognitive Post-test	1		
Practical Post-test	.80*	1	
Affective Post-test	.70*	.85*	1

Research Question 1

Question 1: What is the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on associate degree nursing students' transcultural self-efficacy (TSE) perceptions?

Statistical Methods

Recommendations from the consulting statistician and dissertation advisor/TSET author and a review of the literature guided the decision-making process for data analyses and statistical tests used to answer research question 1. Three different type of analyses were conducted to answer the research question: a) calculation of self-efficacy strength (SEST) scores, b) self-efficacy level (SEL) group comparison between pretest and post-test, and c) bivariate analyses on two separate surveys (Simulation Survey and Simulation Participation Survey - Part A and Part B) (Table 1). Statistical tests and associated analyses highlighted below are addressed in more detail in their respective sections.

- a. Changes in SEST scores were examined between pretest and post-test on the Cognitive, Practical, and Affective subscales and total TSET. A paired *t*-test was conducted on the final data set ($n = 53$) for determining whether there was a statistically significant mean difference in each subscale and the total TSET.
- b. Changes in SEL groups were examined by using the quartile method (Halter et al., 2014; Jeffreys, 2016a) to more comprehensively appraise and understand the overall impact of the DSPS cultural competence education strategy. McNemar's test was utilized for further analyzing statistically significant relationships between the pretest and post-test SEL groups on each subscale and total TSET.
- c. Bivariate analyses were conducted with the purpose of: a) determining similarities on students' responses for the same four questions (cognitive, practical, and affective dimensions, and overall confidence) on the Simulation Survey and Simulation Participation Survey - Part A and Part B for the DSPS #1 and DSPS #2,

and b) establishing the correlation between the post-test TSET responses and the specific scenario (DSPS #1 and #2 separately) (Table 1; Table 7).

Changes on Self-Efficacy Strength (SEST) Scores from Pretest to Post-test

Using the paired sample *t*-test, changes in SEST scores between pretest and post-test were examined for the dependent variables (Cognitive, Practical, Affective subscales and total TSET). The purpose of the paired sample *t*-test is to determine whether there is statistical evidence that the mean difference between paired observations on a particular outcome is significantly different from zero (Plichta & Kelvin, 2013). In this study ($n = 53$), the pretest SEST scores were compared with post-test scores to see whether there was a significant change in TSET measurements as a result of the DSPS intervention.

A paired sample *t*-test can be used when: a) two paired measurements are compared (pretest and post-test), b) total sample size is at least 30 pairs, c) two measures that are compared are normally distributed, and d) measurement scale is either interval or ratio. Prior to conducting the paired sample *t*-test, graphical procedures (boxplots and histograms) were observed to view shapes for determining if the sample population was normally distributed. Boxplots were observed for the presence of outliers on each subscale and the total TSET. Additionally, normality of difference scores were assessed using skewness and kurtosis statistics. Possible violations in the normality assumption were determined with the exception of the Cognitive subscale. Provided that the sample size for this study ($n = 53$) was sufficiently large, there was no issue with non-normality of the population differences by following the central limit theorem (Plichta & Kelvin, 2013). As part of the paired sample *t*-test assumptions, measurement scale of the TSET was reviewed lastly. Self-efficacy measurement tools mainly apply statistical tests for interval or ordinal-level measurement. Generally, interval-level measurement allows more

sophisticated statistical analysis concerning the use of parametric tests versus non-parametric tests. For self-efficacy studies, there is still continuous discussion about the selected level of the measurement because it is very difficult to measure self-efficacy at an exact level that distinguishes self-efficacy perceptions equally between individuals and between questionnaire response choices (Jeffreys, 2016a, p.147). The TSET's scales are at the ordinal-level of measurement and the recommended approach is to adhere to the analysis used in self-efficacy studies (interval-level) and interpret the ordinal-level data cautiously by acknowledging study limitations (Bandura, 1989; Jeffreys, 2016a).

After reviewing the assumptions, the paired sample *t*-test was conducted on the final data set ($n = 53$) to determine whether there was a statistically significant mean difference between pretest SEST scores compared to post-test (Figure 4; Table 5). The following sections present results of the paired sample *t*-test on: The Cognitive, Practical, Affective subscales and total TSET.

Table 5
Paired Sample t-Test Results from Pretest to Post-test

	Mean	SD	<i>t</i>	p value (*$p = .05$)
Cognitive Pre Post	7.30 8.33	1.49 1.37	4.580	< .05*
Practical Pre Post	7.61 8.33	1.41 1.38	4.214	< .05*
Affective Pre Post	8.83 9.14	1.06 1.00	1.970	.054
Total Pre Post	7.96 8.62	1.01 1.15	4.695	< .05 *

On the TSET, three subscales tap the three dimensions of learning: Cognitive (25 items), Practical (28 items), and Affective (30 items) (Jeffreys, 2016a). The final sample ($n = 53$)

involved one student (outlier) whose scores skewed the data for all three subscales and total TSET. The decision was made to keep all students in the sample, since removing this particular student did not influence the statistically significant results.

Part I (Cognitive subscale) of the TSET asked participants to describe how knowledgeable they are about the ways cultural factors influence nursing care. The cognitive learning dimension was measured by the 25-item Cognitive subscale score on the TSET (Jeffreys, 2016b, Toolkit Item 1). For the final sample ($n = 53$), pretest subscale scores ranged from 4.96 to 10; post-test scores ranged from 1.96 to 10. When excluding aforementioned one student, pretest subscale scores ranged from 5.00 to 10; post-test scores ranged from 5.12 to 10. The mean difference in the sample for the Cognitive subscale pretest and post-test scores was 1.03. The 95% confidence interval for the mean difference scores in the Cognitive subscale from pretest to the post-test was between .58 and 1.48 points. Using the paired sample t -test, a statistically significant difference was found between Cognitive pretest and post-test scores after participating in the DSPS cultural competence education intervention ($t_{52} = 4.580, p < .05$) (Figure 4; Table 5). Additionally, this study reported a relatively high effect size (.62) for the Cognitive subscale via the paired sample t -test statistic, which showed that the statistically significant changes from pretest to post-test to a great extent were explained by the DSPS intervention.

Part II (Practical subscale) of the TSET measures students' confidence in interviewing clients with diverse cultural backgrounds to learn their values and beliefs. The practical learning dimension was measured by the 28-item Practical subscale score on the TSET (Jeffreys, 2016b, Toolkit Item 1). For the final sample ($n = 53$), pretest subscale scores ranged from 4 to 10; post-test scores ranged from 2 to 10. When excluding the aforementioned one student, pretest

subscale scores ranged from 5.25 to 10; post-test scores ranged from 5.04 to 10. The mean difference in the sample for the Practical subscale pretest and post-test scores was .69. The 95% confidence interval for the mean score difference in the Practical subscale from pretest to post-test was between .37 and 1 point. The paired sample *t*-test results suggested a statistically significant average difference between Practical pretest and post-test scores ($t_{52} = 4.214, p < .05$) (Figure 4; Table 5). Also, the relatively high effect size (.57) calculated for the Practical subscale showed that the highly significant ($p < .05$) changes from pretest to post-test to a great extent were explained by the intervention.

Part III (Affective subscale) of the TSET measures students' confidence in identifying cultural attitudes, values, and beliefs. The affective learning dimension was measured by the 30-item Affective subscale score on the TSET (Jeffreys, 2016b, Toolkit Item 1). For the final sample ($n = 53$), pretest subscale scores ranged from 5.50 to 10; post-test scores ranged from 4.90 to 10. When excluding the aforementioned one student, pretest subscale scores ranged from 5.50 to 10; post-test scores ranged from 7.03 to 10. The mean difference in the sample for the Affective subscale pretest and post-test scores was .31. According to the paired sample *t*-test results, the change occurred on the expected direction from the pretest to post-test; however, it missed statistical significance ($t_{52} = 1.970, p = .054$) (Figure 4; Table 5). A small effect size (.27) was also calculated for the Affective subscale consistent with the statistically insignificant finding.

Lastly, total TSET score refers to the average strength of self-efficacy perceptions aggregated across all dimensions; however, this scoring can be an additional assessment and should not replace individual measurement and interpretation of each subscale separately and within the context of the overall underlying CCC framework (Jeffreys, 2016a; M. Jeffreys,

personal communication, December 23, 2017). For this study, similar to other studies reporting the total TSET score, the total score is calculated by averaging the 83 item responses (overall mean score on the TSET). For the final sample ($n = 53$), pretest scores ranged from 5.80 to 9.86; post-test scores ranged from 3.04 to 10. When excluding the aforementioned one student, pretest scores ranged from 6.01 to 9.86; post-test scores ranged from 6.28 to 10. The mean difference in the sample for the total TSET scores was .66. The 95% confidence interval for the mean difference in total TSET from pretest to post-test was between .38 and .94. Followed by the paired sample t -test, there was a statistically significant average difference between the total TSET pretest and post-test scores ($t_{52} = 4.695$, $p < .05$) (Figure 4; Table 5). The relatively high effect size (.65) calculated on total TSET also showed that statistically significant changes ($p < .05$) from pretest to post-test to a great extent were explained by the DSPS. Next, changes in SEL groups between the pretest and post-test on each subscale and total TSET will be presented.

Figure 4

TSET pretest and post-test self-efficacy strength scores (SEST) on each subscale and total instrument

* $p < .05$, **Affective Subscale missed statistical significance ($p = .054$)

Changes on Self-Efficacy Level (SEL) Groups from Pretest to Post-test

In addition to SEST scores calculation (as mentioned in Chapter III), the researcher conducted SEL analysis using the quartile method (Halter et al. 2014; Jeffreys, 2006, 2016a, 2016b). This analysis assisted the researcher to obtain a more in-depth understanding regarding the impact of the DSPS cultural competence education intervention. For this study, the pretest SEL scores determined the grouping method decision. Twenty-five percent of students were grouped as low, 50% were grouped as medium, and 25% were grouped as high in this particular sample (Table 6).

Table 6

Self-efficacy Level (SEL) Groups from Pretest to Post-test

SEL Groups (* $p = .05$)	Pretest n	%	Post-test n	%
Cognitive				
Low SEL	14	25 %	3	6 %
Medium SEL	26	50 %	25	47 %
High SEL	13	25 %	25	47 %
	McNemar (3) = 13.882 ($p = .003^*$)			
Practical				
Low SEL	13	25 %	5	9 %
Medium SEL	26	50 %	27	51 %
High SEL	14	25 %	21	40 %
	McNemar (2) = 7.912 ($p = .019^*$)			
Affective				
Low SEL	13	25 %	6	11 %
Medium SEL	27	50 %	27	51 %
High SEL	13	25 %	20	38 %
	McNemar (3) = 7.495 ($p = .058$)			
Total				
Low SEL	13	25 %	5	9 %
Medium SEL	27	50 %	25	47 %
High SEL	13	25 %	23	44 %
	McNemar (4) = 10.341 ($p = .016^*$)			

In the majority of the cases, students' SEL on the Cognitive, Practical, Affective and total TSET increased (in cases of pretest low) or remained the same (in cases of pretest medium

groups). For the Practical and Affective Subscales, there were no decreases in pretest SEL for Medium groups. On the Cognitive Subscale and total TSET, there was a 3% ($n = 2$) decrease in pretest SEL for Medium groups. The greatest change in SEL analysis occurred in Low and High groups between the pretest and post-test on all subscales and total TSET. For Low groups, the most change occurred on the Cognitive subscale, followed by the Practical, total TSET, and Affective subscales. For High groups, the Cognitive subscale had the most change, followed by total TSET and the Practical and Affective subscales (Figure 8; Table 6).

A nonparametric test (McNemar's test) was conducted to further analyze the statistically significant relationships between the pretest and post-test SEL groups on three subscales (Cognitive, Practical, and Affective) and total TSET (Table 6). McNemar's test determines if the pretest and post-test SEL grouping percentages are homogeneous (similar) with regard to the distribution of these percentages (M. Fridline, personal communication, December 10, 2017). When the data set includes a paired or matched sample such as before-and-after measurements on the same individuals or observations, McNemar's test is used instead of the chi-square test (Plichta & Kelvin, 2013, p. 290). Since this study included paired data, typical approaches such as the chi-square independence or homogeneity test were not conducted for the SEL analysis. This was decided based on the recommendation of the consulting statistician (M. Fridline, personal communication, December 10, 2017). The results of McNemar's test suggested a statistical significant difference for the distribution of the percentages between the pretest and post-test SEL groups on the Cognitive ($p = .003$) and Practical ($p = .019$) subscales and total TSET ($p = .016$), but not on the Affective subscale ($p = .058$) (Table 6; Figure 5).

Figure 5

TSET Pretest and Post-test Self-Efficacy Level (SEL) Groups on TSET Subscales and Total TSET Instrument

* $p < .05$, **Affective Subscale missed statistical significance ($p = .058$)

The following sections provide more in-depth SEL analysis results, presenting the distribution of percentages that increased, decreased, or remained the same in Low, Medium, and HighSEL groups for each subscale and total TSET. Please note that the researcher did not examine if students who remained in the same group had changes in their scores, since this level of detail was beyond the scope of the study. Below, each SEL section narrative is accompanied by a figure illustrating pretest and post-test changes and a descriptive figure legend to enhance easy interpretation.

Cognitive Subscale. When observing the Cognitive subscale SEL groups that moved to a higher SEL on the post-test (Low to Medium, Low to High, and Medium to High), 11.3% of students in pretest Low increased to Medium and 9.4% increased to High. Approximately 23% of

pretest medium scorers increased to High (Figure 6). Furthermore, 9.4% of pretest high scorers ($n = 5$) decreased to Medium (Figure 6). Finally, when observing the groups that remained unchanged between pretest and post-test, a few students in pretest Low ($n = 3$; 5.7%) remained in Low. The majority (26.4%) of the students in pretest Medium remained as Medium, and 15.1% of pretest High remained as High. McNemar's test suggested a statistically significant difference for the distribution of the percentages between pretest and post-test Cognitive subscale SEL groups ($p = .003$) (Table 6).

Figure 6

Changes on Cognitive Subscale SEL Groups from Pretest to Post-test

Practical Subscale. When observing the Practical subscale SEL groups that changed to a higher SEL on the post-test (Low to Medium and Medium to High), 18.9% of students in pretest Low increased to Medium (Figure 7). Nearly 25% of pretest medium scorers increased to High. Furthermore, the results showed that 11.3% of the students in pretest High decreased to Medium. Only two (3.8%) pretest medium scorers decreased to Low. Finally, when observing the Practical subscale SEL groups that remained unchanged between pretest and post-test, a few students ($n = 3$; 5.7%) remained in Low. The majority (20.8%) of students in pretest Medium remained as Medium, and 15.1% of students in pretest High remained as High on post-test. McNemar's test results demonstrated statistically significant difference ($p = .019$) between the pretest and post-test Practical subscale SEL groups (Table 6).

Figure 7

Changes on Practical Subscale SEL Groups from Pretest to Post-test

Affective Subscale. The percentages of Affective subscale SEL that increased, decreased, or remained the same in Low, Medium, and High groups are depicted in Figure 8. Seventeen percent of students in pretest Low increased to Medium. Nearly 11% of students in pretest Medium increased to High. When observing the groups that decreased from pretest to post-test, a small percentage ($n = 1$; 1.9%) of students in pretest High decreased to Medium. Additionally, four students (7.5%) in pretest Medium decreased SEL to Low. Furthermore, the majority of students (32.1%) in pretest Medium remained as Medium; 22.6% of pretest High remained as High; and 3.8% of pretest Low remained as Low. The results were in the expected direction; however, McNemar's test did not indicate a statistically significant difference on the distributions of the percentages between pretest and post-test ($p = .058$) (Table 6).

Figure 8

Changes on Affective Subscale SEL Groups from Pretest to Post-test

Total TSET. When examining the total TSET SEL groups (Low to Medium, Low to High, and Medium to High) that changed to a higher SEL on the post-test, 11.3% of students in pretest Low increased to Medium (Figure 9). A few ($n = 3$; 5.7%) pretest low scorers moved to High. Approximately 19% of students who scored in Medium for pretest increased to High. When observing the SEL groups (Medium to Low and High to Medium) that changed to a lower SEL on post-test, only one student (1.9%) moved from Medium to Low. Approximately 6% of students in pretest High decreased to Medium. Furthermore, four students (7.5%) in pretest Low remained as Low. The majority (30.2%) of students in pretest medium group remained as Medium, and approximately 19% of students in the pretest High group remained as High. The McNemar test revealed a statistically significant difference between pretest and post-test SEL groups for total TSET ($p = .016$) (Table 6).

Figure 9

Changes on Total TSET SEL Groups from Pretest to Post-test

Bivariate Analyses

As mentioned earlier, this study involved two separate measures in addition to the TSET to collect additional data. These measures, the Simulation Survey and Simulation Participation Survey, used the same four questions corresponding with the TSET subscales (Cognitive, Practical, and Affective) and the total TSET. In addition to SEST scores and SEL group analyses, as part of answering research question 1, bivariate analyses were conducted on the data gathered from students' responses for the same four questions (cognitive, practical, affective dimensions, and overall confidence) on both surveys for the DSPS #1 and DSPS #2 (Table 7).

As it was described in Chapter III, Simulation Survey (4-item) (Appendix C) was administered anonymously immediately after implementation of each scenario. All students completed the Simulation Survey as part of the Diverse Standardized Patient Simulation (DSPS) strategy whether or not they participated in the research study. This survey focused students on appraising their immediate perceived outcomes as a result of the DSPS strategy and assisted the researcher to conduct a formative evaluation (Figure 3, Step 2 and 4).

The Simulation Participation Survey (10-item) – Part A and Part B (Appendix D) was administered as part of the post-test data collection packet, attached after TSET. Data gathered from this survey assisted the researcher to: a) establish student participation in both DSPS scenarios to determine the final sample size; b) control for extraneous variables such as other class and clinical activities that may have included cultural competence education and experiences; c) determine similarities on students' responses on the survey completed right after debriefing (Simulation Survey) for both DSPS #1 and DSPS #2; and d) establish the relationship between post-test TSET responses and the specific scenario (DSPS #1 and DSPS #2, separately).

Feedback and recommendations received from the consulting statistician and the dissertation chair guided the data analysis plan conducted on the additional data gathered from these two separate measures. Table 7 presents questions, goals, and corresponding analyses used for examining the data gathered from Simulation Survey and Simulation Participation Survey. Please note that question 1 in Table 7 focusing on the determination of the final sample size was addressed in the sample size section of this chapter. Remaining questions, with their matching goals and statistical methods listed in Table 7, are addressed in the following section. Results are provided accordingly, focusing on the DSPS #1 and DSPS #2.

Table 7

Bivariate Analyses: Questions, Goals, Measurement(s), and Corresponding Analyses

Questions	Goals	Measurement(s)	Analyses
1. Which students participated in both DSPS scenarios (#1 and #2)?	Goal 1: To determine student participation in both DSPS scenarios.	*Simulation Participation Survey (10-item) – Part A and Part B	Analysis of Question 1 (Yes/No Question) on the Simulation Participation Survey – Part A and Part B
2. Are students' mean item responses on the Simulation Survey for DSPS #1 (completed anonymously and immediately after debriefing) and mean item responses on the Student Participation Survey for DSPS #1, (completed as part of post-test questionnaire packet), similar or different?	Goal 2: To determine similarities on students' responses for the same four questions (cognitive, practical, and affective dimensions and overall confidence) on the Simulation Survey and Simulation Participation Survey for both DSPS #1 and DSPS #2.	**Simulation Survey (4-item) *Simulation Participation Survey (10-item) – Part A and Part B	Calculation of means, mean differences, and standard deviations of the same four questions (cognitive, practical, and affective dimensions and overall confidence) on both surveys. Independent <i>t</i> -test
2.1 Are students' mean item responses on the Simulation Survey for			

DSPS #2 (completed anonymously and immediately after debriefing) and mean item responses on the Student Participation Survey for DSPS #2 (completed as part of post-test questionnaire packet), similar or different?			
<p>3. What is the relationship between mean item responses on the Student Participation Simulation Survey (DSPS #1) and corresponding post-test TSET subscale and total TSET scores?</p> <p>3.1 What is the relationship between mean item responses on the Student Participation Simulation Survey (DSPS #2) and corresponding post-test TSET subscale and total scores?</p>	Goal 3: To establish that post-test TSET responses were correlated to the specific scenario (DSPS #1 and DSPS #2, separately).	<p>*Simulation Participation Survey (10-item)</p> <p>Post-test TSET</p>	Pearson r correlation test

*Simulation Participation Survey (10-item) was administered as part of post-test packet and attached after the TSET.

**Simulation Survey (4-item) was administered anonymously immediately after each scenario.

Statistical Methods

First, in order to determine similarities on students' responses for the same four questions (cognitive, practical, and affective dimensions and overall confidence) on the Simulation Survey and Simulation Participation Survey for both DSPS #1 and DSPS #2, means, standard deviations, and mean score differences were computed on each question (Table 7; Table 8). The independent *t*-test was conducted to determine whether or not the means of the two independent groups (Simulation Survey and Simulation Participation Survey) differ for both DSPS #1 and DSPS #2 (Table 8). The independent *t*-test is a

parametric test, which allows the comparison of the means of two independent samples (Plichta & Kelvin, 2013). This test can be used when: a) the independent variable is dichotomous; b) two categories are independent of each other; and c) the variable measuring the dependent variable is normally distributed and continuous. The independent variables were the Simulation Survey and Simulation Participation Survey. These surveys were independent of each other and both collected in different timelines. Possible violations in the normality assumption were detected. However, provided that the sample size for this study ($n = 53$) was sufficiently large enough, there was no issue with non-normality of the population differences by following the central limit theorem (Plichta & Kelvin, 2013).

Second, in order to establish the TSET post-test responses were correlated to the specific scenario (DSPS #1 and DSPS #2, separately), Pearson r correlation test was conducted between the TSET post-test scores for each subscale and the total TSET, and the Simulation Participation Survey Questions for the DSPS #1 and DSPS #2 (Table 7; Table 9). This analysis assisted the researcher to determine the relationship between the post-test TSET subscales and the specific DSPS intervention (DSPS #1 and DSPS #2, separately). The next sections present the results of the independent t -test and Pearson r correlation test results for the DSPS #1 and DSPS #2.

Similarities of Student Responses on the Simulation Survey and Simulation Participation Survey Questions for DSPS #1 and DSPS #2

Diverse Standardized Patient Simulation (DSPS) #1. Despite the other cultural competence educational activities and learning experiences throughout the semester, the researcher expected mean item responses for the same four questions (cognitive, practical, affective dimensions, and overall confidence) between the survey completed immediately after the simulation (Simulation Survey) and the post-test (Simulation Participation Survey) to be

similar for the DSPS #1. Mean score differences between the two surveys ranged from $-.25$ (overall confidence in caring for culturally diverse patient populations) to $.01$ (culturally sensitive attitudes, values and beliefs). The results generated by the independent t -test showed no significant difference among the group means of the Cognitive ($t = .334, p = .739$), Practical ($t = .142, p = .887$), and Affective ($t = -.047, p = .963$) dimensions and overall confidence ($t = 1.050, p = .296$) questions between the Simulation Survey and Simulation Participation Survey (Table 8). In other words, the results were in the expected direction and showed that aggregated means on the Simulation Survey immediately after DSPS #1 were similar to aggregated means on the Simulation Participation Survey, which was used as part of the post-test.

Diverse Standardized Patient Simulation (DSPS) #2. The researcher expected mean item responses for the same four questions (cognitive, practical, affective dimensions, and overall confidence) between the survey completed immediately after the simulation (Simulation Survey) and the post-test (Simulation Participation Survey) to be similar for the DSPS #2. Differences between these survey questions' mean ratings ranged from $.03$ (culturally sensitive attitudes, values, and beliefs) to $.23$ (overall confidence in caring for culturally diverse patient populations) (Table 8). The independent t -test demonstrated no significant difference among the group means of the Cognitive ($t = -.176, p = .861$), Practical ($t = -.177, p = .860$), and Affective ($t = -.103, p = .918$) dimensions and overall confidence ($t = -.967, p = .336$) questions between the Simulation Survey and Simulation Participation Survey (Table 8). In other words, the results were in the expected direction and showed that aggregated means on the Simulation Survey immediately after DSPS #2 were similar to aggregated means on the Simulation Participation Survey, which was used as part of the post-test.

Table 8

Changes on the Cognitive, Practical, Affective Dimensions, and Overall Confidence as Measured by the Same Four Questions on the Simulation Survey and Simulation Participation Survey (DSPS #1 and DSPS #2)

Diverse Standardized Patient Simulation #1	Measurement [SS (n = 68); SPS (n = 53)]	Mean	M Dif. (SS – SPS)	SD	t	p value (*p=.05)
Q1. Knowledge about the ways cultural factors may influence nursing care?	SS	8.91	-.07	1.03	.334	.739
	SPS	8.98		1.24		
Q2. Cultural assessment and interview skills?	SS	8.59	-.03	1.14	.142	.887
	SPS	8.62		1.5		
Q3. Culturally sensitive attitudes, values and beliefs?	SS	8.90	.01	1.01	-.047	.963
	SPS	8.89		1.39		
Q4. Overall confidence in caring for culturally diverse patient populations?	SS	8.81	-.25	1.2	1.050	.296
	SPS	9.06		1.39		
Diverse Standardized Patient Simulation #2	Measurement [SS (n = 64); SPS (n = 53)]	Mean	M Dif. (SS – SPS)	SD	t	p value (*p=.05)
Q1. Knowledge about the ways cultural factors may influence nursing care?	SS	8.95	.04	1.49	-.176	.861
	SPS	8.91		1.40		
Q2. Cultural assessment and interview skills?	SS	8.86	.05	1.44	-.177	.860
	SPS	8.81		1.48		
Q3. Culturally sensitive attitudes, values and beliefs?	SS	8.95	.03	1.50	-.103	.918
	SPS	8.92		1.46		
Q4. Overall confidence in caring for culturally diverse patient populations?	SS	9.06	.23	1	-.967	.336
	SPS	8.83		1.49		

SS: Simulation Survey (4-item) (administered anonymously immediately after each scenario)

SPS: Simulation Participation Survey (10-item) (administered as part of post-test data collection, attached after TSET)

SS - SPS = Mean difference score between the Simulation Survey and the Simulation Participation Survey

M Dif = Mean Difference

Comparison of the Post-test TSET Responses to the Specific Scenario

Diverse Standardized Patient Simulation (DSPS) #1. The results of the Pearson r correlation test generated sufficient evidence to conclude that there is a positive statistically significant correlation between the post-test TSET subscales and four questions on the Simulation Participation Survey – Part A used for the evaluation of the DSPS #1 (Table 9). Strongest positive correlation was observed on the overall confidence question, followed by the practical, affective, and cognitive dimension questions, respectively (Table 9).

Diverse Standardized Patient Simulation (DSPS) #2. The results of the Pearson r correlation test suggested a positive statistically significant correlation between the post-test TSET subscales and the four questions the Simulation Participation Survey – Part B used for the evaluation of the DSPS #2 (Table 9). Strongest positive correlation was detected on the practical dimension question, followed by the overall confidence, affective, and cognitive dimension questions, respectively (Table 9).

Table 9

Correlations between TSET (Post-test) Scores and Simulation Participation Survey Responses (DSPS #1 and DSPS #2)

TSET (Post-test)	Simulation Participation Survey – DSPS #1	Pearson's Correlation Coefficient (*$p = .05$)
Cognitive Subscale	Q1. Knowledge about the ways cultural factors may influence nursing care	$r_{(51)} = .616, p = .001^*$
Practical Subscale	Q2. Cultural assessment and interview skills	$r_{(51)} = .689, p = .001^*$
Affective Subscale	Q3. Culturally sensitive attitudes, values, and beliefs	$r_{(51)} = .677, p = .001^*$
Total TSET	Q4. Overall confidence in caring for culturally diverse patient populations	$r_{(51)} = .841, p = .001^*$
TSET (Post-test)	Simulation Participation Survey – DSPS #2	Pearson's Correlation Coefficient (*$p = .05$)
Cognitive Subscale	Q1. Knowledge about the ways cultural factors may influence nursing care	$r_{(51)} = .682, p = .001^*$
Practical Subscale	Q2. Cultural assessment and interview skills	$r_{(51)} = .740, p = .001^*$
Affective Subscale	Q3. Culturally sensitive attitudes, values, and beliefs	$r_{(51)} = .701, p = .001^*$
Total TSET	Q4. Overall confidence in caring for culturally diverse patient populations	$r_{(51)} = .734, p = .001^*$

Research Question 2

What is the influence of select demographic variables on TSE perceptions of associate degree nursing students? Question 2 examined if any of the nine demographic variables (sex, age, marital status, ethnicity, English as first language, ability to speak another language besides English, born in the United States, religion, and previous healthcare experience) influenced students' TSE perceptions on each subscale and total TSET (Table 1).

Statistical Method

The non-parametric test, the Mann-Whitney U -test, was performed on individual student demographic variables to determine what, if any, impact these variables had on each subscale of the TSET and total TSET. The Mann-Whitney U -test is used to determine whether a relationship

exists between two groups when one variable is dichotomous, and the other variable is at least ordinal (Plichta & Kelvin, 2013, p. 111). When observing the distribution of a numerical variable for the two different demographic groups, the comparison of medians for each group is completed by the Mann-Whitney *U*-test (Plichta & Kelvin, 2013). The non-parametric Mann-Whitney *U*-test has fewer assumptions and can be used more freely (Plichta & Kelvin, 2013).

Selection of this statistical test over others was based upon the literature review and consulting statistician's recommendations. Some of the reasons for finding the use of the Mann-Whitney *U*-test more suitable for this analysis included: a) small sample size of this study, b) low or no reporting numbers on the original response options on each demographic variable category, and c) possible violations in the normality assumption for the dependent variables. The dependent variables used for this analysis consisted of Cognitive, Practical, and Affective subscales and total TSET. The independent variables were nine demographic variables: a) sex, b) age, c) marital status, d) ethnicity, e) English as first language, f) ability to speak another language besides English g) born in the United States, h) religion, and i) previous healthcare experience. As mentioned earlier, the Mann-Whitney *U*-test was conducted to examine the median differences based on the independent variables on each subscale and total TSET. Prior to conducting the Mann-Whitney *U*-test, due to low or no reporting numbers on the original response options for certain demographic variables' categories, five out of nine demographic variables (age, marital status, ethnicity, religion, and previous healthcare experience) were re-coded into two response categories. More information about how these five independent variables were re-coded will be presented in each demographic variable analysis section. Similar to the analysis for the first research question, a *p*-value of .05 was used to examine the impact of demographic variables on students' perceived TSE.

Demographic Variable 1: Sex. The independent variable of sex consisted of two response options: female and male. Results from the Mann-Whitney U -test suggested that there was no statistically significant difference in TSE perceptions between female and male students on total TSET score ($U = .545, p > .05$) or any of the subscales: Cognitive ($U = .318, p > .05$), Practical ($U = .517, p > .05$), Affective ($U = .899, p > .05$) (Table 10).

Table 10

Influence of Male or Female Demographic Variable on TSE Perceptions (n= 53) as Measured by Total TSET Score and Subscale Score Median Differences

Variable: Sex	Median Difference	SD	Mann-Whitney U - test (* $p = .05$)
Female (n = 41)	<u>Cognitive Subscale</u> .88	1.69	.318
Male (n = 12)	.80	1.37	
Female (n = 41)	<u>Practical Subscale</u> .66	1.20	.517
Male (n = 12)	.78	1.17	
Female (n = 41)	<u>Affective Subscale</u> .10	1.24	.899
Male (n = 12)	.33	.80	
Female (n = 41)	<u>Total TSET</u> .73	1.09	.545
Male (n = 12)	.58	.73	

Demographic Variable 2: Age. The independent variable of age originally included nine item response options: Under age 25 ($n = 37$), 25–29 ($n = 11$), 30–34 ($n = 3$), 35–39 ($n = 1$), 45–49 ($n = 1$), 50–54 ($n = 0$), 55–59 ($n = 0$), and 60 and over ($n = 0$). Due to low or no reporting numbers on certain original age response options, the age variable was re-coded into two categories: ≥ 25 and < 25 . Using the Mann-Whitney U -test, results generated no statistically significant difference in TSE perceptions between students below age 25 and above age 25 on total TSET ($U = .786, p > .05$) or any of the subscales: Cognitive ($U = .663, p > .05$), Practical ($U = .786, p > .05$), Affective ($U = .794, p > .05$) (Table 11).

Table 11

Influence of Age Variable on TSE Perceptions ($n = 53$) as Measured by Total TSET Score and Subscale Score Median Differences

Variable: Age	Median Difference	SD	Mann-Whitney U - test (* $p = .05$)
Age < 25 ($n = 37$)	<u>Cognitive Subscale</u> 1.0	1.49	.663
Age ≥ 25 ($n = 16$)	.62	1.96	
Age < 25 ($n = 37$)	<u>Practical Subscale</u> .60	1.24	.786
Age ≥ 25 ($n = 16$)	.76	1.11	
Age < 25 ($n = 37$)	<u>Affective Subscale</u> .10	.899	.794
Age ≥ 25 ($n = 16$)	.20	1.63	
Age < 25 ($n = 37$)	<u>Total TSET</u> .60	.94	.561
Age ≥ 25 ($n = 16$)	.93	1.20	

Demographic Variable 3: Marital Status. The independent variable of marital status originally had six item response options: Single ($n = 46$), Living with Partner ($n = 3$), Married ($n = 4$), Separated ($n = 0$), Divorced ($n = 0$), and Widowed ($n = 0$). Certain response options for the marital status variable included low or no reporting numbers; therefore, this variable was re-coded into two response option categories: Single and Living with Partner or Married. Following the Mann-Whitney U -test, there was no statistically significant difference in TSE perceptions between students who were single and students who lived with a partner or were married on any of the subscales: Cognitive ($U = .113, p > .05$), Practical ($U = .319, p > .05$), Affective ($U = .248, p > .05$) (Table 12). The results showed a statistically significant difference for total TSET ($U = .04, p < .05$); however, it should be noted that there were only seven students who reported their marital status as living with partner or married, and results should be cautiously interpreted due to low sample numbers.

Table 12

Influence of Marital Status Variable on TSE Perceptions ($n = 53$) as Measured by Total TSET Score and Subscale Score Median Differences

Variable: Marital Status	Median Difference	SD	Mann-Whitney U - test (* $p = .05$)
Single ($n = 46$)	<u>Cognitive Subscale</u> .82	1.64	.113
Living with partner or married ($n = 7$)	1.4	1.35	
Single ($n = 46$)	<u>Practical Subscale</u> .64	1.24	.319
Living with partner or married ($n = 7$)	1.1	.733	
Single ($n = 46$)	<u>Affective Subscale</u> .10	1.09	.248
Living with partner or married ($n = 7$)	.53	1.42	
Single ($n = 46$)	<u>Total TSET</u> .58	1.04	.040*
Living with partner or married ($n = 7$)	1.4	.491	

Demographic Variable 4: Ethnicity. The independent variable of ethnicity originally consisted of nine item response options: American Indian or Alaskan Native ($n = 0$), Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai) ($n = 7$), Other Asian ($n = 0$), Black or African American ($n = 4$), Hispanic or Latino ($n = 6$), Native Hawaiian or Other Pacific Islander ($n = 0$), White ($n = 32$), Multiracial ($n = 2$), and Other ($n = 2$). Because of low reporting or no reporting numbers on the original item response options, the ethnicity variable was re-coded into two categories: White and All Other Ethnicities. The latter category included American Indian or Alaskan Native, Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai), other Asian, Black or African American, Hispanic or Latino, Native Hawaiian or other Pacific Islander, Multiracial, and Other item responses. Mann-Whitney U -test results suggested that there was no statistically significant difference in TSE perceptions based on two re-coded ethnicity categories (White and All other ethnicities) on total TSET ($U = .841, p > .05$), and any of the subscales: Cognitive ($U = .461, p > .05$), Practical ($U = .702, p > .05$), and Affective ($U = .662, p > .05$) (Table 13).

Table 13

Influence of Ethnicity Variable on TSE Perceptions (n = 53) as Measured by Total TSET Score and Subscale Score Median Differences

Variable: Ethnicity	Median Difference	SD	Mann-Whitney <i>U</i> – test (* <i>p</i> = .05)
White (n = 32)	<u>Cognitive Subscale</u> .78	1.63	.461
All other ethnicities (n = 21)	1.0	1.65	
White (n = 32)	<u>Practical Subscale</u> .71	1.28	.702
All other ethnicities (n = 21)	.60	1.14	
White (n = 32)	<u>Affective Subscale</u> .21	1.09	.662
All other ethnicities (n = 21)	.06	1.20	
White (n = 32)	<u>Total TSET</u> .70	.963	.841
All other ethnicities (n = 21)	.46	1.11	

Note. All other ethnicities: American Indian or Alaskan Native, Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai), Other Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Multiracial, and Other.

Demographic Variable 5: English as First Language. The independent variable of English as First Language had two item response options, Yes and No. Following the Mann-Whitney *U*-test, results yielded no statistical significance on TSE perceptions between students who spoke English as their first language and who did not on total TSET ($U = .425, p > .05$) and any of the subscales: Cognitive ($U = .184, p > .05$), Practical ($U = .407, p > .05$), and Affective ($U = .915, p > .05$) (Table 14).

Table 14

Influence of Speaking English as First Language on TSE Perceptions (n = 53) as Measured by Total TSET Score and Subscale Score Median Differences

Variable: English as First Language	Median Difference	SD	Mann-Whitney U- test (* $p = .05$)
Yes (n = 41)	<u>Cognitive Subscale</u> 1.0	1.71	.184
No (n = 12)	.36	1.23	
Yes (n = 41)	<u>Practical Subscale</u> .75	1.08	.407
No (n = 12)	.69	1.52	
Yes (n = 41)	<u>Affective Subscale</u> .16	1.07	.915
No (n = 12)	.15	1.44	
Yes (n = 41)	<u>Total TSET</u> .73	.943	.425
No (n = 12)	.58	1.25	

Demographic Variable 6: Ability to Speak Another Language Besides English. The independent variable of Ability to Speak Another Language Besides English included two item response options: Yes and No. Results obtained from the Mann-Whitney *U*-test showed no statistically significant difference on TSE perceptions between students who spoke another language besides English and who did not on total TSET ($U = .480, p > .05$) and any of the subscales: Cognitive ($U = .409, p > .05$), Practical ($U = .912, p > .05$), Affective ($U = .521, p > .05$) (Table 15).

Table 15

Influence of Ability to Speak Another Language Besides English on TSE Perceptions (n = 53) as Measured by Total TSET Score and Subscale Score Median Differences

Variable: Ability to speak another language besides English	Median Difference	SD	Mann-Whitney U- test (* $p = .05$)
Yes (n = 20)	<u>Cognitive Subscale</u> .88	1.25	.409
No (n = 33)	.88	1.82	
Yes (n = 20)	<u>Practical Subscale</u> .65	1.34	.912
No (n = 33)	.71	1.11	
Yes (n = 20)	<u>Affective Subscale</u> .25	1.04	.521
No (n = 33)	.34	1.22	
Yes (n = 20)	<u>Total TSET</u> .58	1.06	.480
No (n = 33)	.67	.994	

Demographic Variable 7: Born in the United States. The independent variable of Born in the United States comprised two item response options: Yes and No. The Mann-Whitney *U*-test results suggested no statistically significant difference on TSE perceptions between students who were born in the United States and those who were not for total TSET ($U = .679$, $p > .05$) and any of the subscales: Cognitive ($U = .785$, $p > .05$), Practical ($U = .348$, $p > .05$), and Affective ($U = .215$, $p > .05$) (Table 16).

Table 16

Influence of Being Born in the United States on TSE Perceptions (n = 53) as Measured by Total TSET Score and Subscale Score Median Differences

Variable: Born in the United States	Median Difference	SD	Mann-Whitney U- test (*p = .05)
Yes (n = 39)	<u>Cognitive Subscale</u> .88	1.72	.785
No (n = 14)	.98	1.41	
Yes (n = 39)	<u>Practical Subscale</u> .75	1.10	.348
No (n = 14)	.69	1.41	
Yes (n = 39)	<u>Affective Subscale</u> .10	1.02	.215
No (n = 14)	.45	1.44	
Yes (n = 39)	<u>Total TSET</u> .63	.960	.679
No (n = 14)	.65	1.19	

Demographic Variable 8: Religion. The independent variable of religion originally included nine item response options: Agnostic (n = 1), Atheist (n = 0), Catholic (n = 29), Jewish (n = 5), Mormon (n = 0), Muslim (n = 3), Protestant /Other Christian (n = 11), other non-Christian religion (n = 1), and none (n = 3). The review of the transcultural nursing literature guided the decision-making process prior to re-grouping the religion variable. Chapter V of Ray (2016) provided the background and rationale on how to categorize religious response options in two categories for this study. Specifically, Ray (2016) emphasized a differentiation between individuals who self-identify with a specific religion that has formalized religious services and doctrine and belief in God or gods, and those whose belief does not correspond to beliefs about God as a universal resource. Ray's (2016) differentiation on religious groups and low or no reporting numbers on certain response options for the religion variable substantiated the

decision-making on re-coding the religion variable in two categories. One category consisted of Agnostic and Atheist or None together. The second category involved students who self-identified with any of the other options (including other non-Christian religion); it was re-coded as Identified with a Formalized Religion. The Mann-Whitney U -test did not generate statistically significant difference in students' TSE perceptions for the Cognitive ($U = .216, p > .05$) and Practical ($U = .071, p > .05$) subscales. Although results showed a statistically significant difference on the Affective subscale ($U = .002, p < .05$) and total TSET ($U = .004, p < .05$), it should be noted that the Agnostic and Atheist or None category had only four students and the results should be interpreted very cautiously due to the low number of students in this group (Table 17).

Table 17

Influence of Religion Variable on TSE Perceptions ($n = 53$) as Measured by Total TSET Score and Subscale Score Median Differences

Variable: Religion	Median Difference	SD	Mann-Whitney U - test (* $p = .05$)
Agnostic & Atheist & None ($n = 4$)	<u>Cognitive Subscale</u>		.216
	2.2	1.10	
Identified with a formalized religion ($n = 49$)	<u>Practical Subscale</u>		.071
	.84	1.66	
Agnostic & Atheist & None ($n = 4$)	<u>Affective Subscale</u>		.002*
	1.6	1.10	
Identified with a formalized religion ($n = 49$)	<u>Total TSET</u>		.004*
	.67	1.16	
Agnostic & Atheist & None ($n = 4$)	<u>Cognitive Subscale</u>		.216
	1.9	.927	
Identified with a formalized religion ($n = 49$)	<u>Practical Subscale</u>		.071
	.10	1.05	
Agnostic & Atheist or None ($n = 4$)	<u>Affective Subscale</u>		.002*
	1.81	.584	
Identified with a formalized religion ($n = 49$)	<u>Total TSET</u>		.004*
	.60	.981	

Demographic Variable 9: Previous Healthcare Experience. The independent variable of Previous Healthcare Experience originally consisted of three response options: None ($n = 33$), LPN ($n = 2$), and Other ($n = 18$). This variable was re-coded in two categories: LPN and Other and None due to low reporting numbers. Results obtained from the Mann-Whitney U -test did not reveal a statistically significant difference in TSE perceptions between the LPN and Other category and students who did not report any previous healthcare experience for the total TSET ($U = .150, p > .05$) and any of the subscales: Cognitive ($U = .666, p > .05$), Practical ($U = .388, p > .05$), and Affective ($U = .090, p > .05$) (Table 18).

Table 18

Influence of Previous Healthcare Experience Variable on TSE Perceptions ($n = 53$) as Measured by Total TSET Score and Subscale Score Median Differences

Variable: Previous Healthcare Experience	Median Difference	SD	Mann-Whitney U- test (* $p = .05$)
LPN & Other ($n = 20$)	<u>Total TSET</u> .93	1.14	.150
None ($n = 33$)	.63	.923	
LPN & Other ($n = 20$)	<u>Cognitive Subscale</u> .88	2.19	.666
None ($n = 33$)	.88	1.18	
LPN & Other ($n = 20$)	<u>Practical Subscale</u> .78	1.02	.388
None ($n = 33$)	.60	1.29	
LPN & Other ($n = 20$)	<u>Affective Subscale</u> .31	1.35	.090
None ($n = 33$)	.03	1	

Summary of Research Question 2 Results

The second research question of this study was: What is the influence of select demographic variables on TSE perceptions of associate degree nursing students? The researcher expected to find no relationship between select demographic variables and changes in TSE

perceptions on each subscale and total TSET. For the marital status variable, the Mann-Whitney *U*-test suggested a statistically significant difference in TSE perceptions between single students and students who lived with a partner or married ($n = 7$) only on total TSET ($p = .040$). In addition, the Mann-Whitney *U*-test indicated that Affective subscale ($p = .002$) and total TSET ($p = .004$) SEST median difference scores were statistically significantly different depending on the religion. However, it should be noted that one of the religion categories (agnostic and atheist or none) had only four students and the results should be interpreted very cautiously due to low number of students in this group. The remaining demographic variables (sex, age, ethnicity, English as first language, ability to speak another language besides English, born in the United States, and previous healthcare experience) were found to have no impact on students' TSE perceptions.

Chapter IV Summary

This longitudinal, one-group pretest and post-test educational intervention study involved two research questions to understand changes on ADN students' TSE following the DSPS cultural competence education strategy as measured by the TSET. Before answering the two research questions, the final sample size ($n = 53$) was confirmed by establishing student participation in both DSPS scenarios as measured by the Simulation Participation Survey - Part A and Part B – Question 1 (see Table 7). For both the pretest and post-test, Cronbach's alpha was calculated for each subscale and total TSET (see Table 3). Statistically significant intercorrelations between TSET subscales were observed in both the pretest and post-test (see Table 4).

Three different types of analyses were conducted to answer research question 1. First, a paired sample *t*-test was completed to determine changes in mean SEST scores between pretest

and post-test for the four dependent variables (Cognitive, Practical, Affective subscales and total TSET). Using the paired sample *t*-test, a statistically significant difference was found between pretest and post-test SEST scores following the DSPS cultural competence education intervention: Cognitive subscale ($t_{52} = 4.580, p < .05$), Practical subscale ($t_{52} = 4.214, p < .05$), and total TSET ($t_{52} = 4.695, p < .05$). For the Affective subscale, the change occurred on the expected direction from pretest to post-test; however, it missed statistical significance ($t_{52} = 1.970, p = .054$). Furthermore, the relatively high effect sizes (with the exception of the Affective subscale) showed that the changes from pretest to post-test, to a great extent, were explained by the DSPS educational intervention the participants received.

Second, changes in SEL groups (Low, Medium, and High) were examined by using the quartile method. McNemar's test was conducted to further analyze the statistically significant relationships between the pretest and post-test SEL groups on the dependent variables (Cognitive, Practical, Affective subscales and total TSET). Similar to SEST scores analysis, the results of McNemar's test suggested a statistical significant difference for the distribution of the percentages (changes) between the pretest and post-test SEL groups on the Cognitive subscale ($p = .003$), Practical subscale ($p = .019$), and total TSET ($p = .016$), but not on the Affective subscale ($p = .058$).

Third, as part of answering research question 1, bivariate analyses were conducted on the data gathered from students' responses for the same four questions (cognitive, practical, and affective dimensions and overall confidence) on two separate surveys (Simulation Survey and Simulation Participation Survey) for the DSPS #1 and DSPS #2. The statistical tests involved the use of the independent *t*-test and Pearson *r* correlation tests to: a) determine similarities on students' responses on the same four questions (cognitive, practical, and affective dimensions

and overall confidence) on the Simulation Survey and Simulation Participation Survey - Part A and Part B for the DSPS #1 and DSPS #2, and b) establish the correlation between the post-test TSET responses and the specific scenario (DSPS #1 and #2, separately).

For DSPS #1, results generated by the independent t -test were in the expected direction and showed that aggregated means on the Simulation Survey immediately after DSPS #1 were similar to aggregated means on the Simulation Participation Survey, which was used as part of the post-test: Cognitive ($t = .334, p = .739$), Practical ($t = .142, p = .887$), Affective ($t = -.047, p = .963$), and overall confidence ($t = 1.050, p = .296$). Additionally, the results of the Pearson r correlation test generated sufficient evidence to conclude that there is a positive statistically significant correlation between the post-test TSET subscales and four questions on the Simulation Participation Survey – Part A used for the evaluation of the DSPS #1.

For DSPS #2, results were in a similar direction. The independent t -test results revealed that aggregated means on the Simulation Survey immediately after DSPS #2 were similar to aggregated means on Simulation Participation Survey, which was used as part of the post-test: Cognitive ($t = -.176, p = .861$), Practical ($t = -.177, p = .860$), Affective ($t = -.103, p = .918$), and overall confidence ($t = -.967, p = .336$). Furthermore, the Pearson r correlation test demonstrated a positive statistically significant correlation between the post-test TSET subscales and four questions (Simulation Participation Survey – Part B) used for the evaluation of the DSPS #2. For both DSPS #1 and DSPS #2, higher correlation was detected on the practical dimension and total TSET question compared to the affective and cognitive dimension questions.

For research question 2, the researcher wanted to determine if selected demographic variables for the ADN students had an effect on their TSE as a result of the DSPS cultural competence education intervention. The Mann-Whitney U -test was conducted to examine the

median differences based on the independent variables on each subscale and total TSET. The independent variables were nine demographic variables: a) sex, b) age, c) marital status, d) ethnicity, e) English as first language, f) ability to speak another language besides English, g) born in the United States, h) religion, and i) previous healthcare experience. Seven out of nine demographic variables (sex, age, ethnicity, English as first language, ability to speak another language besides English, born in the United States, and previous healthcare experience) were found to have no impact on students' TSE perceptions. For the marital status variable, the Mann-Whitney *U*-test suggested a statistically significant difference in TSE perceptions between single students and students who lived with a partner or were married ($n = 7$) only on the total TSET ($p = .040$). In addition, the Mann-Whitney *U*-test indicated that the Affective subscale ($p = .002$) and the total TSET ($p = .004$) SEST median difference scores were statistically significantly different depending on self-identified affiliation with a religion.

Chapter V discusses the research findings presented in chapter IV in relation to previous relevant educational interventions, clinical simulation, and SP research studies. The limitations and strengths of the study are presented and implications for theory, education, research, leadership, policy, and administration are discussed. Based on the findings and limitations from this study, recommendations concerning educational interventions and future research are presented.

CHAPTER V

Summary, Discussion, Implications, Recommendations, and Conclusion

In the previous chapter, the presentation and analysis of the statistical data for this longitudinal, one-group, pretest and post-test educational intervention study were reported. This chapter presents a summary of the study, discusses relevant findings related to two research questions, identifies study limitations and strengths, and presents implications for theory, education, research, policy, and administration. Recommendations for further research conclude this chapter. Finally, the researcher offers synthesizing statements related to the substance and scope of this research study.

Summary of the Study

Development of cultural competence is essential to ensure positive patient outcomes and eliminate health disparities (AACN, 2008; ANA, 2015; IOM, 2010; Jeffreys, 2006, 2010, 2016a; Leininger, 1978, 1991, 1995, 2002, 2006; Leininger & McFarland, 2006; Marion et al., 2016; NLN, 2012; TCNS, 2015). Cultural competence is an expected standard for nursing education and it is essential for nurse educators to determine the effectiveness of specific teaching-learning strategies to meet and address this important standard. The use of clinical simulation in nursing education is recognized as a valuable opportunity for students to practice in a risk-free, controlled environment that helps them develop self-efficacy (confidence) within the nursing role (Grossman et al. 2012; Ndiwane et al., 2014), yet there continues to be little research concerning utilization of clinical simulation for cultural competence development of undergraduate students. Additionally, a limited but growing part of the literature addresses the use of SPs as a valuable teaching-learning experience in nursing education, but the discipline of nursing is lacking robust research and evidence that supports SP simulation as an effective

method for nurse educators to use for fostering culturally competent nursing care (Byrne, 2017; Fioravanti et al., 2017; Garrido et al., 2014; Ndiwane et al., 2014; Rutledge et al., 2004). More research is needed that focuses on the integration of the SP simulation in nursing education to improve culturally competence education.

The purposes of this study were to: 1) evaluate the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on ADN students' TSE perceptions; 2) contribute to the evidence regarding the effectiveness of DSPS as an innovative educational strategy for the development of cultural competence; 3) explore if any of nine independent variables (sex, age, marital status, ethnicity, English as first language, ability to speak another language besides English, born in the United States, religion, and previous healthcare experience) influenced changes in ADN students' SEST scores following the educational intervention; and 4) contribute to the growing empirical evidence concerning cultural competence education, simulation, and the use of SPs, the underlying assumptions of the CCC model, and psychometric features of the TSET.

The research design followed a longitudinal, one-group, pretest and post-test educational intervention study design. Based on the Cultural Competence and Confidence (CCC) model (Jeffreys, 2016a), the researcher developed the DSPS cultural competence education strategy. The National League for Nursing Jeffries Simulation Theory (JST) (2015) (Appendix K), the INACLS Standards of Best Practice: SimulationSM (2013, 2016), and guidelines for coaching standardized patients from Wallace (2007) were followed closely in the design, implementation, and evaluation of the simulation scenarios and SP training processes. As a multidimensional strategy, the DSPS strategy carefully weaves together cognitive, practical, and affective transcultural nursing skills; encompasses assessment, planning, implementation, and evaluation;

and involves the TSE appraisal process in addition to other considerations from the educational and self-efficacy literature and the CCC model. This strategy integrated the key concepts from Healthy People 2020 (USDHHS, 2012), such as communication skills, patient teaching, health literacy, health promotion, management of chronic illnesses, and cultural competence among marginalized populations, to positively influence nursing students' self-efficacy for performing cognitive, practical, and affective transcultural nursing skills.

The DSPS strategy involved two different simulation scenarios utilized in a second-semester, nine-credit, 15-week medical-surgical nursing course with culturally diverse SPs representing underrepresented patient populations. The DSPS #1 concentrated on conducting a focused cultural assessment by using Leininger's Sunrise Enabler as a framework and providing culturally competent perioperative teaching for a 65-year-old female patient of Turkish Muslim heritage (Appendix P). The DSPS #2 focused on developing a culturally congruent education plan for a 55-year-old patient with a chronic illness (diabetes) who self-identified with the lesbian, gay, bisexual, transgender, and/or queer (LGBTQ) population and was a first-generation American of Irish and Italian heritage and Methodist religion (Appendix Q). The patient's partner, who self-identified as Puerto Rican and Catholic, was at the bedside and incorporated within the teaching plan. Consistent with the INACSL (2013, 2016) standards, each scenario also involved comprehensive student preparation activities developed by the researcher after collaborating with two medical-surgical course coordinators. Content validity of both DSPS scenarios was completed by five doctorally prepared experts who had advanced education and experience in transcultural nursing, medical-surgical nursing, undergraduate nursing education, research, pedagogy, simulation, SP simulation, and diverse student and patient populations. For both DSPS scenarios, the mean score for each item on the content evaluation forms were > 3

(ranging from 1 = strongly disagree to 4 = strongly agree). The item-level content validity index (I-CVI) score was computed on both DSPS Scenario #1 and DSPS Scenario #2 content validity evaluation forms. For the DSPS Scenario #1, the I-CVI score was between .80 and 1.0 on the faculty and student materials evaluation form and 1.0 on the SP materials evaluation form. For the DSPS Scenario #2, the I-CVI score was between .80 and 1.0 on the faculty and student materials evaluation form and 1.0 on the SP materials evaluation form.

The convenience sample was derived from all ($n = 69$) ADN students enrolled in a second-semester, nine-credit, 15-week medical-surgical nursing course at a northeastern urban public university and consisted of all consenting students with usable and matching data ($n = 53$). Quantitative data were gathered by the administration of four instruments: a) the TSET (Jeffreys, 2016b, Toolkit Item 1) (Appendix A), b) the 9-item adapted Demographic Data Sheet-Undergraduate (DDS-U) (Jeffreys, 2016b, Toolkit Item 8) (Appendix B), c) Simulation Survey (4-item) (Appendix C), and d) Simulation Participation Survey (10-item) (Appendix D). The data gleaned from the participants' responses were statistically analyzed utilizing IBM SPSS Version 24. A significance level of $p < .05$ was used for all analyses.

The overall sample ($n = 53$) consisted of 77% female and 23% male. The majority of the participants (70%) in this sample were adults below the age of 25 and single (87%). Most participants described themselves as White (60%). The majority of the sample spoke English as their first language (77%), were unable to speak a language other than English fluently (62%), and were U.S. born (74%). When queried regarding religion, the majority reported their religion as Catholic (55%). More than half of the students reported having no previous healthcare experience (62%).

The following research questions guided this study:

Question 1. What is the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on associate degree nursing (ADN) students' transcultural self-efficacy (TSE) perceptions?

Question 2. What is the influence of select demographic variables on TSE perceptions of associate degree nursing students?

Prior to answering the two research questions, the final sample size ($n = 53$) was confirmed by establishing the student's participation in both DSPS scenarios as measured by the Simulation Participation Survey - Part A and Part B – Question 1 (Appendix D). Research Question 1 was answered by conducting three different types of analyses. First, a paired sample *t*-test was conducted to examine the changes in SEST scores between pretest and post-test on the Cognitive, Practical, Affective subscales and total TSET. Second, changes in SEL groups (Low, Medium, and High) were examined by using the quartile method (Halter et al., 2014; Jeffreys, 2016a) to more comprehensively appraise and understand the overall influence of the DSPS cultural competence education strategy. McNemar's test was utilized to further analyze statistically significant relationships between the pretest and post-test SEL groups on each subscale and total TSET. Third, the independent *t*-test and Pearson *r* correlation tests were conducted on students' responses for the same four questions used immediately after the scenario (Simulation Survey) and post-test TSET (Simulation Participation Survey - Part A and Part B) in two separate surveys (Table 1). Question 2 was answered via a non-parametric test, Mann-Whitney *U*-test, to determine what, if any, impact individual student demographic variables have on changes in SEST scores between pretest and post-test for each subscale and total TSET.

Discussion of the Findings

This study was designed to seek answers to two research questions. First, findings obtained from research question 1 on the Cognitive, Practical, and Affective subscales and total TSET are addressed. Next, results of research question 2 are discussed. Findings gained from each question are substantiated with the literature and related to the underlying conceptual model (CCC). A final summary of relevant findings concludes the discussion section.

Research Question 1

What is the effect of the Diverse Standardized Patient Simulation (DSPS) cultural competence education strategy on associate degree nursing (ADN) students' transcultural self-efficacy (TSE) perceptions?

Cognitive Subscale. The TSET was developed to measure and evaluate “students’ transcultural self-efficacy (TSE) perceptions for performing general transcultural skills among diverse client populations in three dimensions: Cognitive (25 items), Practical (28 items), and Affective (30 items)” (Jeffreys, 2016a, p. 94). The Cognitive subscale asks respondents to rate their confidence concerning their knowledge about the ways cultural factors may influence nursing care among clients of different cultural backgrounds (Jeffreys, 2016a).

When examining the changes on the Cognitive subscale SEST scores, the pretest mean was 7.30 ($SD = 1.49$) and the post-test mean was 8.33 ($SD = 1.37$). The standard deviation (SD) was smaller on post-test indicating the data points were clustered more closely after the DSPS intervention than on pretest. The greatest change occurred on the cognitive dimension of learning among other subscales and total TSET (Table 5); means in all comparison groups were lowest on the Cognitive subscale. The paired sample t -test revealed a significant increase from pretest to post-test ($p < .05$) (Figure 4; Table 5). While the DSPS strategy positively influenced students’

knowledge, students felt least confident about their knowledge and understanding of cultural beliefs and practices in comparison with the other learning domains. Additionally, the relatively high effect size (.62) calculated on the Cognitive subscale also showed that statistically significant changes ($p < .05$) from pretest to post-test to a great extent were explained by the DSPS. Educational intervention studies using the CCC model and/or its corresponding TSET were closely reviewed with a particular focus on the Cognitive subscale in relation to other TSET scores and underlying CCC model assumptions. Consistent with this study's findings and assumption 9 of CCC model, other researchers reported: a) lowest means on the Cognitive subscale and b) statistically significant mean difference between pretest and post-test following educational intervention (Amerson, 2010; Curtis et al., 2016; Grossman et al., 2012; Halter et al., 2014; Jeffreys & Smolaka, 1999a, 1999b; Jeffreys & Dogan, 2012; Lim, 2004; Rogers-Walker, 2014; Weideman et al., 2016).

In addition, McNemar's test showed a statistically significant change for the distribution of the percentages among the Cognitive subscale SEL groups (Low, Medium, and High) between pretest and post-test ($p = .003$) (Table 6). A few students in pretest Low ($n = 3$; 5.7%) remained in Low on the post-test. As mentioned earlier, specific changes in students' scores for the students who remained in the same group were not examined for any of the subscales and total TSET since this level of detail was beyond the scope of the study. Similar to SEST analysis findings, the most change occurred in Low SEL groups (Figure 8; Table 6). Since this study specifically used the quartile method for SEL analysis (as mentioned in Jeffreys, 2006, 2016a) and as utilized previously by Halter et al. (2014), results were compared and contrasted with their study. Consistent with this study's findings, Halter et al. (2014) reported a statistically significant difference on students' SEL following an educational intervention ($p < .05$).

Additionally, they reported: a) the most change occurring in the Low SEL group and b) fewer students falling within the Low SEL group following the educational intervention (similar to this study).

Furthermore, this study used two separate measurements in addition to the TSET: Simulation Survey (Appendix C) and Simulation Participation Survey – Part A and Part B (Appendix D). The question used in both surveys specific to the cognitive dimension (knowledge) asked respondents “to what extent did the simulation experience help you to develop (further develop) knowledge about the ways cultural factors may influence nursing care?” Respondents selected a response ranging from 1 (not at all) to 10 (to a great extent). For both DSPTS #1 and DSPTS #2, the statistical tests indicated that the means for this question were similar regardless of students’ answering immediately after the scenario or post-test TSET (Table 8). A statistically significant positive correlation was observed: a) between the post-test Cognitive subscale of TSET and DSPTS #1 cognitive dimension question ($r_{(51)} = .616, p = .001$); and b) between the post-test Cognitive subscale of TSET and DSPTS #2 cognitive dimension question ($r_{(51)} = .682, p = .001$) (Table 9).

Changes in the Cognitive SEST scores, SEL groups’ distribution (Low, Medium, and High), and bivariate analyses results conceptually made sense and provided further support that the DSPTS intervention made a positive difference on students’ knowledge about the ways cultural factors may influence nursing care when interacting with culturally diverse patients. Leininger (1995, 2002, 2006) described the crucial value of “holding knowledge” prior to interacting with culturally diverse patients and/or participating in teaching and learning activities to enhance understanding of the culture. “Holding knowledge” refers to the understanding of cultural patterns that is held by healthcare professionals (Leininger, 1995, 2002, 2006).

Consistent with Leininger's description of "holding knowledge" and the theoretical framework (CCC) of this study, the DSPS strategy (DSPS #1 and DSPS #2) included pre-requisite learning activities (Figure 2, Steps 2 and 4) in conjunction with several other important components (Figure 2, Steps 3 and 5) that were specifically designed aligning with the DSPS scenarios' learning objectives. Prerequisite learning activities involved: a) review of the specific simulation scenario, b) review of an assigned journal article, c) listening to/viewing narrated PowerPoint video, and d) completion of a pre-simulation assignment (Figure 2; Figure 3). Students were instructed to complete these activities in this specific order to optimize their learning of necessary knowledge, skills, and values for developing cultural competence. As a result of successful participation in the DSPS strategy, results indicated that aforementioned preparatory activities assisted students to remember and understand necessary knowledge related to different cultural groups; basic concepts of culturally competent nursing care and patient teaching; and how to conduct a focused, systematic cultural assessment using Leininger's Sunrise Enabler. Ultimately the activities enhanced the students' cognitive learning. The following underlying assumptions of the CCC model were supported by this study's findings on Cognitive SEST, SEL, and bivariate analyses. (Please note that the assumptions are quoted from Jeffreys [2016a, p. 76] and that the asterisk refers to assumptions that were empirically tested and supported by Jeffreys and/or other researchers.)

Assumption 2. TSE is a dynamic construct that changes over time and is influenced by formalized exposure to culture care concepts.*

Assumption 9. Learners are most confident about their attitudes (affective dimension) and least confident about their transcultural nursing knowledge (cognitive dimension).*

Assumption 14. The greatest change in TSE perceptions will be detected in individuals with low self-efficacy (low confidence) initially, who have then been exposed to formalized transcultural nursing concepts and experiences.*

Practical Subscale. The Practical Subscale (28 items) asks respondents to rate their confidence level for interviewing clients from diverse cultures about their beliefs and values (Jeffreys, 2010a, 2016a). Results of the paired sample *t*-test of the Practical subscale SEST scores demonstrated a statistically significant difference between pretest and post-test ($p < .05$) (Table 5). When examining changes on the Practical subscale SEST scores, the pretest mean was 7.61 ($SD = 1.41$) and the post-test mean was 8.33 ($SD = 1.38$). Similar to findings on the Cognitive subscale, the Practical post-test *SD* was smaller when compared to the pretest, indicating the data points were clustered closely around the mean. Following the Cognitive subscale, the second most change occurred on the Practical subscale SEST scores. Additionally, the relatively high effect size (.57) calculated on the Practical subscale also showed that statistically significant changes ($p < .05$) from pretest to post-test to a great extent were explained by the DSPS. Educational intervention studies using the CCC model and/or its corresponding TSET were closely reviewed with a particular focus on the Practical subscale in relation to other TSET scores and underlying CCC model assumptions. Consistent with this study's findings and assumption 9 of the CCC model, other researchers reported: a) the Practical subscale having the most change after the Cognitive Subscale, and b) statistically significant mean difference between pretest and post-test following educational intervention (Amerson, 2010; Curtis et al., 2016; Grossman et al., 2012; Halter et al., 2014; Jeffreys & Smoldaka, 1999a, 1999b; Jeffreys & Dogan, 2012; Lim et al., 2004; Rogers-Walker, 2014; Sarafis, & Malliarou, 2016; Weideman et al., 2016). Although this study and many other researchers (such as those mentioned above)

reported the most change occurring on the Cognitive subscale, the literature review revealed a few studies reporting the greatest change in SEST scores occurring in the Practical subscale (Adams, 2012; Creech et al., 2017; Singleton, 2017).

Consistent with the changes in SEST scores when examining the impact of the DSPS intervention on the Practical SEL groups, McNemar's test results suggested a statistical significant difference for the distribution of the percentages between the pretest and post-test ($p = .019$) (Table 6). The most change occurred in Low SEL; a few students in pretest Low ($n = 5$; 9%) remained in the Low group on the post-test (Figure 8; Table 6). Similar to this study's findings, Halter et al. (2014) reported a statistically significant difference on students' Practical SEL following an educational intervention ($p < .05$). Additionally, they reported: a) the most change occurring in the Low SEL group and b) having fewer students falling within the Low SEL group following the educational intervention (similar to this study).

Students' responses to the practical dimension question used in both the Simulation Survey and Simulation Participation Survey were also analyzed. This question specifically asked respondents "to what extent did the simulation experience help you to develop (further develop) cultural assessment and interview skills?" Respondents selected a response ranging from 1 (not at all) to 10 (to a great extent). For both DSPS #1 and DSPS #2, the statistical tests indicated that the means for this question were similar regardless of when the survey was administered, immediately after the scenario or post-test TSET (Table 8). Bivariate analyses demonstrated that the post-test Practical subscale had the strongest correlation with DSPS #1 ($r_{(51)} = .689, p = .001^*$) and DSPS #2 for the practical dimension question ($r_{(51)} = .740, p = .001^*$) as opposed to the other two subscales (Cognitive and Affective) (Table 9). Since the DSPS intervention assisted students to practice communication skills and actively engage and interact with

culturally diverse SPs, it would make sense that students who gained knowledge and understanding about cultural factors (cognitive dimension) would feel more confident to communicate verbally and nonverbally while interviewing SPs from diverse cultural backgrounds (practical dimension).

Finally, the results obtained from three separate analyses on the Practical subscale were in the expected direction and made sense conceptually, since the design of the DSPS strategy considered important information sources such as the actual performances and vicarious experiences for self-efficacy development as per Bandura (1986) and the CCC model (Table 19). The strongest source of self-efficacy development, actual performances, was addressed within the DSPS strategy by providing students with the opportunity to engage and interact with culturally diverse SPs who portrayed a patient or significant other role. Vicarious experiences are another source for improving self-efficacy as they incorporate modeling. The preparatory activities of the DSPS strategy incorporated vicarious learning by providing students with sample written and narrated cultural assessment questions and responses on the narrated PowerPoint videos for the DSPS #1 and DSPS #2. Additionally, the pre-conference, simulation “run time,” and debriefing components of the DSPS involved vicarious learning, where the researcher (instructor) assisted students to reflect upon on their own knowledge from observing others and participating in the scenario, while at the same time encouraging motivation and confidence development. Additionally, several DSPS learning objectives specifically aimed to enhance students’ psychomotor/practical skills such as: a) using therapeutic communication strategies (verbal and nonverbal) when interacting with culturally, linguistically, and generationally diverse patients, family members, staff, and others; b) conducting a focused cultural assessment using Leininger’s Sunrise Enabler as a framework; c) developing and initiating a culturally congruent

education plan; and d) implementing evidence-based culturally competent nursing interventions. Findings for the Practical subscale continued to lend support for the following underlying assumptions of the CCC model (Jeffreys, 2016a, p. 76). (Please note that the assumptions are quoted from Jeffreys [2016a, p. 76] and that the asterisk refers to assumptions that were empirically tested by Jeffreys and/or other researchers.)

Assumption 2. TSE is a dynamic construct that changes over time and is influenced by formalized exposure to culture care concepts.*

Assumption 9. Learners are most confident about their attitudes (affective dimension) and least confident about their transcultural nursing knowledge (cognitive dimension).*

Assumption 14. The greatest change in TSE perceptions will be detected in individuals with low self-efficacy (low confidence) initially, who have then been exposed to formalized transcultural nursing concepts and experiences.*

Affective Subscale. The Affective subscale (30 items) asks respondents to rate their level of confidence about clients' attitudes, beliefs and values (Jeffreys, 2006, 2010a, 2016a).

Affective learning is considered the most important in developing professional values and attitudes, is difficult to measure, and often takes the longest to change (Jeffreys, 2016a). When examining the changes on the Affective subscale SEST scores, the pretest mean was 8.83 ($SD = 1.06$) and the post-test mean was 9.14 ($SD = 1.00$) (Figure 5; Table 5). When compared to other subscales and total TSET, descriptive statistics revealed that students who participated in this study had highest mean scores on the Affective subscale before and after participating in the DSPS intervention. Additionally, the smallest mean difference was detected in this subscale. Although changes on the Affective subscale SEST scores following the DSPS intervention occurred in the expected direction (increase), paired sample t -test results were not statistically

significant ($p = .054$) (Table 5). A small effect size (.27) was also calculated for the Affective subscale consistent with the statistically insignificant finding. Within the literature, affective learning is noted as difficult to change and measure. For this study, it is also possible that initial high ratings on the Affective subscale made it difficult to detect a significant difference in students' cultural competence development and small effect size may also indicate a larger sample size is needed to detect changes in this area. This study's findings on the Affective subscale SEST scores were consistent with the findings of other longitudinal studies (Allen et al. 2013; Curtis et al., 2011; 2016; Rudnick, 2004). Different from this study's findings, longitudinal studies targeting ADN students by Jeffreys and Smoldaka ($n = 357$) (1996), Jeffreys and Smoldaka ($n = 51$) (1999a), Jeffreys and Dogan ($n = 36$) (2012), and Rogers-Walker ($n = 55$) (2014) reported statistically significant results on the Affective subscale.

Consistent with the changes in SEST scores, McNemar's test showed a statistically insignificant change for the distribution of the percentages among the Affective subscale SEL groups (Low, Medium, and High) between pretest and post-test ($p = .058$) (Table 6). Although this study just missed statistical significance for changes on Affective SEL groups, it should be noted that very few students in pretest Low ($n = 6$; 11%) remained in Low on the post-test. However, as mentioned before, this study did not examine whether or not the scores of students who remained in the same group changed since this level of detail was beyond the scope of the study. Similar to the other subscales (Cognitive and Practical) and total TSET score, the most change occurred in Low SEL groups (Figure 8; Table 6). Similar to this study, Halter et al. (2014) also reported that the most change occurred in the Low SEL group. Additionally, they found statistically significant differences for the distributions of the percentages on the Affective SEL groups, which differed from this study.

Students' responses to the affective dimension question used in both the Simulation Survey and Simulation Participation Survey were also analyzed. This question specifically asked respondents "to what extent did the simulation experience help you to develop (further develop) culturally sensitive attitudes, values and beliefs?" Respondents selected a response ranging from 1 (not at all) to 10 (to a great extent). For both DSPS #1 and DSPS #2, the statistical tests indicated that the means for this question were similar, regardless of when the survey was administered, immediately after the scenario or post-test TSET (Table 8). Additionally, the Affective subscale was found to strongly correlated with the DSPS #1 ($r_{(51)} = .677, p = .001^*$) and DSPS #2 affective dimension question ($r_{(51)} = .701, p = .001^*$) (Table 9).

For this study, components of the DSPS activities such as reflection via guided questions on the narrated PowerPoint videos for both DSPS scenarios, reflection during the debriefing and feedback sessions about the SP experience, observation during the simulation run time, and the affective dimension question on the additional surveys (Simulation Survey and Simulation Participation Survey), assisted students to focus on and reflect on their own cultural attitudes, values, beliefs, and experiences while working with underrepresented patient populations. As anticipated, after participating in DSPS #1, students verbalized and showed less anxiety when preparing and participating in DSPS #2, as they reported in their observation sheets. This study's findings on the Affective subscale for SEST scores, SEL distribution, and bivariate analyses conceptually made sense and provided further support that the DSPS intervention made a difference in students' culturally sensitive attitudes, values, and beliefs when interacting with culturally diverse patients and supported the following underlying assumptions of the CCC model (Jeffreys, 2016a, p. 76). (Please note that the assumptions are quoted from Jeffreys

[2016a, p. 76] and that the asterisk refers to assumptions that were empirically tested by Jeffreys and/or other researchers.)

Assumption 2. TSE is a dynamic construct that changes over time and is influenced by formalized exposure to culture care concepts.*

Assumption 9. Learners are most confident about their attitudes (affective dimension) and least confident about their transcultural nursing knowledge (cognitive dimension).*

Assumption 14. The greatest change in TSE perceptions will be detected in individuals with low self-efficacy (low confidence) initially, who have then been exposed to formalized transcultural nursing concepts and experiences.*

Total TSET. Consistent with Bandura's work and other self-efficacy studies' recommendations, calculation of the total TSET score is not included within the instructions of the Cultural Competence Education Resource (CCER) toolkit (Jeffreys, 2016b). Jeffreys mentioned that total TSET scoring can be an additional assessment and should not replace individual measurement and interpretation of each subscale separately and within the context of the overall underlying CCC framework (Jeffreys, 2016a; Jeffreys, personal communication, December 23, 2017). In order to contribute to the literature, analysis of the changes on the total TSET scores (83-item mean) has been added in this study.

When examining changes in SEST scores on the total TSET, paired sample *t*-test results demonstrated a statistically significant difference following the DSPS intervention ($p < .05$) (Table 5). The pretest mean was 7.96 ($SD = 1.01$) and the post-test mean was 8.62 ($SD = 1.15$). The results of positive changes (increases) on total TSET score were consistent with other educational intervention studies in the transcultural nursing literature (Burrell, 2010; Grossman et al., 2012; Halter et al., 2014; Mesler, 2014; Rogers-Walker, 2014; Singleton, 2017; Weideman

et al., 2016). The relatively high effect size (.65) calculated on total TSET also showed that statistically significant changes ($p < .05$) on total TSET scores from pretest to post-test were explained to a great extent by the DSPS.

When examining the changes on total TSET SEL groups, McNemar's test results suggested a statistically significant difference for the distribution of the percentages between pretest and post-test ($p = .016$) (Table 6). Consistent with each subscale analysis, the most change occurred in Low; a few students in pretest Low ($n = 5$; 9%) remained in the Low group on the post-test (Figure 8; Table 6). Similar to this study's findings, Halter et al. (2014) also reported: a) the most change occurring in the Low group and b) statistically significant changes between pretest and post-test for total TSET SEL groups. Changes on SEST scores and SEL groups for total TSET demonstrated the aggregate effectiveness of the DSPS intervention to enhance TSE.

Furthermore, when examining the responses to the overall confidence question on additional surveys (Simulation Survey and Simulation Participation Survey), which asked respondents "to what extent did the simulation experience help you to develop (further develop) confidence in caring for culturally diverse patient populations?" the independent t -test indicated that the means for this question were similar regardless of when the survey was administered, immediately after the scenario or post-test TSET for both DSPS #1 and DSPS #2 (Table 8). Additionally, the post-test total TSET had the strongest correlation with DSPS #1 ($r_{(51)} = .841, p = .001^*$) and DSPS #2 overall confidence question ($r_{(51)} = .734, p = .001^*$) compared with the three subscales (Cognitive, Practical, Affective) (Table 9). As the DSPS intervention carefully weaves together the cognitive, practical, and affective learning dimensions of learning and involves the TSE appraisal process (Table 19), the researcher expected participants in this study

to demonstrate positive changes on their total SEST scores and total SEL distribution (Low, Medium, and High groups). The results for changes in total TSET SEST scores, SEL group distribution, and bivariate analyses were in the expected direction with CCC model, made conceptual sense, and supported the following assumptions of the CCC model (Jeffreys, 2016a, p. 76). (Please note that the assumptions are quoted from Jeffreys [2016a, p. 76] and that the asterisk refers to assumptions that were empirically tested by Jeffreys and/or other researchers.)

Assumption 2. TSE is a dynamic construct that changes over time and is influenced by formalized exposure to culture care concepts.*

Assumption 7. The most comprehensive learning involves the integration of cognitive, practical, and affective dimensions.*

Assumption 14. The greatest change in TSE perceptions will be detected in individuals with low self-efficacy (low confidence) initially, who have then been exposed to formalized transcultural nursing concepts and experiences.*

Research Question 2

What is the influence of select demographic variables on TSE perceptions of associate degree nursing students?

In question 1, the main focus was to understand the influence of the DSPS strategy on ADN students' TSE perceptions. In question 2, the researcher wanted to determine if select demographic variables influenced the changes in ADN students' SEST scores following their participation in the DSPS strategy. This was explored to provide evidence supporting that the DSPS strategy caused positive changes in TSE perceptions, regardless of demographic variables. Based upon literature-supported and empirically supported assumption 6 of the CCC model, which states that "all students and nurses (regardless of age, ethnicity, gender, sexual orientation,

lifestyle, religion, socioeconomic status, geographic location, or race) require formalized educational experiences to meet culture care needs of diverse individuals” (Jeffreys, 2016a, p. 76), the expected data analysis outcome was to find no relationship between select demographic variables and changes on TSE perceptions for each subscale and total TSET.

When examining the literature concerning how other researchers collected and analyzed demographic data, certain disparities and inconsistencies were found in the timeline of collecting the demographic data (pretest, post-test, one-time), targeted sample population, study design, scores being used for the analyses (e.g., SEST, SEL, changes in SEST scores, pretest SEST, post-test SEST), and statistical tests utilized. To consider the practical and statistical significance for the analysis of demographic data, changes in SEST scores were used for the analysis as per consultation from an expert statistician and the dissertation chair. For this study, it should be noted that prior to conducting the Mann Whitney *U*-test, five of nine demographic variables (age, marital status, ethnicity, religion, and previous healthcare experience) were re-coded into two response categories due to low or no reporting numbers on the original response categories.

Seven demographic variables (sex, age, ethnicity, English as first language, ability to speak another language besides English, born in the United States, and previous healthcare experience) were not significant predictors on any of the subscales and total TSET. Marital status was not statistically significant for changes in any of the subscale scores. Self-identified affiliation with a religion was not a significant predictor of changes in Cognitive or Practical subscale scores. Among the marital status variable and total TSET score changes, a statistically significant difference was found in TSE perceptions between single students and students who lived with a partner or spouse ($n = 7$), with single students having lower scores ($p = .040$). In addition, changes in SEST scores were statistically significantly different on the Affective

subscale ($p = .002$) and the total TSET ($p = .004$) depending on self-identified affiliation with a religion; students who selecting “agnostic and atheist or none” demonstrated higher scores.

Sample size limitations in these demographic variable groups did not permit further statistical analyses for this study. The following sections discuss the findings on each demographic variable briefly in relation to the literature (with a focus on studies using SEST scores or changes in SEST scores for the analysis of demographic variables) and underlying conceptual model (CCC). The presentation of the discussion follows the order of the demographic data sheet (DDS) and Chapter IV to maintain consistency.

Demographic Variable 1: Sex. Consistent with the findings in this study and the expectation that the sex variable would not influence TSE, the majority of researchers examining this variable, such as Adams (2012), Jeffreys and Smoldaka (1999b), Jeffreys and Dogan (2012), reported that changes in SEST scores did not differ by sex. In contrast to this study’s finding, Curtis et al. (2016) found that changes in Practical subscale SEST scores differed significantly by gender variable ($p = .048$), with lower scores generated by male students ($n = 56$). Their quasi-experimental, pretest and post-test educational intervention study evaluated the integration of contemporary literature and other cultural learning activities into three nursing courses in an effort to increase the cultural competency of 56 accelerated BSN students.

Demographic Variable 2: Age. Consistent with the expected data analysis outcome, the age variable was not a significant predictor in SEST score changes on any of the subscales and total TSET. Similar to this study’s findings, Adams (2012), Jeffreys and Dogan (2012) reported no significant relationship between the age variable and changes on SEST scores on any of the TSET subscales. In contrast to this study’s findings, Hoyer (2013) reported a statistically significant relationship between changes in Cognitive subscale SEST scores and the age variable

($n = 535$); however, comparison with the current study is limited as the methodology (correlational study design), sample ($n = 535$, education leaders and faculty), and the context of interest (non-binary sexual identity issues) were different.

Demographic Variable 3: Marital Status. Consistent with the expected data outcome analysis, the marital status variable was not a significant predictor in SEST scores changes on any of the TSET subscales. Similar to this study's findings, Li et al. (2016) reported no significant differences in SEST scores on any of the subscales based on marital status ($n = 1156$). Different from this study, Li et al. (2016) used a cross-sectional study design and the TSET-Chinese to explore perceived TSE of registered nurses in general hospitals in Guangzhou, China. Among marital status variable and total TSET score changes in this study, a statistically significant difference was found in TSE perceptions between single students and students who lived with a partner or spouse ($n = 7$) with single students having lower scores ($p = .040$). Although students who lived with someone of choice rather than being single reported higher TSE, the small sample size limitations did not permit further statistical analyses.

Demographic Variable 4: Ethnicity. Consistent with the majority of researchers examining this variable, the ethnicity variable was not a significant predictor in SEST scores changes for any of the subscales or total TSET in this study. A longitudinal and cross-sectional study of ADN students by Jeffreys and Dogan (2012) reported similar findings. In contrast to this study's findings, Adams (2012) reported that changes in Practical and Affective subscale SEST scores differed significantly by ethnicity variable, with higher scores generated by participants in the non-White group of BSN students ($n = 111$). The ethnicity variable was presented in two categories, White and non-White, in Adams's (2012) quasi-experimental design, educational intervention study, which examined the effect of service-learning as an innovative strategy to

enhance students' TSE perceptions. In addition to Adams' findings, the previously mentioned cross-sectional study by Li et al. (2016), which targeted registered nurses ($n = 1156$), found that nurses identifying as members of an ethnic minority group in China had statistically significant higher SEST scores than the predominant race category (Han Chinese) on the Cognitive and Affective subscales. The design and targeted sample in the Li et al. (2016) study differed from this study.

Demographic Variable 5: English as First Language. Consistent with the expected data analysis outcome, this study did not show statistical significance in SEST scores changes between students who spoke English as their first language and others on any of the subscales and total TSET. Consistent with the findings of this study and the CCC model, Jeffreys and Dogan (2012) reported similar findings. In contrast to this study's findings, Adams (2012) reported that participants who did not speak English as a first language had significantly higher pretest SEST scores prior to the service-learning intervention on all subscales and total TSET ($n = 111$). Rogers-Walker (2014) supported Adams's (2012) findings and found similar results on pretest Cognitive, Practical, and total TSET scores ($n = 55$). It should be noted that unlike this study, both Adams's (2012) and Rogers-Walker's (2014) studies examined the influence of service-learning experiences using a quasi-experimental, pretest and post-test design with some limited-English-proficient client populations.

Demographic Variable 6: Ability to Speak Another Language Besides English. This study demonstrated no statistically significant difference in SEST scores changes between students who spoke another language besides English and others on any of the subscales and total TSET. Consistent with the findings in this study and the CCC model, Jeffreys and Dogan

(2012) also reported that the ability to speak another language besides English variable was not a significant predictor of SEST scores changes on any of the TSET subscales.

Demographic Variable 7: Born in the United States. This study did not find statistically significant differences in SEST scores changes for students who were born in the United States and who were not on any of the subscales and total TSET. Consistent with the findings in this study and the expectation that birth in the United States would not influence students' TSE perceptions, Jeffreys and Dogan (2012) examined this variable with ADN students and reported similar findings on TSET subscales. In contrast to this study, Rogers-Walkers (2014) found that pre-test Cognitive and Practical subscale SEST scores differed significantly for the "born in the United States" variable ($n = 55$). Her quasi-experimental, one-group, pretest and post-test educational intervention study evaluated the influence of a service-learning experience on ADN students' TSE perceptions.

Demographic Variable 8: Religion. This study demonstrated no statistically significant differences in SEST score changes between students who self-identified themselves with a formalized religion ($n = 49$) and students who reported their religion as agnostic, atheist, or none ($n = 4$) on the Cognitive and Practical subscales. The study found that changes in SEST scores were statistically significantly different on the Affective subscale ($p = .002$) and total TSET ($p = .004$) depending on self-identification with a formalized religion; students who selected agnostic, atheist, or none demonstrated higher scores. In contrast to this study's findings, Kim (2013) reported that the religion variable did not influence South Korean registered nurses' SEST scores on any of the subscales and total TSET. Kim's (2013) cross-sectional study, which used the TSET-Korean version ($n = 285$), reported the highest response rate on the "no religion" response category. This study had only four participants whose belief did not correspond to beliefs about

God or gods as a universal resource. Small sample size limitations did not permit the researcher to conduct further analysis on this variable.

Demographic Variable 9: Previous Healthcare Experience. Previous experiences are an integral part of the CCC model that affect individuals' confidence and motivation during the learning process of developing cultural competence. This longitudinal study did not find that the previous healthcare experience variable influenced students' SEST scores changes on any of subscales and total TSET. Similar to this study's findings, Jeffreys and Dogan (2012), in a longitudinal study, found that changes in SEST scores did not differ significantly by previous healthcare experience on any of the TSET subscales ($n = 36$). In contrast to this study's findings, other cross-sectional studies by Jeffreys and Dogan (2012) and Jeffreys and Smodlaka (1999b) reported strong correlations between previous health care experience and cognitive TSE. Similar to this study, both studies (Jeffreys & Dogan, 2012; Jeffreys & Smodlaka, 1999b) targeted ADN students as their sample, but it should be noted that the majority of their sample involved participants with previous healthcare experiences, whereas more than half of the students in this study reported having no previous healthcare experience (62%).

Although the majority of researchers who studied the influence of demographic variables on SEST scores and SEST scores changes reported statistically non-significant findings, (which is consistent with the CCC model, assumption 6 of the CCC model, and the transcultural literature), others using different methods and samples have reported statistically significant differences (Jeffreys, 2016a). Sample size limitations in certain demographic variable groups did not permit further statistical analyses for this study; future researchers should continue to gather demographic data and explore their influence on TSE perceptions if large enough data sets are collected. The findings of demographic variables analyses continued to lend support for

Leininger's statement (1995, 2002, 2006) and Assumption 6 of the CCC model, that "all students and nurses (regardless of age, ethnicity, gender, sexual orientation, lifestyle, religion, socioeconomic status, geographic location, or race) require formalized educational experiences to meet culture care needs of diverse individuals" (Jeffreys, 2016a, p. 76).

Summary

This longitudinal, one-group, pretest and post-test educational intervention study sought to answer two research questions. The first research question examined the influence of the DSPS cultural competence education strategy on 53 ADN students' TSE perceptions. Three different types of analyses were conducted to answer research question 1: a) SEST score analysis; b) comparison of SEL groups between pretest and post-test; and c) bivariate analyses on two researcher-developed measures (Simulation Survey and Simulation Participation Survey).

When examining SEST scores, students on the pretest felt least confident about the items on the Cognitive followed by the Practical and Affective subscales. On the post-test, the most change on SEST scores occurred on the Cognitive subscale, followed by the Practical and Affective subscales. The changes occurred in the expected direction from pretest to post-test on each subscale and total TSET, and only the Affective subscale missed statistical significance ($p = .054$). The relatively high effect sizes calculated on each subscale and total TSET showed that the changes from pretest to post-test, to a great extent, were explained by the DSPS educational intervention the participants received.

When examining the SEL groups' distribution between the pretest and post-test, the greatest change in SEL groups occurred in Low and High on all subscales and total TSET. It should be noted these groups were artificially created to be smaller than the medium group using the quartile method. For Low groups, the most change occurred on the Cognitive subscale,

followed by the Practical, total TSET, and Affective subscale. For High groups, the Cognitive subscale had the most change, followed by the total TSET, Practical, and Affective subscales (Figure 8; Table 6). Similar to the SEST analysis, only the Affective subscale ($p = .058$) missed statistical significance for the distribution of percentages (changes).

Bivariate analyses were conducted on the data gathered from students' responses for the same four questions (cognitive, practical, affective dimensions, and overall confidence) on two separate surveys (Simulation Survey and Simulation Participation Survey) for the DSPS #1 and DSPS #2. The results indicated that the mean scores for the cognitive, practical, and affective dimensions and overall confidence questions were similar regardless of when the survey was administered, immediately after the scenario or post-test TSET (Table 8) for both DSPS #1 and DSPS #2. The strongest positive correlation was observed on the overall confidence question, followed by the practical, affective, and cognitive dimension questions, respectively, for DSPS #1 (Table 9). The strongest positive correlation was detected on the practical dimension question, followed by the overall confidence, affective, and cognitive dimension questions, respectively, for DSPS #2 (Table 9).

Research question 2 examined whether or not select demographic variables influenced changes in SEST scores following ADN students' participation in the DSPS strategy. Consistent with assumption 6 of the CCC model and the expected data analysis outcome, seven demographic variables (sex, age, ethnicity, English as first language, ability to speak another language besides English, born in the United States, and previous healthcare experience) were not significant predictors on any of the subscales and total TSET. Marital status was not statistically significant for changes in any of the subscale scores. Self-identified affiliation with a religion was not a significant predictor on changes in Cognitive or Practical subscale scores.

Among the marital status variable and total TSET score changes, a statistically significant difference was found in TSE perceptions between single students and students who lived with a partner or spouse ($n = 7$), with single students having lower scores ($p = .040$). In addition, changes in SEST scores were statistically significantly different on the Affective subscale ($p = .002$) and the total TSET depending on self-identified affiliation with a religion, with students selecting agnostic and atheist or none demonstrating higher scores ($p = .004$). Sample size limitations in certain demographic variable groups did not permit further statistical analyses for this study; future researchers should continue to gather demographic data and explore their influence on TSE if large enough data sets are collected.

Finally, the findings from responses to the two research questions of this study were in the expected direction. Overall, students who participated in this study completed the learning objectives of the DSPS strategy satisfactorily, developed their TSE, and demonstrated positive changes on their cognitive, practical, and affective learning. Next, limitations and strengths of the study are presented.

Limitations

When initially proposing this much-needed study, the researcher acknowledged several limitations but also noted that benefits outweighed limitations. Lunenburg and Irby (2008) explain that “limitations are factors that may have an effect on the interpretation of the findings or on the generalizability of the results” (p. 133). First, this study was limited to the use of a convenience sample ($n = 53$) of ADN students enrolled in a second-semester, nine-credit, 15-week medical-surgical nursing course at a northeastern urban public university; therefore, findings from this study may only be generalized to ADN students in similar communities and not to other sample populations of nursing students; in addition, the results may not be

generalizable to other geographic regions or universities. The majority of the respondents were single, female, and under age of 25; most were US born, spoke English as their first language, and described themselves as White. When queried regarding religion, the majority reported their religion as Catholic (55%). Again, results should be viewed with these limitations in mind, and repeated studies should target larger, more diverse samples in a variety of geographic locations to enhance generalizability beyond one institution.

Second, although some literature suggests a one-group, pretest and post-test educational intervention design may be a limitation because of lack of a control group, measurement experts and other scholarly literature advocated a one-group design, indicating that "students in the longitudinal study serve as their own control, [and] the pretest and post-test design is more powerful than having a control group that might be different from the experimental group in many ways" (Jeffreys & Dogan, 2012, p. 194). Further, "in the absence of experimentation, only longitudinal research lends itself to the study of causation in general and reciprocal causation in particular" (Pedhazur & Schmelkin, 1991, p. 316). The participants (53 ADN students) were exposed to the DSPS cultural competence education intervention and they served as their own control. Consequently, after careful deliberation and consultation with a measurement expert familiar with the TSET and several different study designs utilizing the TSET with undergraduate and graduate students, the selected one-group design was deemed most appropriate (E. Dogan, personal communication, September 10, 2015). An additional statistician who had expertise in educational measurement, evaluation, scoring, and data analysis with the TSET supported the selected design for this study (M. Fridline, personal communication, December 15, 2016).

Third, the researcher recognizes that it was difficult to minimize the possible variables within and/or outside the nursing program's curriculum that would cause changes in TSE perceptions. As mentioned in earlier sections, the DSPS strategy consisted of two scenarios. Each DSPS scenario was conducted with seven separate course sections (ranging from 8 to 10 students per section). In total, 14 simulation sessions were planned. The DSPS #1 was implemented during the first 4 to 6 weeks of the semester; the DSPS #2 was implemented during weeks 10 to 12 of the semester. The dates of the simulations were determined based on students' clinical schedules and the availability of the simulation laboratory. These dates were not modifiable by the researcher. In addition to the DSPS strategy, students participated in two other medium-/high-fidelity manikin simulation activities focused on heart failure (weeks 7–9) and Crohn's disease (weeks 12–14) as part of their medical-surgical course. Data collected via two separate researcher-developed measures (Simulation Survey and Simulation Participation Survey) assisted researcher to control for other types of educational activities, such as the other medium-/high-fidelity manikin simulations, assignments, clinical setting, and classroom activities to which students were exposed during the semester, that could potentially affect their overall performance of achieving culturally competent nursing care and mask the actual impact of the DSPS cultural competence education strategy.

Finally, this study followed consistent international guidelines (INACSL, 2013, 2016; Jeffries, 2015) for all components of the DSPS, but due to the nature of the simulation, it was difficult for each participant to experience an identical learning event. Variations in each participant group's approach, responses, behaviors, and interventions may be a limitation to the study because they could have led to very different simulation experiences for the groups. To lessen this limitation, all 14 simulation sessions were conducted by the researcher to ensure that

each group experienced a consistent and standardized pre-brief, simulation, and debriefing with the researcher to maintain the control of the DSPS. Additionally, following each simulation session, the researcher consistently took notes concerning the groups and sessions. No noteworthy learning event difference in any aspect of the DSPS strategy was observed. Each debriefing session was adapted to address the knowledge, skills, and attitudes of the unique participant groups and focused on the scenario objectives and outcomes. Possible variations in participants' responses and interventions were redirected and guided by the researcher to meet predetermined learning objectives and outcomes, build upon developing strengths, and further develop the weaker areas.

Strengths

A carefully orchestrated educational intervention that specifically utilized SP pedagogy and was guided by a theoretical framework, followed international guidelines and standards for design, implementation, evaluation, and SP training, and had content validity review by transcultural scholars and other experts was lacking in the education literature. This study filled this gap. In addition, this study was the only study to examine the influence of a carefully designed cultural competence educational intervention (the DSPS) on ADN students' TSE. Despite the small sample size ($n = 53$), the results of this study demonstrate the effectiveness of the DSPS to enhance cultural competence of undergraduate nursing students. The conducted analyses and statistical tests are replicable by future researchers with similar targeted populations. Another important strength of this study was the use of a psychometrically valid and reliable measurement instrument (TSET) to examine the changes in students' TSE from pretest to post-test (Appendix R; Jeffreys, 2000, 2010a, 2016a). Using the TSET, findings of this study provide valuable information to guide future cultural competence initiatives and add to the

growing body of empirical evidence concerning the TSET's consistently established high psychometric properties. Finally, the results of this study demonstrate the effectiveness of the DSPS to enhance cultural competence of undergraduate nursing students. The major strength of this study is the detailed description about the development, design, implementation, and evaluation of the DSPS strategy. Several major strengths of the DSPS strategy are listed below, and some are further detailed in the narrative that follows.

- The DSPS strategy carefully weaves together cognitive, practical, and affective transcultural nursing skills; encompasses assessment, planning, implementation, and evaluation; and incorporates the information sources influencing TSE appraisal (Table 19) in addition to considerations from the educational and self-efficacy literature and the CCC framework.
- The DSPS strategy was developed based on the CCC model. Additionally, the NLN Jeffries Simulation Theory (JST) (2015), the INACLS Standards of Best Practice: Simulation (2013, 2016), and guidelines and recommendations for coaching standardized patients from Wallace (2007) were closely followed for design, evaluation, and implementation of each DSPS scenario and SP training processes.
- The DSPS integrated key concepts of Healthy People 2020 such as communication skills, patient teaching, health literacy, health promotion, management of chronic illnesses, and cultural competence among marginalized populations (USDHHS, 2010).
- All components of the DSPS strategy were found to be consistent with recently published INACSL Standards of Best Practice: Simulation (2013, 2016) and Standards of Best Practice disseminated by the ASPE for educators working with SPs (Lewis et al., 2017) to promote participants' safety and enhance the effectiveness of the SP experience.

- The DSPS strategy consisted of two different simulation scenarios focusing on underrepresented patient populations to be utilized in a second-semester, nine-credit, 15-week medical-surgical course with culturally diverse SPs. The first scenario presented a 65-year-old, Turkish Muslim immigrant woman with limited English proficiency (Appendix P). The second scenario presented a 55-year-old first-generation American man of Irish and Italian heritage who was a Methodist and self-identified with the LGBTQ population (Appendix Q); the patient came to the hospital with his partner, who self-identified as Puerto Rican and Catholic.
- Content validity of two DSPS scenarios was completed by five doctorally prepared experts, whose expertise varied with regard to transcultural nursing, medical-surgical nursing, undergraduate nursing education, research, pedagogy, simulation, SP simulation, and diverse student and patient populations, who reviewed all DSPS scenario materials. For both DSPS scenarios, the mean score for each item on the content evaluation forms were > 3 (1 = strongly disagree and 4 = strongly agree). The I-CVI score was between .80 and 1.0 for the DSPS #1 and DSPS #2 content evaluation forms.
- The design of this strategy integrated a systematic description for the assessment, planning, implementation, and evaluation processes of each DSPS scenario. This offers an opportunity for future research studies to easily adapt and utilize the DSPS in various nursing courses with different levels of students to enhance cultural competence nursing education.
- The detailed description of the preparation and planning of the SP recruitment, hiring, and training processes served as another strength of the DSPS as a means of maintaining the standardization of the learning experience.

- The implementation of the DSPS strategy involved hiring three primary SPs and three understudy SPs. Both primary and understudy SPs provided feedback to students following the format on the SP evaluation form during the debriefing session. The immediate feedback provided by SPs benefitted students, helping them improve their communication skills, and also assisted faculty in identifying the students' strengths and weaknesses throughout out their participation in the DSPS strategy. Hiring understudy SPs for unforeseen circumstances and involving both primary and understudy SPs within the feedback process serve as strengths of this study's design, helping maintain standardization and preventing the loss of data.
- Integrating the DSPS strategy into a nursing curriculum required a structured approach to design, assessment, and, especially, evaluation. DSPS implementation and evaluation stimulated further faculty interest in evaluating outcomes of simulation for the targeted student group.
- Finally, in addition to the use of a valid and reliable tool, the TSET, the design of the DSPS involved utilization of two additional researcher-developed measures (Simulation Survey and Simulation Participation Survey). The first part of the Simulation Participation Survey – Part A and Part B assisted the researcher to establish student participation in the DSPS scenarios. Both surveys also assisted the researcher to receive students' immediate perceived outcomes following the intervention and control for extraneous variables, such as other class and clinical activities that may have included cultural competence education and experiences. Bivariate data analyses conducted on these two measures strengthened the interpretation of study findings.

Implications

Theory

The CCC model (Jeffreys, 2016a) guided the development, implementation, and evaluation of the DSPS cultural competence education strategy (Figure 3) and aligned very well with the design of the DSPS. The CCC model describes the process of teaching and learning optimal cultural competence as a multidimensional process in which TSE is vital to achieve the goal of culturally congruent patient care (Jeffreys, 2006, 2010, 2016a, 2017). Within this model, TSE is defined as “the perceived confidence for performing or learning transcultural nursing skills” (Jeffreys, 2000, p. 128). According to the model, strong self-efficacy is expected to lead to commitment, motivation, persistence, preparation, and performance of transcultural skills aimed at providing cultural congruent patient care. In contrast, individuals who are inefficacious (with low confidence) or supremely efficacious (overly confident) are at risk for not learning or performing the transcultural skills needed for culturally competent care (Jeffreys, 2016a). Application of the crucial components of the CCC model assisted the researcher to incorporate the link between the participants (students), the intervention (the DSPS strategy), and the environment (encouraging a supportive learning simulation experience).

The CCC model also emphasizes that TSE and transcultural skill development can change over time as a result of formalized education interventions and other learning experiences aimed at enhancing cultural competence development. The multidimensional DSPS cultural competence education strategy carefully weaves together cognitive, practical, and affective transcultural nursing skills; encompasses assessment, planning, implementation, and evaluation; and addresses the four important information sources influencing the TSE appraisal process (Table 19) in addition to other considerations from the educational and self-efficacy

literature and the CCC model. This study's major empirical finding concerning the influence of the DSPS strategy on students' TSE perceptions revealed that students who completed the DSPS strategy reported significant changes (increases) in their perceived TSE. Furthermore, results obtained from research question 2 supported that all students, regardless of background, benefit (and require) formalized cultural competence education. The findings obtained from this study serve to critically derive theoretical implications and conceptually continued to provide additional support for the following assumptions of the CCC model (Jeffreys, 2016a, p. 76). (Please note that the assumptions are quoted from Jeffreys [2016a, p. 76] and that the asterisk refers to assumptions that were empirically tested by Jeffreys and/or other researchers.)

Assumption 2. TSE is a dynamic construct that changes over time and is influenced by formalized exposure to culture care concepts.*

Assumption 6. All students and nurses (regardless of age, ethnicity, gender, sexual orientation, lifestyle, religion, socioeconomic status, geographic location, or race) require formalized educational experiences to meet culture care needs of diverse individuals.*

Assumption 7. The most comprehensive learning involves the integration of cognitive, practical, and affective dimensions.*

Assumption 9. Learners are most confident about their attitudes (affective dimension) and least confident about their transcultural nursing knowledge (cognitive dimension).*

Assumption 14. The greatest change in TSE perceptions will be detected in individuals with low self-efficacy (low confidence) initially, who have then been exposed to formalized transcultural nursing concepts and experiences.*

Nurse educators should continue to consider, measure, and evaluate the underlying assumptions of the CCC model to add to the growing history of the model for the design,

implementation, and evaluation of cultural competence educational strategies within courses and throughout the curriculum to enhance students' knowledge, skills, and attitudes with regard to providing culturally competent nursing care.

Table 19

Considerations of the Transcultural Self-Efficacy (TSE) Appraisal Information Sources within the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy

TSE Appraisal – Four Information Sources	The Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy		
	Cognitive Dimension	Practical Dimension	Affective Dimension
Actual Performances	Preparatory components of the DSPS scenarios (Figure 2, Step 2 and 4 & Figure 3, Step 1 and 3). Pre-conference component of the DSPS strategy.	Focused cultural assessment and culturally competent patient teaching on the patients for DSPS #1 and DSPS #2.	Active participation in debriefing and feedback session of DSPS #1 and DSPS #2. Reflective observation during the simulation “run time”. Responses to the cognitive, practical, and affective dimension questions on additional surveys (Simulation Survey and Simulation Participation Survey) used in both DSPS scenarios.
Vicarious Experiences	The preparatory components of the DSPS scenarios (Figure 2, Step 2 and 4 & Figure 3, Step 1 and 3). Pre-conference component of the DSPS strategy.	Example practice cultural assessment questions and responses through the narrated Power Point videos for the DSPS #1 and DSPS #2.	Reflective observation during simulation “run time”. The debriefing and feedback sessions.
Forms of Persuasion	Pre-conference component of the DSPS strategy.	Practice of providing verbal feedback to peers during the debriefing and feedback sessions.	Verbal encouragement during debriefing and feedback sessions coming from SPs, peers, and the instructor.
Emotional Arousal (Physiological Indices)	The preparatory components of the DSPS scenarios (Figure 2, Step 2 and 4 & Figure 3, Step 1 and 3).	Participation in all components of two DSPS scenarios as part of the DSPS strategy.	Verbal reports during debriefing and feedback sessions. Written statements on the student observation sheets. (Participation in all components of the DSPS #1 assisted students to experience less anxiety when preparing and participating in the DSPS #2).

Education

Nurse educators have been charged by several nursing organizations and accrediting bodies to provide educational experiences, both didactic and clinical, to help students to develop the knowledge, skills, and attitudes needed to provide culturally competent care to patients. An alarming gap exists within the literature concerning innovative teaching and learning strategies that are carefully designed, implemented, and evaluated and follow a conceptual model, guidelines, and standards to enhance cultural competence development of diverse student groups, who must work with patients from various backgrounds (Jeffreys, 2016a; McFarland & Wehbe-Alamah, 2015; Sagar, 2014). In addition, the literature is further lacking strategies that are particularly designed by incorporating cognitive, practical, and affective skills and address the development of cultural competence as an ongoing multidimensional process to achieve culturally congruent care.

The findings of this study indicate that the DSPS strategy positively influenced nursing students' perceived confidence for the Cognitive, Practical, and Affective dimensions of TSE and total TSET. The relatively high effect sizes calculated for each subscale and total TSET demonstrate that statistically significant changes on nursing students' TSE from pretest to post-test were explained to a great extent by the DSPS intervention. Consistent with the expected data analysis outcome, this study found that demographic variables of sex, age, ethnicity, English as first language, ability to speak another language besides English, born in the United States, and previous healthcare experience had no impact on students' TSE perceptions. Marital status was not statistically significant for changes in any of the subscale scores; self-identified affiliation with a religion was not a significant predictor on changes in Cognitive or Practical subscale scores as part of the expected analysis outcome. While sample size limitations were a concern for

this study, statistically significant differences were found in total TSET score changes between single students and students who lived with a partner or spouse ($n = 7$), with single students having lower scores ($p = .040$) (Table 12). In addition, statistically significant differences were detected in SEST score changes on the Affective subscale ($p = .002$) and the total TSET ($p = .004$), depending on self-identified affiliation with a religion, with students selecting agnostic and atheist or none demonstrating higher scores (Table 17). Supporting Leininger's work (1995, 2002, 2006) and assumption 6 of the CCC model, the results support that all students, regardless of background benefit (and require), formalized cultural competence education. The results obtained from this study and the use of an evidence-based, consistent format, and step-by-step description of all components of the DSPS have implications for educators from entry-level, RN-BS, graduate, and doctoral level programs, as well as for staff education and orientation programs in hospitals and continuing education (CE) programs.

First, programs preparing nurses at entry-level into the profession have the potential to build a stronger foundation in cultural competence development because enrollment rates in these programs are higher than in other degree programs. "Nurse educators in all entry-level programs can make a tremendous difference by introducing, fostering, and nurturing cultural competence development" (Jeffreys, 2016a, p. 203). In the US, ADN programs are preparing the greatest number of nurses into practice and they continue to reflect noteworthy diversity in previous work experience, academic preparedness, age, immigration, economic status, and cultural background (Jeffreys, 2016a). The faculty in ADN programs are challenged to find evidence-based teaching and learning strategies to prepare students for their nursing role in a time-constrained 2-year program (Jeffreys, 2016a; Sagar, 2014). As an evidence-based strategy, the DSPS strategy includes two different diverse simulation scenarios to be utilized by all ADN

students enrolled in a second-semester, nine-credit, 15-week medical-surgical nursing course with culturally diverse SPs. With the purpose of promoting students' knowledge, skills, and attitudes with regard to providing culturally congruent nursing care, the first scenario presents a 65-year-old Turkish Muslim immigrant woman with limited English proficiency (Appendix P). The second scenario presents a 55-year-old first-generation American man of Irish and Italian heritage and Methodist religion who self-identifies with the LGBTQ population (Appendix Q) and comes to the hospital with his partner, who self-identifies as Puerto Rican and Catholic. Although, this study targeted a medical-surgical course for the integration of the two scenarios, the DSPS strategy has direct relevance and easy application for use with entry-level students as part of other fundamental nursing courses. The meticulously prepared sample scenario script of both DSPS scenarios and the structured design of the DSPS can easily be adapted by educators to use as part of their courses; educators may consider introducing different cultural and religious background information to promote culturally competent nursing care. Nurse educators who teach in the entry-level programs are encouraged to adapt the DSPS strategy into their courses to determine if similar findings result over longer periods of time as students are exposed to a variety of cultural experiences throughout their nursing programs.

Second, the use of a consistent format and step-by-step description of all components of the DSPS facilitate the easy adaptation of this strategy with different nursing student populations. The NLN (2005, 2009a, 2009b, 2012) and AACN (2009, 2011) provide guidelines and faculty toolkits for the integration of diversity and cultural competence to be used in baccalaureate, master's, and doctoral education. Additionally, the integration of the mission, goals, and priority indicators of Healthy People 2020 (USDHHS, 2012) and Healthy People 2030, now being developed, into the nursing curricula is recommended for all graduate and doctoral levels of

nursing education. The two DSPS scenarios used in this study target underrepresented patient populations and integrate key concepts from Healthy People 2020 (USDHHS, 2010) to improve students' knowledge, skills, and attitudes with regard to providing culturally competent nursing care. The DSPS can offer a solution for common challenges in nursing education such as shortage of clinical sites, limited opportunities to provide students with experiences caring for culturally diverse patients, shortage of faculty, lack of cost-effective teaching and learning strategies, and limited finances.

Third, using simulation is recognized as an effective way for teaching various skills to new graduates and experienced nurses as they care for the nation's increasingly diverse population (Jeffreys, 2016a; Sagar, 2014). The new ANA Standard 8: Culturally Congruent Practice and its accompanying competencies invites all nurses to take actions towards making important contributions for reducing racial and ethnic disparities in both health outcomes and healthcare services (Marion et al. 2016). The integration of content to promote diversity and cultural competence development in staff education and orientation programs requires creativity, resources, expertise, close follow-up with evidence-based practice, and, last but not least, the use of theory. Teaching and learning strategies for use in these programs should be compliant with culturally and linguistically appropriate services (CLAS) standards (USDHHS, Office of Minority Health [OMH], 2013). The DSPS strategy, which incorporated all three domains of learning (cognitive, practical, and affective) and was designed carefully consistent with the CLAS standards can easily be adapted, implemented, and evaluated by staff development educators. The detailed description of the planning, implementation, and evaluation facilitates the adaptation of the DSPS strategy not only by educators in hospitals but also by educators from

various healthcare fields such as medicine, social work, pharmacy, and other health professions to promote cultural competence education.

Finally, continuing education (CE) is considered as the most common way of assuring ongoing cultural competence development. Accessing online transcultural nursing resources (TCNS, 2010, 2015; USDHHS, 2012; OMH, 2013), attending local, national, and international conferences and workshops, collaboration and networking with other nurses, healthcare professionals, and organizations, and seeking certifications are considered some of the ways to be actively involved in the cultural competence development process. The use of innovative and evidence-based teaching and learning strategies such as the DSPS as part of CE activities can be an effective way to enhance the participant's confidence to actively engage in cultural competence development.

Consequently, educators have a key role in supporting students in engaging in the process of culturally competent care by integrating innovative and evidence-based teaching and learning strategies to enhance transcultural nursing practice. Learner-centered, carefully designed, described, implemented, evaluated, and validated teaching and learning strategies, guided by a theoretical framework, such as the DSPS strategy, offer a valuable guide for educators from all levels who are planning to introduce and foster cultural competence development and thereby make a difference. Nurse educators should continue to plan innovative educational interventions to affect change in nursing students' TSE and to ultimately help eliminate health disparities in underserved populations.

Research

This study has demonstrated the DSPS strategy to be an effective teaching and learning tool for the development of cultural competence and the acquisition and stability of transcultural

nursing skills. Guided by the CCC model, the carefully orchestrated DSPS cultural competence education strategy involved two simulation scenarios and international guidelines and standards for scenario design, implementation, evaluation, and SP training (INACSL, 2013; 2016; Jeffries, 2015; Wallace, 2007). Two DSPS scenarios had content validity review by five doctorally prepared experts. A second-semester, nine-credit, 15-week medical-surgical course, which contained the most credit hours and clinical experiences of any course in the curriculum, was targeted for the implementation of two scenarios with culturally diverse standardized patients (SPs) representing underrepresented patient populations. Students in this study also participated in different cultural competence learning activities during their first semester. Several faculty meetings and follow-up discussions with the course coordinators of the targeted course (medical-surgical) and quality time designated for the design of the DSPS strategy facilitated the development process and increased the quality of the intervention. It is recommended that future research studies consider adaptation and replication of the evidence-based format and step-by-step description approach utilized in the development, implementation, and evaluation of the DSPS strategy. Future studies should also target a larger sample size and continue to use the learner-centered approach when designing other innovative teaching and learning strategies for cultural competence development.

As mentioned earlier, this study targeted a second-semester, nine-credit, 15-week medical-surgical nursing course to integrate two DSPS scenarios. Future researchers can easily adapt and utilize all components of the DSPS strategy, not only in medical-surgical courses but also as part of other nursing courses at the baccalaureate, graduate, and doctoral levels. Both DSPS scenarios involved prerequisite components (Figure 2, Step 2 and 4 & Figure 3, Step 1 and 3) to assist students to remember and understand necessary knowledge related to different

cultural groups, basic concepts of culturally competent nursing care and patient teaching, how to conduct a systematical cultural assessment, and ultimately enhance their overall learning.

Inclusion of prerequisite components for each scenario is recommended (INACSL, 2013, 2016; Jeffries, 2015) for future researchers to better prepare student groups for the simulation experience. Additionally, both prerequisite components of this strategy and participation in DSPS #1 assisted participants to experience less anxiety when preparing for and participating in the DSPS #2 as observed by the researcher and reported in students' simulation observation documents. The researcher recommends that researchers continue using both DSPS scenarios and all components involved within the each DSPS scenario when replicating this study.

In addition, consistent data collection techniques were utilized in this study via the use of the CCC model's corresponding, valid, and reliable instrument (TSET) and two additional researcher-developed surveys. The TSET's extensive and thorough psychometric properties have been reported in various nursing and healthcare studies (Appendix R). The use of the CCC model and its corresponding TSET is suggested for future researcher to add more depth to the growing body of empirical evidence concerning TSET and the CCC model. In this study, two additional researcher-developed surveys (Simulation Survey and Simulation Participation Survey) also assisted the researcher to: a) ensure student participation in the DSPS scenarios via the first part of the Simulation Participation Survey on Part A and Part B; and b) control for other types of educational activities such as assignments, clinical setting, and classroom activities to which students were exposed during the semester that could potentially affect their overall performance of achieving culturally competent nursing care and mask the actual impact of the DSPS cultural competence education strategy. The researcher strongly suggests the future studies

include these surveys as part of the DSPS intervention and conduct similar statistical tests to compare and contrast with this study's findings.

Furthermore, this study involved calculation of SEST scores, which is a routinely recommended approach by Jeffreys (2016b) when using the TSET. Jeffreys (2010, 2016a) also suggests that SEL analysis be done as another analysis to gain a deeper insight about the types of changes on TSE perceptions, depending on the purpose of the study. In addition to SEST scores calculation, this study included SEL analysis via the quartile method by grouping students in Low, Medium, and High groups. Future intervention studies should include both SEST and SEL analyses and conduct similar statistical tests to compare and contrast with this study's findings to understand in depth the influence of the utilized educational strategy. This study also reported the effect sizes for each subscale and total TSET. The researcher recommends the calculation of the effect size be included in future research studies for comparison with current and past studies to determine if comparable connections exist and if they are significant.

A cursory review of anonymous student observation sheets (as part of the DSPS intervention) completed during the run time of the simulation by all students who participated in the DSPS strategy revealed many positive comments about the intervention. A qualitative evaluation of student observation sheets was not used in this study but could be included in future research studies to add to the body of knowledge concerning the influence of the DSPS intervention and guide the development of future educational intervention studies. In addition, the use of focus groups to follow-up with students about the intervention would provide greater insight. Furthermore, the researcher strongly believes that future TSE and SP research studies should consider using mixed-methods studies. Mixed-method SP studies (Byrne, 2017; Garrido

et al., 2014; Ndiwane et al., 2014) that integrated a qualitative analysis of participants' responses of open-ended questions and/or reflection essays support this belief.

Finally, for this study, the small sample size caused statistical concerns when analyzing the demographic data. Recall that due to low or no reporting numbers on the original response options, five of nine demographic variables (age, marital status, ethnicity, religion, and previous healthcare experience) were re-coded into two-response categories. Future studies should target larger sample sizes and complete similar statistical tests to those utilized within this study to determine the influence of demographic variables on SEST scores changes. In summary, the consistent approach that is followed for the DSPS strategy's design, implementation, and evaluation assists not only nurse researchers but also researchers from various healthcare fields such as medicine and other health professions for adaptation of this strategy. Easy adaptation of this strategy will promote cultural competence education and help researchers validly compare and contrast findings within and between studies to synthesize and add further depth to theory, research, and evidence-based education.

Policy and Administration

Several nursing organizations (ANA, 2015; AACN, 2008a, 2008b, 2012; NLN, 2005, 2009a, 2009b; Joint Commission, 2010; TCNS, 2010, 2015) and experts in culturally competent nursing care (Andrews & Boyle, 2008; Campinha-Bacote, 2003a, 2003b, 2007, 2011; Douglas et al., 2014; Giger & Davidhizar, 2008; Jeffreys, 2010, 2016a, 2016b, 2017; Leininger, 1991, 1995, 2002, 2006; Leininger & McFarland, 2006; Lipson & DeSantis, 2007; McFarland & Wehbe-Alamah, 2015; Purnell, 2008; Sagar, 2012, 2014; Spector, 2004b) provide essential resources, standards, position statements, guidelines, and toolkits to guide curriculum development that ensures culturally competent nursing is threaded throughout nursing education. However,

inclusion of diversity and cultural competence as a standard is still missing in INACSL: Standards of Best Practice (2013; 2016) (Foronda & MacWilliams, 2015; Foronda et al., 2018). Although the recently revised 2016 INACSL Standards mention “race and culture” under the Design Standard (INACSL Standards Committee, 2016, p. S7), important findings of this study provide additional support that the integration of a comprehensive standard presenting universal and applicable guidelines about the integration of diversity and cultural competence is crucially needed. Inclusion of such standard within INACSL guidelines will assist simulation instructors, facilitators, and staff to create more diverse and inclusive learning environments with the purpose of eliminating health disparities.

Douglas et al. (2014) present 10 universally applicable guidelines for implementing culturally competent nursing care to serve as a resource for nurses, nurse educators, nurse researchers, and nurse administrators. These guidelines are: 1) knowledge of cultures, 2) education and training in culturally competent care, 3) critical reflection, 4) cross-cultural communication, 5) culturally competent practice, 6) cultural competence in healthcare systems and organizations, 7) patient advocacy and empowerment, 8) multicultural workforce, 9) cross-cultural leadership, and 10) evidence-based practice and research. The researcher encourages the individuals who are in position to include an additional INACSL standard targeting diversity and cultural competence development to consider utilizing and integrating these 10 guidelines as a direction point for simulation education, research, and policy development.

The NCSBN simulation study by Hayden et al. (2014), which evaluated the educational outcomes of 25% and 50% simulation use in place of traditional clinical hours, supports the use of simulation as a substitute for up to 50% of traditional clinical time and has contributed substantially to the literature in both nursing regulation and education for the use of clinical

simulation. This study, which also supports the continuous use of clinical simulation, demonstrated that SP simulation can be a useful tool to enhance cultural competence, communication, cultural assessment skills, and cultural knowledge, attitudes, and skills of diverse nursing students when the intervention is designed, implemented, and evaluated aligning with recommended guidelines and standards.

Furthermore, this study's findings provide further data for individuals who are in administrative roles regarding the allocation of resources, time, and finances when substituting clinical time with clinical simulation to better address diversity. To strategically evaluate the simulation curriculum and ensure representativeness of transcultural nursing content, administrators in nursing education should consider building a simulation team involving diverse faculty members. It is essential to identify individual faculty members or committees interested in simulation and cultural competence development who are also familiar with suggested standards, guidelines, toolkits, and competencies (AACN, 2008a, 2008b, 2012; Douglas et al., 2011; INACSL: Standards of Best Practice, 2013; 2016; NLN, 2005, 2009a, 2009b; USDHHS, Office of Minority Health [OMH], 2013) to serve with enthusiasm and commitment in the process of simulation design, implementation, and evaluation within the curriculum following evidence-based guidelines. The DSPS strategy's systematic description of the design, implementation, and evaluation processes serve as a guideline and provide an opportunity for administrators and faculty to address cultural competence development in a safe environment. With the goal of building a culturally competent curriculum, administrators should consider providing faculty with continues development opportunities concerning the use of technology in nursing education, sharing evidence-based practices regarding the use of clinical simulation in education. Mentoring new researchers and simulation faculty members and encouraging them to

collaborate and disseminate of relevant outcomes is necessary for the development of innovative, evidence-based teaching-learning strategies.

Recommendations for Future Research

This study demonstrated that the DSPS strategy was successful in developing nursing students' knowledge, skills, and attitudes and confidence (transcultural self-efficacy) for providing culturally congruent care. The findings of this study provide valuable information to guide future cultural competence initiatives. Based on the findings and limitations from this study, the following recommendations for future research are proposed:

- Adapt and utilize the DSPS strategy using a longitudinal study design and repeat the data analyses conducted in this study to obtain quantitative comparative data to guide ongoing curricular development.
- Collaborate with other nurse researchers to plan a mixed-design study targeting a larger sample size or multiple sites.
- Follow consistent data collection techniques and continue to use reliable and valid instruments such as TSET when evaluating the effectiveness of cultural competence education strategies.
- Continue to collect demographic data and specifically utilize the changes in SEST scores when conducting educational intervention studies to analyze the demographic variables' influence on TSE perceptions. In future studies, besides a larger sample size, a cross-sectional sample of students would yield greater diversity in religion and marital status as well as other demographic data that might provide different results.
- Conduct ongoing psychometric testing for the TSET to contribute to the body of knowledge concerning its validity and reliability estimates.

- When using the TSET, in addition to the standard recommended approach of the SEST score calculation, include SEL analysis using the quartile method to conduct more in-depth analysis regarding the influence of the intervention used.
- Prior to the implementation of the intervention, consider environmental issues such as having the simulation and the debriefing room separated from each other. If possible, separate the simulation and clinical days and schedule the simulations on a separate day.
- Plan to hire understudy SPs in case of unforeseen circumstances. Plan for both primary and understudy SPs to complete evaluation forms at the end of the simulation experience to be able to provide objective feedback to student groups.
- This study's findings confirmed that changes on TSE perceptions occurred as a result of the DSPS strategy. Future research should explore evaluation of patient outcomes in the clinical setting. For example, the Cultural Competence Clinical Evaluation Tool (CCCET) (Jeffreys, 2016b, Toolkit Item 3-7) can be used in conjunction the TSET for formative and summative evaluation purposes to guide individual, course, curricular, or program innovations and teaching-learning strategies (Jeffreys, 2016a, p. 297; Jeffreys & Dogan, 2013; Jeffreys & Dogan, 2016a, Exhibit 6.4).
- Continue to use of the CCC model and the TSET with undergraduate, graduate (masters and doctoral) student populations, diverse health care professionals including nurses and physicians, and faculty and/or academic administrators to add more depth to the growing body of empirical evidence concerning TSE.
- Follow well-planned study designs, evidence-based standardized approaches, and step-by-step descriptions for the development, implementation, and evaluation of innovative cultural competence educational strategies.

Conclusion

This chapter included a review of the study, discussion of relevant findings, limitations and strengths, implications for theory, education, research, policy and administration, and recommendations for further research. Cultural competence is an expected standard for nursing education. It is essential for educators to determine the effectiveness of specific teaching-learning strategies to meet and address this important standard. The lack of conceptually and empirically supported teaching and learning strategies, especially targeting cultural competence development and SP simulation, became evident in the literature review. In addition, the literature reveals a gap in strategies that are particularly designed by incorporating cognitive, practical, and affective skills and address the development of cultural competence as an ongoing multidimensional process to achieve culturally congruent care.

This study adds to the education literature related to cultural competence, TSE, and SP simulation by exploring the effectiveness of using a carefully designed DSPS cultural competence education strategy to enhance ADN students' ($n = 53$) cultural competence development. The multidimensional DSPS strategy is a learner-centered, evidence-based strategy that involves careful integration of cognitive, practical, and affective skills based upon the CCC model. The researcher-developed, multidimensional DSPS strategy's design, evaluation, and implementation processes followed recommended guidelines and standards (INACSL, 2013, 2016; Jeffries, 2015; Wallace, 2007). Implemented within a second-semester, nine-credit, 15-week medical-surgical course in the ADN curriculum, the DSPS strategy involved two different simulation scenarios with culturally diverse SPs. The DSPS scenario #1 targeted culturally competent care for a Turkish Muslim patient in the preoperative setting; the DSPS scenario #2 targeted culturally competent care for chronic disease management (diabetes) for a patient who

self-identified with the lesbian, gay, bisexual, and/or transgender population. Both DSPS scenarios aimed to positively influence nursing students' self-efficacy for performing cognitive, practical, and affective transcultural nursing skills by interacting with trained, culturally diverse SPs representing underrepresented patient populations. The materials for both DSPS scenarios were reviewed by five doctorally prepared experts for content evaluation and the I-CVI score was between .80 and 1.0 on both the DSPS #1 and DSPS #2 content evaluation forms.

Findings of this one-group, pretest and post-test, educational intervention study on SEST scores analysis, comparison of SEL groups, and bivariate analyses on two researcher-developed measures (Simulation Survey and Simulation Participation Survey) support the continuous use of the DSPS strategy for cultural competence development. In addition, the findings obtained from the analysis of SEST scores changes to provide evidence that the DSPS strategy caused positive changes in TSE perceptions regardless of the influence of the select demographic variables continue to lend support for Leininger's statement (1995, 2002, 2006) and Assumption 6 of the CCC model that "all students and nurses (regardless of age, ethnicity, gender, sexual orientation, lifestyle, religion, socioeconomic status, geographic location, or race) require formalized educational experiences to meet culture care needs of diverse individuals" (Jeffreys, 2016a, p. 76). While sample size limitation was a concern, this study also provided evidence that the marital status variable was a statistically significant predictor for changes on total TSET score and the religion variable was a significant predictor on changes in the Affective subscale and total TSET scores for this target population. Future researchers should continue to gather demographic data and explore their influence on TSE if large enough data sets are collected.

The utilization of the CCC model and its corresponding TSET, along with recommended guidelines and standards, can assist to direct future research and focus educational strategies to

support students' confidence in providing cultural competent care. This study clearly supports the adaptation and utilization of the DSPS cultural competence education strategy for various populations and settings to develop cultural competence and TSE. Consequently, it fills the gap in the area of a carefully orchestrated cultural competence educational intervention specifically utilizing the SP pedagogy that: was guided by a theoretical framework; followed international guidelines and standards for the design, implementation, evaluation, and SP training; and had content validity review.

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Appendix A. Transcultural Self-Efficacy Tool (TSET)

Throughout your nursing education and nursing career, you will be caring for clients of many different cultural backgrounds. These clients will represent various racial, ethnic, gender, socioeconomic, and religious groups.

Cultural difference exists in health care needs, caring, and curing practices. Knowing and understanding cultural factors related to client care helps establish a theoretical foundation for providing cultural-specific nursing care.

Part I

Among clients of **different** culture backgrounds, how knowledgeable are **YOU** about the ways cultural factors may influence nursing care? Please use the scale below and mark your response accordingly.

	Not Confident	—	—	—	—	—	—	—	—	Totally Confident
	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
You know and understand the ways cultural factors may influence nursing care in the following areas:										
1) health history and interview	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
2) physical examination	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
3) informed consent	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
4) health promotion	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
5) illness prevention	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
6) health maintenance	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
7) health restoration	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
8) safety	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
9) exercise and activity	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
10) pain relief and comfort	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
11) diet and nutrition	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
12) patient teaching	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
13) hygiene	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
14) anxiety and stress reduction	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
15) diagnostic tests	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
16) blood tests	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
17) pregnancy	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
18) birth	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
19) growth and development	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
20) aging	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
21) dying and death	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
22) grieving and loss	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
23) life support and resuscitation	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
24) sexuality	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
25) rest and sleep	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

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Part II

The most effective way to identify specific cultural factors that influence client behavior is to conduct a cultural assessment of each client. This is best done by interview.

Right NOW, how confident are **YOU** about **interviewing clients of different cultural backgrounds** to learn about their values and beliefs?

Rate your degree of confidence or certainty for each of the following **interview topics**. Please use the scale below and mark your response accordingly.

	Not Confident	—	—	—	—	—	—	—	—	Totally Confident
	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Interview clients of different cultural backgrounds about:										
26) language preference	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
27) level of English comprehension	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
28) meaning of verbal communication patterns	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
29) meaning of nonverbal behaviors	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
30) meanings of space and touch	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
31) time perception & orientation	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
32) racial background & identity	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
33) ethnic background & identity	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
34) socioeconomic background	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
35) religious background & identity	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
36) educational background & interests	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
37) religious practices & beliefs	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
38) acculturation	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
39) world view (philosophy of life)	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
40) attitudes about health care technology	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
41) ethnic food preferences	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
42) role of elders	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
43) role of children	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
44) financial concerns	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
45) traditional health & illness beliefs	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
46) folk medicine tradition & use	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
47) gender role & responsibility	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
48) acceptable sick role behaviors	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
49) role of family during illness	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
50) discrimination & bias experiences	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
51) home environment	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
52) kinship ties	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
53) aging	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

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Part III

As a nurse who will care for many different people, **knowledge of yourself** is very important.

Please rate **YOUR** degree of confidence or certainty for each of the following items. Use the scale below and mark your response accordingly.

	Not Confident	—	—	—	—	—	—	—	—	Totally Confident
	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
A) About yourself, you are <u>AWARE OF</u>:										
54) YOUR OWN cultural heritage and belief systems	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
55) YOUR OWN biases and limitations	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
56) differences within YOUR OWN cultural group	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
B) <u>Among clients of different cultural backgrounds,</u>										
You are <u>AWARE OF</u> :										
57) insensitive and prejudicial treatment	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
58) differences in perceived role of the nurse	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
59) traditional caring behaviors	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
60) professional caring behaviors	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
61) comfort and discomfort felt when entering a culturally different world	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
62) interaction between nursing, folk, and professional systems	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
You <u>ACCEPT</u> :										
63) differences between cultural groups	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
64) similarities between cultural groups	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
65) client's refusal of treatment based on beliefs	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
You <u>APPRECIATE</u> :										
66) interaction with people of different cultures	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
67) cultural sensitivity and awareness	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
68) cultural-specific nursing care	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
69) role of family in providing health care	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
70) client's world view (philosophy of life)	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

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	Not Confident	—	—	—	—	—	—	—	—	Totally Confident
	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Among clients of different cultural backgrounds,

You **RECOGNIZE:**

71) inadequacies in the U.S. health care system	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
72) importance of home remedies & folk medicine	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
73) impact of roles on health care practices	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
74) impact of values on health care practices	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
75) impact of socioeconomic factors on health care practices	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
76) impact of political factors on health care practices	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
77) need for cultural care preservation/maintenance	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
78) need for cultural care accommodation/negotiation	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
79) need for cultural care repatterning/restructuring	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
80) need to prevent ethnocentric views	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
81) need to prevent cultural imposition	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

You **ADVOCATE:**

82) client's decisions based on cultural beliefs	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
83) cultural-specific care	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

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Appendix B. Demographic Data Sheet – Undergraduate (DDS-U)

Directions: Please mark one choice for each item

- 1) Sex

☐ Female
☐ Male
- 2) Age

☐ Under 25
☐ 25-29
☐ 30-34
☐ 35-39
☐ 40-44

☐ 45-49
☐ 50-54
☐ 55-59
☐ 60 and over
- 3) What is your marital status

☐ Single
☐ Living with partner
☐ Married
☐ Separated
☐ Divorced
☐ Widowed
- 4) Which of the following categories best describes you?

☐ American Indian or Alaskan Native
☐ Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai)
☐ Other Asian
☐ Black or African American

☐ Hispanic or Latino
☐ Native Hawaiian or Other Pacific Islander
☐ White
☐ Multiracial
☐ Other
- 5) Is English your first language?

☐ Yes
☐ No
- 6) Do you speak a language other than English fluently?

☐ Yes
☐ No
- 7) Were you born in the United States?

☐ Yes
☐ No
- 8) What is your religious preference?

☐ Agnostic
☐ Atheist
☐ Catholic
☐ Jewish
☐ Mormon
☐ Muslim
☐ Protestant / Other Christian
☐ Other non-Christian religion
☐ None
- 9) Previous healthcare experience:

☐ None
☐ LPN
☐ Other

Appendix C. Simulation Survey

Directions: Please use the scale below and mark your response accordingly.

To what extent did the simulation experience concerning patient teaching for “**preoperative patient Leyla Erol, a Turkish Muslim woman scheduled for right sided femoral popliteal bypass**” help YOU develop (or further develop)

1. Knowledge about the ways cultural factors may influence nursing care?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

2. Cultural assessment and interview skills?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

3. Culturally sensitive attitudes, values and beliefs?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

4. Confidence in caring for culturally diverse patient populations?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Simulation Survey

Directions: Please use the scale below and mark your response accordingly.

To what extent did the simulation experience concerning patient teaching for patient “**Anthony O’Leary, a gay man of Irish-Italian-American Christian background and his partner, Sergio Lopez?**” help YOU develop (or further develop)

1. Knowledge about the ways cultural factors may influence nursing care?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

2. Cultural assessment and interview skills?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

3. Culturally sensitive attitudes, values and beliefs?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

4. Confidence in caring for culturally diverse patient populations?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Appendix D. Simulation Participation Survey

Part A

Directions: Please read the questions below and mark your response accordingly.

1. Were you present for the simulation experience concerning patient teaching for **preoperative patient Leyla Erol, a Turkish Muslim woman scheduled for right sided femoral popliteal bypass?**

Yes ☐ No ☐

To what extent did the simulation experience concerning patient teaching for the above patient, "**Leyla Erol**," help YOU develop (or further develop)

2. Knowledge about the ways cultural factors may influence nursing care?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

3. Cultural assessment and interview skills?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

4. Culturally sensitive attitudes, values and beliefs?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

5. Confidence in caring for culturally diverse patient populations?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Part B**Directions:** Please read the questions below and mark your response accordingly

1. Were you present for the simulation experience concerning diabetic teaching for patient **“Anthony O’Leary, a gay man of Irish-Italian-American Christian background and his partner, Sergio Lopez?”**

Yes ☐ No ☐

To what extent did the simulation experience concerning patient teaching for patient, **“Anthony O’Leary and his partner, Sergio Lopez”**, help YOU develop (or further develop)

2. Knowledge about the ways cultural factors may influence nursing care?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

3. Cultural assessment and interview skills?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

4. Culturally sensitive attitudes, values and beliefs?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

5. Confidence in caring for culturally diverse patient populations?

Not At All	—	—	—	—	—	—	—	—	To A Great Extent
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Appendix E. Personal Coding Cover Page for Anonymity and Matching Questionnaire

USER INFORMATION

- Used to match questionnaires and assessment tools while protecting respondent's anonymity.
- Attach to front page of questionnaire, questionnaire packet, or assessment tool.

Questionnaire Cover Sheet for Personal Coding System

Purpose: This page will create a unique code that will only be used to match your questionnaires together.
Confidentiality: Participants will not be identified using information provided. Respondants will remain anonymous.

Please fill-in the circles below using pen or pencil. Do not use ✕ or ✓ on the form.

1. The first 2 letters of your mother's maiden name (Example: Smith would be SM):
2. The month that your mother was born.
3. The number of siblings (brothers and sisters) you had when you were 18 years old. (Example: 2 brothers and 1 sister would be 3. If you have 0 siblings, write 0). (If more than 9, please mark 9.)
4. The number of brothers who were OLDER than you when you were 18 years old.
5. The number of brothers who were YOUNGER than you when you were 18 years old.
6. The number of sisters who were OLDER than you when you were 18 years old.
7. The number of sisters who were YOUNGER than you when you were 18 years old.

1.	2.	3.	4.	5.	6.	7.
☐ A	☐ Jan	☐ 0	☐ 0	☐ 0	☐ 0	☐ 0
☐ B	☐ Feb	☐ 1	☐ 1	☐ 1	☐ 1	☐ 1
☐ C	☐ Mar	☐ 2	☐ 2	☐ 2	☐ 2	☐ 2
☐ D	☐ Apr	☐ 3	☐ 3	☐ 3	☐ 3	☐ 3
☐ E	☐ May	☐ 4	☐ 4	☐ 4	☐ 4	☐ 4
☐ F	☐ Jun	☐ 5	☐ 5	☐ 5	☐ 5	☐ 5
☐ G	☐ Jul	☐ 6	☐ 6	☐ 6	☐ 6	☐ 6
☐ H	☐ Aug	☐ 7	☐ 7	☐ 7	☐ 7	☐ 7
☐ I	☐ Sep	☐ 8	☐ 8	☐ 8	☐ 8	☐ 8
☐ J	☐ Oct	☐ 9	☐ 9	☐ 9	☐ 9	☐ 9
☐ K	☐ Nov					
☐ L	☐ Dec					
☐ M						
☐ N						
☐ O						
☐ P						
☐ Q						
☐ R						
☐ S						
☐ T						
☐ U						
☐ V						
☐ W						
☐ X						
☐ Y						
☐ Z						

Appendix F. Copyright Clearance Request Letter to Reprint the Figure of Jeffreys' Cultural Competence and Confidence (CCC) Model (2016)

Doctor of Philosophy in Nursing (PhD) Program
Room 3317
365 Fifth Avenue
New York, NY 10016-4309
212.817.7987
212.817.1681 fax
www.qc.cuny.edu

February 28th, 2016

To Springer Publishing Company,

Re: Requesting permission to reprint the figure of Jeffreys's (2016) Cultural Competence and Confidence (CCC)

|

Dear Sir or Madam,

My name is Eda Ozkara San and I am a nursing PhD student under the direction of Dr. Marianne Jeffreys at the City University of New York (CUNY) Graduate Center. I am currently working on preparing a proposal for my doctoral dissertation. My dissertation title is "Effect of the Diverse Standardized Patient Simulation Cultural Competence Education Strategy on Associate Degree Nursing Students' Transcultural Self-Efficacy Perceptions".

I am writing to request your permission to reprint the figure of Jeffreys's (2016) Cultural Competence and Confidence (CCC) model for my doctoral dissertation. The figure, "Cultural Competence and Confidence (CCC) model", appears as figure 3.1 on page 69 in the book below.

Jeffreys, M. R. (2016a). Teaching cultural competence in nursing and health care. Third edition, p.69. New York: Springer Publishing Company.

If you are willing to grant me permission to reprint the figure referenced above, please reply with your official confirmation so that I may have your permission for my records. Please also include how you would like the image to be credited. If additional permission is needed from another source, please do let me know. If you require additional information, please do not hesitate to contact me via e-mail at eozkara@gradcenter.cuny.edu.

Thank you for consideration of this request.

Sincerely yours,

E. Ozkara San

Eda Ozkara San, MBA, RN
PhD Student in Nursing, CUNY Graduate Center

Appendix G. Copy of Permission License from Springer Publishing Company to Reprint and Adapt the Figure of Jeffreys' Cultural Competence and Competence (CCC) Model

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Feb 25, 2018

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Licensed content publisher	Springer Publishing Company, Inc.
Licensed content title	Teaching Cultural Competence in Nursing and Health Care, Third Edition: Inquiry, Action, and Innovation
Licensed content date	Dec 1, 2015
Type of Use	Thesis/Dissertation
Requestor type	Not-for-profit entity
Format	Print, Electronic
Portion	image/photo
Number of images/photos requested	1
The requesting person/organization is:	Eda Ozkara San
Title or numeric reference of the portion(s)	I am writing to request your permission to reprint the figure of Jeffreys' (2016a) Cultural Competence and Confidence (CCC) Model for my doctoral dissertation. The figure, the Cultural Competence and Confidence (CCC) Model, appears as figure 3.1 on page 69 in the book below. Jeffreys, M. R. (2016a). Teaching cultural competence in nursing and health care. Third edition, p.69. New York: Springer Publishing Company.
Title of the article or chapter the portion is from	Part I, Section III
Editor of portion(s)	N/A
Author of portion(s)	N/A
Volume of serial or monograph.	N/A
Page range of the portion	69
Publication date of portion	2016-2017
Rights for	Main product and any product related to main product
Duration of use	Life of current edition
Creation of copies for the disabled	Yes
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For distribution to	Worldwide
In the following language(s)	Original language of publication

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The lifetime unit quantity of new product	Up to 499
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Licensed content publisher	Springer Publishing Company, Inc.
Licensed content title	Teaching Cultural Competence in Nursing and Health Care, Third Edition: Inquiry, Action, and Innovation
Licensed content date	Dec 1, 2015
Type of Use	Thesis/Dissertation
Requestor type	Author of requested content
Format	Print, Electronic
Portion	chart/graph/table/figure
Number of charts/graphs/tables/figures	1
The requesting person/organization is:	Eda Ozkara San
Title or numeric reference of the portion(s)	I would like to request permission to use and adapt the Figure 11.1 Application of Jeffreys' Cultural Competence and Confidence (CCC) Model: Innovative Field Trip Experience on page 369.
Title of the article or chapter the portion is from	N/A
Editor of portion(s)	N/A
Author of portion(s)	N/A
Volume of serial or monograph.	N/A
Page range of the portion	369
Publication date of portion	2016
Rights for	Main product and any product related to main product

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For distribution to	Worldwide
In the following language(s)	Original language of publication
With incidental promotional use	No
The lifetime unit quantity of new product	Up to 499
Title	Effect of the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy on Nursing Students' Transcultural Self-Efficacy Perceptions
Instructor name	Eda Ozkara San
Institution name	CUNY Graduate Center
Expected presentation date	Apr 2018
Billing Type	Invoice
Billing Address	CUNY Graduate Center 523 Prospect Place Apt 101 Brooklyn, NY Brooklyn, NY 11238 United States Attn: Eda Ozkara San
Total (may include CCC user fee)	0.00 USD

Appendix H. Copy of Permission Letter from Springer Publishing Company for Jeffreys' Cultural Competence and Confidence Education Resource Toolkit (2016)

Toolkit - Cultural Competence 3rd Edition

springer@newgen.co <springer@newgen.co>
to me, pamri

8/22/16

Dear Customer,

Thank you for your interest in the *Cultural Competence Education Resource Toolkit, Third Edition*. **Please complete and return the attached license agreement via return email to springer@newgen.co.** Once received, we will provide the Toolkit.

Please confirm receipt of this email and advise if there are any questions or concerns. Thank you

Springer Publishing and the Newgen Team

eda ozkara san <edaozkarasan@gmail.com>
to springer, pamri

Hello,
I am attaching the signed license agreement to this email. Thank you.
My Best,

Eda Ozkara San, RN, MBA, PhD Candidate
Clinical Instructor, NYU Rory Meyers College of Nursing
PhD Candidate in Nursing, CUNY Graduate Center
eo626@nyu.edu
917 627 6595

2 Attachments

springer@newgen.co <springer@newgen.co>
to me, pamri

Dear Customer,

Please find attached the toolkit. Could you please confirm receipt of the file. Thank you

Regards,

Springer Publishing and Newgen Team

Appendix I. Request to Reprint NLN Jeffries Simulation Theory (2015) from National League for Nursing and Wolters Kluwer

Doctor of Philosophy in Nursing (PhD) Program
Room 3317
365 Fifth Avenue
New York, NY 10016-4309
212.817.7987
212.817.1681 fax
www.gc.cuny.edu

January 11th, 2016

To Wolters Kluwer Lippincott Williams & Wilkins,

Re: Requesting permission to reprint the figure of the National League for Nursing (NLN) Jeffries Simulation Theory

Dear Sir or Madam,

My name is Eda Ozkara San and I am a nursing PhD student under the direction of Dr. Marianne Jeffreys at the City University of New York (CUNY) Graduate Center. I am currently working on preparing a proposal for my doctoral dissertation. My dissertation title is "Effect of the Diverse Standardized Patient Simulation Cultural Competence Education Strategy on Associate Degree Nursing Students' Transcultural Self-Efficacy Perceptions".

I am writing to request your permission to reprint the figure of the National League for Nursing (NLN) Jeffries Simulation Theory. The figure, "the NLN Jeffries Simulation Theory", appears as figure 3.1 on page 40 in the book below.

Jeffries P. R. (2016). *The NLN Jeffries Simulation Theory*. New York: National League for Nursing Press.

If you are willing to grant me permission to reprint the figure referenced above, please reply with your official confirmation so that I may have your permission for my records. Please also include how you would like the image to be credited. If additional permission is needed from another source, please do let me know. If you require additional information, please do not hesitate to contact me via e-mail at eozkara@gradcenter.cuny.edu.

Thank you for consideration of this request

Sincerely yours,

E. Ozkara San

Eda Ozkara San, MBA, RN
PhD Student in Nursing, CUNY Graduate Center

Appendix J. Permission Letter from National League for Nursing and Wolters Kluwer**Discussion Thread****Response Via Email (Caren Erlichman)**

01/21/2016 11:59 AM

Hello Eda.

Your request to use the figure "NLN Jeffries Simulation Theory" from Jeffries: The NLN Jeffries Simulation Theory" in your thesis "Effect of the Diverse Standardized Patient Simulation Cultural Competence Education..." is granted.

I am including a link (below) to our Terms and Conditions. Please see those Terms for how to credit the book in your thesis.

Please consider those, and this email, your official grant of permission. Thank you.

www.lww.com/healthpermissions-terms

Sincerely,

Caren Erlichman
Health Permissions Group
Health Learning, Research & Practice
Wolters Kluwer

Appendix K. NLN Jeffries Simulation Theory Figure (2015)

Figure: NLN Jeffries Simulation Theory

Jeffries Pamela R., The National League for Nursing Jeffries simulation theory, Pamela Jeffries, Copyright © 2016 National League for Nursing, Reprinted by permission of Wolters Kluwer.

Appendix L. Letter to Department Chairperson

CUNY Graduate Center

365 5th Ave, New York, NY 10016

Dr. Arlene Farren, Chairperson, Nursing Department
CUNY College of Staten Island
715 Ocean Terrace
Staten Island, New York, 10301

Dear Dr. Farren,

My name is Eda Ozkara San and I am a nursing PhD student under the direction of Dr. Marianne Jeffreys at the City University of New York (CUNY) Graduate Center. I am writing to request permission to conduct my doctoral research at CUNY College of Staten Island in the Department of Nursing.

For my doctoral dissertation study, I am studying “Effect of the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy on Nursing Students’ Transcultural Self-Efficacy Perceptions” and I am pleased to inform you that I am awarded a grant to partially support the hiring and training of standardized patients. Two DSPS scenarios designed by me will be implemented to all associate degree nursing students who are enrolled in a 15-credit second semester medical-surgical course. One DSPS scenario targets culturally competent care for a Turkish Muslim patient in the perioperative setting; the second DSPS scenario targets culturally competent care for chronic disease management (diabetes and renal disease) for a patient self-identifying with the lesbian, gay, bisexual, and/or transgender population. Five doctoral prepared experts will do the content validity of both scenarios. An abstract of the study is also attached to this email for your review.

Currently, the second semester medical-surgical nursing course includes a perioperative and a chronic disease management (diabetes and renal disease) simulation scenario. For this study, I will be incorporating new objectives within the existing clinical topics that emphasize cultural competence and communication and provides the students with an opportunity to dialogue with a trained SP representing under-represented patient populations. Consistent with international simulation guidelines and Dr. Peggy Wallace’s (2007) SP coaching and training guidelines, I prepared instructional packets for faculty, students, and SPs.

The Transcultural Self-Efficacy Tool (TSET) by Dr. Jeffreys and a Demographic Data Sheet will be administered as pretest before at the beginning of the semester before the first scenario implementation. The TSET and the researcher developed Simulation Participation Survey is requested to administer to students at the end of the semester as post-test. Completion of the instruments should take approximately twenty-five minutes.

The results of this study will benefit both the College of Staten Island faculty and students through the implementation of innovative teaching learning activity. Additional benefits to CSI students include having the opportunity to work with diverse patient population in order to provide high quality, culturally competent nursing care, and participation in a nursing research study. Thank you for considering my request. Please let me know if further information is needed.

Sincerely,

Eda Ozkara San

Eda Ozkara San, RN, MBA
PhD Student at CUNY Graduate Center

Appendix M. Letter to Course Coordinator

CUNY Graduate Center,
365 5th Ave, New York, NY 10016

Assistant Professor, Nursing Department
College of Staten Island
Marcus Hall Bldg. 5S-Rm 204
2800 Victory Blvd.
Staten Island, N.Y. 10314

Dear Dr. Griffiths,

My name is Eda Ozkara San and I am a nursing PhD student under the direction of Dr. Marianne Jeffreys at the City University of New York (CUNY) Graduate Center. For my doctoral dissertation study, I am studying “Effect of the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy on Nursing Students’ Transcultural Self-Efficacy Perceptions” and I am pleased to inform you that I am awarded a grant to partially support the hiring and training of standardized patients. I am writing to request your permission to integrate of 2 diverse standardized patients simulation scenarios for second-semester medical-surgical class for possible implementation during Fall 2016 as part of my doctoral research at CUNY Graduate Center.

I am planning to design two DSPS scenarios to be implemented to all associate degree nursing students who are enrolled in a medical-surgical course. For this study, I will be incorporating new objectives within the existing clinical topics that emphasize cultural competence and communication and provides the students with an opportunity to dialogue with a trained SP representing under-represented patient populations. Consistent with international simulation guidelines and Dr. Peggy Wallace’s (2007) SP coaching and training guidelines, I prepared instructional packets for faculty, students, and SPs.

One DSPS scenario targets culturally competent care for a Turkish Muslim patient in the perioperative setting; the second DSPS scenario targets culturally competent care for chronic disease management (diabetes and renal disease) for a patient self-identifying with the lesbian, gay, bisexual, and/or transgender population. Five doctoral prepared experts will do the content validity of both scenarios. An abstract of the study is also attached to this email for your review.

The Transcultural Self-Efficacy Tool (TSET) by Dr. Jeffreys and a Demographic Data Sheet will be administered as pretest before at the beginning of the semester before the first scenario implementation. The TSET and the researcher developed Simulation Participation Survey is requested to administer to students at the end of the semester as post-test. Completion of the instruments should take approximately twenty-five minutes.

The results of this study will benefit both the College of Staten Island faculty and students through the implementation of innovative teaching learning activity. Additional benefits to CSI students include having the opportunity to work with diverse patient population in order to provide high quality, culturally competent nursing care, and participation in a nursing research study. Thank you for considering my request. Please let me know if further information is needed.

Sincerely,

Eda Ozkara San

Eda Ozkara San, RN, MBA
PhD Student at CUNY Graduate Center

Appendix N. Consent Form: Pretest

Dear Student:

As nurse educators, we aim to help you to discover your potential and enhance your nursing skills for providing culturally competent nursing care to diverse patient populations. In order to achieve this goal, it is important for us to learn what students know, think, feel, and need. You can definitely assist us to reach this goal.

All students, who are enrolled in Nursing 120 at the College of Staten Island are being asked to complete 2 questionnaires anonymously. Both questionnaires will be distributed and collected in class today.

There are no rights or wrong answers so please answer the questions as accurately and truthfully as possible.

This research study aims to contribute to the evidence regarding the effectiveness of an innovative educational intervention for development of cultural competence in associate degree nursing students.

All responses will be kept strictly confidential by the researcher. Questionnaires will be completed anonymously; however, you will be asked to submit a personal code known only to you for the purpose of matching questionnaires. Only group results will be reported. Responses will in no way affect your grades in nursing.

Participation in this research study is completely voluntary. Students may withdraw from the study at any time. Refusal to participate will involve no penalty or loss of benefits to which nursing students are otherwise entitled. Willingness to complete questionnaires indicates informed consent.

Benefits of participation include providing data and support for development of future innovative educational interventions to promote cultural competent nursing care development. Another benefit is you will be assisting the researcher to investigate the effectiveness of the teaching methods used in the medical surgical course.

If you have questions about the study, please contact the researcher, Eda Ozkara San, PhD in Nursing Candidate, The City University of New York (CUNY) Graduate Center at 917-627-6595.

If you have questions about your rights as a study participant volunteer, please contact Dr. Marianne Jeffreys, Dissertation Chairperson at 718-982-3825 or Susan Brown, Research Protections Program Manager at 718-982-3867, The City University of New York College of Staten Island Institutional Review Board.

Thank you.

Appendix O. Consent Form: Post-test

Dear Student:

As nurse educators, we aim to help you to discover your potential and enhance your nursing skills for providing culturally competent nursing care to diverse patient populations. In order to achieve this goal, it is important for us to learn what students know, think, feel, and need. You can definitely assist us to reach this goal.

At the beginning of this semester, you were asked to complete 2 questionnaires. Today, all associate students enrolled in Nursing 120 are being asked to complete 2 more questionnaires anonymously. Both questionnaires will be distributed and collected in class today.

There are no rights or wrong answers so please answer the questions as accurately and truthfully as possible.

This research study aims to contribute to the evidence regarding the effectiveness of an innovative educational intervention for development of cultural competence in associate degree nursing students.

All responses will be kept strictly confidential by the researcher. Questionnaires will be completed anonymously; however, you will be asked to submit a personal code known only to you for the purpose of matching questionnaires. Only group results will be reported. Responses will in no way affect your grades in nursing.

Participation in this research study is completely voluntary. Students may withdraw from the study at any time. Refusal to participate will involve no penalty or loss of benefits to which nursing students are otherwise entitled. Willingness to complete questionnaires indicates informed consent.

Benefits of participation include providing data and support for development of future innovative educational interventions to promote cultural competent nursing care development. Another benefit is you will be assisting the researcher to investigate the effectiveness of the teaching methods used in the medical surgical course.

If you have questions about the study, please contact the researcher, Eda Ozkara San, PhD in Nursing Candidate, The City University of New York (CUNY) Graduate Center at 917-627-6595.

If you have questions about your rights as a study participant volunteer, please contact Dr. Marianne Jeffreys, Dissertation Chairperson at 718-982-3825 or Susan Brown, Research Protections Program Manager at 718-982-3867, The City University of New York College of Staten Island Institutional Review Board.

Thank you.

Appendix P. Diverse Standardized Patient Simulation (DSPS) #1

Nursing 120: Culturally Competent Patient Teaching:

Preoperative Nursing Management

a) Letter to Reviewers

August 10, 2015

Dear Evaluation Review Expert:

My name is Eda Ozkara San and I am a nursing PhD student under the direction of Dr. Marianne Jeffreys at the City University of New York (CUNY) Graduate Center. I would like to thank you for accepting my invitation to serve as an evaluation review expert for my Diverse Standardized Patient Simulation (DSPS) scenarios.

For my doctoral dissertation study, I am studying “Effect of the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy on Nursing Students’ Transcultural Self-Efficacy Perceptions” and I am pleased to inform you that I am awarded a grant to partially support the hiring and training of standardized patients. Two DSPS scenarios designed by me will be implemented at a northeastern public college to all associate degree nursing students who are enrolled in a 9-credit second semester medical-surgical course (approximately 50). One DSPS scenario targets culturally competent care for a Turkish Muslim patient in the perioperative setting; the second DSPS scenario targets culturally competent care for chronic disease management (diabetes and renal disease) for a patient self-identifying with the lesbian, gay, bisexual, and/or transgender population. (An abstract of the study is contained in the folder labeled “Folder 1 - Reviewer Materials”).

During their first semester nursing course, students participated in the *Cultural Discovery* learning activities over an 8-week period and an integrated skills (IS) laboratory day at the end of the semester whereby diverse patient backgrounds were incorporated within the medical record and patient report. Information about the *Cultural Discovery* multidimensional teaching-learning strategy can be found in Dr. Jeffreys’ (2010) book “Teaching Cultural Competence in Nursing and Health Care”, Chapter 7; pages 150-159 of her book provide an IS example. (For more information about *Cultural Discovery*, please see the folder labeled “Optional Background Materials for Reviewers”).

Currently, the second semester medical-surgical nursing course includes a perioperative and a chronic disease management (diabetes and renal disease) simulation scenario. For this study, I will be incorporating new objectives within the existing clinical topics that emphasize cultural competence and communication and provides the students with an opportunity to dialogue with a trained SP representing under-represented patient populations. Consistent with international simulation guidelines and Dr. Peggy Wallace’s (2007) SP coaching and training guidelines, I prepared instructional packets for faculty, students, and SPs.

Today, I am requesting that you review the perioperative scenario using the 2 evaluation forms included in the folder labeled “**Folder 1 – Reviewer Materials**”. After accessing Folder 1, **please read the instructions contained at the beginning of each Evaluation Form, beginning with Evaluation Form 1, then Evaluation Form 2 before proceeding to review any of the other folders contained in the zip file.** You will be asked to complete the rating scale as indicated on the evaluation form, write comments on any of the documents using the “Review” feature of Microsoft office word, and return to me at your earliest convenience but by **September 15, 2015**.

I will send the second DSPS scenario materials after receiving feedback about the perioperative scenario. Please confirm that you received my e-mail and can open all the attached documents. If you require additional information, please do not hesitate to contact me via e-mail at eozkara@gradcenter.cuny.edu.

Thank you in advance for your time and expertise in reviewing my materials.

Sincerely,

Eda Ozkara San
PhD Student in Nursing, CUNY Graduate Center,
eozkara@gradcenter.cuny.edu/

b) Expert Reviewer Evaluation Form- Faculty and Student Materials

Instructions for Reviewers:

1. Read through the entire evaluation form below.
2. Read the materials in the “Student Materials” folder in the order presented to rate items concerning student materials.
3. Next, read the materials in the “Faculty Materials” folder in the order presented to rate items concerning faculty materials.
4. Feel free to also write additional comments on any of the materials using the “Review” feature of Microsoft office word.
5. Please return all evaluation forms and materials with comments to the researcher via email at your earliest convenience but no later than **September 15, 2015**. Thank you.

Evaluation Rating

Please use the following key to rate your agreement for items under 6 subheadings for the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy- Perioperative Scenario Student and Faculty Materials.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Agree
- 4 = Strongly Agree

- Please write your rating in the rating column for each item.
- Please indicate a rating for each item so that ratings from each reviewer can be tabulated.
- Please use the comment section if you have any additional input for each item.

Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy- Perioperative Scenario		
Pre-simulation assignment	Rating	Comments
1. provides appropriate amount and level of preparation for the DSPS experience		
2. has relevant questions to the specific scenario		
3. is appropriate for the level of Associate in Applied Science (AAS) nursing students.		
Pre-simulation article		
1. is relevant to the scenario		
2. is appropriate for the level of Associate in Applied Science (AAS) nursing students.		
3. is interesting and easy to read		
4. provides accurate information about American Muslim patients.		
Student version of simulation scenario		
1. has clear and concise learning objectives		
2. easy to understand and read		
3. provides accurate and evidence-based information about patient's situation		
4. provides accurate and evidence-based information about the patient's background		
5. has appropriate amount of complexity for Associate in Applied Science (AAS) nursing students.		
6. has appropriate medication orders for a pre-op patient given the current health condition of the patient		
7. has appropriate diagnostic test orders for a pre-op patient given the current health condition of the patient		
8. provides relevant information about traditional health practices and significant cultural factors of a Turkish Muslim Patient		
Faculty version of simulation scenario		
1. has clear and concise learning objectives		
2. easy to understand and read		
3. has accurate and sufficient information about the situation for instructor preparation		
4. has sufficient and evidence-based information in the patient history for instructor preparation		
5. provides accurate information about patient's cultural background		
6. provides relevant information about traditional health practices and significant cultural factors of a Turkish Muslim patient		
7. provides a realistic timeline for each state		
8. has appropriate medications for the case on each state		
1. has appropriate diagnostic test orders for the specific case		
2. has accurate directions for the simulation instructor for each state		

3. has clear transition from one state to another		
4. describes the goals for each student group clearly on each state		
5. provides enough diagnostic cues to lead appropriate actions or interventions for each state		
6. describes significant changes to warrant specific action for each state		
7. has appropriate and achievable nursing interventions for each state		
8. provides sufficient change in the “patient’s” condition to evaluate impact of interventions		
9. provides accurate contextual details to cue participants to accomplish desired outcomes		
10. is an accurate representation of the described clinical condition		
11. specifies the role of each group for each state clearly		
12. is designed to allow feedback to participants		
Pre-conference instructions for the faculty		
1. provides clear directions to the simulation instructor		
2. provides enough information to the simulation team for the standardized patient set up		
3. provides accurate information about the layout of the DSPS experience		
4. includes clear and relevant learning objectives		
Debriefing instructions for the faculty		
1. includes evidence-based instructions to guide the faculty for facilitating the debriefing session		
2. includes appropriate debriefing questions related to identified objectives, scenario, and/or learner outcomes		
3. provides accurate answers for each recommended debriefing questions		
4. provides a realistic timeline to conduct the debriefing session		

c) Expert Reviewer Evaluation Form- Standardized Patient Materials

Instructions for Reviewers:

1. Read through the entire evaluation form below.
2. Read the materials in the “Standardized Patient” folder in the order presented to rate items.
3. Feel free to also write additional comments on any of the materials using the “Review” feature of Microsoft office word.
4. Please return all evaluation forms and materials with comments to the researcher via email at your earliest convenience but no later than **September 15, 2015**. Thank you.

Evaluation Rating

Please use the following key to rate your agreement for items under 6 subheadings for the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy- Perioperative Scenario Standardized Patient Materials.

1 = Strongly Disagree

2 = Disagree

3 = Agree

4 = Strongly Agree

- Please write your rating in the rating column for each item.
- Please indicate a rating for each item so that ratings from each reviewer can be tabulated.
- Please use the comment section if you have any additional input for each item.

Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy- Perioperative Scenario SP Documents		
Sample scenario script & scenario background	Rating	Comments
1. provides accurate background information for the Standardized Patient's (SP) preparation		
2. provides compatible information with learning objectives of the scenario		
3. provides brief information about the layout of the DSPS		
4. provides brief and useful information about each state's outcomes		
5. provides realistic timeline for each state		
6. reflects a realistic patient-nurse conversation		
7. provides accurate and evidence-based responses both for the patient and the nurse		
8. includes appropriate patient responses on each state based on the cultural heritage (Turkish Muslim)		
9. provides accurate amount of responsibilities to students in each group (primary, secondary, and medication/documentation nurse)		
10. covers all learning objectives of the scenario		
Standardized patient (SP) checklist		

1. has understandable language		
2. easy to read and fill out		
3. has accurate criteria for each subheading to accomplish desired outcomes of the scenario		
4. accurately addresses expected student interventions		
5. has compatible criteria with scenario objectives		

d) Journal Article Citation

Ezenkwele U. A., & Roodsari G. S., (2013). Cultural competencies in emergency medicine: Caring for Muslim-American patients from the Middle East. *The Journal of Emergency Medicine*, 45 (2), 168–174.

e) PowerPoint Presentation Outline

Nursing 120: Culturally Competent Patient Teaching: Perioperative Nursing Management

Pre-Assignment on Blackboard (Total time 20 minutes)

Narrated PowerPoint Outline (Building upon, highlighting, and expanding previous learning)

1. Description of Learning Objectives
2. Outline of the DSPS Experience - Perioperative Nursing Management
3. Case Summary
4. Culturally Competent Nursing Care Quality Indicators
 - A. Institutions
 - a) The Joint Commission (2010)
 - b) The American Association of Colleges of Nursing ([AACN], 2008a, 2008b, 2012)
 - c) National League of Nursing (NLN, 2005, 2009a, 2009b)
 - d) Transcultural Nursing Society (TCNS), (2010)
 - B. Statements
 - a) Institute of Medicine Report (IOM), (2011)
 - b) Healthy People, (2020)
 - c) National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health Care, (2001)
 - d) Transcultural Nursing Society
5. Leininger's Sunrise Enabler for the Theory of Culture Care Diversity and Universality
 - A. Culture Care Preservation or Maintenance
 - B. Culture Care Accommodation or Negotiation
 - C. Culture Care Repatterning and Restructuring
6. Principles of Effective Cultural Assessment
7. Sample Questions for Cultural Assessment
 - A. Communication Factors
 - B. Cultural Values, Beliefs, and Lifeways
 - C. Religious/Spiritual/Philosophical Factors
 - D. Kinship and Social Factors
 - E. Ethnohistory
 - F. Educational Factors
 - G. Economic Factors
 - H. Political and Legal Factors
 - I. Technological Factors
8. Components of Culturally Competent Nursing Pre-Operative Care
 - A. Communication
 - B. Culturally and Linguistically Appropriate Services (CLAS)
 - C. Anesthesia Side Effects
 - D. Informed Consent
 - E. Advanced Directives
 - F. Medication Reconciliation
 - G. Patient Education
 - H. Immobility
 - I. Diet

f) Pre – Simulation Assignment

Nursing 120: Culturally Competent Patient Teaching: Perioperative Nursing Management

(Adapted from currently existing course assignment)

Please answer each of the questions carefully by using peer reviewed resources and bring a copy of your assignment to class on your scheduled simulation day.

1. Describe the risk factors and the pathophysiology of peripheral arterial occlusive disease.
2. What are the physical signs and symptoms of peripheral arterial occlusive disease?
3. What surgical treatments are used for peripheral arterial disease of the femoral arteries? What is the purpose of the femoral popliteal bypass surgery? What are the risks of this procedure?
4. Explain main three elements of a focused nursing assessment for a patient who will have a right sided femoral popliteal bypass surgery.
5. Describe the pre-op and post op teaching points for a patient who will have a right sided femoral popliteal bypass surgery.
6. What are the key components of conducting a cultural assessment?
7. Based on the article by Ezenkwele & Roodsari (2013), what is your plan for providing culturally competent care for your patient?

Medications Cards List: Please explain each of your patient's medication by using the indicated subheadings below.

Please complete the following on each of the medications: - Drug class, generic and trade name, routes of administration, mechanism of action, half-life, indications for use **for this patient**, recommended dose **based on this patient's condition**, most common side effects, most common adverse effects, contraindications **for this patient**, any black box warnings, and the **nursing priorities regarding this drug for this patient**.

Topics and Skills to Review

Peripheral arterial occlusive disease, femoral popliteal bypass surgery, IV/IVPB administration, cultural assessment, focused pain assessment, performing an ECG, and oxygen administration, pre-op and post op education.

g) Student Version of the Scenario

**Nursing 120: Culturally Competent Patient Teaching:
Perioperative Nursing Management**

Patient Care Summary

Name: Leyla Erol Sex: Female DOB: 06/30/1950 Medical Record Number: 1000000412 Admission Date: XX/XX/15 Room Number: Simulation room Admission DX: Peripheral arterial occlusive disease of the right leg Attending Physician: J. Martin
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Allergies: Penicillin (shortness of breath)

Most recent vitalsigns:

Time	Today, 8 am
Blood pressure (BP)	BP= 128/88
Heart Rate(HR)	90
Respiratory Rate(RR)	17
SpO2	97 % in room air
Temperature	37 C

Medications

Ondansetron 4 mg IVPB prior to surgery
 Albuterol 2.5 mg via nebulizer PRN if O₂ < 95 %
 Atrovent 0.02% .5mg/3ml NaCl via nebulizer PRN if O₂ < 95 %
 Morphine 1 mg IVP (PRN) for pain every 4-6 hours
 Morphine 2 mg IVP (PRN) for pain every 7-10 hours
 2L Oxygen via nasal cannula if O₂ < 95 %
 Notify MD/ NP

- If O₂ Sat is less than 95%
- If systolic BP is less than 90 mmHg

IV Medications:

IV: Normal Saline IV infusion 75 mL/hr

Nursing orders:

Admit to perioperative holding area

Activity: OOB

Conduct perioperative assessment

Chest X-ray for respiratory status

ECG and continuous oxygen saturation monitoring via pulse oximetry

Most recent lab orders: CBC, BMP, PT/PTT, INR, Type and Cross Match 1 unit packed red blood cells (**Needs to be drawn**).

Diet: NPO

Diagnostic tests (needs to be done):

Venous doppler ultrasound of right leg

Chest X-ray for respiratory status

ECG and continuous oxygen saturation monitoring via pulse oximetry

Patient Name: Leyla Erol **MD/NP:** J. Martin, MD

Code: ☒ **FULL** ☐ **PARTIAL** ☐ **DNR** ☐ **PALLATIVE** **ALLERGIES:** Penicillin

S (SITUATION)

Diagnosis: Peripheral arterial occlusive disease of the right leg.

Leyla Erol is a 65-year-old female Turkish Muslim patient with a history of peripheral arterial occlusive disease of the right leg for 5 years and appendectomy several years ago and reports severe nausea and vomiting following the surgical procedure. She smoked 1 pack per day for 20 years and quit 5 years ago. She had asthma since age 7 and uses PRN inhaler medications. Within the last month, she has been experiencing increased right leg pain, numbness, and difficulty walking. She is scheduled for right sided femoral popliteal bypass today and is admitted to the preoperative holding area. She mentions that she did not take her medications including the pain medications on time because she is fasting during the month of Ramadan. Her husband brought her to the hospital but left to pick up clothes for the patient.

B (BACKGROUND)

Past Medical History: She smoked 1 pack per day for 20 years and quit 5 years ago. She had asthma since age 7 and uses PRN inhaler medications. Her healthcare provider last saw her about six months ago. She had an appendectomy in 2001 and experienced severe nausea and vomiting following the surgical procedure due to general anesthesia.

Social/Family History: Mother (deceased), age 75, HTN, T2DM. Father (deceased), age 79, asthma. Siblings: 3 brothers with asthma, 2 other brothers, 2 sisters. Children: Daughter (A & W, lives with the patient), age 26; Sons (A & W, both married and live in Turkey), ages 30, 32. She moved from Turkey to USA at 1995 and she is currently living with her daughter and husband in a two-story home.

Diet: NPO

Allergies: PCN

Code Status: Full code

Education: High school diploma

Occupation: Housewife

Religion: Muslim

Ethnicity: Turkish

Primary Language: Fluent in Turkish. She also speaks English.

Medications: ibuprofen 600 mg PRN for pain; Albuterol 2.5 mg 2 puffs PRN (for asthma); Clopidogrel 75 mg once daily.

Traditional health practices: She fasts during the month of Ramadan. She eats halal food or traditional Turkish food and uses chamomile tea to help with digestion. She also eats parsley, purslane, and garlic daily to help with blood pressure.

Significant cultural factors: She prefers a female health care provider. She eats halal food or/and traditional Turkish food. Significant other is her husband and wants to be notified in case of emergency. She has strong commitment to her family for making health care decisions. She believes that wearing an evil eye necklace protects her from harm.

ISOLATION: Contact ☐ Droplet ☐ Airborne ☐ immunocompromised ☐

A (ASSESSMENT)

Vital Signs: HR BP RESP O2 Sat % on

General Appearance:

Cardiac:

Respiratory:

Gastrointestinal:

Genitourinary:

Extremities:

Neurological:

IV Access:

Labs:

Fall Risk:

Pain:

R (RECOMMENDATION)

Group	Positive Findings	Areas for improvement	
1			
Switch Time			
2			
Switch Time			
3			
Switch Time			
Learning Outcomes: at the end of the scenario, the student will be able to:		Met	Unmet
1. Implement evidence based culturally competent nursing practices by prioritizing and implementing appropriate nursing interventions and recognizing abnormal findings.			
2. Use effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patients, family members, staff, and others involved in the patients’ social support system.			
3. Develop and initiate a culturally congruent education plan for the patient/family unit for perioperative preparation and postoperative care.			
4. Conduct a brief, focused cultural assessment by using Leininger’s Sunrise Enabler as a framework.			
5. Conduct evaluation of care by evaluating patient’s response to interventions and teaching.			

h) Pre – Conference Instructions for the Faculty

Nursing 120: Culturally Competent Patient Teaching:

Perioperative Nursing Management

- Outline of the Diverse Standardized Patient Simulation (DSPS):

2:00-2:25	Classroom Pre-conference
2:27-4:00	<p>The Diverse Standardized Patient Simulation (DSPS) Scenario Implementation: The students will be divided into three groups. Each group will have one primary nurse, one secondary nurse, and one medication/documentation nurse.</p> <ul style="list-style-type: none"> • State 1 (31 minutes) <ul style="list-style-type: none"> ○ The DSPS (15 minutes) ○ Hand off report (5 minutes) ○ Completion of the SP checklist and reflection paper (10 minutes) ○ Transition time (1 minute) • State 2 (31 minutes) <ul style="list-style-type: none"> ○ The DSPS (15 minutes) ○ Hand off report (5 minutes) ○ Completion of the SP checklist and reflection paper (10 minutes) ○ Transition time (1 minute) • State 3 (31 minutes) <ul style="list-style-type: none"> ○ The DSPS (15 minutes) ○ Hand off report (5 minutes) ○ Completion of the SP checklist and reflection paper (10 minutes) ○ Transition time (1 minute)
4:00-4:10	Break (10 minutes)
4:10-5:00	Debriefing & the SP feedback for each group

- Discuss the scenario and the pre-simulation assignment questions.
 - Leyla Erol is a 65-year-old female Turkish Muslim patient with a history of peripheral arterial occlusive disease of right leg for 5 years and appendectomy several years ago and reports severe nausea and vomiting following the surgical procedure. She smoked 1 pack per day for 20 years and quit 5 years ago. She had asthma since age 7 and uses PRN inhaler medications. Within the last month, she has been experiencing increased

- right leg pain, numbness, and difficulty walking. She is scheduled for right sided femoral popliteal bypass today and is admitted to the preoperative holding area.
- Identify role expectations (Adapted from current course): Students will be divided into 3 groups consisting of 3-4 students per group. Each group will be involved on an ongoing simulation scenario. Each student will work on reflection after simulation scenario. Each group will have a:
 - Primary Nurse: Receives report from nurse (simulation instructor). Responsible for primary care of patient. For example, patient assessment, etc. Can delegate to secondary nurse.
 - Secondary Nurse: Receives report from primary nurse. Assists primary nurse and engages in collaborative relationship with primary nurse.
 - Medication/Documentation Nurse: Administers medications. Assists in care of patient.
 - Bring into room and introduce to setting and equipment. Encourage students to touch equipment, move bed, familiarize with code cart, etc.
 - Bring back into classroom and set rules for debriefing:
 - Confidential and respectful
 - “What happens in debriefing stays in debriefing”
 - Non-judgmental environment but is opportunity to learn and incorporate into clinical practice.

Objectives: Perioperative Nursing Management

The student will:

1. Implement evidence-based culturally competent nursing practices by
 - Prioritizing and implementing appropriate nursing interventions:
 - Conducts a focused pre-operative assessment (Blood pressure, bilateral pulses, respiratory rate, O2 saturation, temperature etc.)
 - Conducts a focused pain assessment
 - Explains the diagnostic tests that are ordered
 - Maintains nothing by mouth (NPO) status
 - Contacts surgeon regarding consent
 - Addresses and clarifies Clopidogrel use
 - Conducts preoperative teaching
 - Addresses and clarifies information regarding Health Care Proxy
 - Administers pre-operative medications by following 6 medication rights
 - Recognizing abnormal findings:
 - Incorrect information and confusion regarding surgery and informed consent

- Medication – Clopidogrel - contraindicated prior to surgery
 - History of nausea and vomiting with anesthesia
 - Incorrect information regarding health care proxy
 - Decreased sensation on right leg and diminished pulses (right femoral pulse 1 + vs. left femoral pulse 2+)
 - Pain 2/10
 - Incorrect interpretation of fasting on the day of surgery
2. Utilize effective communication by
 - Using SBAR to notify health care provider of patient changes
 - Identifying the roles of the team members
 - Collaborating with team member(s), providing quality care, prioritizing assessment data, and delegating tasks appropriately.
 - Using effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patients, family members, staff, and other involved in the patients' social support system.
 3. Develop and initiate a culturally congruent education plan for the patient/family unit for perioperative preparation and postoperative care by
 - Maintaining NPO status
 - Questioning the consent form
 - Correcting the information regarding health care proxy
 - Including all diagnostic test results to patient's folder
 - Initiating/reinforcing use of incentive spirometer
 - Explaining potential complications and strategies for prevention
 - Explaining pain management before and after surgery
 - Explaining the postoperative equipment such as intravenous lines, dressing, and monitoring devices.
 4. Conducts a brief, focused cultural assessment by using Leininger's Sunrise Enabler as a framework by
 - Identifying cultural-religious values, beliefs, and health care practices professionally e.g. gender preferences for physical exam; language preferences; fasting and other abstinence and religious practices during the month of Ramadan most relevant to patient's current health situation; family role in health care decisions; role of others significant in assisting patient with health care decisions, halal food preferences; praying; and wearing an evil eye necklace
 - Identifying cultural values, beliefs, and health care practices most relevant for pre-op and post op teaching.
 5. Conduct evaluation of care by
 - Evaluating patient's responses to interventions
 - Evaluating effectiveness of communication and teaching.

i) Handoff Report

Nursing 120: Culturally Competent Patient Teaching:

Perioperative Nursing Management

Handoff Report - Leyla Erol - MR# 1000000412- DOB: 6/30/1950

Situation	Leyla Erol is a 65-year-old female Turkish Muslim patient with a history of peripheral arterial occlusive disease of the right leg for 5 years and appendectomy several years ago and reports severe nausea and vomiting following the surgical procedure. She smoked 1 pack per day for 20 years and quit 5 years ago. She had asthma since age 7 and uses PRN inhaler medications. Within the last month, she has been experiencing increased right leg pain, numbness, and difficulty walking. She is scheduled for right sided femoral popliteal bypass today and is admitted to the preoperative holding area. She mentions that she did not take her medications including the pain medications on time because she was fasting during the month of Ramadan. Her husband brought her to the hospital but left to pick up clothes for the patient.
Background	<p>Past Medical History: She smoked 1 pack per day for 20 years and quit 5 years ago. She had asthma since age 7 and uses PRN inhaler medications. Her healthcare provider last saw her about six months ago. She had an appendectomy in 2001 and experienced severe nausea and vomiting following the surgical procedure due to general anesthesia.</p> <p>Family/Social History: Mother (deceased), age 75, HTN, T2DM. Father (deceased), age 79, asthma. Siblings: 3 brothers with asthma, 2 other brothers, 2 sisters. Children: Daughter (A & W, lives with the patient), age 26; Sons (A & W, both married and live in Turkey), ages 30, 32. The patient migrated from Turkey to USA at 1995 and she is currently living with her daughter in a two-story home.</p> <p>Diet: NPO</p> <p>Allergies: <u>Penicillin (shortness of breath)</u></p> <p>Code Status: Full code</p> <p>Education: High school diploma</p> <p>Occupation: Housewife</p> <p>Religion: Muslim</p> <p>Ethnicity: Turkish</p> <p>Primary Language: Fluent in Turkish, understands English, and speaks English with a strong accent.</p> <p>Medications: Ibuprofen 600 mg PRN for pain; Albuterol 2.5 mg 2 puffs PRN (for asthma); Clopidogrel 75 mg once daily.</p>
Assessment	<p>Vital signs: HR = 90; BP = 128/88; RR = 17; SpO2 = 97 % in RA; Temp = 37 C</p> <p>General Appearance: Concerned about the surgery and anxious</p> <p>Neurological: No neurological deficits. PERRLA.</p> <p>Respiratory: Clear lung sounds</p> <p>Cardiovascular: Sinus rhythm</p> <p>GI: Normal bowel sounds</p> <p>GU: Has not voided</p> <p>Skin: Little sweaty, pale</p> <p>Pulses: Right femoral pulse 1 +, left femoral pulse 2+</p> <p>Capillary refill less than 3 seconds</p>

	<p>IV: IV lock on right arm in place with no IV fluids; inserted on preoperative floor 1 hour ago. She refuses her IV medication because she is fasting.</p> <p>Pain: Localized pain on her right leg (2/10), refuses pain medication</p> <p>Cultural Assessment: Not done yet</p>
Recommendations	<p>Physical and history assessment is done. Conduct a focused pre-op assessment (only vitals and assessment of lower extremities), and a focused cultural assessment. Complete the orders for diagnostic tests and develop & conduct a culturally congruent pre and post op teaching.</p>

j) Faculty Version of the Scenario

Nursing 120: Culturally Competent Patient Teaching:

Perioperative Nursing Management

Patient Care Summary

Name: Leyla Erol
Sex: Female
DOB: 06/30/1950
Medical Record Number: 1000000412
Admission Date: XX/XX/15
Room Number: Simulation room
Admission DX: Peripheral arterial occlusive disease of the right leg
Attending Physician: J. martin, MD

Learning Outcomes:

At the end of this simulation session, the students will:

1. Implement evidence based culturally competent nursing practices by prioritizing and implementing appropriate nursing interventions and recognizing abnormal findings.
2. Use effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patients, family members, staff, and other involved in the patients' social support system.
3. Develop and initiate a culturally congruent education plan for the patient/family unit for perioperative preparation and postoperative care.
4. Conduct a brief, focused cultural assessment by using Leininger's Sunrise Enabler as a framework.
5. Conduct evaluation of care by evaluating patient's response to interventions and teaching.

Overview:

Leyla Erol is a 65-year-old female Turkish Muslim patient with a history of peripheral arterial occlusive disease of the right leg for 5 years and appendectomy several years ago and reports severe nausea and vomiting following the surgical procedure. She smoked 1 pack per day for 20 years and quit 5 years ago. She had asthma since age 7 and uses PRN inhaler medications. Within the last month, she has been experiencing increased right leg pain, numbness, and difficulty walking.

She mentions that she did not take her medications including the pain medications on time because she is fasting for Ramadan. Her husband brought her to the hospital but left to pick up clothes for the patient. She is scheduled for right sided femoral popliteal bypass today and is admitted to the preoperative holding area. The patient understands and speaks English but she has strong accent.

Background:

She smoked 1 pack per day for 20 years and quit 5 years ago. She has childhood asthma and she is using PRN inhaler medications. Her healthcare provider last saw her about six months ago. She had an appendectomy in 2001 and experienced severe nausea and vomiting following the surgical procedure due to general anesthesia.

Diagnosis: Peripheral arterial occlusive disease of the right leg

Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy- Perioperative Scenario Documentation:

Each simulation scenario will consist of the following:

1. Pre-simulation assignment questions and assigned reading
2. Pre-conference instructions for faculty
3. Faculty version of simulation scenario (with medical orders)
4. Student version of simulation scenario
5. Standardized patient-scenario background & sample scenario script
6. Debriefing instructions for faculty
7. Standardized patient checklist
8. Hand off report (SBAR)
9. Observer Evaluation Sheet

DSPS Layout: (Adapted from current course)

- The scenario will be run by using a standardized patient (SP). All equipment including IV tubing, patient monitor, fluids, medications, and specific treatment related material will be available at the bedside.
- The whole DSPS experience will take 3 hours.
- All students will complete pre-sim assignments and read assigned article and come ready to the simulation experience. Students will be instructed to complete their pre-sim assignments by using APA format. The assignments will be collected by the instructor (or submitted to the blackboard 48 hours before the simulation day by the students for the instructor to comment on and grade). The grading will be Pass/Fail.
- Students will be divided into 3 groups consisting of 3-4 students per group and given 20 minutes for the DSPS experience. Each group will be involved on an ongoing simulation scenario. Each student will work on reflection after the DSPS scenario while the SP works on the checklist. Each group will have a:
 - Primary Nurse: Receives report from nurse (simulation instructor). Responsible for primary care of patient. For example, patient assessment, etc. Can delegate to secondary nurse.
 - Secondary Nurse: Receives report from primary nurse. Assists primary nurse and engages in collaborative relationship with primary nurse.
 - Medication/Documentation Nurse: Administers medications. Assists in care of patient.

Group 1: Will work on Reflection immediately following simulation scenario and will observe Group 2 and 3 while completing an observer evaluation sheet.

Group 2: Will work on Reflection immediately following simulation scenario and will observe group 1 and 3 during simulation scenario while completing an observer evaluation sheet.

Group 3: Will work on Reflection immediately following simulation and will observe group 1 and 2 during simulation scenario while completing an observer evaluation sheet.

- Outline of the Diverse Standardized Patient Simulation (DSPS):

2:00-2:25	Classroom Pre-conference
2:27-4:00	<p>The Diverse Standardized Patient Simulation (DSPS) Scenario Implementation: The students will be divided into three groups. Each group will have one primary nurse, one secondary nurse, and one medication/documentation nurse.</p> <ul style="list-style-type: none"> • State 1 (31 minutes) <ul style="list-style-type: none"> ○ The DSPS (15 minutes) ○ Hand off report (5 minutes) ○ Completion of the SP checklist and reflection paper (10 minutes) ○ Transition time (1 minute) • State 2 (31 minutes) <ul style="list-style-type: none"> ○ The DSPS (15 minutes) ○ Hand off report (5 minutes) ○ Completion of the SP checklist and reflection paper (10 minutes) ○ Transition time (1 minute) • State 3 (31 minutes) <ul style="list-style-type: none"> ○ The DSPS (15 minutes) ○ Hand off report (5 minutes) ○ Completion of the SP checklist and reflection paper (10 minutes) ○ Transition time (1 minute)
4:00-4:10	Break (10 minutes)
4:10-5:00	Debriefing & the SP feedback for each group

Standardized Patient Set up

Female dressed in hospital gown, head of bed elevated, room air, 20 gauge IV on right arm (placed on admission). The patient's head is covered with a scarf. She is holding small prayer beads and is also wearing an evil eye shaped necklace.

Equipment: ECG, O₂ saturation monitor, vital signs monitor, arm/ID band.

<p><u>Brief Summary:</u> During the Diverse Standardized Patient Simulation (DSPS), the students are expected to perform a focused pre-operative assessment (only vitals and assessment of the extremities because physical and history assessment are already done), prioritize and implement culturally competent appropriate nursing interventions, recognize the abnormal findings, assure the acquisition of informed consent, complete pre-operative orders (medications and diagnostic tests), complete pre-operative assessment checklist, and develop and initiate a culturally congruent education plan for the patient/family unit for pre-operative preparation and post-operative care.</p>	
<p><u>State One:</u> The students should complete a focused pre-op assessment, complete lab orders, and begin to ask questions to identify the patient's cultural-religious, values, beliefs, and health care practices.</p>	<p>Patient is in the preoperative waiting area and lying in a hospital bed. She is waiting to be prepared for her scheduled surgery today. She is anxious. She mentions that she is fasting on Ramadan and refuses IV fluids and blood drawn. After vital signs interpretation, the patient rates her pain as 2/10 on her right leg. Students are expected to</p> <ul style="list-style-type: none"> • conduct a focused pre-op assessment and interpret the findings • conduct a pain assessment • provide accurate information about the consent form • review and implement the orders by the health care provider • communicate effectively with patient • communicate effectively with primary care provider and other health care professionals by using SBAR • offer resources to address patient's fasting (patient's religious leader or clergy person and/or contact the on-call clergy)
<p><u>State Two:</u> The students should interpret lab and diagnostic test results, and continue to identify cultural-religious values, beliefs, and health care practices, and complete physician's orders.</p>	<p>The patient is lying in a hospital bed and she seems nervous about the surgery decision. She looks shy and softly whispers that she wants a female nurse (if the nurse is male). She frequently holds her prayer beads and prays. Students are expected to</p> <ul style="list-style-type: none"> • monitor vital signs • interpret the blood and diagnostic tests results • review and implement the orders by the health care provider • continue to identify cultural-religious beliefs and health care practices professionally e.g. gender preferences for physical exam; fasting during the month of Ramadan; family role on health care decisions; halal food preferences; praying; and wearing an evil eye necklace.
<p><u>State Three:</u> The students should complete the pre and post-operative culturally congruent education by</p>	<p>Patient is still in the perioperative holding area and lying in a hospital bed. She asks questions about the care after the surgery. She questions the advance care directive and the health care proxy form. She listens to the teaching by the nurse very</p>

<p>incorporating the knowledge received from cultural assessment, complete physician's orders (if not completed yet), and the pre-operative checklist.</p>	<p>carefully, but she refuses to sign any form without her husband. She is concerned about the food in the hospital since her religion requires her to eat halal food. At the end of the teaching, she requests to go to bathroom and refuses to use the bedpan.</p> <p>Students are expected to</p> <ul style="list-style-type: none"> • continue to monitor vital signs • clarify patient's statement regarding the health care proxy • provide accurate information about the advance care directive • respect patient's cultural-religious beliefs and health care practices • complete culturally congruent pre and postoperative education for the patient/family unit • complete the perioperative checklist
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Orders 1:

Admit to perioperative holding area

Ondansetron 4 mg IVPB prior to surgery

Albuterol 2.5 mg via nebulizer PRN if O₂ < 95 %

Atrovent 0.02% .5mg/3ml NaCl via nebulizer PRN if O₂ < 95 %

Morphine 1 mg IVP (PRN) for pain 4-6

Morphine 2 mg IVP (PRN) for pain 7-10

2L Oxygen via nasal cannula if O₂ < 95 %

Notify MD/ NP

- If O₂ Sat is less than 95 %
- If systolic BP is less than 90 mmHg

IV: Normal Saline IV infusion 75 mL/hr

Activity: OOB

Diet: NPO

Labs: CBC, BMP, PT/PTT, INR, Type and Cross Match 1 unit packed red blood cells.

Venous doppler ultrasound of right leg

Chest X-ray for respiratory status

ECG and continuous oxygen saturation monitoring via pulse oximetry

Conduct perioperative focused assessment

STATE 1(20 minutes) (8 AM): The students should complete a focused pre-op assessment, complete lab orders, and begin to ask questions to identify the patient's cultural-religious, values, beliefs, and health care practices.

Vital signs:	HR=86 BP=120/83; RR=16; SpO2=97 % in room air (RA); Temp=37.1 C
Assessment:	<p>General Appearance: Anxious, general malaise</p> <p>Neuro: PERRLA, no neurologic deficits, decreased sensation on right leg.</p> <p>Respiratory: Clear lung sounds, rapid breaths</p> <p>Cardiac: Sinus tachycardia, no extra heart sounds</p> <p>GI: + bowel sounds in all 4 quads Normal</p> <p>GU: has not voided since she came in</p> <p>Skin: clammy, pale pink</p> <p>Pulses: right femoral pulse 1 +, left femoral pulse 2+</p> <p>Capillary refill less than 3 seconds</p> <p>Pain: Localized pain on her right leg (2/10), refuses pain medication</p> <p>Allergies: Penicillin (shortness of breath)</p> <p>IV: IV lock with no IV fluids in place on the right arm; inserted on preoperative floor 1 hour ago. She refuses her IV medication and fluids because she is fasting.</p>
Suggested patient responses:	<p>The patient is lying in bed and says “My name is Leyla Erol and my date of birth is 6/30/1950. I am here for my leg surgery. My leg sometimes hurts a lot and it feels numb. It has been difficult to walk lately.”</p> <p>“I have a little dull pain on my right leg. It is 2 out of 10”</p> <p>“I was using a medicine called Clopidogrel for my leg”</p> <p>If asked about Clopidogrel, “My doctor told me to stop about one week ago.”</p> <p>“I think my skin on my right leg is dry and it gets cracked easily. I have some problems with nail growth. Also, the hair on my right leg it seems like it is not growing”</p> <p>“I can’t believe I am going to wake up without my right leg. I am worried. I don’t understand why the doctor said my leg has to come off. I would rather live with the pain than without a leg”</p> <p>“I did not sign any form. I am waiting for my husband to come and sign necessary documents”</p> <p>“My pain is no bad and I can’t take any pain meds because I am fasting during the month of Ramadan. My daughter told me not fast for today but, I have to because it does not feel right”</p> <p>“I want to continue fasting until I go to surgery”</p>
Diagnostic Test results:	Labs not available

- Assessment:
 - Obtains vital signs
 - Performs a focused pre-operative assessment
 - Conduct a holistic pain assessment
 - Identifies abnormal findings
 - Assesses the patient's cultural-religious beliefs e.g. fasting and addresses patient's beliefs about fasting during the day of the surgery
 - Questions the consent form
 - Clarifies Clopidogrel usage
- Nursing Interventions:
 - Collaborates with other health care professionals and the patient's religious leader to address her fasting during the day of the surgery.

After patient's decision to break her fasting:

 - Verifies allergies to drugs
 - Offers pain medication
 - Explains what diagnostic tests are ordered
 - Calls departments to requests diagnostic tests: chest x-ray, ECG, labs
 - Maintains nothing by mouth (NPO) status
 - Assess the IV site and initiates the IV medication
 - Reviews and completes pre-op orders and administers medications following the Six Rights
- Communication:
 - Uses SBAR when giving report
 - Identifies the roles of the team members
 - Collaborates with team member(s) providing quality care and prioritization of assessment data.
 - Communicates effectively with primary care provider and other health care professionals.
 - Uses effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patient and/or family members.
 - Offers resources to address patient's fasting on the day of operation (patient's religious leader or clergy person and/or contact the on-call clergy)

State 1 ends after when the students complete the focused perioperative assessment, communicate with patient's religious leader (Imam) to address her fasting, and complete diagnostic test orders.

Orders #2 (received by phone from health care provider)

Ondansetron 4 mg IVPB prior to surgery

Albuterol 2.5 mg via nebulizer **PRN** if O₂ < 95 %

Atrovent 0.02% .5mg/3ml NaCl via nebulizer **PRN** if O₂ < 95 %

Continuous pulse oximetry

STATE 2 (20 minutes): The students should call the lab and interpret blood tests and other diagnostic test results and continue to the cultural assessment; and complete physician's orders.

Assessment:	<p>General Appearance: Nervous about the surgery</p> <p>Neuro: PERRLA, no neurologic deficits, decreased sensation on right leg.</p> <p>Respiratory: Clear lung sounds</p> <p>Cardiac: Sinus rhythm</p> <p>GI: + bowel sounds in all 4 quads - Normal</p> <p>GU: No urinary output</p> <p>Skin: Warm and pink</p> <p>Capillary refill: less than 3 seconds</p> <p>Pulses: right femoral pulse 1 +, left femoral pulse 2+</p> <p>Pain: 2/10</p> <p>IV: Remains patent and intact. IV team-initiated NS fluid. The patient is also receiving Ondansetron 4 mg IVPB.</p>
Suggested patient responses:	<p>The patient appears very uncomfortable when the male nurse touches her IV site for assessment.</p> <p>"She holds her prayer beads and begins to pray silently. If asked by the students, she answers "I believe my praying and my evil eye necklace will protect from bad things. Allah hears me and gives me the strength to face with challenges of the day"</p> <p>"I had an appendix removal surgery and it was bad! I vomited so much after that medicine they gave me to make me sleep. Will that happen again?"</p> <p>"English is my second language and I also speak Turkish"</p> <p>"My family is everything for me. It has been very difficult to adjust when we came here in 1995 but, now we're okay as a family other than my health problems"</p> <p>"I sometimes use herbal teas (chamomile tea) to help with my sleeping and digestion. I also eat parsley, purslane, and garlic to help with my blood pressure"</p> <p>"Do you have halal food in this hospital? I only eat halal food. I don't eat pork products because of my religion"</p> <p>"Do you know when I am going to the surgery? How long am I going to be here?"</p>

Diagnostic test results:	<i>CBC: WBC 14.2, Hgb 13, Hct 36%, Platelets 250</i> <i>Chemistry: Na 138, K 4.5, Cl 93, Creatinine 1.0, BUN 23, INR 1.2 and PTT 33,</i> <i>Blood type: O RH +</i> <i>SaO2 98% in RA</i> <i>Chest x-ray: Negative</i> <i>ECG: Sinus Rhythm</i>
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Expected Student Interventions for State 2:

- Assessment:
 - Monitors vital signs
 - Interprets diagnostic test results
 - Continues to identify & address the patient's cultural-religious values, beliefs, and health care practices professionally e.g. gender preferences for physical exam; fasting during the month of Ramadan; family role on health care decisions; halal food preferences; praying; and wearing an evil eye necklace
- Nursing Interventions:
 - Frequently monitors patient status
 - Monitors the IV pump and the patient to ensure the correct operation, flow rate and early detection of infiltration
 - Administers Ondansetron 4 mg IVPB by following 6 medication rights
- Communication:
 - Uses effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patient and/or family members.
 - Uses SBAR when giving hand of report
 - Collaborates with interdisciplinary team members professionally
 - Notifies healthcare provider about diagnostic test results
 - Provides culturally and linguistically proper nursing care

State 2 ends when students complete the cultural assessment and interpret diagnostic test results

Orders #3 (received by phone from health care provider)

Continuous pulse oximetry

Complete pre-op orders

Complete culturally congruent preoperative and postoperative education

Administer Ondansetron 4 mg IVPB if not administered yet.

STATE 3 (20 minutes): The students should complete the pre and post-operative education by incorporating the knowledge received from cultural assessment, complete physician's orders (if not completed yet), and the perioperative checklist.

Assessment:	Neuro: PERRLA, no neurologic deficits, decreased sensation on right leg. Respiratory: Clear lung sounds, normal breathing pattern Cardiac: Sinus rhythm, no extra heart sounds GI: + bowel sounds in all 4 quads- Normal GU: 200 ml clear, yellow urine. Skin: dry, warm Capillary refill: less than 3 seconds Pulses: right femoral pulse 1 +, left femoral pulse 2+ Pain: 1/10 IV: Remains patent and intact. IVF infusing. Ondansetron 4 mg IVPG is finished.
Suggested patient responses:	The patient continues to ask questions about the care after the surgery. “The doctor mentioned something about health care proxy, I am not familiar with this term. Why does my husband have to be my health care proxy? Lately, he gets confused easily” “I want to wait for my husband and daughter before I sign anything” “I hate surgery! Do you think I will wake up?” “Do you have halal food in this hospital? I don’t eat pork products” “My daughter and husband did not come yet. You have to tell all these to them as well” At the end of teaching, the patient requests to go to bathroom and refuses to use the bedpan
Diagnostic test results:	No additional lab results

Expected Student Interventions State 3:

- Assessment:
 - Assesses patient’s vitals
 - Completes an ongoing assessment and interprets data

- Monitors the IV pump and the patient to ensure the correct operation, flow rate and early detection of infiltration
- Nursing Interventions:
 - Maintains NPO status
 - Questions the consent form
 - Corrects the information regarding health care proxy
 - Includes all diagnostic test results to patient's folder
 - Initiates/reinforces use of incentive spirometer
 - Explains potential complications
 - Explains about how to prevent infection and maintain the circulation
 - Explains the pain management after surgery
 - Explains the postoperative equipment such as intravenous lines, dressing, and monitoring devices.
- Communication:
 - Explores the patient's feelings regarding the surgery
 - Uses SBAR when communicating interdisciplinary team members
 - Uses effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patient and/or family members.
 - Includes the daughter and other family members in the patient's education.
 - Provides culturally and linguistically proper nursing care

k) Debriefing Instructions for the Faculty

Nursing 120: Culturally Competent Patient Teaching: Perioperative Nursing Management

Debriefing Session: Approximately 1 hour

Phase 1: Standardized Patient Feedback to Each Group (15 minutes)

- The SP uses the provided checklist subheadings to provide brief feedback to each group

Phase 2: Student Reaction (approximately 5 minutes)

- Allow time for student responses.
- Start with open-ended questions:
 - How do you feel?
 - Please share some initial reactions about what happened?
- Can someone summarize the main points of the case?

Phase 3: Understanding (approximately 20-30 minutes)

- Explore trainee's perspectives:
 - "I saw, I think, I wonder"
 - Example: I saw that you did not clarify with the patient when the last dose of Clopidogrel was taken. I think it is important to address this prior to surgery since this medication increases the patient's risk of bleeding. I wonder how you see it.
 - Example: When giving report to members of your team, you did not use SBAR format. I think using the SBAR format is an effective way to address the key components of identification and patient assessment. I wonder what you think about that.
- Discussion and Teaching:
 - How do others see this?
 - Discuss topic
- Generalize and Apply:
 - So the next time you see this cluster of data, how would you respond?
 - So the next time you need your discussing and collaborating about patient care, what culturally competent communication strategies would you use?

Phase 3: Summary (approximately 5-10 minutes)

- Every student discusses their take away messages, what they would like to incorporate into clinical practice, etc.

Recommended Debriefing Questions with Answers: (Adapted from current course)

1. What are the risk factors of peripheral arterial occlusive disease
 - ✓ History of coronary artery disease and cerebrovascular disease (stroke)
 - ✓ Smoking (tobacco)
 - ✓ Diabetes
 - ✓ Hypertension (high blood pressure)
 - ✓ Hyperlipidemia (high blood cholesterol)
 - ✓ Family history of atherosclerosis
 - ✓ Obesity
 - ✓ Age
2. What are the risk factors of this patient?
 - ✓ Age
 - ✓ Smoking history
3. What are the physical signs and symptoms of peripheral arterial occlusive disease?
 - ✓ Painful cramping in your hip, thigh or calf muscles after activity, such as walking or climbing stairs (intermittent claudication)
 - ✓ Leg numbness or weakness
 - ✓ Coldness in your lower leg or foot, especially when compared with the other side
 - ✓ Sores on toes, feet, or legs that won't heal
 - ✓ A change in the color of your legs
 - ✓ Hair loss or slower hair growth on your feet and legs
 - ✓ Slower growth of your toenails
 - ✓ Shiny skin on legs
 - ✓ No pulse or a weak pulse in your legs or feet
4. What are the priority assessment areas for the perioperative femoral popliteal bypass surgery?
 - ✓ Vital signs (Blood pressure, pulse, respiratory rate, O2 saturation, temperature, etc.)
 - ✓ Pain
 - ✓ Peripheral pulses
 - ✓ Cardiac and respiratory assessment
 - ✓ Neuro assessment
 - ✓ Allergies
 - ✓ Skin temperature
 - ✓ Presence of edema
 - ✓ Homan's sign
 - ✓ IV site assessment
 - ✓ Lab work
5. Describe the abnormal findings on State 1
 - ✓ Pulses: right femoral pulse 1 +, left femoral pulse 2+
 - ✓ Pain 2/10
 - ✓ Allergies to PCN

- ✓ Medication – Clopidogrel - contraindicated prior to surgery
 - ✓ Fasting on the day of surgery
 - ✓ Patient history of HBP, childhood asthma
 - ✓ Incorrect information and confusion regarding surgery and informed consent
6. Describe the abnormal findings on State 2
- ✓ Pulses: right femoral pulse 1 +, left femoral pulse 2+
 - ✓ Pain 2/10
 - ✓ History of nausea and vomiting with anesthesia
 - ✓ No urine output
 - ✓ Agitation
 - ✓ Gender preference for receiving health care
7. Describe the abnormal findings on State 3
- ✓ Pulses: right femoral pulse 1 +, left femoral pulse 2+
 - ✓ Incorrect information regarding health care proxy
 - ✓ Pain 1/10
8. Describe how fasting during Ramadan impacts this patient's health?
- ✓ Fasting during the month of Ramadan is mandatory in Islam. Islamic calendar is lunar, therefore, the time of Ramadan is variable and can be in any of the four seasons; it is considered more difficult to fast in the summer than the winter due to the heat and longer daylight hours.
 - ✓ During the specified month, Muslims should avoid eating, drinking, smoking, and sexual activity from dawn to dusk. This may include taking medication orally or parenterally. Therefore, patients can request not to take medications and injections during the daytime. Health care professionals should be supportive in managing diseases during the fast instead of advising patients against it.
 - ✓ Fasting from food and drink from dawn to dusk during the month of Ramadan may also require health professionals to advise those with specific chronic illnesses, such as diabetes and hypertension. Fasting may also complicate drug, diet, and sleep regimens important in the management of other chronic illnesses. For some vulnerable adults, ritual fasting may be associated with temporary dehydration, weight loss, irritability and lack of concentration, although the literature provides contradictory findings (e.g., benefits such as improved lipid profiles)
9. Describe the basic components of conducting a cultural assessment based on Leininger's Sunrise Enabler.
- ✓ Ethnohistory – In nursing, we can benefit from learning about the client's cultural heritage. Could you please tell me about your cultural heritage/ background? Where were you born and where have you been living in the recent past? Have you and your parents lived in different geographic or environmental places?
 - ✓ Communication Factors– In nursing, we can benefit from learning about the client's cultural heritage. Could you please tell me about your cultural heritage/ background? Where were you born and where have you been living in the recent past? Have you and your parents lived in different geographic or environmental places?

- ✓ Kinship and Social Factor - Can you tell me about your family and your close friends? How have your kin (relatives) or social friends influenced your life and especially your caring and healthy lifeways? Do you view your family a caring family? If not what would make them more caring? Who usually makes the health care decisions in your family?
 - ✓ Cultural Values, Beliefs, and Lifeways – Could you share with me what values and beliefs you would like nurses to know help you regain or maintain your health? Home remedies or treatments? Healing or caring practices? Food preferences?
 - ✓ Religious/Spiritual/Philosophical Factor – Can you tell me about your religion? How do you think your religion help you heal or to face crisis, disabilities or even death? What spiritual factors do we need to incorporate into your care?
 - ✓ Economic Factors – In what ways do you believe money influences your health and access to care or obtain professional services? How do you see the cost of the hospital care versus home care cost practices? Do you find money as an important component to keep you well? If not please explain.
 - ✓ Political and Legal Factors – What are some of your views about politics and how you and others maintain your wellbeing? Are there any political or legal barriers that influence to maintain your wellbeing?
 - ✓ Educational Factors – Can you tell me about your education background? Do you value education and health instruction? How has your education influenced you to stay well or become ill?
 - ✓ Technological Factors – Do you consider yourself dependent upon modern technologies to remain healthy or get access to care? (please give some examples) Barriers access to care? Resources?
10. What kind of significant cultural- religious values, beliefs and health care practices of this patient can impact the patient's health and health care decisions?
- ✓ Gender preferences for physical exam
 - ✓ Modesty
 - ✓ English as a second language
 - ✓ Family role on health care decisions (strong commitment to the family)
 - ✓ Religious rituals -Fasting during the month of Ramadan (from dawn to dusk)
 - ✓ Medication non-adherence (not taking medications during the day while fasting)
 - ✓ Food choices (halal and Turkish food preferences)
 - ✓ The role of praying to maintain good health
 - ✓ Spiritual factors (wearing an evil eye necklace, seeing God as source of illness and health, referring to God in daily conversation such as “Thanks to God” or “In-sha-allah” (God willing), which used frequently when any plan, wish, or future result is expected.
 - ✓ Respect for Western medicine
 - ✓ Home remedies and treatments (herbal teas (chamomile tea) to help with my sleeping and digestion and parsley, purslane, and garlic to help with my blood pressure)
11. What is the responsibility of the nurse regarding the cultural-religious values, beliefs, and health care practices of this patient?

- ✓ The nurse must assess the significant cultural values, beliefs, and health care practices of the patient carefully and incorporate with the family in order to provide culturally competent care.
12. If the patient is not fluent in English, with whom would the nurse collaborate to communicate with the patient?
- ✓ Interpreter
 - ✓ Family member
 - ✓ The health care provider
 - ✓ The nurse manager
 - ✓ Social worker
 - ✓ Other
13. What is the proper reaction when the patient begins to pray?
- ✓ The nurse should respect to patient's religious values and beliefs. The nurse should know that praying is part of the patient's daily life. The five pillars in Islam are announcement of faith (Shahadatein), praying five times a day, Zakat (giving to the poor), fasting during the month of Ramadan, and Hajj (pilgrimage to Mecca once in a lifetime).
 - ✓ Muslims pray five times a day, starting from early morning before sunrise, to late night. For praying, Muslims stand toward Mecca, the holy city in Saudi Arabia. Therefore, patients may ask about the direction toward east. If the patients cannot stand up, they can pray sitting in a chair or bed.
 - ✓ The nurse also should know that the concept of cleanliness is directly related to praying. For praying, body, clothes, and place should be free of "dirtiness," including blood, stool, and urine.
14. What surgical treatments are used for peripheral arterial disease of the femoral arteries?
- ✓ **Femoral popliteal bypass:** It is the surgical opening of the upper leg to directly visualize the femoral artery. It is performed to bypass the blocked portion of the artery using a piece of another blood vessel. Blood vessels, or vein grafts, used for the bypass procedure may be pieces of a vein taken from the legs. One end of the vein graft is attached above the blockage and the other end is attached below the blockage, rerouting blood flow around the blockage through the new graft to reach the muscle.
 - ✓ **Percutaneous transluminal angioplasty (PTA) of the femoral arteries:** It is a minimally invasive (without a large incision) procedure used to open the blocked or narrowed femoral artery and to restore arterial blood flow to the lower leg without open vascular surgery. A special catheter (long hollow tube) is inserted into the femoral artery. The catheter has a tiny balloon at its tip. The balloon is inflated once the catheter has been placed into the narrowed area of the artery. The inflation of the balloon compresses the fatty tissue in the artery and makes a larger opening inside the artery for improved blood flow.
15. What are the risks of femoral popliteal bypass surgery?
- ✓ MI (heart attack)
 - ✓ Cardiac arrhythmias
 - ✓ Hemorrhage (bleeding)
 - ✓ Wound infection
 - ✓ Leg edema (swelling of the leg)

- ✓ Thrombosis (clot in the leg)
- ✓ Pulmonary edema (fluid in the lungs)
- ✓ Bleeding at the catheter insertion site (usually the groin) after procedure
- ✓ Blood clot or damage to the blood vessel at the insertion site
- ✓ Restenosis (blockage in the blood vessels after procedure)
- ✓ Nerve injury
- ✓ Graft occlusion (blockage in the graft used in bypass surgery)
- ✓ Patients who are allergic to or sensitive to medications, contrast dyes, iodine, shellfish, or latex should notify their doctor.

16. Describe the nursing management of preventing possible complications and risks on Q15?

- Provide routine pre-op care.
 - ✓ Monitor patient status and complaints
 - ✓ Conduct a baseline focused pre-operative assessment
 - ✓ Assess for focus of infection or infectious processes (urinary tract infections).
 - ✓ Mark distal peripheral pulses.
- Provide routine post-op care. Assess the following:
 - ✓ Circulation, noting rate, rhythm, and quality of peripheral pulses distal to the graft; color; temperature; and sensation
 - ✓ Signs and symptoms of thrombophlebitis
 - ✓ Neuro checks
 - ✓ Hourly outputs
 - ✓ CVP
 - ✓ Wound drainage, noting amount, color, and characteristics
 - ✓ Elevate legs above the level of the heart
 - ✓ Encourage turning, coughing, and deep breathing while splinting incision.

17. Describe the necessary culturally competent perioperative teaching points for this patient?

- ✓ Brief description of the procedure
- ✓ Maintains NPO status
- ✓ Explains the reason of doing a physical assessment
- ✓ Baseline vitals
- ✓ Incorporating patient's cultural-religious values, beliefs, and health care practices into pre-op teaching
- ✓ Explains necessary blood tests
- ✓ Explains EKG procedure and the chest X-ray
- ✓ Consent Form
- ✓ Health Care Proxy
- ✓ Explains the anesthesia procedure and the possible post-surgery effects of it on patient (administering Ondansetron 4 mg IVPB and fluids)
- ✓ Pain management
- ✓ Clarification on Clopidogrel use
- ✓ Deep breathing, coughing, incentive spirometer
- ✓ Activity

18. Describe the necessary culturally competent postoperative teaching points for this patient?
- ✓ Explains potential complications (MI, stroke, bleeding, infection, graft occlusion, peripheral edema)
 - ✓ Encourages the use of the incentive spirometer, breathing, and coughing exercises.
 - ✓ Explains about how to prevent infection and maintain the circulation
 - ✓ Explains the post op nursing assessment
 - ✓ Explains the diet right after surgery (fluids, soft food, then low salt & sodium and diabetic food options)
 - ✓ Explains the pain management after surgery
 - ✓ Explains the postoperative equipment such as intravenous lines, dressing, and monitoring devices.
 - ✓ Explains the activity level after surgery
 - ✓ Clarifies when to call the doctor after discharge
19. What are the signs and symptoms would inquire to call health care provider after surgery?
- ✓ Fever and/or chills
 - ✓ Increased pain, redness, swelling, or bleeding or other drainage from the insertion site
 - ✓ Coolness, numbness and/or tingling, or other changes in the affected extremity
 - ✓ Chest pain/pressure, nausea and/or vomiting, profuse sweating, dizziness, and/or fainting
20. What are the important components of foot care after surgery?
- ✓ Wash your feet daily, dry them thoroughly and moisturize often to prevent cracks that can lead to infection. Don't moisturize between the toes, however, as this can encourage fungal growth.
 - ✓ Wear well-fitting shoes and thick, dry socks.
 - ✓ Promptly treat any fungal infections of the feet.
 - ✓ Take care when trimming your nails.
 - ✓ Avoid walking barefoot.
 - ✓ Have a foot doctor (podiatrist) treat bunions, corns or calluses.
 - ✓ See your doctor at the first sign of a sore or injury to your skin.

1) Wristband & Allergy Band**Nursing 120: Culturally Competent Patient Teaching:
Perioperative Nursing Management**

Leyla Erol DOB: 6/30/1950 MR# 1000000412 Allergies: Penicillin
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PENICILLIN ALLERGY
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m) Standardized Patient Training Materials

Training Session	Purpose	Estimated Time
Session One: Familiarization with the Case	<ul style="list-style-type: none"> ✓ Coach introduces case materials and the checklist gives overview. ✓ SPs read through training materials together. ✓ View video of student/SP encounter if it is available ✓ Do progressive interview with the SPs with coach in role of nursing student 	1 Hour
Session Two: Learning to Use the Evaluation Checklist	<ul style="list-style-type: none"> ✓ Do brief progressive interview with coach in role of the nurse student. ✓ Practice using the checklist and the guide to the checklist. 	1 hour
Session Three: Putting It All Together (Performance, Checklist, Feedback)	<ul style="list-style-type: none"> ✓ Introduce SPs to simulation room ✓ Do two practice encounters with each SP stressing <ol style="list-style-type: none"> 1. Authenticity and standardization of performance. 2. Accuracy of performance and checklist use. 3. Writing effective feedback. 	2 hours
Session Four: Dress Rehearsal Faculty Verification of SPs' Authenticity	<ul style="list-style-type: none"> ✓ First dress rehearsal and final training session. ✓ Uninitiated faculty verifies SPs' performance authenticity by engaging in practice encounters in role of student. ✓ Coach and nonperforming SPs observe performances from the monitoring room. 	2 hours
Practice Day	<ul style="list-style-type: none"> ✓ Mock SP experience with participation of all SPs and all administrative support staff. ✓ Nursing faculty serve as examinees to pilot the scenario logistics; gives SPs a sense of how the actual scenario will run and coaches a chance to give SPs final feedback. 	2 hours
Actual SP experience Day	<ul style="list-style-type: none"> ✓ Students meet and interview the SP ✓ Coaches/faculty observe clinical encounters from monitoring room. ✓ SPs fill out checklists, write feedback then following the SP experience debrief with coach and/or faculty. 	

Reference: Wallace, P. (2007). *Coaching standardized patients for use in the assessment of clinical competence*. New York, NY: Springer.

n) Standardized Patient - Scenario Background & Sample Scenario Script

Nursing 120: Culturally Competent Patient Teaching:

Perioperative Nursing Management

Standardized Patient-Scenario Background & Sample Scenario Script

Patient's Name: Leyla Erol

MR# 1000000412

DOB: 6/30/1950

Standardized Patient Set up: Patient is in preoperative waiting area and lying in hospital bed. Female dressed in hospital gown, head of bed elevated, room air, 20 gauge IV on right arm (placed on admission). The patient's head is covered with a scarf. She is holding small prayer beads also wearing an evil eye shaped necklace.

Equipment: ECG, O₂ saturation monitor, vital signs monitor, arm/ID band.

Overview of the Scenario / Scenario Background for Patient
Leyla Erol is a 65-year-old female Turkish Muslim patient with a history of peripheral arterial occlusive disease of the right leg for 5 years. She is scheduled for the right sided femoral popliteal bypass today and is admitted to the preoperative holding area. Within the last month, she has been experiencing increased right leg pain, numbness, and difficulty walking. She mentions that she did not take her medications including the pain medications on time because she is fasting for Ramadan. She is still fasting on the day of her surgery and wants to fast until she goes to surgery. Her husband brought her to the hospital but left to pick up clothes for the patient. The patient understands and speaks English but, she has strong accent.
Past Medical History: She smoked 1 pack per day for 20 years and quit 5 years ago. She had asthma since age 7 and uses PRN inhaler medications. Her healthcare provider last saw her about six months ago. She had an appendectomy in 2001 and experienced severe nausea and vomiting following the surgical procedure due to general anesthesia.
Social/Family History: Mother (deceased), age 75, HTN, T2DM. Father (deceased), age 79, asthma. Siblings: 3 brothers with asthma, 2 other brothers, 2 sisters. Children: Daughter (A & W, lives with the patient), age 26; Sons (A & W, both married and live in Turkey), ages 30, 32. She moved from Turkey to USA at 1995 and she is currently living with her daughter and husband in a two-story home.
Allergies: <u>Penicillin (shortness of breath)</u> Code Status: Full code Education: High school diploma Occupation: Housewife Religion: Muslim Ethnicity: Turkish Primary Language: Fluent in Turkish. She also speaks English.

Medications: ibuprofen 600 mg PRN for pain; Albuterol 2.5 mg 2 puffs PRN (for asthma); Clopidogrel 75 mg once daily.

Traditional health practices: She fasts during the month of Ramadan. She eats halal food or traditional Turkish food and uses chamomile tea to help with digestion. She also eats parsley, purslane, and garlic daily to help with blood pressure.

Significant cultural factors: She prefers female health care provider. She eats halal food or/and traditional Turkish food. Significant other is her husband and wants to be contacted in case of emergency. She has strong commitment to her family for making health care decisions. She believes that wearing an evil eye necklace protects her from harm.

State 1: The students should complete a focused pre-op assessment, complete lab orders, and begin to ask questions to identify the patient's cultural-religious, values, beliefs, and health care practices.

State 2: The students should interpret lab and diagnostic test results, and continue to identify cultural-religious values, beliefs, and health care practices, and complete physician's orders.

State 3: The students should complete the pre and post-operative culturally congruent education by incorporating the knowledge received from cultural assessment, complete physician's orders (if not completed yet), and the pre-operative checklist.

Diverse Standardized Patient Simulation (DSPS)-Perioperative Nursing Management Layout:

- The scenarios will be run by using one Standardized Patient (SP). All equipment including IV tubing, patient monitor, fluids, medications, and specific treatment related material will be available at the bedside.
- The whole DSPS experience will take around 3 hours.
- Students will be divided into 3 groups consisting of 3-4 students per group. Each group will be involved on an ongoing simulation scenario. Each group will have a:
 - Primary Nurse
 - Secondary Nurse
 - Medication/Documentation Nurse
- The SP will be completing a checklist at the end of each state while students are working on the reflection.
- The SP will join the debriefing session and provide brief feedback (two or three constructive suggestions related with objectives) by using the checklist subheadings.

STATE 1 (20 minutes): The patient is lying in bed in the perioperative holding area. A primary, secondary, and medication nurse are taking care of the patient.

The sink is outside of the room and handwashing already occurred.

Primary Nurse: Hello. My name is, I will be your nurse during the day and I will be preparing you for your surgery. Can you tell me your first name, last name, and date of birth?

Secondary Nurse and Medication Nurse also introduce themselves.

Patient (looks shy): Hello. My name is Leyla Erol and my date of birth is 6/30/1950. I am here for my leg surgery.

Primary Nurse: Nice to meet with you. How would you like us to call you?

Patient: Mrs. Erol is okay.

Primary Nurse: Thank you for letting us know. We saw in your chart that you're Turkish. We would like to be careful about the pronunciation of your first and last name. Do you feel comfortable if we continue our conversation in English?

Patient: Yes. No problem. I can speak and understand English, but my main language is Turkish.

Primary Nurse: Okay. Please let us know, if you would like an interpreter to facilitate our conversation.

Patient: I am okay with English. Thank you.

Primary Nurse: We will help you to get ready for your surgery. First of all, do you have any pain?

Patient: Right now, it is okay. My pain comes and goes. Lately, it feels numb and has been difficult to walk (she rubs her right leg).

Primary Nurse: How would you rate your pain from 0 to 10? (Ten is the highest and zero is the lowest)

Patient: I would say it is a 2 out of 10 now. It is usually a dull pain generally on my right leg.

(Primary nurse assigns the secondary nurse to assess vital signs and complete diagnostic test orders)

Primary Nurse: Are there any aggravating or relieving factors?

Patient: It gets worse when I elevate my legs and improves when I dangle my legs over the side of the bed.

Secondary Nurse: Mrs. Erol, I am going to assess your blood pressure, pulse, respirations, and your temperature.

Secondary Nurse: Your blood pressure, heart rate, respirations, and oxygen level are all within normal limits. Your temperature is within normal limits as well.

Medication Nurse: We see that you take some medications for your medical conditions and you also take a medication called Clopidogrel. Is that correct?

Patient: Yes. My physician prescribed it for my leg. I sometimes use my puff medication when I have a breathing issue. I don't remember their names.

Medication Nurse: Yes, we have the list of your medications. When was the last time you used Clopidogrel and ibuprofen?

Patient: My doctor told me to stop about one week ago, so I stopped. The doctor prescribed morphine pills for me in case I needed pain medicine during last week. I don't remember the dose but I haven't taken it for the last 2 days.

Medication Nurse: Did you have pain during the last two days? If yes how did you manage your pain? Was there a specific reason for not taking your pain killers?

Patient: I did have some pain but, I am fasting during the month of Ramadan and I am not allowed to take anything by mouth including medications.

Medication Nurse: We understand. Thank you for sharing this information with us. In the meantime, you can tell us more about your religious background. We can also contact with the clergy to address your decision to fast on the day of your surgery. Would that be okay for you?

Patient: Yes. It is okay. If you have an Imam (religious leader) at the hospital. I would be willing to talk.

Primary Nurse: Thanks for letting us know. We will contact clergy person for you. Before we do that, I am also going to assess your legs before your surgery. Is that okay?

Patient (she is shy and hesitates to answer): Okay...

Primary Nurse: Did you notice any differences specifically on your right leg in terms of appearance? (The primary nurse assesses patient's skin on lower limbs (in terms of color, edema, temperature changes, and sensation), checks capillary refill, and assesses bilateral pulses (femoral, dorsalis pedis, posterior tibial, popliteal). (When assessing femoral pulse, the primary nurse realizes that the patient is not comfortable and closes the curtain and provides privacy for the patient).

Patient: immm. (**Patient is not comfortable with the touching**) I am not sure but, I think my skin on my right leg is dry and it gets cracked easily. I have some problems with nail growth. Also, the hair on my right leg it seems like it is not growing.

Primary Nurse: Okay. These are symptoms of your peripheral arterial occlusive disease (PAOD). You previously mentioned that your pain decreases when you dangle your legs, let's dangle your legs over the side of the bed.

Patient: Okay. Thank you. People keep saying the name of this disease, but no one is explaining it to me clearly.

Primary Nurse: PAOD may result from gradual narrowing or sudden blockage of an artery. When an artery narrows, the parts of the body it supplies may not receive enough blood. Your extremities, usually your legs, don't receive enough blood flow to keep up with demand. This causes symptoms, most notably leg pain when walking.

Patient: I don't understand why this is happening to me.

Secondary Nurse: There are possible risk factors for this disease. The major risk factors include a history of smoking, high blood pressure, and advanced age. Your physician can give more information about your questions.

Patient: Ohhh.. I almost have all of them. I can't believe I am going to wake up without my right leg. I am worried. I don't understand why the doctor said my leg has to come off. I would rather live with the pain than without a leg.

Primary Nurse: Did your physician discuss the surgical procedure with you? Did you complete a consent form for your surgery?

Patient: What do you mean by a consent form?

Primary Nurse: Informed consent is the patient's agreement to allow something to happen, such as surgery or an invasive diagnostic procedure, based on a full disclosure of risks, benefits, alternatives and consequences of refusal. Informed consent creates a legal duty for the physician and/or healthcare provider to disclose material facts in terms the client can reasonably understand to make an informed choice. Did you sign a consent form?

Patient: She did explain. I think I heard her saying that they will cut my right leg. I signed the form. My husband was there when I signed it.

Primary Nurse: We will communicate with your physician to explain the procedure to you again so that you understand what will happen. (**Assigns the secondary nurse to call the physician**)

Patient: Yes. Thank you

Secondary Nurse: (calls the physician and provides a SBAR report and alerts the physician that patient did not fully understand the surgery)

Physician (the instructor will play the role of physician): Via speakerphone, physician clarifies surgery and asks patient to restate the surgery and if she has any questions. After patient restates correctly and does not have any questions, physician says to the nurse "Please complete the medical orders and prepare the patient for the surgery."

Secondary Nurse:(informs the primary nurse about the physician's response)

Primary Nurse:(checks with medication nurse about the pain medication)

Medication Nurse: Your physician ordered a pain medication (Morphine) through your IV lock as needed. Do you need your pain medication?

Patient: No no. it is okay. My pain is not so bad. I don't want any pain medication. I am fasting during the month of Ramadan. My daughter told me not fast for today but, I have to because it does not feel right. When I fast, I cannot take any meds including pain killers. I want to continue fasting until I go to surgery.

Medication Nurse: Okay. We understand that you don't want any pain medication right now. We ask our patients not to eat or drink anything before surgery after midnight and there is an IV fluid order that we need to start because you will receive nothing by mouth until your surgery.

Patient: No no. I cannot receive any IV fluids. According to my religion, during Ramadan month, when I fast, I cannot eat or drink anything by mouth and no fluids can enter my body through a different route until sunset.

Primary Nurse: Can you tell me about the month of Ramadan a little bit more?

Patient: During the month of Ramadan, all Muslims around the world must fast. During fasting, a person cannot eat, drink between sunrise and sunset. It is obligatory for all Muslims if they are physically and mentally stable. It shows my appreciation to Allah.

Primary Nurse: Thank you very much for explaining it to me. I understand that you want to continue to fast until your surgery and IV fluids can break your fasting, but I need to inform your health care provider about your decision about the medical orders.

Patient: Please do.

Secondary Nurse: Mrs. Erol, your doctor ordered a chest X ray, a doppler ultrasound of your right leg, and an electrocardiography (ECG) to monitor your heart. These are all certain procedures that we need to complete before your surgery. I will communicate with necessary people to proceed. Please don't hesitate to ask us any questions. We also need to draw some blood for the blood tests.

Patient: Ohh... I am okay with other tests but drawing blood would break my fasting too. Can we wait until the sunset for blood tests?

Primary Nurse: We need to complete your preparation before sunset because your surgery is already planned. Maybe, we can call the Imam (a religious leader of Islam) in our hospital that might be helpful to talk with about your decision to fast on the day of your surgery. Would you want us to communicate with your religious leader (Imam) right now?

Patient: Oh yes. That would be good.

Primary Nurse: Okay. We'll help you to communicate with your religious leader.

Patient: Thank you.

Primary nurse instructs the secondary nurse to call on call clergy and discuss the request of an Imam to speak with patient.

The Imam calls the room via phone and explains that those who are sick, elderly, or on a journey, and women who are menstruating, pregnant or nursing, are permitted to break the fast and make up an equal number of days later in the year if they are healthy and able. Drawing blood or receiving IV fluids would break the individual's fasting. Such a person should not fast during the days of his or her sickness, but he or she must fast later after Ramadan to complete the missed days.

Patient (more receptive after phone call): Okay. I will accept the treatment because Imam says I can complete my missed days after surgery. Insallah nothing will happen after surgery and I will have chance to complete my missed days.

Secondary Nurse calls laboratory and radiology departments for diagnostic tests. After the call, we are going to the scenario where the blood has been drawn and chest X-ray & ECG is done. The technician will call and give the results on the second stage.

Medication Nurse: Please let us know if you have any other concerns, we can again communicate with your religious leader. Please don't hesitate to ask us any questions.

Patient: Thank you very much.

Primary Nurse: Mrs. Erol, our group is going to leave now. We will report our findings to our colleagues and they will be taking care of you from now on. Do you have any other questions?

Patient: Okay.No. Thank you very much for everything.

(The simulation team will initiate IV fluid of NS with rate of 75 ml/hr before State 2. The students will receive a quick report that the IV team initiated IV fluids 5 minutes ago. The patient is also receiving Ondansetron 4mg via IVPB).

State 1 ends after students complete a focused pre-op assessment, complete lab orders, and begin to identify the impact of patient's cultural-religious, values, beliefs, and health care practices on her health.

STATE 2 (20 minutes): The patient is still lying in a hospital bed in the pre-operative holding area. A primary, secondary, and medication nurse are taking care of the patient. The students should interpret lab and diagnostic test results, complete physician's orders, and continue to identify cultural-religious values, beliefs, and health care practices.

The sink is outside of the room and handwashing already occurred.

Patient: (is holding her prayer beads and praying)

Primary Nurse: Hello. My name is, I will be your primary nurse now and I will continue preparing you for your surgery. Can you tell me your first name, last name, and date of birth?

Secondary Nurse and Medication Nurse (male) also introduce themselves.

Patient: Hello. My name is Leyla Erol and my date of birth is 6/30/1950.

Patient (if asked by students about praying): I believe my praying and my evil eye necklace will protect from bad things.

Primary Nurse: (Assigns the secondary and the medication nurse to review and complete pre-op diagnostic orders)

Secondary Nurse: How is your day going? Do you have any pain right now? Could you please rate your pain if you have any? (Zero is the lowest and ten is the highest)

Patient: I am okay. It is around 2 out of 10. I am okay. Will I vomit a lot after surgery? I had an appendix removal surgery and it was really bad! I vomited so much after that medicine they gave me to make me sleep. Will that happen again?

Medication Nurse: I understand your concern. I see that you are receiving your IV fluids now and a medication called Ondansetron 4 mg IVPB prior to surgery because you have a history of nausea we want to reduce the risk of nausea and vomiting after your surgery. This medication will prevent nausea and vomiting after your surgery. Do you feel any pain on your IV site? (The nurse touches to patient's arm).

Patient: (she does not make any eye contact if the nurse is male, she seems very uncomfortable) No pain. It is okay.

Primary Nurse:(realizes that the patient is not comfortable with a male nurse) Thank you for your cooperation with us. While my colleagues prepare your medication, I would like to ask some questions to learn more about your culture. Would that be okay for you?

Patient: Yes absolutely.

Primary Nurse: (Subheadings below include suggested questions that are basic components of Leininger's Sunrise Enabler for cultural assessment. The nurse does not have to ask them all and the patient does not have to answer them all)

- **Ethnohistory** – First of all, could you please tell us about your cultural heritage/ background? Have you and your parents lived in different geographic or environmental places? Where have you been living in the recent past?

Patient: Well. I am Turkish and I have lived in Turkey until 1995. We won the green card lottery and decided to move here in 1995 with my family.

- **Communication Factors**– What languages do you speak and understand? Is English your second language?

Patient: Yes, English is my second language and I also speak Turkish. The grammar is really different between Turkish and English. It took me so long to learn English. My children were very helpful. They sent me to English classes.

- **Kinship and Social Factor** – Can you tell me about your family and your close friends? How have your kin (relatives) or social friends influenced your life and especially your caring and healthy lifeways? Who usually makes the health care decisions in your family?

Patient: I have two sons and they both live in Istanbul, Turkey. They are married and I have two grandchildren. I live with my daughter and husband here. My daughter is studying in college. My family is everything for me. It has been very difficult to adjust when we came here in 1995 but, now we're okay as a family other than my health problems. My husband and daughter usually are very involved with my health problems and needed decisions to keep me well.

- **Cultural Values, Beliefs, and Lifeways** – I think you were fasting when you came to hospital. Can you tell us a little bit more about how your fasting is affecting your medication adherence? Could you share with me what values and beliefs you would like nurses to know help you regain or maintain your health? Home remedies or treatments? Healing or caring practices? Food preferences?

Patient: Even though, I use some medications regularly, I don't feel comfortable with the idea of not fasting during Ramadan. My family does not approve this decision. Anyway, it is my responsibility and a way of my appreciation to Allah. When I am fasting, I am not allowed to eat, drink, and take my medications. Sometimes, that makes me feel weak and I have to rest. To answer your second question, I sometimes use herbal teas (chamomile tea) to help with my sleeping and digestion. I also eat parsley, purslane, and garlic to help with my blood pressure. Other than these, I want you to know that I don't eat pork. It is not allowed because of my religion. I prefer traditional Turkish food and halal food.

- **Religious/Spiritual/Philosophical Factor** – Can you tell me about your religion? How do you think your religion help you heal or to face crisis, disabilities or even death? What spiritual factors do we need to incorporate into your care?

Patient: I am a Muslim. According to my religion, a disability or death is part of our life. It can happen to anyone. It is like a personal test with Allah, and it is my belief that Allah gives strength to meet every test. Today my test is to go through this surgery. I laugh at the problems, because they are nothing compared with the mercy of Allah. I smile at the doctors, because they seem so burdened with all their medical knowledge and gadgets and rushing about. My way of dealing is to pray five times a day

starting from sunrise to late night. That way, Allah hears me and gives me the strength to face with challenges of the day. Also, you see this necklace it is protecting me from evil eye.

- **Economic Factors** – In what ways do you believe money influences your health and access to care or obtain professional services? How do you see the cost of the hospital care versus home care cost practices? Do you find money to keep you well? If not please explain.

Patient: Ohh. We learned that we won a green card from lottery and we decided to move US. It was so difficult to adjust when we first came to this country. Even finding an apartment to stay... Thank to Allah, we had some money with us and survived. We did not have any insurance until 2005 because we did not understand how it works here. I still don't understand, but my daughter is being very helpful. My husband even tried to sell ice-creams... My husband finally opened a deli in 2000 and he is still working in there. Thank to Allah, we can manage on our own.

- **Political and Legal Factors** – What are some of your views about politics and how you and others maintain your wellbeing? Are there any political or legal barriers that influence to maintain your wellbeing?

Patient: In my country, we have government and private hospitals. The poor usually goes to the government hospital whereas the rich goes to the private hospitals and pays money. Since 2005, we don't have so many barriers but, prior to 2005, we didn't have health insurance and we found health care here very costly. For instance, I had to go back to Turkey to have my appendix removal surgery because it was too expensive in here and we could not afford it.

- **Educational Factors** – Can you tell me about your education background? How has your education influenced you to stay well or become ill?

Patient: After high school, I did not have chance to study more. We were living in a very small town and I got married when I was 19. I always promote my children's education, they are my main support to maintain my health. They are actually the reason we moved here.

- **Technological Factors** – Do you consider yourself dependent upon modern technologies to remain healthy or get access to care? (please give some examples) Barriers access to care? Resources?

Patient: My daughter just bought me this high-tech phone, it is difficult but, I am trying to learn how to use it. I sometime use its internet and search for meal recipes. I cannot believe how easy to reach out the information nowadays.

During the cultural assessment, **Secondary Nurse and Medication Nurse** will obtain the diagnostic test results by calling laboratory and interpret them. It is expected for them to inform the health care provider about the results by using Situation, Background, Assessment Findings, and Recommendation (SBAR) method. They also need to explain the results to the patient, if she asks.

Medication Nurse re assesses patient's oxygenation and monitors the IV pump and the patient to ensure the correct operation, flow rate.

Patient: (does not make eye contact with male nurse)

Primary Nurse: Mrs. Erol, our group is going to leave now. Thank you very much for this informative conversation. We appreciated that you gave us more information about your cultural background. We will report our findings to our colleagues and they will be taking care of you from now on. Do you have any other questions?

Patient: My pleasure. Do you know when I am going to the surgery? And how long am I going to be here?

Secondary Nurse: Your physician told us that you will be taken to the surgery when we receive your diagnostic test results and we just shared our findings with your physician. We believe it won't take too long, your physician informed us that she will also come and discuss the surgery one more time with you.

Patient: Thank you very much. I am just concerned about what is going to happen before and after my surgery.

Medication Nurse: The next group will give you more information about the surgery before they send you to the operation room. It was nice to meet with you, Mrs. Erol. Please let us know if you need anything else.

Patient: (no eye contact). Thank you.

End of State 2 after the cultural assessment and the interpretation of diagnostic test results

STATE 3 (20 minutes): **The patient is still lying in her bed. The students should complete the pre and post-operative education by incorporating the knowledge received from cultural assessment, complete physician's orders (if not completed yet), and the pre-operative checklist.**

The sink is outside of the room and hand washing already occurred.

Primary Nurse: Hello. My name is, I will be your primary nurse now and I will continue preparing you for your surgery. Can you tell me your first name, last name, and date of birth?

Secondary Nurse and Medication/Documentation Nurse also introduce themselves.

Patient: (Hello. My name is Leyla Erol and my date of birth is 6/30/1950. I am glad you came. I am bored lying in this bed.

Primary Nurse: Nice to meet you Mrs. Erol. We will discuss some important details with you regarding to your surgery. Would that be okay? **(Assigns the secondary nurse to check vital signs and the medication nurse to complete the pre-operative checklist)**

Secondary Nurse: Do you have any pain on your leg? If yes, can you rate your pain? (Zero is the lowest and ten is the highest)

Patient: It is around 1 out of 10 now. I am okay. Am I going to have too much pain after this surgery?

Secondary Nurse (assesses IV site): You will receive pain medications after your surgery. We will observe you closely. Please don't hesitate to share if you are in pain after your surgery. I see that you're receiving your IV fluids. Do you feel any pain on your IV site?

Patient: No, I don't have pain on my arm. I have a question for you. The doctor mentioned something about health care proxy form that I need to sign, but I am not familiar with this term. Why does my husband have to be my health care proxy? Lately, he gets confused easily.

Secondary Nurse: Health care proxy is an important legal document, which is an important part of advance care directives. A completed health care proxy form gives the person you choose as your agent the authority to make all health care decisions for you, including the decision to remove or provide life-sustaining treatment, unless you say otherwise in this form. "Health care" means any treatment, service or procedure to diagnose or treat your physical or mental condition. With this form you're giving authority to someone (an agent) you choose to make decisions on your behalf when you are not able decide by yourself.

Patient: I see. What do you mean by advance care directives? It is the first time I hear about this.

Secondary Nurse: Advance directives form is a term we use that covers the forms such as a living will and health care proxy form. A living will is one form to describe instructions for future treatment. These forms assist health care professionals to provide you a safe and effective care.

Patient: For health care proxy, you said the person I choose, so it does not have to be my husband. Does this person have to be a family member?

Secondary Nurse: You may choose any adult (18 years of age or older), including a family member or close friend, to be your agent. If you select a doctor as your agent, he or she will have to choose between acting as your agent or as your attending doctor because a doctor cannot do both at the same time.

Patient: I now understand what it means. I will probably choose my daughter since she knows everything about my health conditions. If I become terminally ill, I actually don't want you to treat me. In my belief, Allah knows the best for me and I would prefer natural death.

Secondary Nurse: It is your own decision and we respect to your decision. Even though you have signed the health care proxy form, you may cancel the authority given to your agent by telling him or her or your health care provider orally or in writing. You can decide to choose allow natural death order when you become terminally ill. Also, you have the right to make health care decisions for yourself as long as you are able to do so, and treatment cannot be given to you or stopped if you object, nor will your agent have any power to object.

Patient: Okay. Insallah... I will think about this and I will discuss this with my family when they come. I hate surgery! Do you think I will wake up?

Secondary Nurse: I see that you are concerned about waking up after the surgery. Would you mind sharing your feelings with me?

Patient: I am a little scared about this surgery. I wanted to wait a little longer but, my family was concerned about my intermittent pain episodes.

Secondary Nurse: I understand you might be worried. It is an important decision. Your anesthesiologist will also come and explain the procedures (before and after) related to your surgery. Do you think that speaking with your anesthesiologist would help with your concerns?

Patient: Yes. Thank would help. Thank you. I have another question for you. Do you have halal food in this hospital? I don't eat pork products.

Medication/Documentation Nurse: Our colleagues informed us about your food preferences. We want you to know that we have patients of many different cultural and religious backgrounds in our hospital. We can definitely let the kitchen know about your food preferences. It is also important to communicate with your physician before you eat anything after surgery. Please don't eat any food from outside without letting us know.

Patient: Ohh.. Okay. I told my daughter to bring some Turkish food, but I will let you know.

Primary Nurse: Mrs. Erol, we would like to do some pre and post-operative teaching regarding the nursing care you will receive. Do you feel like you can listen us?

Primary Nurse: We separated the topics we want to discuss between each one of us. I will be explaining the nursing assessment and the possible complications we will be assessing you for.

Secondary Nurse: I will explain the pain management and the postoperative equipment such as intravenous lines, dressing, monitoring devices, and the incentive spirometer that we will be using after your surgery.

Medication/Documentation Nurse: (begins to fill out pre-op checklist) I will also collaborate with your primary and secondary nurse and fill out your pre-operation checklist.

Patient: My daughter and husband did not come yet. You have to tell all these to them as well. What is that incentive something?

Primary Nurse: Of course. When they come, we can answer their questions and explain pre and post-operative procedures, if it is needed.

Patient: Yes. My friend had surgery and had to breathe into a tube for days after. Do you think would it happen to me?

Primary Nurse: I am not sure the about type of the surgery your friend had, but complications are possible with every surgery. In order to prevent and reduce the risk of breathing problems, we would highly recommend you use your incentive spirometer as directed.

Secondary Nurse: (shows the incentive spirometer in hand). The incentive spirometer and equipment we use after surgery. It will help you keep your lungs clear and will help keep your lungs active throughout the recovery process, as if you were performing your daily activities. May I show you how to use it?

Patient: Ohh. Okay. Not now please. I want to wait for my daughter and husband who are coming in a few minutes. I will be more relaxed with them here and it will stay more in my mind. I promise I will ask to use it after surgery.

Secondary Nurse: Of course. We explain it when your daughter and husband arrive.

Patient: Am I able walk right after my surgery?

Primary Nurse: We will observe your condition for a while after your surgery. You may not be able to walk right after your surgery but, we will be here to assist you with your needs.

Patient: Okay. Good to know. Thank you for your help. I need to go the bathroom. Can you show where bathroom is?

Primary Nurse: You have been lying for some time and I am concerned that you might feel dizzy when you get out of your bed. Would you like us to give you a bedpan?

Patient: No no. I don't like them. They're dirty. I want to go to the bathroom.

Primary Nurse: Okay. My colleague will help you to go to the bathroom.

Patient: Thank you.

End of the Scenario

o) Standardized Patient Checklist

SP Name:

Date:

	Yes	No	N/A	Comments
As Leyla Erol, were you satisfied with this student encounter?				
The student				
Maintains professionalism				
✓ Washes hand and introduces self & role/title				
✓ Identifies patient (name, ID Band, DOB, MRN#)				
✓ Maintains professional manners (provides privacy, maintains collegial practice)				
Uses effective communication strategies				
✓ Maintains good body language				
✓ Collaborates with team member(s) and delegates tasks appropriately.				
✓ Speaks in understandable terms, and communicates effectively and listens actively (e. g. let the patient finish speaking and responded appropriately, appears empathic and involved)				
✓ Asks about patient's cultural values, beliefs, and practices showing interest and respect				
✓ Avoids verbal/nonverbal judgment cues/reactions				
Conducts a focused pre-operative assessment				
✓ Provides an accurate explanation about the plan of care				
✓ Assesses vital signs and provides an accurate explanation to the patient				
✓ Conducts a focused assessment (focuses vital signs, lower extremities, peripheral pulses, and skin)				
✓ Addresses the patient's complaint about pain and conducts a culturally sensitive pain assessment				
✓ Shows cultural sensitivity by acknowledging and respecting patient's cultural-religious values, beliefs, and health care practices during physical examination (e. g. gender preferences, personal space, touch)				
Conducts a cultural assessment				
✓ Acknowledges and respects the patient's cultural-religious values, beliefs, and health care practices such as <ul style="list-style-type: none"> ○ Language preferences ○ Traditional health and illness beliefs ○ Fasting and other abstinence and religious practices during the month of Ramadan ○ Gender preferences and personal space ○ Lack of eye contact ○ The role of the family on health care decisions and support system ○ The role of praying ○ Traditional food preferences 				

<ul style="list-style-type: none"> ○ The role of hygiene ○ Spiritual belief on wearing an evil eye necklace ○ Folk medicine tradition and use (home remedies & healing practices) ○ Acculturation 				
✓ Asks culturally sensitive questions in order to collect data regarding cultural background				
✓ Shows cultural sensitivity and awareness and advocates the patient by respecting and accepting the differences				
✓ Respects patient's personal need for space				
✓ Identifies a clerical or spiritual person to contact				
Conducts a culturally congruent pre & post-operative education				
✓ Provides an overview about the pre and post-operative teaching topics				
✓ Explains necessary blood tests and other diagnostic tests				
✓ Provides information about the consent form and the health care proxy				
✓ Clarifies information on Clopidogrel use				
✓ Explains post op nursing management and potential complications (MI, stroke, bleeding, infection, graft occlusion, peripheral edema)				
✓ Provides teaching on deep breathing, coughing, the use of incentive spirometer				
✓ Explains the postoperative equipment such as intravenous lines, dressing, and monitoring devices.				
✓ Provides information about post-operative pain management				
✓ Helps patient incorporate her cultural practices in to her health care				
✓ Integrates the patient to the plan of care by incorporating the information received on cultural assessment.				
Conducts evaluation of care				
✓ Evaluates patient's responses to interventions				
✓ Evaluates effectiveness of communication and teaching by using teach back method				

Definition of Terms

* **Acculturation** explains the process of cultural change and psychological change that results following meeting between cultures.

* **Clopidogrel** is a blood thinner medicine used to help prevent stroke, heart attack, and other heart problems. It needs to be stopped one week before the surgery.

* **Consent Form** is the patient's agreement to allow something to happen, such as surgery or an invasive diagnostic procedure, based on a full disclosure of risks, benefits, alternatives and consequences of refusal.

* **Health Care Proxy** is a legal document with which a patient (primary individual) appoints an agent to legally make health care decisions on behalf of the patient, when he or she is incapable of making and executing the healthcare decisions stipulated in the proxy.

* **Incentive spirometer** is a medical device used to help patients improve the functioning of their lungs.

* **Ramadan** is the ninth month of the Islamic calendar, and is observed by Muslims worldwide as a month of fasting to commemorate the first revelation of the Quran to Muhammad according to Islamic belief

Appendix Q. Diverse Standardized Patient Simulation (DSPS) Scenario #2

Nursing 120: Culturally Competent Patient Teaching:

Health Promotion and Management of Chronic Illness

a) Letter to Reviewers

November 3rd, 2015

Dear Evaluation Review Expert:

My name is Eda Ozkara San and I am a nursing PhD student under the direction of Dr. Marianne Jeffreys at the City University of New York (CUNY) Graduate Center. I currently finalized my second Diverse Standardized Patient Simulation (DSPS) scenario on “**Culturally Competent Patient Teaching: Nursing Management and Health Promotion (Exemplar: Diabetes)**”. I am very excited to share it with you for your evaluation. Once again, I would like to thank you for accepting my invitation to serve as an evaluation review expert for my second DSPS scenario.

In order to remind you my study details, I would like to provide you a brief introduction. As you already may know, for my doctoral dissertation study, I am studying “Effect of the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy on Nursing Students’ Transcultural Self-Efficacy Perceptions”. Two DSPS scenarios designed by me will be implemented at a northeastern public college to all associate degree nursing students who are enrolled in a 9-credit second semester medical-surgical course (approximately 50). One DSPS scenario targets culturally competent care for a Turkish Muslim patient in the perioperative setting; the second DSPS scenario targets culturally competent care for chronic disease management (diabetes) for a patient self-identifying with the lesbian, gay, bisexual, and/or transgender population. (An abstract of the study is contained in the folder labeled “Folder 1 - Reviewer Materials”).

As you might remember, on my first email concerning my first scenario’s evaluation, I mentioned *Cultural Discovery* learning activities over an 8-week period and an integrated skills (IS) laboratory day at the end of the semester that students were exposed during their first semester nursing course. I again included information about the *Cultural Discovery* multidimensional teaching-learning strategy which can be found in Dr. Jeffreys’ (2010) book “Teaching Cultural Competence in Nursing and Health Care”, Chapter 7; pages 150-159 (For more information about *Cultural Discovery*, please see the folder labeled “Optional Background Materials for Reviewers”).

Today, I am requesting that you review “**Culturally Competent Patient Teaching: Nursing Management and Health Promotion (Exemplar: Diabetes)**” using the 2 evaluation forms included in the folder labeled “**Folder 1 – Reviewer Materials**”. After accessing Folder 1, **please read the instructions contained at the beginning of each Evaluation Form, beginning with Evaluation Form 1, then Evaluation Form 2 before proceeding to review any of the other folders contained in the zip file.** You will be asked to complete the rating scale as indicated on the evaluation form, write comments on any of the documents using the

“Review” feature of Microsoft office word, and return to me at your earliest convenience but by **December 7th, 2015**.

Please confirm that you received my e-mail and can open all the attached documents. If you require additional information, please do not hesitate to contact me via e-mail at eozkara@gradcenter.cuny.edu. Thank you in advance for your time and expertise in reviewing my materials.

Sincerely,
Eda Ozkara San, MBA, RN
PhD Student in Nursing, CUNY Graduate Center,

b) Expert Reviewer Evaluation Form - Faculty and Student Materials

Instructions for Reviewers:

1. Read through the entire evaluation form below.
2. Read the materials in the “Student Materials” folder in the order presented to rate items concerning student materials.
3. Next, read the materials in the “Faculty Materials” folder in the order presented to rate items concerning faculty materials.
4. Feel free to also write additional comments on any of the materials using the “Review” feature of Microsoft office word.
5. Please return all evaluation forms and materials with comments to the researcher via email at your earliest convenience but no later than **December 7th, 2015**. Thank you.

Evaluation Rating

Please use the following key to rate your agreement for items under 6 subheadings for the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy- Student and Faculty Materials.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Agree
- 4 = Strongly Agree

- Please write your rating in the rating column for each item.
- Please indicate a rating for each item so that ratings from each reviewer can be tabulated.
- Please use the comment section if you have any additional input for each item.

Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy- Culturally Competent Patient Teaching: Nursing Management and Health Promotion (Exemplar: Diabetes)		
Pre-simulation assignment	Rating	Comments
1. provides appropriate amount and level of preparation for the DSPS experience		
2. has relevant questions to the specific scenario		
3. is appropriate for the level of Associate in Applied Science (AAS) nursing students.		
Pre-simulation article		
1. is relevant to the scenario		
2. is appropriate for the level of Associate in Applied Science (AAS) nursing students.		
3. is interesting and easy to read		
4. provides accurate information about diabetes management in Lesbian, Gay, Bisexual, Transgender (LGBT) population		
Student version of simulation scenario		
1. has clear and concise learning objectives		
2. easy to understand and read		
3. provides accurate and evidence-based information about patient's situation		
4. provides accurate and evidence-based information about the patient's background		
5. has appropriate amount of complexity for Associate in Applied Science (AAS) nursing students.		
6. has appropriate medication orders for a patient given the current health condition of the patient		
7. has appropriate diagnostic test orders for a patient given the current health condition of the patient		
8. provides relevant information about traditional health practices and significant cultural factors of for a patient who self identifies himself from LGBT population		
Faculty version of simulation scenario		
1. has clear and concise learning objectives		
2. easy to understand and read		
3. has accurate and sufficient information about the situation for instructor preparation		
4. has sufficient and evidence-based information in the patient		

history for instructor preparation		
5. provides accurate information about patient's cultural background		
6. provides a realistic timeline for each state		
7. has appropriate medications for the case on each state		
8. has appropriate diagnostic test orders for the specific case		
9. has accurate directions for the simulation instructor for each state		
10. has clear transition from one state to another		
11. describes the goals for each student group clearly on each state		
12. provides enough diagnostic cues to lead appropriate actions or 13. interventions for each state		
14. describes significant changes to warrant specific action for each state		
15. has appropriate and achievable nursing interventions for each state		
16. provides sufficient change in the 'patient's condition to evaluate impact of interventions		
17. provides accurate contextual details to cue participants to accomplish desired outcomes		
18. is an accurate representation of the described clinical condition		
19. specifies the role of each group for each state clearly		
20. is designed to allow feedback to participants		
Pre-conference instructions for the faculty		
1. provides clear directions to the simulation instructor		
2. provides enough information to the simulation team for the standardized patients' set up		
3. provides accurate information about the layout of the DSPP experience		
4. includes clear and relevant learning objectives		
Debriefing instructions for the faculty		
1. involves enough cultural information related to providing culturally competent teaching regarding to diabetes management		
2. includes evidence-based instructions to guide the faculty for facilitating the debriefing session		
3. includes appropriate debriefing questions related to identified objectives, scenario, and/or learner outcomes		
4. provides accurate answers for each recommended debriefing questions		
5. provides a realistic timeline to conduct the debriefing session		

c) Expert Reviewer Evaluation Form - Standardized Patient Materials

Instructions for Reviewers:

1. Read through the entire evaluation form below.
2. Read the materials in the “Standardized Patient” folder in the order presented to rate items.
3. Feel free to also write additional comments on any of the materials using the “Review” feature of Microsoft office word.
4. Please return all evaluation forms and materials with comments to the researcher via email at your earliest convenience but no later than **December 7th, 2015**. Thank you.

Evaluation Rating

Please use the following key to rate your agreement for items under 6 subheadings for the Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Agree
- 4 = Strongly Agree

- Please write your rating in the rating column for each item.
- Please indicate a rating for each item so that ratings from each reviewer can be tabulated.
- Please use the comment section if you have any additional input for each item.

Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy- Culturally Competent Patient Teaching: Nursing Management and Health Promotion (Exemplar: Diabetes)		
Sample scenario script & scenario background	Rating	Comments
1. provides accurate background information for the Standardized Patients' (SPs) preparation		
2. provides compatible information with learning objectives of the scenario		
3. provides brief information about the layout of the DSPS		
4. provides brief and useful information about each state's outcomes		
5. provides realistic timeline for each state		
6. reflects a realistic patient-nurse conversation		
7. provides accurate and evidence-based responses both for the patient and the nurse		
8. includes appropriate patient responses on each state		
9. provides accurate amount of responsibilities to students in each group (primary, secondary, and medication/documentation nurse)		
10. covers all learning objectives of the scenario		
Standardized patient (SP) checklist		
1. has understandable language		
2. easy to read and fill out		
3. has accurate criteria for each subheading to accomplish desired outcomes of the scenario		
4. accurately addresses expected student interventions		
5. has compatible criteria with scenario objectives		

d) Journal Article Citation

Garnero, T. L. (2010). Providing culturally sensitive diabetes care and education for the Lesbian, Gay, Bisexual, and Transgender (LGBT) community. *Diabetes Spectrum*, 23 (3), 178-181.

e) PowerPoint Presentation Outline

Nursing 120: Culturally Competent Patient Teaching: Health Promotion and Management of Chronic Illness

(Total time 15 minutes)

Narrated PowerPoint Outline (Building upon, highlighting, and expanding previous learning)

1. DESCRIPTION OF LEARNING OBJECTIVES
2. OUTLINE OF the DSPS EXPERIENCE - Culturally Competent Patient Teaching: Nursing Management and Health Promotion (Exemplar: Diabetes)
3. CASE SUMMARY
4. LESBIAN, GAY, BISEXUAL, and TRANSGENDER (LGBT) POPULATION and PREVALENCE of DIABETES COMPONENTS of CULTURALLY CONGRUENT PATIENT EDUCATION
 - A. Communication
 - B. Health related values, beliefs, and practices
 - C. Nutrition
 - D. Socioeconomic considerations
 - E. Organizations providing cultural support
 - F. Educational background
 - G. Cultural restrictions
 - H. Family role
 - I. Sexual Orientation
5. CULTURAL EDUCATION RESOURCES for DIABETES PATIENT EDUCATIONCDC
 - A. National Diabetes Education Program
 - B. Cultural and Ethnic Food and Nutrition Education Materials
 - C. Health Resources and Service Administration (HRSA): Cultural Competence Resources
 - D. Agency for Healthcare Research and Quality (AHRQ): Cultural and Linguistic Competence
6. GENERAL PATIENT EDUCATION for DIABETES MANAGEMENT
 - A. Medication Regimen
 - a. Insulin Usage
 - b. The use of ACE inhibitors over Beta Blockers
 - c. Cross sensitivity allergy (Cephalosporin & Penicillin)
 - B. Hypoglycemia Signs and Symptoms
 - C. Complications of Diabetes
 - D. Glucometer Usage
 - E. Benefits of Exercise
 - F. Diabetic Diet
 - G. Diabetic Foot Care
 - H. Infection Signs and Symptoms
 - I. Maintaining Hygiene
 - J. Wound Assessment and Dressing Change

f) Pre – Simulation Assignment

Nursing 120: Culturally Competent Patient Teaching: Health Promotion and Management of Chronic Illness

(Adapted from currently existing course assignment)

Please answer each of the questions carefully by using peer reviewed resources and bring a copy of your assignment to class on your scheduled simulation day.

1. Describe the differences between type 1 and type 2 diabetes.
2. Describe the pathophysiologic changes that occur to the body during hypoglycemia.
3. What are the most common causes of hypoglycemia in people with type 2 diabetes? Describe the nursing and medical management of hypoglycemia.
4. What are the acute and chronic complications of diabetes?
5. Describe the basic components of a wound assessment and list 5 factors which promote wound healing.
6. Based on the journal article by Garner (2010) what is your plan for providing culturally competent care for your patient?

Medications Cards List: Please explain each of your patient's medication by using the indicated subheadings below.

Please complete the following on each of the medications: - Drug class, generic and trade name, routes of administration, mechanism of action, half-life, indications for use **for this patient**, recommended dose **based on this patient's condition**, most common side effects, most common adverse effects, contraindications **for this patient**, any black box warnings, and the **nursing priorities regarding this drug for this patient**.

Topics and Skills to Review

Type 2 diabetes, hypoglycemia, kidney disease, cultural assessment, dry sterile dressing change, culturally competent patient teaching on diabetes management (diet, medications, complications, and foot care)

g) Student Version of the Scenario

**Nursing 120: Culturally Competent Patient Teaching:
Health Promotion and Management of Chronic Illness**

Patient Care Summary

Name: Anthony O’Leary Sex: Male DOB: 05/15/1960 Medical Record Number: 1000000311 Admission Date: XX/XX/15 Room Number: Simulation room Admission DX: Hypoglycemia Attending Physician: Dr. Jamie Martin
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Allergies: Penicillin (Rash)

Most recent vitalsigns:

Time	Today,8 am
Blood pressure (BP)	BP= 135/88
Heart Rate(HR)	90
Respiratory Rate(RR)	18
SpO2	98 % in room air
Temperature	37 C

Medications

Glipizide 5 mg PO daily

Captopril 25 mg PO every 8 hours

Cefazolin 500 mg IV every 8 hours

Ibuprofen 600 mg PO PRN for pain < 5

2L Oxygen via nasal cannula if O₂< 95 %

Notify MD/ NP

○ If O₂ Sat is less than 95 %

○ If systolic BP is less than 90 mmHg

Insulin (Humalog/Lispro) coverage as per sliding scale before meals

Blood Glucose level	Insulin Humalog (Lispro) Subcutaneous Injection
0-140	No coverage
141-170	1 unit
171-200	2 units
201-230	3 units
231-260	4 units
261-290	5 units
291-320	6 Units
➤ 320	7 units and notify the health care provider
Last Test: Fingerstick glucose 82	No insulin given

Insulin (Humalog/Lispro) coverage as per sliding scale before bedtime

Blood Glucose level	Insulin Humalog (Lispro) Subcutaneous Injection
< 200	No coverage
201-230	1 unit
231-260	2 units
261-290	3 units
291-320	4 Units
➤ 320	5 units and notify the health care provider

Nursing orders:

Admit to medical surgical unit

Activity: OOB with assistance

Finger stick before meals and bedtime / Insulin coverage per insulin administration order

Dry sterile dressing change to the right foot

Diet: 2 gram sodium diet / 1800 calorie ADA

Most recent lab orders: CBC, BMP, HbA1C, Urine analysis and urine culture and sensitivity Stat (Labs are done at ED).

Diagnostic tests (Completed at ED):

Chest X-ray for respiratory status

ECG and continuous oxygen saturation monitoring via pulse oximetry

Patient Name: Anthony O'Leary **MD/NP:** J. Martin, MD

Code: ☒ **FULL** ☐ **PARTIAL** ☐ **DNR** ☐ **PALLATIVE**

ALLERGIES: Penicillin

S (SITUATION)

Diagnosis: Hypoglycemia

Anthony O'Leary, 55-year-old male, American born of Irish, Italian, and Methodist heritage with prior history of Type 2 diabetes for 8 years, hypertension for 15 years, and kidney disease for 1 year, was brought to the emergency department by his partner after he was found wandering the hallway of his apartment building confused and combative with slurred speech. Mr. O'Leary tripped on the building steps sustained a small cut to his right foot. Upon arrival to the ER, he was unconscious. Blood glucose was 40 mg/dL. He received 25 ml D50W IV. Prophylactic antibiotics were ordered. He was admitted to the medical surgical unit for evaluation. His partner accompanies him on to the medical surgical unit.

B (BACKGROUND)

Past Medical History: He smoked 1 pack per day for 20 years and quit 5 years ago. He has type 2 diabetes for 8 years, hypertension for 5 years, and kidney disease for 1 year. Patient is HIV negative. His surgical history includes right knee replacement 5 years ago. His healthcare provider last saw him last week and started insulin injections for management of his glucose level. He has a blister on his right foot because of improper footwear, which has not healed since last month. He recently sustained a small cut to the same foot when he tripped on his apartment's building step.

Social/Family History: Mother (deceased), age 72, HTN, T2DM. Father (deceased), age 75, heart attack. Siblings: 2 brothers with HTN. Children: Son, age 26, lives in Texas. The patient is divorced from the mother of his child for 23 years. He currently lives with his partner of 15 years who is also HIV negative.

Diet: 2 gram sodium diet/ 1800 cal ADA

Allergies: Penicillin (Rash)

Code Status: Full code

Education: Junior college (AS degree)

Occupation: Retired X-ray Technician

Religion: Methodist

Ethnicity: American Irish Italian

Primary Language: English, speaks some Spanish

Medications: Humalog (Lispro) injections before meals (recently started); Glipizide 5 mg PO daily; and Captopril 25 mg PO every 8 hours

Traditional health practices: He uses basil leaf tea to lower his blood sugar. He also uses cranberry and chamomile leaf tea to regulate his blood sugar. For wound healing and preventing infections, he uses hot sugar or bread wrapped in a linen cloth for cuts or wounds to prevent infection and promote healing.

Significant cultural factors: Significant other is partner and has power of attorney in case of emergency. His partner's name is Sergio Lopez. He self-identifies as a Puerto Rican, Catholic and he is 42 years old. Mr. O'Leary prefers home-cooked meals, so his partner usually brings in

home-cooked foods at lunchtime. Coffee, wine, and cheese all play a significant role in his diet. Mr. O’Leary also eats Mexican food. He requests family visitation privileges to include select members of the Gay Men’s Health Crisis support group.

ISOLATION: ☐ Contact ☐ Droplet ☐ Airborne ☐ Immunocompromised

A (ASSESSMENT)

Vital Signs: HR BP RESP O2 Sat % on

General Appearance

Cardiac:

Respiratory:

Gastrointestinal:

Genitourinary:

Extremities:

Neurological:

IV Access:

Labs:

Fall Risk:

Pain:

R (RECOMMENDATION)

Group	Positive Findings	Areas for improvement	
1			
Switch Time			
2			
Switch Time			
3			
Switch Time			
Learning Outcomes: at the end of the scenario, the student will be able to:		Met	Unmet
1. Develop and initiate a culturally congruent education plan for the patient/family unit for management of diabetes.			
2. Use effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patients, family members, staff, and other involved in the patients’ social support system.			
3. Implement evidence based culturally competent nursing practices by prioritizing and implementing appropriate nursing interventions and recognizing abnormal findings.			
4. Conduct evaluation of care by evaluating patient’s response to interventions and teaching.			

h) Pre – Conference Instructions for the Faculty

Nursing 120: Culturally Competent Patient Teaching: Health Promotion and Management of Chronic Illness

- Outline of the Diverse Standardized Patient Simulation (DSPS):

2:00-2:25	Classroom Pre-conference
2:27-4:00	<p>The Diverse Standardized Patient Simulation (DSPS) Scenario Implementation: The students will be divided into three groups. Each group will have one primary nurse, one secondary nurse, and one medication/documentation nurse.</p> <ul style="list-style-type: none"> • State 1 (31 minutes) <ul style="list-style-type: none"> ○ The DSPS (15 minutes) ○ Hand off report (5 minutes) ○ Completion of the SP checklist and reflection paper (10 minutes) ○ Transition time (1 minute) • State 2 (31 minutes) <ul style="list-style-type: none"> ○ The DSPS (15 minutes) ○ Hand off report (5 minutes) ○ Completion of the SP checklist and reflection paper (10 minutes) ○ Transition time (1 minute) • State 3 (31 minutes) <ul style="list-style-type: none"> ○ The DSPS (15 minutes) ○ Hand off report (5 minutes) ○ Completion of the SP checklist and reflection paper (10 minutes) ○ Transition time (1 minute)
4:00-4:10	Break (10 minutes)
4:10-5:00	Debriefing & the SP feedback for each group

- Discuss the scenario and the pre-simulation assignment questions.

Anthony O’Leary, 55-year-old male, American born of Irish, Italian, Methodist heritage with prior history of Type 2 diabetes for 8 years, hypertension for 15 years, and kidney disease for 1 year, was brought to the emergency department by his partner after he was found wandering the hallway of his apartment building confused and combative with slurred speech. Mr. O’Leary tripped on the building steps sustained a small cut to his right foot. Upon arrival to the ER, he was unconscious. Blood glucose was 40 mg/dL. He received 25 ml D₅₀W IV. Prophylactic antibiotics were ordered. He was admitted to the medical surgical unit for evaluation. His partner accompanies him on to the medical surgical unit.

- Identify role expectations (Adapted from current course): Students will be divided into 3 groups consisting of 3-4 students per group. Each group will be involved on an ongoing simulation scenario. Each student will work on reflection after simulation scenario. Each group will have a:
 - Primary Nurse: Receives report from nurse (simulation instructor). Responsible for primary care of patient. For example, patient assessment, etc. Can delegate to secondary nurse.
 - Secondary Nurse: Receives report from primary nurse. Assists primary nurse and engages in collaborative relationship with primary nurse.
 - Medication/Documentation Nurse: Administers medications, documents nursing interventions, and assists in care of patient.
- Each student will be given an identification card for the roles above. SPs will be asking each student questions in equal proportions.
- Bring into room and introduce to setting and equipment. Encourage students to touch equipment, move bed, familiarize with code cart, etc.
- Bring back into classroom and set rules for debriefing:
 - Confidential and respectful
 - “What happens in debriefing stays in debriefing”
 - Non-judgmental environment but is opportunity to learn and incorporate into clinical practice.

Objectives: Patient Teaching: Diabetes and Renal Disease Nursing Management and Health Promotion

The student will:

1. Develop and initiate a culturally congruent education plan for the patient/family unit for management of diabetes by
 - Respecting patient’s cultural-religious values, beliefs, and health care practices professionally e.g. language preferences; food preferences; family role in health

care decisions; the role of domestic partner in assisting patient with health care decisions.

- Educating patient regarding hypoglycemia signs and symptoms, diabetic diet, and emergency symptoms to notify the doctor
 - Educating the patient about proper rapid acting insulin administration
 - Discussing healthy diet for diabetes management
 - Discussing medication regimen
 - Educating the patient about renal disease as a complication of diabetes
 - Educating the patient regarding dry sterile dressing change, signs and symptoms of infection, proper foot care, and maintaining hygiene
2. Utilize effective communication by
- Using SBAR to notify health care provider of patient changes
 - Identifying the roles of the team members
 - Collaborating with team member(s), providing quality care, prioritizing assessment data, and delegating tasks appropriately.
 - Using effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patients, family members, staff, and other involved in the patients' social support system.
3. Implement evidence-based culturally competent nursing practices by:
- Prioritizing and implementing appropriate nursing interventions:
 - Addresses and clarifies possible cross sensitivity allergy (cephalosporin and penicillin)
 - Conducts teaching for diabetic care (including complications of type 2 diabetes, signs and symptoms of hypoglycemia, medication regimen, diet, dry sterile dressing change, foot care, signs and symptoms of infection, and maintaining hygiene)
 - Addresses patient's questions about renal disease
 - Performs a dressing change
 - Recognizing abnormal findings:
 - Improper self-administration of rapid acting insulin
 - Cross sensitivity allergy (cephalosporin and penicillin)
 - Incorrect information regarding diabetic diet
 - Incorrect information about medication regimen
 - Lack of knowledge about foot care and dressing change on right ankle
4. Conducts Evaluation of Care:
- Evaluating patient's responses to interventions
 - Evaluating effectiveness of communication and teaching

i) Handoff Report

Nursing 120: Culturally Competent Patient Teaching:

Health Promotion and Management of Chronic Illness

(Medical-Surgical Unit RN gives the report in the beginning of the first state)

Handoff Report – Anthony O’Leary - MR# 1000000311- DOB: 5/15/1960

Situation	Anthony O’Leary, 55-year-old male, American born of Irish, Italian, and Methodist heritage with prior history of Type 2 diabetes for 8 years, hypertension for 15 years, and kidney disease for 1 year, was brought to the emergency department by his partner after he was found wandering the hallway of his apartment building confused and combative with slurred speech. Mr. O’Leary tripped on the building steps sustained a small cut to his right foot. Upon arrival to the ER, he was unconscious. Blood glucose was 40 mg/dL. He received 25 ml D50W IV. Prophylactic antibiotics were ordered. He was admitted to the medical surgical unit for evaluation. His partner accompanies him on to the medical surgical unit.
Background	<p>Past Medical History: He smoked 1 pack per day for 20 years and quit 5 years ago. He has type 2 diabetes for 8 years, hypertension for 5 years, and kidney disease for 1 year. Patient is HIV negative. His surgical history includes right knee replacement 5 years ago. His healthcare provider last saw him last week and started insulin injections for management of his glucose level. He has a blister on his right foot because of improper footwear, which has not healed since last month. He recently sustained a small cut to the same foot when he tripped on his apartment’s building step.</p> <p>Family / Social History: Mother (deceased), age 72, HTN, T2DM. Father (deceased), age 75, heart attack. Siblings: 2 brothers with HTN. Children: Son, age 26, lives in Texas. The patient is divorced from the mother of his child for 23 years. He currently lives with his partner of 15 years who is also HIV negative.</p> <p>Diet: 2 gram sodium / 1800 cal ADA</p> <p>Allergies: Penicillin (rash)</p> <p>Code Status: Full code</p> <p>Education: Junior college (AS degree)</p> <p>Occupation: Retired X-ray Technician</p> <p>Religion: Methodist</p> <p>Ethnicity: American Irish-Italian</p> <p>Primary Language: English, speaks some Spanish</p> <p>Medications: Humalog (Lispro) injections before meals (recently started); Glipizide 5 mg PO daily; and Captopril 25 mg PO every 8 hours</p>

	<p>Traditional health practices: He uses basil leaf tea to lower his blood sugar. He also uses cranberry and chamomile leaf tea to regulate his blood sugar. For wound healing and preventing infections, he uses hot sugar or bread wrapped in a linen cloth for cuts or wounds to prevent infection and promote healing.</p> <p>Significant cultural factors: Significant other is partner and has power of attorney in case of emergency. His partner's name is Sergio Lopez. He self-identifies as a Puerto Rican, Catholic and he is 42 years old. Mr. O'Leary prefers home-cooked meals, so his partner usually brings in home-cooked foods at lunchtime. Coffee, wine, and cheese all play a significant role in his diet. Mr. O'Leary also eats Mexican food. He requests family visitation privileges to include select members of the Gay Men's Health Crisis support group.</p>
Assessment	<p>Vital signs: HR 90; BP=135/88; RR=18; SpO2=98 % in RA; Temp = 37 C</p> <p>General Appearance: Concerned about his glucose level and not sure what happened</p> <p>Neurological: No neurological deficits. PERRL.</p> <p>Respiratory: Clear lung sounds</p> <p>Cardiovascular: Sinus rhythm</p> <p>GI: Normal bowel sounds</p> <p>GU: Has not voided</p> <p>Skin: Slightly sweaty, pale. Has a clean dressing on right ankle.</p> <p>Pulses: Radial, pedal, posterior tibial, popliteal pulses 2 +. No edema. Capillary refill less than 3 seconds</p> <p>IV: IV lock on right arm; inserted on ER 1 hour ago.</p> <p>Labs: BMP and CBC were done at ER and results are in EHR. Last finger stick glucose was done before lunch and it was 220. The patient received 3 units Insulin Humalog (Lispro) Subcutaneous Injection and is currently receiving his antibiotic (Cefazolin 500 mg IVPB).</p> <p>Fall Risk: High-risk due to hypoglycemic attack</p> <p>Pain: Localized pain on his right ankle (2/10), declines pain medication</p> <p>Significant cultural factors: Significant other is partner and has power of attorney in case of emergency. His partner's name is Sergio Lopez. He self-identifies as a Puerto Rican, Catholic and he is 42 years old. Mr. O'Leary prefers home-cooked meals, so his partner usually brings in home-cooked foods at lunch time. Coffee, wine, and cheese all play a significant role in his diet. Mr. O'Leary also eats Mexican food. He requests family visitation privileges to include select members of the Gay Men's Health Crisis support group.</p>
Recommendations	<p>Physical and history assessments are done. Labs and diagnostic tests are completed. The health care provider is informed about test results. The patient just received 3 units Humalog (Lispro) subcutaneous injection because his last fingerstick glucose was 220. He is currently receiving Cefazolin 500 mg IVPB. Perform a culturally congruent patient teaching concerning management of diabetes.</p>

j) Faculty Version of the Scenario

Nursing 120: Culturally Competent Patient Teaching: Health Promotion and Management of Chronic Illness

Patient Care Summary

Name: Anthony O'Leary Sex: Male DOB: 05/15/1960 Medical Record Number: 1000000311 Admission Date: XX/XX/15 Room Number: Simulation room Admission DX: Hypoglycemia Attending Physician: Dr. Jamie Martin
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Learning Outcomes:

At the end of this simulation session, the students will:

1. Develop and initiate a culturally congruent education plan for the patient/family unit for management of diabetes.
2. Use effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patients, family members, staff, and other involved in the patients' social support system.
3. Implement evidence based culturally competent nursing practices by prioritizing and implementing appropriate nursing interventions and recognizing abnormal findings.
4. Conduct evaluation of care by evaluating patient's response to interventions and teaching.

Overview:

Anthony O'Leary, 55-year-old male, American born of Irish, Italian, and Methodist heritage with prior history of Type 2 diabetes for 8 years, hypertension for 15 years, and kidney disease for 1 year, was brought to the emergency department by his partner after he was found wandering the hallway of his apartment building confused and combative with slurred speech. Mr. O'Leary tripped on the building steps sustained a small cut to his right foot. Upon arrival to the ER, he was unconscious. Blood glucose was 40 mg/dL. He received 25 ml D50W IV. Prophylactic antibiotics were ordered. He was admitted to the medical surgical unit for evaluation. His partner accompanies him on to the medical surgical unit.

Background:

He smoked 1 pack per day for 20 years and quit 5 years ago. He has type 2 diabetes for 8 years, hypertension for 5 years, and kidney disease for 1 year. Patient is HIV negative. His surgical history includes right knee replacement 5 years ago. His healthcare provider last saw him last week and started insulin injections for management of his glucose level. He has a blister on his right foot because of improper footwear which has not healed since last month. He recently sustained a small cut to the same foot when he tripped on his apartment's building step.

Diverse Standardized Patient Simulation (DSPS) Cultural Competence Education Strategy- Patient Teaching: Diabetes and Renal Disease Nursing Management and Health Promotion

Each simulation scenario will consist of the following:

1. Pre-simulation assignment questions
2. Assigned reading
3. Faculty version of simulation scenario (with medical orders)
4. Student version of simulation scenario with an observation sheet
5. Hand off report (SBAR)
6. Pre-conference and debriefing instructions for faculty
7. Standardized patient-scenario background & sample scenario script
8. Standardized patient checklist

DSPS Layout: (Adapted from current course)

- The whole DSPS experience will take 3 hours.
- The scenario will be run by using two standardized patients (SPs). All equipment including IV tubing, patient monitor, fluids, medications, and specific treatment related material will be available at the bedside.
- All students will complete pre-sim assignments and read assigned article and come ready to the simulation experience. Students will be instructed to complete their pre-sim assignments by using APA format. The assignments will be collected by the instructor (or submitted to the blackboard 48 hours before the simulation day by the students for the instructor to comment on and grade). The grading will be Pass/Fail.
- Students will be divided into 3 groups consisting of 3-4 students per group and given 20 minutes for the DSPS experience. Each group will be involved on an ongoing simulation scenario. Each student will work on reflection after the DSPS scenario while the SPs work on the checklist. Each group will have a:
 - Primary Nurse: Receives report from nurse (simulation instructor). Responsible for primary care of patient. For example, patient assessment, etc. Can delegate to secondary nurse.
 - Secondary Nurse: Receives report from primary nurse. Assists primary nurse and engages in collaborative relationship with primary nurse.
 - Medication/Documentation Nurse: Documents nursing interventions and assists in care of patient.
- **Each student will be given an identification card for the roles above. SPs will be asking each student questions in equal proportions.**

Group 1: Will work on Reflection immediately following simulation scenario and will observe Group 2 and 3 while completing an observer evaluation sheet.

Group 2: Will work on Reflection immediately following simulation scenario and will observe group 1 and 3 during simulation scenario while completing an observer evaluation sheet.

Group 3: Will work on Reflection immediately following simulation scenario and will observe group 1 and 2 during simulation scenario while completing an observer evaluation sheet.

Standardized Patient Set up
Standardized Patient Set up: Patient is on the medical surgical unit and lying in a hospital bed. Male dressed in hospital gown, head of bed elevated, room air, 20 gauge IV on right arm (placed on admission). The patient is receiving Cefazolin 500 mg IVBP. The patient's partner is at the bedside and they're holding hands.
Equipment: ECG, O ₂ saturation monitor, vital signs monitor, arm/ID band.

Brief Summary: During the Diverse Standardized Patient Simulation (DSPS) – Culturally Competent Patient Teaching Scenario, the students are expected to prioritize and implement culturally competent appropriate nursing interventions, interpret abnormal findings, complete medical orders, and develop and initiate a culturally congruent patient-teaching plan for the patient/family unit for diabetes management.

State One: Culturally competent patient teaching about medication regime, type 2 diabetes and its complications.	<p>Patient is on the medical-surgical unit and lying in a hospital bed. His partner is with him at bedside. He received 25 ml D₅₀W IV in the ED. After his transfer to the medical surgical unit, his last finger stick glucose level was 220. He just received 3 units Insulin Humalog (Lispro) subcutaneous injection and is currently receiving his antibiotic (Cefazolin 500 mg IVBP). The patient rates his pain as 0/10 on his right foot and refuses pain medication. He is concerned about his medication regimen. Students are expected to</p> <ul style="list-style-type: none"> • conduct a pain assessment • communicate effectively with patient and his partner • communicate effectively with primary care provider and other health care professionals by using SBAR • review and explains the orders by the health care provider to the patient • respect patient's cultural-religious beliefs and health care practices • assess patient's medication adherence • conduct culturally congruent education about current medication regimen • educate the patient about type 2 diabetes and its complications.
State Two: Culturally competent patient teaching about the diabetic diet	<p>The patient ate his lunch and he is lying in a hospital bed. His partner is with him at bedside. There are half empty meal plates on the table. He is asking to order Mexican food outside of the hospital. Primary, secondary, and medication nurse are taking care of the patient. The students should educate the patient regarding the diabetic diet.</p> <p>Students are expected to</p> <ul style="list-style-type: none"> • communicate effectively with patient and his partner • communicate effectively with primary care provider and other health care professionals by using SBAR • respect patient's cultural-religious beliefs and health care practices • assess patient's usual diet at home • conduct culturally congruent education about the diabetic diet
State Three: Culturally competent patient teaching about the assessment of the recent cut and the blister on patient's right foot, dressing change, signs and symptoms of infection, and proper diabetic foot care.	<p>Patient is still on the medical-surgical unit and lying in a hospital bed. He asks about his dressing change. He and his partner listen to the teaching by the nurse very carefully. Students are expected to</p> <ul style="list-style-type: none"> • respect patient's cultural-religious beliefs and health care practices • conduct a pain assessment • assess patient's blister and the cut on his right foot • assess patient's knowledge about foot care • communicate effectively with patient • communicate effectively with primary care provider and other health care professionals by using SBAR • conduct culturally congruent education for the patient/partner about the dressing change, signs and symptoms of infection, maintaining hygiene, and proper foot care.

STATE 1: Culturally competent patient teaching about medication regimen and complications of type 2 diabetes

Patient is on the medical-surgical unit and lying in a hospital bed. His partner is with him at bed side. He received 25 ml D₅₀W IV on ED. After his transfer to the medical surgical unit, his last finger stick glucose level was 220. He just received 3 units Insulin Humalog (Lispro) subcutaneous injection and is currently receiving his antibiotic (Cefazolin 500 mg IVPB). The patient rates his pain as 0/10 on his right foot and refuses pain medication. He is concerned about his medication regimen. Students are expected to:

- conduct a pain assessment
- communicate effectively with patient and his partner
- communicate effectively with primary care provider and other health care professionals by using SBAR
- review and explains the orders by the health care provider to the patient
- respect patient's cultural-religious beliefs and health care practices
- assess patient's medication adherence
- conduct culturally congruent education about current medication regimen
- educate the patient about type 2 diabetes and its complications.

STATE 2: Culturally competent patient teaching about the diabetic diet

The patient ate his lunch and he is lying in a hospital bed. His partner is with him at bed side. There are half empty meal plates on the table. He is asking to order Mexican food outside of the hospital. Primary, secondary, and medication nurse are taking care of the patient. The students should educate the patient regarding the diabetic diet.

Students are expected to:

- communicate effectively with patient and his partner
- communicate effectively with primary care provider and other health care professionals by using SBAR
- respect patient's cultural-religious beliefs and health care practices
- assess patient's usual diet at home
- conduct culturally congruent education about the diabetic diet

STATE 3: Culturally competent patient teaching about the assessment of the recent cut and the blister on patient's right foot, dressing change, signs and symptoms of infection, and proper diabetic foot care.

Patient is still on the medical-surgical unit and lying in a hospital bed. He asks about his dressing change. He and his partner listen to the teaching by the nurse very carefully.

Students are expected to:

- respect patient's cultural-religious beliefs and health care practices
- conduct a pain assessment
- assess patient's blister and the cut on his right foot
- assess patient's knowledge about foot care
- communicate effectively with patient
- communicate effectively with primary care provider and other health care professionals by using SBAR
- conduct culturally congruent education for the patient/partner about the dressing change, signs and symptoms of infection, maintaining hygiene, and proper foot care.

Orders 1:

Admit to medical surgical unit

Glipizide 5 mg PO daily

Captopril 25 mg PO every 8 hours

Cefazolin 500 mg IVPB every 8 hours

Ibuprofen 600 mg PO PRN for pain < 5

2L Oxygen via nasal cannula if O₂ < 95 %

Notify MD/ NP

- If O₂ Sat is less than 95 %
- If systolic BP is less than 90 mmHg

Insulin (Humalog/Lispro) coverage as per sliding scale before meals

Blood Glucose level	Insulin Humalog (Lispro) Subcutaneous Injection
0-140	No coverage
141-170	1 unit
171-200	2 units
201-230	3 units
231-260	4 units
261-290	5 units
291-320	7 units
➤ 320	7 units and notify the health care provider
Last Test: Fingerstick glucose 82	No insulin given

Insulin (Humalog/Lispro) coverage as per sliding scale before bedtime

Blood Glucose level	Insulin Humalog (Lispro) Subcutaneous Injection
< 200	No coverage
201-230	1 unit
231-260	2 units
261-290	3 units
291-320	5 units
➤ 320	5 units and notify the health care provider

Nursing orders:

Activity: OOB with assistance

Finger stick before meals and bedtime / Insulin coverage per insulin administration order

Dry sterile dressing change to the right foot

Diet: 2 gram sodium diet / 1800 calorie ADA

Most recent lab orders: CBC, BMP, HbA1C, Urine analysis and urine culture and sensitivity Stat (Labs are done at ED).

Diagnostic tests (Completed at ED):

Chest X-ray for respiratory status

ECG and continuous oxygen saturation monitoring via pulse oximetry

STATE 1 (20 minutes) (12 PM): The students should educate the patient regarding medication regimen, type 2 diabetes, and possible complications (His last finger stick glucose was 220 and he just received 3 units Humalog (Lispro) subcutaneous injection. He is currently receiving Cefazolin 500 mg IVPB).

Vital signs:	HR=90 BP=135/88; RR=18; SpO2=98 % in room air (RA); Temp=37.1 C
Assessment:	<p>General Appearance: Calm</p> <p>Neuro: PERRL, no neurologic deficits, decreased sensation on right foot.</p> <p>Respiratory: Clear lung sounds, rapid breaths</p> <p>Cardiac: Sinus tachycardia, no extra heart sounds</p> <p>GI: + bowel sounds in all 4 quads Normal</p> <p>GU: has not voided since he came in</p> <p>Skin: Clammy, pale pink. Clean dressing on right ankle</p> <p>Pulses: Radial, pedal, posterior tibial, popliteal pulses 2 +. No edema</p> <p>Capillary refill less than 3 seconds</p> <p>Pain: (if asked by students) No pain on right foot (0/10)</p> <p>Allergies: PCN (rash)</p> <p>IV: IV lock on the right arm; inserted in ED 4 hours ago. He is receiving Cefazolin 500 mg IVPB.</p>
Suggested patient responses:	<p>The patient is lying in bed and asking questions about current medication regimen.</p> <p>“Hello. My name is Anthony O’Leary and my date of birth is 5/15/1960. I am glad you came this antibiotic is just finished I believe.”</p> <p>“My partner found me unconsciousness and they brought me to the ED via ambulance. I don’t exactly remember what happened. This is my partner Sergio. We have been living together for about 15 years and he is my all. He is also my power of attorney in case of emergency. He will be staying with me during my hospitalization and please don’t hesitate to share any detail regarding my health with him as well. He is my all.”</p> <p>“Do you know why they started this antibiotic? I am allergic to Penicillin. I took Penicillin as a child and got a severe rash. I hope it’s not something similar to Penicillin.”</p> <p>When students disconnect the antibiotic: “I am HIV negative just to let you know. I have seen that people are becoming anxious when they’re touching me.”</p> <p>“I really cannot explain what happened this morning. What do you think happened to me? I did my injection at 7.30 am when I woke up. I cannot eat right away after I wake up. I usually eat around 8.30 am. When I tried to do my breakfast this morning, I don’t know what happened. I felt very bad.”</p>

	<p>“What do all these medications do anyway? Why do I have to take so many? I was taking oral diabetes pills. What is the purpose of taking this Insulin as well? “</p> <p>“How long am I gonna use all these meds? Let’s say I am being very careful with my diet and everything, should I still continue to use these?”</p> <p>“Do you think will I need dialysis? What should I do to prevent my kidneys from getting sicker?”</p> <p>“I also have blood pressure (BP) problem and I take BP medication as well. Why do I have to take Captopril (my old BP medication was Metoprolol)? It's confusing to take so many times per day.”</p> <p><u>Partner’s Statements:</u></p> <p>“My name is Sergio Lopez and Anthony is my partner. I am very worried about him. Since he started his insulin injections, he has been having difficulty to adjust. I came from work and found him wandering the hallway of our apartment building. He was confused and combative with slurred speech.”</p> <p>“His doctor recently started him on Insulin injections. Now, he has so many pills and now shots to take! It has been difficult to adjust. His nurse also recently gave him another insulin shot. Will he feel the same way just like this every morning?”</p> <p>“The one his physician prescribed him called Humalog as well. I did some searching on the internet and found that it is a fast-acting form of insulin that works by lowering blood sugar in the blood. What does this fast-acting mean? “</p> <p>“He is using oral forms of diabetes and blood pressure drugs. It is just confusing to keep up all these meds.”</p> <p>“So, as long as he uses his medications properly, we don’t have to worry right?”</p> <p>“I have been reading about long terms problems that diabetes can cause. Anthony’s doctor diagnosed him with kidney disease. Do you think that could it be related with diabetes?</p> <p>“My friend’s 8-year-old granddaughter just got diagnosed with diabetes but they told her she has to take shots and cannot take pills. Why is that?”</p>
Diagnostic Test results:	<p><i>CBC: WBC 9, Hgb 13, Hct 36%, Platelets 250</i></p> <p><i>Chemistry: Na 138, K 4.5, Cl 93, Creatinine 1.0, BUN 28, HbA1C 6.5 %</i>, <i>ABG: pH 7.37, PaCO2 36, PaO2 83, HCO3 23, SaO2 98% in RA</i></p> <p><i>Last finger stick before lunch: 220</i></p> <p><i>Blood type: O RH +</i></p> <p><i>Chest x-ray: Negative</i></p> <p><i>ECG: Sinus Rhythm</i></p> <p><i>Urine analysis, culture and sensitivity is not resulted yet</i></p>

- Assessment:
 - Assesses IV site
 - Assesses patient's pain
 - Identifies abnormal findings
 - Assesses patient's medication regimen
- Nursing Interventions:
 - Verifies allergies to drugs
 - Communicates with health care provider for sensitivity between Cephalosporin and PNC
 - Monitors the IV pump and the patient to ensure the correct operation, flow rate and early detection of infiltration
 - Educates patient regarding the complications of type 2 diabetes and hypoglycemia signs and symptoms.
 - Educates the patient regarding the medication regimen
- Communication:
 - Uses SBAR when giving report
 - Identifies the roles of the team members
 - Collaborates with team member(s) providing quality care and prioritization of assessment data.
 - Communicates effectively with primary care provider and other health care professionals.
 - Uses effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patient and/or family members.
 - Offers resources to for proper diabetic diet

State 1 ends after when the students complete the focused assessment and complete teaching about the medication regimen, type 2 diabetes and its complications.

Orders #2 (received by phone from health care provider)

Ibuprofen 600 mg PO PRN for pain <5

2L Oxygen via nasal cannula if O₂ < 95 %

Notify MD/ NP

- If O₂ Sat is less than 95 %
- If systolic BP is less than 90 mmHg

STATE 2 (20 minutes): The patient is lying in bed on the medical surgical unit. The partner is at the bedside and they're holding hands. There are meal plates on the table. The patient ate his lunch. A primary, secondary, and medication nurse are taking care of the patient. The students should educate the patient regarding the diabetic diet.

Assessment:	<p>General Appearance: Calm. Resting in bed.</p> <p>Neuro: PERRL, no neurologic deficits, decreased sensation on right foot.</p> <p>Respiratory: Clear lung sounds.</p> <p>Cardiac: Sinus rhythm</p> <p>GI: + bowel sounds in all 4 quads - Normal</p> <p>GU: No urine output</p> <p>Skin: Warm and pale. Clean dressing on right ankle for blister</p> <p>Capillary refill: less than 3 seconds</p> <p>Pulses: Radial, pedal, posterior tibial, popliteal pulses 2 +. No edema</p> <p>Capillary refill less than 3 seconds</p> <p>Pain: (if asked by students) No pain on right foot (0/10)</p> <p>Allergies: PCN (rash)</p> <p>IV: Remains patent and intact.</p>
Suggested patient responses:	<p>The patient is lying in hospital bed.</p> <p>"Hello. My name is Anthony O'Leary and my date of birth is 5/15/1960. This is my partner Sergio. We have been living together for about 15 years and he is my all. He is also my power of attorney in case of emergency. He will be staying with me during my hospitalization and please share every detail about my health with him as well."</p> <p>"Lunch was not so good though. I wish Sergio brought me some Mexican food. I don't like hospital food. Is it okay if my partner buys me some more food from outside?"</p> <p>"For breakfast, I usually eat cornflakes or an omelet with bacon. For lunch, I usually prefer home cooked meals. I do homemade pizza sometimes for lunch. For dinner, when Sergio comes from work, we cook great Mexican food or meat and we also drink some wine together. Sergio is Puerto Rican and he is a great cook."</p> <p>"Since I am on the sugar pill and this insulin shot it doesn't really matter what I eat right?"</p> <p>"There is no taste on what I eat if I restrict the salt, fat, and sugar from my diet. Right now, I am really craving for a fried shrimp taco with white rice and a coke. Since, is it okay if Sergio gets me some shrimp tacos for today?"</p> <p>"Can I have a strawberry or cranberry fruit juice instead of coke?"</p> <p>"I use basil leaves tea for my blood pressure. I also use chamomile and cranberry juice/leaves for my diabetes. I heard that they're helpful in terms of regulating my blood sugar."</p>

	<p>“Can you give us some examples in terms of foods that have high carbs?”</p> <p><u>Partner’s Statements:</u></p> <p>“Yes he loves Mexican food. Is it okay if I buy him some tacos with brown rice?”</p> <p>“Tony! My dear, tell them about the great food we cook together. He likes all these oily stuff even though he has this blood pressure and blood sugar problems. I tell him to be careful but, he does not listen to me anymore. Please tell him that he shouldn’t eat oily and sugary foods, maybe he will listen to you.”</p> <p>“He thinks that as long as he uses his meds he can eat whatever he wants.”</p> <p>“Anthony has Irish, Italian heritage. His whole family loves drinking. We usually drink in the evening with dinner. I would say that he drinks 2 or 3 glasses of wine every day.”</p> <p>“Do we need to check his blood sugar after lunch? I think he also needs a dressing change. We did not change his dressing since we came in.”</p>
Diagnostic test results:	<i>No additional lab results</i>

Expected Student Interventions for State 2:

- **Assessment:**
 - Evaluates response to interventions
 - Assesses patient’s usual diet
 - Documents assessment findings, care given
 - Assesses patient’s knowledge about diabetic diet
- **Nursing Interventions:**
 - Frequently assesses patient’s condition
 - Collaborates with other health care professionals
 - Reviews and completes medical orders and administers medications following the Six Rights
 - Explains 2 gr sodium diet/ 1800 cal ADA
 - Educates the patient for proper diabetic diet.
- **Communication:**
 - Uses effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patient and/or family members.
 - Uses SBAR when giving hand of report
 - Collaborates with interdisciplinary team members professionally
 - Provides culturally and linguistically proper nursing care

State 2 ends when students complete education regarding the diabetic diet.

Orders #3 (received by phone from health care provider)

Dry sterile dressing change

Ibuprofen 600 mg PO PRN for pain <5

STATE 3 (20 minutes): **The students should assess patient's pain in his right foot and provide culturally competent patient teaching about the assessment of the recent cut and the blister on patient's right foot, the signs and symptoms of infection, and provide information about maintaining hygiene, and proper foot care.**

Assessment:	<p>General Appearance: Calm</p> <p>Neuro: PERRL, no neurologic deficits, decreased sensation on right foot.</p> <p>Respiratory: Clear lung sounds, normal breathing pattern</p> <p>Cardiac: Sinus rhythm, no extra heart sounds</p> <p>GI: + bowel sounds in all 4 quads- Normal</p> <p>GU: 150 ml clear, yellow urine.</p> <p>Skin: Warm and pale. Serosanguinous exudate on dressing.</p> <p>Capillary refill: less than 3 seconds</p> <p>Pulses: Radial, pedal, posterior tibial, popliteal pulses 2 +. No edema</p> <p>Capillary refill less than 3 seconds</p> <p>Pain: Localized pain on right foot (2/10), refuses pain medication</p> <p>Allergies: PCN (rash)</p> <p>IV: Remains patent and intact.</p>
Suggested patient responses:	<p>The patient requests a dressing change.</p> <p>"Please change this dressing. It has been more than 12 hours since I changed it."</p> <p>"My pain is around 2 out of 10 now. I don't want any pain meds. I think I am okay. Am I going to have too much pain while you are changing it?"</p> <p>"I had this blister on my right ankle since last month and now I sustained a cut to my same foot when I tripped on my apartment step. That darn stoop!"</p> <p>"Is there anything you would recommend promoting its healing?"</p> <p>"I have been wearing sneakers mostly, but it is still not healing. Does it matter what kind of shoes I wear? Why is this happening to me?"</p> <p>"Do you have any tips for proper shoe selection?"</p> <p>"How should I take care of my feet? Do you have any suggestions in terms of cleaning?"</p> <p>"My mom used to wrap hot sugar or bread in a linen cloth and place it on the cut or wound to prevent infection and promote healing. I also sometimes do this but, it does not help much."</p>

	<p>“I am a second generation American. My mom is Irish and my father is an Italian. I was born in US, went to school in US, got married in US, but occasionally I visit both Ireland and Italy. We still have some family members there.”</p> <p>“I did not know about this nerve damage. I will be careful about this. As you see, I have this blister and I am afraid that I am going to have another one. Can I pop it? It is pretty uncomfortable.”</p> <p>“Is there anything I can do to make sure my foot heals faster?”</p> <p><u>Partner’s Statements:</u></p> <p>“Anthony. How many times I told you not wear those uncomfortable leather, pointed shoes? Somehow you did not care what it did on your right foot! Don’t you see what kind of problems those shoes caused for us? It is just not healing! Why don’t you just wear the orthopedic ones I bought you on your birthday?”</p> <p>“Is there anything he can do to make sure his foot heals faster? This blister was caused by that damn pointed shoes! It seems like it is not healing.”</p> <p>“Do you have any other tips for foot care? Is there anything he can do to prevent further cuts and blisters on his foot?”</p> <p>“Ohhh my dear. We don’t want to deal with a burn in addition to this. Did not I tell you about my grandfather? He had diabetes and I remember him having a severe burn on his feet because of using hot water.”</p> <p>“What about this small cut? You told me not to use hot water. How can we make sure that the area is not infected? How do I know if my wound is getting worse?”</p> <p>“Do you have any other tips for foot care? Is there anything he can do to prevent further cuts and blisters on his foot?”</p>
Diagnostic test results:	No additional lab results

Expected Student Interventions State 3:

- Assessment:
 - Completes an ongoing assessment and interprets data
 - Assesses patient’s knowledge about dressing change and foot care
 - Assesses patient’s blister and the cut on his right foot
 - Assesses patient’s pain level
- Nursing Interventions:
 - Conducts a dry sterile dressing change
 - Explains about how to prevent infection and maintain the circulation
 - Explains signs and symptoms of infection
 - Explains the importance of maintain hygiene
 - Explains the pain management

- Communication:
 - Uses SBAR when communicating interdisciplinary team members
 - Uses effective therapeutic communication strategies (verbal and nonverbal) when communicating with culturally, linguistically, and generationally diverse patient and/or family members.
 - Includes the partner or other family members in the patient's education.
 - Provides culturally and linguistically proper nursing care.

k) Debriefing Instructions for the Faculty

Nursing 120: Culturally Competent Patient Teaching: Health Promotion and Management of Chronic Illness

Debriefing Session: 50 minutes

Please refer to the scenario outcomes in the beginning of the debriefing session.

Phase 1: Standardized Patient Feedback to Each Group (15 minutes)

- The SP uses the provided checklist subheadings to provide brief feedback to each group

Phase 2: Student Reaction (approximately 5 minutes)

- Allow time for student responses.
- Start with open-ended questions:
 - How do you feel?
 - Please share some initial reactions about what happened?
- Can someone summarize the main points of the case?

Phase 3: Understanding (approximately 20-30 minutes)

- Ask students to summarize the experience they had for each state
 - Who would like to summarize the experience we had during State 1 by using SBAR?
 - Who would like to do another summary for State 2 and 3 by using SBAR?
- Explore trainee's perspectives:
 - "I saw, I think, I wonder"
 - Example: I saw that you asked the patient about the home remedies or treatments he uses. I think it is very important to question traditional practices since there might be some contraindications with current medication regimen. I wonder about your thinking process when you asked about this.
 - Example: I saw that you asked some questions about patient's food preferences right after the patient's request about Mexican food. I think it is very important to learn about patient's daily diet and specific food preferences by considering their cultural heritage. I wonder how you see this. What do you think was the reason he specifically asked for Mexican food?
 - Example: I saw that you did not recognize or address that the patient had an allergy to Penicillin and was receiving a Cefazolin (Cephalosporin). I think it is important to address this prior to administration since there is a cross sensitivity between Penicillin and Cephalosporin. I wonder how you see it.

- Example: When giving report to members of your team, you did not use SBAR format. I think using the SBAR format is an effective way to address the key components of identification and patient assessment. I wonder what you think about that.
- Example: I saw that you did not ask the patient to reiterate the teaching points discussed. I think it is good practice have the patient teach back to assess what was learned. What do you think?
- Discussion and Teaching:
 - How do others see this?
 - Discuss topic
- Generalize and Apply:
 - So the next time you see this cluster of data, how would you respond?
 - So the next time you need you're discussing and collaborating about patient care, what culturally competent communication strategies would you use?

Phase 3: Summary (approximately 5-10 minutes)

- Every student discusses their take away messages, what they would like to incorporate into clinical practice, etc.

Recommended Debriefing Questions with Answers: (Adapted from current course)

- 1) What are the areas that the nurse should be careful about when providing culturally competent patient education to a patient who self identifies himself/herself from lesbian, gay, bisexual, and transgender (LGBT) population and is being discharged after an episode of hypoglycemic shock?
 - ✓ Garnero (2010) states that there are 8.8 million adults lesbian, gay, and bisexual (LGB) adults in the United States and 1.3 million LGB individuals have diabetes, or at least 5% of the 23.6 million people with the disease in the United States.
 - ✓ When organizing a discharge teaching plan to an individual who just had a hypoglycemic episode, the nurse should be aware of the possible risk factors the patient might have in order to provide the best care.
 - ✓ Professional interactions with LGBT individuals, accepting responsibility for personal beliefs and biases, and becoming sensitive to the norms that shape patients' lives are only some of the key areas to consider when working with a patient from this unique population.
 - ✓ Another area is to address the patient's partner in a respectful manner and understand his or her role in patient's health care decisions. The partner should be involved into care as much as possible.
 - ✓ The nurse should also do additional assessment with regard to access to the resources and barriers to get these resources that the patient might use in order to help the patient to manage or prevent further crises.
- 2) What kind of significant cultural- religious values, beliefs and health care practices of this patient can impact the patient's health and health care decisions?
 - ✓ The nurse should question patient's cultural - religious values, beliefs, and health care practices its impact on his health including
 - a. Language preferences
 - b. Being a second generation American
 - c. Medication non-adherence
 - d. Food choices
 - e. The use of home remedies (basil, cranberry, and chamomile leaves) to lower blood pressure and regulate blood sugar
 - f. The use of traditional remedies (hot wraps in a linen cloth to his ankle)
 - g. Sexual orientation
 - h. Partner's role on health care decisions
 - i. Seeking support from LGBT community
- 3) Describe the abnormal findings on State 1
 - ✓ Allergies to PCN
 - ✓ Lack of knowledge with regards to medication regimen and symptoms of hypoglycemia
 - ✓ Lack of information with regards to complications of diabetes
 - ✓ Dressing on the right foot
 - ✓ Vital signs
 - ✓ *HbA1C 6.5 %*
- 4) Describe the abnormal findings on State 2
 - ✓ Allergies to PCN
 - ✓ Lack of knowledge with regards to diabetic diet
 - ✓ Dressing on the right foot
- 5) Describe the abnormal findings on State 3

- ✓ Pain 2/10
- ✓ Allergies to PCN
- ✓ Dressing on the right foot (blister and recent cut on the right ankle)
- ✓ Lack of knowledge about proper foot care

6) What causes diabetes? What is difference between type 1 and type 2 diabetes?

Insufficient production of insulin (either absolutely or relative to the body's needs), production of defective insulin (which is uncommon), or the inability of cells to use insulin properly and efficiently leads to hyperglycemia and diabetes. This latter condition affects mostly the cells of muscle and fat tissues, and results in a condition known as insulin resistance. This is the primary problem in type 2 diabetes. In general, individuals with diabetes either have a total lack of insulin (type 1 diabetes) or they have too little insulin or cannot use insulin effectively (type 2 diabetes).

Common differences between type 1 and type 2 diabetes

Type 1 Diabetes	Type 2 Diabetes
Often diagnosed in childhood	Usually diagnosed in over 30-year olds
Not associated with excess body weight	Often associated with excess body weight
Often associated with higher than normal ketone levels at diagnosis	Often associated with high blood pressure and/or cholesterol levels at diagnosis
Treated with insulin injections or insulin pump	Is usually treated initially without medication or with tablets
Cannot be controlled without taking insulin	Sometimes possible to come off diabetes medication

7) What are the risk factors for type 2 diabetes?

- ✓ Family history
- ✓ Race/ethnicity
- ✓ Weight
- ✓ Inactivity
- ✓ Age
- ✓ Prediabetes
- ✓ High cholesterol levels
- ✓ History of a cardiac disease
- ✓ History of polycystic ovary syndrome (in women)
 - a. What are the risk factors of this patient?
- ✓ His age, family history, hypertension history

8) Describe pathophysiology of hypoglycemia.

Hypoglycemia, reduction of the concentration of glucose in the blood below normal levels, commonly occurring as a complication of treatment for diabetes mellitus. In healthy individuals an intricate glucoregulatory system acts rapidly to counter hypoglycemia by reducing insulin production (insulin is important in the mechanism that removes glucose from the bloodstream) and mobilizing energy reserves from the fat and liver. When this regulatory system does not operate, disproportionately large amounts of insulin in the blood result in sudden drastic falls in circulating glucose.

9) What are the most common causes of hypoglycemia in people with type 2 diabetes?

- ✓ Medication non-adherence (too much insulin)
- ✓ Hormonal deficiencies: Hypoadrenalism (cortisol), hypopituitarism (growth hormone) (in children), glucagon deficiency (rare), and epinephrine (very rare)

- ✓ Critical illnesses: Cardiac, hepatic, and renal diseases; sepsis with multiorgan failure
- ✓ Exercise (in patients with diabetes treated with diabetes medications)
- ✓ Pregnancy
- ✓ Renal glycosuria
- ✓ Ketotic hypoglycemia of childhood
- ✓ Adrenal insufficiency
- ✓ Hypopituitarism
- ✓ Fasting
- ✓ Excessive alcohol consumption

10) What are the signs and symptoms of hypoglycemia?

Early symptoms include:

- ✓ Confusion
- ✓ Dizziness
- ✓ Feeling shaky
- ✓ Hunger
- ✓ Headaches
- ✓ Irritability
- ✓ Pounding heart; racing pulse
- ✓ Pale skin
- ✓ Sweating
- ✓ Trembling
- ✓ Weakness
- ✓ Anxiety

Without treatment, you might get more severe symptoms, including:

- ✓ Poor coordination
- ✓ Poor concentration
- ✓ Numbness in mouth and tongue
- ✓ Passing out
- ✓ Nightmares or bad dreams
- ✓ Coma

11) How can we treat hypoglycemia?

The acute management of hypoglycemia involves the rapid delivery of a source of easily absorbed sugar. Regular soft drinks, juice, lifesaver candies, table sugar, and the like are good options. In general, 15 grams of glucose is the dose that is given, followed by an assessment of symptoms and a blood glucose check if possible. If after 10 minutes there is no improvement, another 10-15 grams should be given. This can be repeated up to three times. If the hypoglycemic episode has progressed to the point at which the patient cannot or will not take anything by mouth, more drastic measures will be needed. In many cases, a family member or roommate can be trained in the use of glucagon. Glucagon is a hormone that causes a rapid release of glucose stores from the liver. It is an injection given intramuscularly to an individual who cannot take glucose by mouth. A response is usually seen in minutes and lasts for about 90 minutes.

12) What are the acute and chronic complications of type 2 diabetes?

Acute Complications: Acute complications arise from uncontrolled high blood sugars (hyperglycemia) and low blood sugars (hypoglycemia) caused by a mismatching of available insulin and need.

Chronic Complications:

- ✓ **Cardiovascular Damage:** Both insulin resistance and the chronic hyperglycemia of type 2 diabetes accelerate the development of atherosclerosis, a disease of large and medium-size arteries. In turn, atherosclerosis causes myocardial infarctions, peripheral artery obstructive disease, renal artery disease, and strokes.
- ✓ **Kidney Damage:** In the United States, diabetic kidney damage is the most common cause of end-stage renal disease. This type of kidney damage, diabetic kidney disease (DKD) or diabetic nephropathy, first appears as small amounts of albumin leaking into the urine (microalbuminuria). Without treatment, microalbuminuria progresses to a more significant leakage, macroalbuminuria. Progression from microalbuminuria to macroalbuminuria takes place within 10 to 15 years in 20% to 40% of those with type 2 diabetes.
- ✓ **Eye Damage:** Diabetes damages small blood vessels and capillaries throughout the body. Basement membranes are thickened, supportive cells are injured, and the vessel walls leak, exuding fluid and producing tiny hemorrhages. Diabetic retinopathy is a leading cause of new cases of legal blindness among working-age Americans.
- ✓ **Nerve Damage:** Diabetes damages the nervous system. The most common problem in people with type 2 diabetes is a symmetric peripheral neuropathy in which patients become less able to sense things with their extremities. Diabetic nerve damage begins at the tips of the longest nerves and slowly progresses to shorter and shorter nerves; therefore, sensation is first lost in the toes, then in the ankles, and later in the fingers.
- ✓ **Foot Damage:** In diabetes, feet and ankles lose sensation before other parts of the body. The loss of sensation means that diabetic patients with neuropathy are not always warned sufficiently to reflexively protect their feet and ankles when the stresses become too severe. Therefore, people who have diabetes tend to injure and reinjure their feet and ankles more frequently and more severely than people without diabetes.

13) Describe significant areas for treatment and management of type 2 diabetes.

- ✓ Development of an individualized care plan and definition of treatment goals
- ✓ Lifestyle modification including diet and exercise
- ✓ Oral antidiabetic agents and how to use them properly
- ✓ Insulin therapy, including rapid-acting, short-acting, intermediate-acting, and long-acting insulins, premixed combination insulins, and insulins from animal sources
- ✓ Timing and frequency of re-evaluation
- ✓ The use of a glucometer
- ✓ Rotation of insulin injection sites
- ✓ Hypo and hyperglycemia signs and symptoms
- ✓ Prevention and treatment of diabetic complications
- ✓ Foot care
- ✓ Eye care
- ✓ Oral care
- ✓ Control of hypertension
- ✓ Management of diabetic nephropathy
- ✓ Management of diabetic neuropathy
- ✓ Management of dyslipidemia
- ✓ Management of cardiovascular complications

- ✓ Immunizations (influenza vaccine, pneumococcal vaccine)
- ✓ Monitoring patient's blood glucose at specific intervals
- ✓ Screening at-risk patients for diabetes
- ✓ Comprehensive monitoring of the minimally impaired patient with diabetes
- ✓ Implementation of the care plan
- ✓ Documentation

14) Describe the medical management and nursing management of diabetic foot care.

- ✓ Wash your feet daily, dry them thoroughly and moisturize often to prevent cracks that can lead to infection. Don't moisturize between the toes, however, as this can encourage fungal growth.
- ✓ Wear well-fitting shoes and thick, dry socks.
- ✓ Promptly treat any fungal infections of the feet.
- ✓ Take care when trimming your nails.
- ✓ Avoid walking barefoot.
- ✓ Have a foot doctor (podiatrist) treat bunions, corns or calluses.
- ✓ See your doctor at the first sign of a sore or injury to your skin.

1) Wristband & Allergy Band

Nursing 120: Culturally Competent Patient Teaching: Health Promotion and Management of Chronic Illness

Anthony O'Leary DOB: 05/15/1960 MR# 1000000311
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PENICILLIN ALLERGY	
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m) Standardized Patient Training Materials

Training Session	Purpose	Estimated Time
Session One: Familiarization with the Case	<ul style="list-style-type: none"> ✓ Coach introduces case materials and the checklist gives overview. ✓ SPs read through training materials together. ✓ View video of student/SP encounter if it is available ✓ Do progressive interview with the SPs with coach in role of nursing student 	1 Hour
Session Two: Learning to Use the Evaluation Checklist	<ul style="list-style-type: none"> ✓ Do brief progressive interview with coach in role of the nurse student. ✓ Practice using the checklist and the guide to the checklist. 	1 hour
Session Three: Putting It All Together (Performance, Checklist, Feedback)	<ul style="list-style-type: none"> ✓ Introduce SPs to simulation room ✓ Do two practice encounters with each SP stressing <ol style="list-style-type: none"> 1. Authenticity and standardization of performance. 2. Accuracy of performance and checklist use. 3. Writing effective feedback. 	2 hours
Session Four: Dress Rehearsal Faculty Verification of SPs' Authenticity	<ul style="list-style-type: none"> ✓ First dress rehearsal and final training session. ✓ Uninitiated faculty verifies SPs' performance authenticity by engaging in practice encounters in role of student. ✓ Coach and nonperforming SPs observe performances from the monitoring room. 	2 hours
Practice Day	<ul style="list-style-type: none"> ✓ Mock SP experience with participation of all SPs and all administrative support staff. ✓ Nursing faculty serves as examinees to pilot the scenario logistics; gives SPs a sense of how the actual scenario will run and coaches a chance to give SPs final feedback. 	2 hours
Actual SP experience Day	<ul style="list-style-type: none"> ✓ Students meet and interview the SP ✓ Coaches/faculty observe clinical encounters from monitoring room. ✓ SPs fill out checklists, write feedback then following the SP experience debrief with coach and/or faculty. 	

Reference: Wallace, P. (2007). *Coaching standardized patients for use in the assessment of clinical competence*. New York, NY: Springer

n) Standardized Patient - Scenario Background & Sample Scenario Script

Nursing 120: Culturally Competent Patient Teaching:

Health Promotion and Management of Chronic Illness

Patient's Name: Anthony O'Leary

MRN# 1000000311

DOB: 05/15/1960

Standardized Patient Set up: Patient is on the medical surgical unit and lying in a hospital bed. Male dressed in hospital gown, head of bed elevated, room air, 20 gauge IV on right arm (placed on admission). The patient is receiving Cefazolin 500 mg IVBP. The patient's partner is at the bed side and they're holding hands.

Equipment: ECG, O₂ saturation monitor, vital signs monitor, arm/ID band.

Overview of the Scenario / Scenario Background for Patient
Anthony O'Leary, 55-year-old male, American born of Irish, Italian, and Methodist heritage with prior history of Type 2 diabetes for 8 years, hypertension for 15 years, and kidney disease for 1 year, was brought to the emergency department by his partner after he was found wandering the hallway of his apartment building confused and combative with slurred speech. Mr. O'Leary tripped on the building steps sustained a small cut to his right foot. Upon arrival to the ER, he was unconscious. Blood glucose was 40 mg/dL. He received 25 ml D50W IV. Prophylactic antibiotics were ordered. He was admitted to the medical surgical unit for evaluation. His partner accompanies him on to the medical surgical unit.
Past Medical History: He smoked 1 pack per day for 20 years and quit 5 years ago. He has type 2 diabetes for 8 years, hypertension for 5 years, and kidney disease for 1 year. Patient is HIV negative. His surgical history includes right knee replacement 5 years ago. His healthcare provider last saw him last week and started insulin injections for management of his glucose level. He has a blister on his right foot because of improper footwear, which has not healed since last month. He recently sustained a small cut to the same foot when he tripped on his apartment's building step.
Social/Family History: Mother (deceased), age 72, HTN, T2DM. Father (deceased), age 75, heart attack. Siblings: 2 brothers with HTN. Children: Son, age 26, lives in Texas. The patient is divorced from the mother of his child for 23 years. He currently lives with his partner of 15 years who is also HIV negative.
Allergies: Penicillin (rash) Code Status: Full code Education: Junior college (Associate degree) Occupation: Retired X-ray technician Religion: Methodist Ethnicity: American Irish-Italian

Primary Language: Fluent in English. He also speaks some Spanish

Medications: Humalog (Lispro) injections before meals (recently started); Glipizide 5 mg PO daily; and Captopril 25 mg PO every 8 hours

Traditional health practices: He uses basil leaf tea to lower his blood sugar. He also uses cranberry and chamomile leaf tea to regulate his blood sugar. For wound healing and preventing infections, he uses hot sugar or bread wrapped in a linen cloth for cuts or wounds to prevent infection and promote healing.

Significant cultural factors: Significant other is partner and has power of attorney in case of emergency. His partner's name is Sergio Lopez. He self-identifies as a Puerto Rican, Catholic and he is 42 years old. Mr. O'Leary prefers home-cooked meals, so his partner usually brings in home-cooked foods at lunchtime. Coffee, wine, and cheese all play a significant role in his diet. Mr. O'Leary also eats Mexican food. He requests family visitation privileges to include select members of the Gay Men's Health Crisis support group.

State 1: The students should educate the patient regarding medication regimen, type 2 diabetes and its complications (His last finger stick glucose was 220 and he just received 3 units Humalog (Lispro) subcutaneous injection. He is currently receiving Cefazolin 500 mg IVPB).

State 2: The patient is lying in bed in the medical surgical unit. The partner is at the bed side and they're holding hands. There are empty meal plates on the table. The patient ate his lunch. A primary, secondary, and medication nurse are taking care of the patient. The students should educate the patient regarding the diabetic diet.

State 3: The students should assess patient's right foot, change patient's dressing, and educate the patient regarding the signs and symptoms of infection, and provide information about maintaining hygiene, and proper foot care.

Layout:

- The whole DSPS experience will take around 3 hours.
- The scenarios will be run by using two Standardized Patients (SPs). All equipment including IV tubing, patient monitor, fluids, medications, and specific treatment related material will be available at the bedside.
- Students will be divided into 3 groups consisting of 3-4 students per group. Each group will be involved on an ongoing simulation scenario. Each group will have a:
 - Primary Nurse
 - Secondary Nurse
 - Medication/Documentation Nurse
- **Each student will be given an identification card for the roles above. SPs will be asking questions to each student in equal proportions.**
- SPs will be completing a checklist at the end of each state while students are working on the reflection.
- SPs will join the debriefing session and provide brief feedback (two or three constructive suggestions related with objectives) by using the checklist subheadings.

STATE 1 (20 minutes): Patient is on the medical-surgical unit and lying in a hospital bed. His partner is with him at bedside. He received 25 ml D₅₀W IV on ED. After his transfer to the medical surgical unit, his last finger stick glucose level was 220. He just received 3 units Insulin Humalog (Lispro) subcutaneous injection and is currently receiving his antibiotic (Cefazolin 500 mg IVPB). The patient rates his pain as 0/10 on his right foot and refuses pain medication. He is concerned about his medication regimen.

(Primary nurse delegates roles to each group member. Medication/Documentation nurse conducts patient teaching about medication regimen and type 2 diabetes with the primary nurse. Secondary nurse reviews orders and provides patient teaching about type 2 diabetes complications).

(If students don't have group discussion and share roles before the DSPS experience, the SPs will be asking questions to each student in equal proportions).

The sink is outside of the room and handwashing already occurred.

Primary Nurse: Hello. My name is, I will be your nurse during the day. Can you tell me your first name, last name, and date of birth?

Secondary Nurse and Medication/Documentation Nurse also introduce themselves.

Patient (looks worried): Hello. My name is Anthony O'Leary and my date of birth is 5/15/1960. I am glad you came. I believe this antibiotic is just finished.

Primary Nurse: Okay. We'll disconnect it from your IV line. Could you please tell us what brought you here today?

Patient: My partner found me unconsciousness and they brought me to ED via ambulance. I don't exactly remember what happened. This is my partner Sergio. We have been living together for about 15 years and he is my all. He is also my power of attorney in case of emergency. He will be staying with me during my hospitalization and please don't hesitate to share any detail regarding my health with him as well.

Primary Nurse: Thank you for this information. Nice to meet with you both. How would you like us to call you?

Patient: Anthony is okay.

Partner (looks worried): Hi. My name is Sergio Lopez and I am his partner. I am very worried about him. Since he started his insulin injections, it has been difficult to adjust. I came from work and found him wandering the hallway of our apartment building. He was confused and combative with slurred speech.

Primary Nurse: Very nice to meet you both.

Patient (When the nurse disconnects the IVPB): Do you know why they started this antibiotic? I am allergic to Penicillin. I took Penicillin as a child and got severe rash. I hope it's not something similar to Penicillin.

Medication/Documentation Nurse: Your physician ordered Cefazolin 500 mg through your intravenous catheter every 8 hours. This antibiotic is ordered for prophylactic (to prevent further infections) purposes because of the blister and your recent small cut on your right foot. Its' classification is different than Penicillin as an antibiotic, but because of cross sensitivity we are being cautious when administering your antibiotic. Please tell us if you have any rashes, fever, or difficulty with your breathing.

Patient: Oh I see. Okay thank you for explaining. I will definitely let you know.

Patient (if the nurse uses gloves while assessing IV site while removing finished antibiotic): I am HIV negative just to let you know. I have seen that people are becoming anxious when they're touching me.

Partner: Anthony. Why are you so mean? They're just trying to help us.

Patient (looks upset): I am sorry. I am really worried. I did not want to sound mean. I feel grumpy because of this hospitalization.

Medication / Documentation Nurse: It is okay. Please don't feel upset. This is just a standard protocol to wear gloves when we assess the IV site. We do it for every patient not just for you.

Patient: Okay. I am sorry. I am a little anxious about this hospitalization.

Primary Nurse: We understand. My colleagues and I are here to help you.

Secondary Nurse: I see that you have a dressing on your right ankle (dressing looks clean). Do you have any pain?

Patient: No I don't have any pain right now. (If students don't address the dressing on his right ankle and conduct a pain assessment, the patient can say "Thank god, I don't have any pain now")

Patient: I really cannot explain what happened this morning. What do you think happened to me? I did my injection at 7.30 am when I woke up. I cannot eat right away after I wake up. I usually eat around 8.30 am. When I tried to do my breakfast this morning, I don't know what happened. I felt very bad.

Partner (looks anxious): His doctor recently started him on Insulin injections. Now, he has so many pills and now shots to take! It has been difficult to adjust. His nurse also recently gave him another insulin shot. Will he feel the same way just like this every morning?

Primary Nurse: Thank you for explaining what happened to you before you came in to the hospital. We understand how worried you both must have been. Based on the symptoms and the timeline of your injection you shared with us, it seems like because you waited 1 hour to eat

after your injection caused your blood sugar to go down. Our colleagues informed us that your last blood sugar reading was 220 and they administered 3 units of Humalog (Lispro).

Patient (asks to his partner): Is this the same insulin my physician prescribed me? Sergio remembers all these medications I use better than me.

Partner: I think it is the same one. The one his physician prescribed him called Humalog as well. I did some searching on the internet and found that it is a fast-acting form of insulin that works by lowering blood sugar in blood. What does this fast-acting mean?

Primary Nurse: Very good question. Each type of insulin has an onset, a peak, and a duration time. The onset is how soon the insulin starts to lower your blood glucose after you take it. The peak is the time the insulin is working the hardest to lower your blood glucose.

(If students don't explain the med, partner can ask about how Humalog works to the student nurse)

Primary Nurse: Humalog is fast acting insulin; therefore, it is usually injected within 15 minutes before a meal or immediately after a meal. If you don't eat within 15-20 minutes after your injection, your blood sugar can go down and you may have symptoms of low blood sugar such as rapid heartbeat, blurry vision, hunger, sweating, shaking, sudden nervousness, unexplained fatigue, pale skin, headache, trouble with concentrating, and loss of consciousness. Your lunch will arrive soon, it is important for you to eat within 15-20 minutes after Humalog injection to prevent low blood sugar.

(If student nurse does not explain low blood sugar symptoms, the patient can ask "what happens if I don't eat within 15-20 minutes after my insulin injection?")

Patient: Okay. Now, I understand why I felt so bad after the injection this morning. I waited about an hour to eat.

Medication / Documentation Nurse: Please be careful to eat 15-20 minutes after you administered your insulin injection in order to prevent low blood sugar symptoms.

Partner: He is using oral forms of diabetes and blood pressure drugs. It is just confusing to keep up all these meds.

Primary Nurse: We understand that it must be hard for you to use different kind of medications. Anthony, can you tell us when did your physician start your insulin injections?

Patient: One week ago. On my last visit to his office. What do all these medications do anyway? Why do I have to take so many? I was taking oral diabetes pills. What is the purpose of taking this Insulin as well?

Medication / Documentation Nurse: In patients with type 2 diabetes, Homolog (Lispro) may be used with another type of insulin or with oral medication(s) for diabetes management. It works by replacing the insulin that is normally produced by the body and by helping move sugar from the

blood into other body tissues where it is used for energy. It also stops the liver from producing more sugar.

Patient: How long am I going to use all these meds? Let's say I am being very careful with my diet and everything, should I still continue to use all these?

Primary Nurse: Your medications are big part of managing and controlling your chronic diseases. Unfortunately, you need to continue your medications to have a better control on your blood sugar.

Partner: So, as long as he uses his medications properly, we don't have to worry right?

Primary Nurse: In addition to using your medications, making lifestyle changes (e.g., diet, exercise, limiting alcohol, not smoking), and regularly checking your blood sugar may help to manage your diabetes and improve your health.

Partner: Thank you for explaining all these. I have been reading about long terms problems that diabetes can cause. Anthony's doctor diagnosed him with kidney disease. Do you think that could it be related with diabetes?

Secondary Nurse: It's great that your partner is very interested and does some research about your medications. Over time, if we don't control your blood sugar levels, people who have diabetes and high blood sugar can develop serious or life-threatening complications, including heart disease, stroke, kidney problems, nerve damage, and eye problems.

Patient: Do you think will I need dialysis? What should I do to prevent my kidneys from getting sicker?

Secondary Nurse: Having a better management of your diabetes will definitely delay the complications related to your kidneys. Using medication(s), making lifestyle changes (e.g., diet, exercise, limiting alcohol, not smoking), and regularly checking your blood sugar may help to manage your diabetes, its complications, and definitely improve your health. I will make sure to convey your questions regarding dialysis to your health care provider. This is an area that he/she would provide a more proper answer.

Patient: Okay. Thank you.

Partner: So, we'll continue to use an oral form of diabetes medication and also insulin as well. Is that correct?

Secondary Nurse: Yes. You will continue to use both of them and they will provide a much better blood sugar control for your case.

Partner: My friend's 8-year-old granddaughter who lives in Puerto Rico just got diagnosed with diabetes but they told her she has to take shots and cannot take pills. Why can't we just do the same and use only one form of medication?

Medication / Documentation Nurse: Every patient is different. There are two different types of diabetes. Type 1 diabetes is known as a juvenile diabetes and patients need to use only insulin to manage their blood sugar. It is a condition in which the body does not produce insulin and therefore cannot control the amount of sugar in the blood; therefore, they need insulin injections. Whereas in your condition (type 2 diabetes), the body does not use insulin properly. This is called insulin resistance. At first, your pancreas makes extra insulin to make up for it. But, over time it isn't able to keep up and can't make enough insulin to keep your blood glucose at normal levels and the patient may need both insulin and oral medications.

Patient: Now, it makes sense. Thank you for this explanation.

Patient: As you may know from my chart, I also have blood pressure (BP) problem and I take BP medication as well. Why do I have to take Captopril (my old BP medication was Metoprolol)? It's confusing to take so many times per day.

Secondary Nurse: Metoprolol belongs to the group of medicines known as beta-blockers. It is a medicine which is used to treat several different medical conditions. It works on the heart and blood vessels. Captopril belongs to the group of medicines known as Angiotensin-converting enzyme (ACE) inhibitors. Research tells us that because ACE inhibitors are associated with favorable effects on renal function and may improve insulin sensitivity, they're the first-line therapy in the treatment of hypertension in diabetic patients.

Partner: Ohh. That makes sense now.

Patient: So, they both have different mechanisms. You mentioned my lunch will be here, soon right?

Secondary Nurse: Yes. Your lunch will be here soon. Our group is going to leave now. We will report to the next group and they will be here with you shortly. Please don't hesitate to ask your questions to next group as well. It was nice to meet with you, Anthony and Sergio. Please let us know if you need anything else.

Patient: Thank you.

State 1 ends after patient teaching about medication regimen, type 2 diabetes and its complications.

STATE 2 (20 minutes): The patient is lying in bed on the medical surgical unit. The partner is at the bedside and they're holding hands. The patient ate his lunch. There are half empty meal plates on the table. A primary, secondary, and medication nurse are taking care of the patient. The students should educate the patient regarding the diabetic diet.

(Primary Nurse instructs the medication/documentation nurse to take nursing notes about diabetic diet teaching. Primary and secondary nurse discuss proper diabetic diet with patient and his partner)

(If students don't have group discussion and share roles before the DSPS experience, the SPs will be asking questions to each student in equal proportions).

The sink is outside of the room and handwashing already occurred.

Primary Nurse: Hello. My name is, I will be your nurse during the day and I will be your primary nurse today. Can you tell me your first name, last name, and date of birth?

Secondary Nurse and Medication/Documentation Nurse also introduce themselves.

Patient (looks worried): Hello. My name is Anthony O'Leary and my date of birth is 5/15/1960. This is my partner Sergio. We have been living together for about 15 years and he is my all. He is also my power of attorney in case of emergency. He will be staying with me during my hospitalization and please share every detail about my health with him as well.

Primary Nurse: Thank you for this information. Nice to meet with you both. How would you like us to call you?

Patient: Anthony is okay. Can you tell someone to take these plates? I am finished with my lunch.

Primary Nurse: Yes of course. I see that you did not finish your meal though.

Patient: I am okay. Lunch was not so good though. I wish Sergio brought me some Mexican food. I don't like hospital food. Is it okay if my partner buys me some more food from outside?

Partner: Yes he loves Mexican food. Is it okay if I buy him some tacos with brown rice?

Secondary Nurse: How frequently do you prefer to eat Mexican food? Can you tell us about your food preferences? For example, what do you usually eat in the morning, afternoon, and evening?

Partner (smiles): Tony! My dear, tell them about the great food we cook together. He likes all these oily stuff even though he has this blood pressure and blood sugar problems. I tell him to be careful but, he does not listen to me anymore. Please tell him that he shouldn't eat oily and sugary foods, maybe he will listen to you.

Patient: As long as I use my medications on time, there is nothing to worry about, right?

Secondary Nurse: Medication usage is a big part for management of your diabetes. Anthony, it seems like your partner is concerned about your diet. Do you usually eat Mexican food mostly? Could you please tell us about your daily routine in terms of your diet?

Patient: He may not be happy but, I eat three times in a day.

Secondary Nurse: Excellent that you have a consistent meal plan and schedule. We recommend to our patients with diabetes to eat smaller and more frequent meals to have a better control on blood glucose levels. We recommend you eat 4 to 6 small meals each day instead of 3 big meals. Could you please tell us what do you usually eat on a daily basis?

Patient: For breakfast, I usually eat cornflakes or an omelet with bacon. For lunch, I usually prefer home cooked meals. I do homemade pizza sometimes for lunch. For dinner, when Sergio comes from work, we cook great Mexican food or meat and we also drink some wine together. Sergio is Puerto Rican and he is a great cook. I am an Irish, Italian. Having this background, I can definitely say that pasta, dairy products, and wine are also my favorites.

Partner (smiles and hold the patient's hands): I am not that good. I just love reading and applying different recipes from internet.

Medication / Documentation Nurse: Very nice. Thank you for explaining your daily routine to us. Maybe...

Patient (interrupts the nurse and says): Since I am on the sugar pill and this insulin shot, it doesn't really matter what I eat right?

Partner (addresses medication nurse): I definitely don't think so my dear. He thinks that as long as he uses his meds he can eat whatever he wants.

Medication / Documentation Nurse: In many cases, you can control your diabetes through a better nutrition, healthy weight, physical activity, and regular checkups with your health care team. Medications, if prescribed by your doctor or nurse practitioner, is a crucial component of diabetes management and should be taken as directed. Some medications need to be timed with meals, and if so your doctor or nurse practitioner will instruct you on appropriate timing. What, when and how much you eat are all important factors in managing diabetes.

Patient: I see, but there is no taste on what I eat if I restrict the salt, fat, and sugar from my diet. Right now, I am really craving for a fried shrimp taco with white rice and a coke. Since, is it okay if Sergio gets me some shrimp tacos for today?

Primary Nurse: Mr. O'Leary, we highly recommend our patients to eat a balanced diet with a variety of foods, including fruits, vegetables, whole grain foods, low-fat dairy products, and lean meat, poultry, fish or meat alternatives. Instead of fried shrimp, maybe we can agree on grilled shrimp without rice and find another alternative drink instead of a coke since it can cause a significant increase on your blood sugar.

Patient: Okay. That would be fine. Can I have a strawberry or cranberry fruit juice instead?

Primary Nurse: We recommend choosing zero-calorie or very low-calorie drinks. This includes water, unsweetened teas, diet soda, and other low-calorie drinks. You can also try flavoring your water with a squeeze of lemon or lime juice for a light, refreshing drink with some flavor. All of these drinks provide minimal calories and carbohydrate. If you choose to drink juice, be sure the label says it is 100% juice with no sugar added. You also mentioned drinking wine. Can you tell us how much do you usually drink?

Partner: Anthony has Irish, Italian heritage. His whole family loves drinking. We usually drink in the evening with dinner. I would say that he drinks 2 or 3 glasses of wine every day.

Primary Nurse: We do recommend limitation for your alcohol usage. When we drink alcohol, the alcohol can inhibit the liver's ability to release glucose into the blood and you may experience low blood sugar symptoms. For type 2 diabetes, we only recommend no more than 2 drinks for men. If you are going to drink alcohol, please check your blood glucose before you drink, while you drink, and for up to 24 hours. You should also check your blood glucose before you go to bed to make sure it is at a safe level between 100 and 140 mg/dL.

Patient: Wow. I did not know that. I do check my blood sugar daily basis. I have a blood glucose monitor machine at home and I write down the numbers every day.

Primary Nurse: Very good. This way we can see how you're doing on daily basis.

Patient: Yes. I want to have a better control on my chronic diseases. I also use a lot of healthy herbs.

Secondary Nurse: Can you tell us more about the home remedies or treatments you use?

Patient: I use basil leaf tea for my blood pressure. I also use chamomile and cranberry juice/leaves for my diabetes. I heard that they're helpful in terms of regulating my blood sugar.

Secondary Nurse: These herbs you mentioned can be helpful to regulate your blood sugar. We still recommend you to be careful in terms of the amount and the frequency of these herbs. For cranberry juice, please be careful to use low-calorie unsweetened cranberry juice, since most of cranberry juice might naturally be high in carbs (sugar). Cranberry also contains salicylic acid and it might thin your blood, you should also be careful if you are using aspirin.

Patient: Thank you. I clearly did not know about these. What do mean by carbs?

Secondary Nurse: I am sorry. It is a short term for carbohydrates. Carbs are sugars that come from the food. Our body uses carbohydrates for energy.

Partner: Can you give us some examples in terms of foods that have high carbs?

Secondary Nurse: Of course. Foods with a lot of carbs include bread, pasta, rice, cereal, fruits, starchy vegetables, milk, dairy foods, also foods with added sugar such as cookies and cakes.

Patient: How will I know how many carbs I eat?

(If the student does not explain about “carb counting”. The patient can say “My friend has diabetes and he told me that it is helpful to check food labels”

Secondary Nurse: We recommend our patients a method called “carb counting”. It is a type of meal planning that many people with diabetes use. You keep the track of how many carbs you eat for each meal and snacks. If food has a nutrition label, look at the information on the label. Your physician or dietician can also tell you more about how many carbs you should eat in 1 day. We recommend you divide the total number of carbs allowed over the day and eat some at each meal and for snacks.

Partner: Good to know all these. Can you also give us a brochure where we can read all this information you provided?

Primary Nurse: Of course, we can.

Patient: Do we need to check his blood sugar after lunch? I think he also needs a dressing change. We did not change his dressing since we came in.

Primary Nurse: We’ll be checking your blood sugar before meals and at bedtime only. We will report our findings to our colleagues and they will be taking care of you from now on. They will assist you in terms of your dressing change. Please don’t hesitate to ask your questions to next group as well. It was nice to meet with you, Anthony and Sergio. Please let us know if you need anything else.

Patient: Thank you very much for everything.

State 2 ends after patient teaching about diabetic diet.

STATE 3 (20 minutes): The students should assess patient's pain his right foot, assess the recent cut and blister, educate the patient and his partner regarding the signs and symptoms of infection, provide information about maintaining hygiene, and proper foot care.

(Primary Nurse instructs the medication/documentation nurse to take nursing notes about the culturally competent patient teaching. Primary and secondary nurse conducts the teaching about mentioned topics above).

(If students don't have group discussion and share roles before the DSPS experience, the SPs will be asking questions to each student in equal proportions).

The sink is outside of the room and hand washing already occurred.

Primary Nurse: Hello. My name is, I will be your primary nurse, and these are my colleagues. Can you tell me your first name, last name, and date of birth?

Secondary Nurse and Medication/Documentation Nurse also introduces themselves.

Patient: My name is Anthony O'Leary and my date of birth is 5/15/1960. This is my partner Sergio. We have been living together for about 15 years and he is my all. He is also my power of attorney in case of emergency. He will be staying with me during my hospitalization and please share every detail about my health with him as well.

Primary Nurse: Nice to meet you both. How would you like us to call you?

Patient: Anthony is okay.

Primary Nurse: Thank you. Anthony. The last group told us that you want a dressing change. Our group will assess your right foot and change your dressing. Is it okay for you?

(If students don't explain, the patient may ask "Are you going to change this dressing?")

(If students don't address the partner, the partner can say "Hi. My name is Sergio Lopez. I am his partner.")

Patient: Yes. Please change this dressing. It has been more than 12 hours since I changed it.

Secondary Nurse: Do you have any pain on your right foot? If yes, can you rate your pain? (Zero is the lowest and ten is the highest)

Patient: It is around 2 out of 10 now.

Secondary Nurse: Are there any aggravating or relieving factors?

Patient: It gets worse when I try to walk and improves when I lay down. I have been changing this dressing since last month.

Secondary Nurse: Your doctor ordered Ibuprofen 600 mg orally for your pain. Do you need any pain medication?

Partner: Anthony my dear. Let them give you a pain medication. I don't want you to have pain.

Patient: I think I am okay. Am I going to have too much pain while you are changing it?

Secondary Nurse: We will observe you closely during dressing change. Please don't hesitate to share if you are in pain while we're changing it.

Patient: Okay I will. I had this blister on my right ankle since last month and now I got a cut to my same foot when I tripped on my apartment step. That darn stoops!

Partner: It seems like this blister he has is not healing. We don't understand why.

Secondary Nurse: Diabetes can alter your blood flow and it can sometimes cause delayed healing. We will assess the blister and the cut when we change your dressing and provide you more information about this topic.

(Primary nurse requests help from secondary nurse with dressing change and assigns medication/documentation nurse to take notes about the assessment of the foot and the information given).

Primary Nurse: Now, we will remove your old dressing and assess your blister and the small cut you recently had on right foot. Please don't hesitate to warn us if you feel uncomfortable.

Patient: Okay.

Patient (before removing up the old dressing, if the student nurse does not assist the patient for a comfortable position): Should I stay in this position? Should I just lie down?

Primary Nurse: If you are comfortable in this position, you can stay in this position. Otherwise, we can definitely try another comfortable position before removing your dressing.

Patient: I am just going to lay down like this.

Primary Nurse & Secondary Nurse (performs hand hygiene, assemble equipment on over bed table within reach, positions the patient, removes the old dressing, and assesses the right foot. After removing the dressing, places soiled dressings in the appropriate waste receptacle, remove gloves and dispose of them in an appropriate waste receptacle, and perform hand hygiene).

(After student nurse removes the old dressing, there will be small discussion between the patient & partner. Students are expected to interfere and act as a facilitator)

Partner: Anthony. How many times I told you not wear those uncomfortable leather, pointed shoes? Somehow you did not care what it did on your right foot! Don't you see what kind of problems those shoes caused for us? It is just not healing! Why don't you just wear the orthopedic ones I bought you on your birthday?

Patient (getsupset): Okay. I know... I know Sergio. How could I have known that this would happen? I am not wearing them since last month though.

Partner (he seems frustrated and worried and addresses primary and secondary nurse): Is there anything he can do to make sure his foot heals faster? This blister was caused by that damn pointed shoes! It seems like it is not healing.

Patient (gets upset): Is there anything you would recommend promotingits healing?

Primary Nurse: It seems like you're both worried. My colleagues and I will be explaining important areas that would be essential and helpful for your foot care. Would that be okay for you?

Partner (as soon as the student interferes): Yes please.

Patient: I have been wearing sneakers mostly but it is still not healing. Does it matter what kind of shoes I wear? Why is this happening to me?

Partner: Don't worry my dear; I am sure they will give us some tips in terms of how to take care of this. I love you.

Secondary Nurse: We understand both of your concerns. First of all, anyone with diabetes can develop foot ulcers. It interferes with your blood circulation to the feet and causes nerve damage in the feet. Impaired circulation causes wounds on the feet to heal more slowly, raising their risk of becoming infected. A simple cut or scrape may be slow to heal and can turn into a serious infection fast, especially in the feet or legs. Therefore, it is very important for you to be careful about your shoe selection.

Patient: I see. Do you have any tips for proper shoe selection?

Secondary Nurse: When selecting your shoes, it is important to consider shoe fit, the shape, and size. You should try to match the shape of the shoe to the shape of your foot. This means that you should be sure your shoes have adequate room in the toe area, over the instep and across the ball of the foot, and there should be a snug fit around the heel. Additionally, you can ask to your health care provider for prescribed special footwear. Your health care provider would definitely be a valuable resource in that sense.

Patient: I see. How should I take care of my feet? Do you have any suggestions in terms of cleaning?

Partner (listens the conversation between the nurse and Anthony very carefully)

Primary Nurse: First of all, it is important for you to observe your feet daily. You can check for dry cracked skin, look for blisters, cuts, scratches, or other sores when you're observing your feet. Proper hygiene is essential for the healing process. We suggest you use mild soap and warm water and gently wash your feet daily. Make sure to dry your feet after cleaning it. You can also apply moisturizer to prevent cracking.

Patient: My mom used to wrap hot sugar or bread in a linen cloth and place it on the cut or wound to prevent infection and promote healing. I also sometimes do this but, it does not help much.

Primary Nurse: Interesting. Can you tell us more about your cultural background?

Patient: I am a second generation American. My mom is Irish and my father is Italian. Both of them moved to New York with their families as young children. I was born, raised, and educated here. I got married in US and I occasionally I visit both Ireland and Italy. We still have some family members there.

Primary Nurse: Very nice. Can you tell us more about alternative healing practices you use?

Patient: The remedy I just told you, I use it a lot and it provides some comfort for a while. Old remedies always worth to try right?

Primary Nurse: Actually, we would like to mention nerve damage as a complication of diabetes. It can cause loss of sensation in the extremities, which means you may not feel heat, cold, or pain in your feet; therefore, we recommend you use warm water to prevent damage.

Partner (looks worried): Ohhh my dear. We don't want to deal with a burn in addition to this. Did not I tell you about my grandfather? He had diabetes and I remember him having a severe burn on his feet because of using hot water.

Patient: Okay. I did not know about this nerve damage. I will be careful about this. As you see, I have this blister and I am afraid that I am going to have another one. Can I pop it? It is uncomfortable.

Primary Nurse: Please do not "pop" it. Apply a clean dressing or a clean bandage and wear a different pair of shoes.

Partner: What about this small cut? You told me not to use hot water. How can we make sure that the area is not infected? How do I know if my wound is getting worse?"

Primary Nurse: As we mentioned previously, hygiene is the essential component to prevent infections. We also recommend you assess your feet daily and look for any signs and symptoms of infection. We want to prevent any kind of infection on the effected side. You should check for redness, increased warmth, drainage, odor, swelling, or tenderness when observing any area of your feet. If you observe any abnormalities, we recommend you communicate with your health provider immediately.

(If students don't mention importance of antibiotic usage, the patient can say "how long should I use this antibiotic they started?")

Medication / Documentation Nurse: Please also make sure to complete your antibiotic regimen as prescribed by your health care provider as well.

Patient: I understand. I will definitely be careful about it. Is there anything I can do to make sure my foot heals faster?

Medication /Documentation Nurse: As discusses by the first group, we definitely recommend a healthy diet, exercising if it is possible, and proper blood sugar control in order to promote healing.

Partner (addresses medication nurse): Do you have any other tips for foot care? Is there anything he can do to prevent further cuts and blisters on his foot?

Medication Nurse: We can also recommend that you don't walk barefoot. Wear white cotton socks, so you can observe abnormalities in terms of the drainage easily. Please don't cut your nails too deep, try to cut your toenails after the bath, when they are soft and don't cut cuticles as well.

Patient: Can you describe the dressing change to me and Sergio for us to do it at home?

Secondary Nurse: Of course. We can describe it to both of you (**Student is expected to tell about the use of sterile technique, how to clean the area (from top to bottom and from the center to the outside), how to dry the area by using a gauze sponge in the same manner, and how to apply a layer of dry, sterile dressing over the wound, and the importance of performing hand hygiene).**

Primary nurse assigns the medication / documentation nurse to complete notes about the assessment of the area, information provided.

Patient and Partner: Thank you very much everything you did for us.

Secondary Nurse: Thank you for listening us. Please let us know if you have any other questions.

End of the Scenario

o) Standardized Patient Checklist

**Nursing 120: Culturally Competent Patient Teaching:
Health Promotion and Management of Chronic Illness**

Standardized Patient Checklist

SP Name: _____

Date: _____

	Yes	No	N/A	Comments
As Anthony O'Leary, were you satisfied with how the students interacted with you?				
Were you satisfied with how students interacted with partner Sergio?				
The student				
A. Maintains professionalism				
I. Washes hand and introduces self & role/title				
II. Identifies patient (name, ID Band, DOB, MRN#)				
III. Maintains professional manners (provides privacy, maintains collegial practice)				
B. Uses effective communication strategies				
I. Maintains good body language				
II. Makes sure patient understands future plans				
III. Collaborates with team member(s) and delegates tasks appropriately.				
IV. Speaks in understandable terms (no medical terms), and communicates effectively and listens actively (e. g. let the patient finish speaking and responded appropriately, appears empathic and involved)				
V. Asks about patient's cultural values, beliefs, and practices showing interest and respect				
VI. Avoids verbal/nonverbal judgment cues/reactions (e. g. did not condemn alternative healing practices)				
VII. Addresses the domestic partner respectfully and involves him/her to patient's care				
C. Develops and initiates a culturally competent education plan for the patient/family unit for management of diabetes				
I. Provides an accurate explanation about the plan of care				
II. Shows cultural sensitivity by acknowledging and respecting patient's cultural-religious values, beliefs, and health care practices during patient teaching including <ul style="list-style-type: none"> a. language preferences b. patient's view of illness and illness treatment c. usage of herbs to regulate blood sugar d. usage of traditional remedies 				

<ul style="list-style-type: none"> e. food preferences f. family role in health care decisions g. the role of domestic partner in assisting patient with health care decisions h. community support 				
III. Assesses readiness to learn and identifies knowledge gap				
IV. Asks questions about the barriers to care				
V. Shared knowledge about <ul style="list-style-type: none"> a. the pathophysiology of diabetes b. medication regimen (rapid acting insulin administration) and glucometer usage c. hypoglycemia signs and symptoms, diabetic diet, and when to notify doctor d. acute and chronic complications of diabetes e. healthy diet for diabetes management f. dry sterile dressing change, signs and symptoms of infection, proper foot care, and maintaining hygiene. 				
D. Conducts evaluation of care				
I. Evaluates patient's responses to interventions				
II. Evaluates effectiveness of communication and teaching by using teach back method.				

p) Standardized Patient Checklist - For Partner

**Nursing 120: Culturally Competent Patient Teaching:
Health Promotion and Management of Chronic Illness**

Standardized Patient Checklist - For Partner

SP Name:

Date:

	Yes	No	N/A	Comments
As the partner of Anthony O'Leary, were you satisfied with how the students interacted with you?				
Were you satisfied with how students interacted with Anthony?				
The student				
E. Maintains professionalism				
I. Washes hand and introduces self & role/title				
II. Identifies patient (name, ID Band, DOB, MRN#)				
III. Maintains professional manners (provides privacy, maintains collegial practice)				
F. Uses effective communication strategies				
I. Maintains good body language				
II. Makes sure patient understands future plans				
III. Collaborates with team member(s) and delegates tasks appropriately.				
IV. Speaks in understandable terms (no medical terms), and communicates effectively and listens actively (e. g. let the patient finish speaking and responded appropriately, appears empathic and involved)				
V. Asks about patient's cultural values, beliefs, and practices showing interest and respect				
VI. Avoids verbal/nonverbal judgment cues/reactions (e. g. did not condemn alternative healing practices)				
VII. Addresses the domestic partner respectfully and involves him/her to patient's care				
G. Develops and initiates a culturally competent education plan for the patient/family unit for management of diabetes				
I. Provides an accurate explanation about the plan of care				
II. Shows cultural sensitivity by acknowledging and respecting patient's cultural-religious values, beliefs, and health care practices during patient teaching including <ul style="list-style-type: none"> a. language preferences b. patient's view of illness and illness treatment c. usage of herbs to regulate blood sugar d. usage of traditional remedies e. food preferences f. family role in health care decisions 				

g. the role of domestic partner in assisting patient with health care decisions				
h. community support				
III. Assesses readiness to learn and identifies knowledge gap				
IV. Asks questions about the barriers to care				
V. Shared knowledge about <ul style="list-style-type: none"> a. the pathophysiology of diabetes b. medication regimen (rapid acting insulin administration) and glucometer usage c. hypoglycemia signs and symptoms, diabetic diet, and when to notify doctor d. acute and chronic complications of diabetes e. healthy diet for diabetes management f. dry sterile dressing change, signs and symptoms of infection, proper foot care, and maintaining hygiene. 				
H. Conducts evaluation of care				
I. Evaluates patient's responses to interventions				
II. Evaluates effectiveness of communication and teaching by using teach back method.				

Appendix R. Studies Using the Transcultural Self-Efficacy Tool (TSET) and the Cultural Competence and Confidence (CCC) Model

Legend/Code:

Y = Yes

N = No

N/A = Not applicable

NS = Not scored

N/I = Not indicated

T C P A = Total, Cognitive, Practical, and Affective Subscale Score

Note: Study sample = USA unless otherwise indicated. Non-USA studies are bolded.

A. Undergraduate Nursing Students: Associate Degree (AD)

Author / Citation	*Sample	Study Design	Statistically Significant Differences or Changes (* p < .05)				Cronbach Alpha (Ranges)
			Total TSET	Subscales C	P	A	
Ellis, R. L. , (2006). <i>Are associate degree nursing graduates adequately prepared to meet the cultural needs of their patients at the end of life?</i> (Unpublished master thesis). Washington State University, Intercollegiate College of Nursing, WA.	46	Non-experimental descriptive	N/A	N/A	N/A	N/A	N/I
			Note. Researcher only used Item 21, 22, 23, and 37 from the TSET.				
Forgacs, E. (2001). The transcultural nursing self-efficacy perceptions of graduating nursing students. (Unpublished study). Middlesex Community College, Lowell, MA.	15	Single survey, descriptive	NS	N/A	N/A	N/A	N/I
			Note. Only mean scores were calculated for Cognitive, Practical, and Affective Subscales.				
Jeffreys, M. R., & Smoldaka, I. (1996). Steps of the instrument-design process: An illustrative approach for nurse educators, <i>Nurse Educator</i> , 21(6), 47-52. (Erratum, 1997, 22 (1), 49).	357	Single survey design, pre-test and a second pre-test.	NS	Y	Y	Y	Total: .97 - .98

Jeffreys, M. R. & Smodlaka, I. (1999a). Changes instudents' transcultural self-efficacy perceptions following an integrated approach to culture care. <i>Journal of Multicultural Nursing and Health</i> , 5(2), 6-12. [Erratum, 2000, 6(1) 20].	51	Descriptive, longitudinal	Pre-test: NS Y Y Y Post-test: NS Y Y Y	Total: .98 Subscales: .95- .97
Jeffreys, M. R. & Smodlaka, I. (1999). ConstructValidation of the Transcultural Self-Efficacy Tool. <i>Journal of Nursing Education</i> , 38, 222-227.	566 (1st + 4th semester students)	Cross-sectional	NS Y Y N	Total: .98 Subscales: .95 - .97
Jeffreys, M. R., & Dogan, E. (2010). Factor analysis of the Transcultural Self-Efficacy Tool (TSET). <i>Journal of Nursing Measurement</i> , 18 (2), 120-139.	272	Factor analysis	NS Y Y Y	Total: .99 Subscales: .94 - .98
Jeffreys M. R., Dogan E. (2012). Evaluating the influence of cultural competence education on students' transcultural self-efficacy perceptions. <i>Journal of Transcultural Nursing</i> , 23 (2) 188–197.	147 36	Cross-sectional and longitudinal	Cross-Sectional: N/S Y N N Longitudinal: N/S Y Y Y	Total: .97 - .98 Subscales: .95 - .99
Mayfield, C. L. (2014). <i>Transcultural self-efficacy perceptions of associate degree nursing students at agreater Minnesota college setting.</i> (Unpublished masterthesis). Minnesota State University, Moorhead, MN.	29	Descriptive	N/S Y N N Note. No direct relationship existed between the three subscales of the TSET and the demographic variable of age, post-secondary completion of transcultural nursing course, and previous healthcare experience. A statistically significant relationship was found only between the credit load and Cognitive subscale.	Total: N/I Subscales: .98 - .99
Ochs J. H. (2016). <i>Evaluating an innovative pedagogy for teaching transcultural nursing in an online format.</i> (Unpublished DNP project). Northeastern University, Bouve College of Health Science.	Online (29) Traditional (20)	Post-test 2-group survey	N/S Y N Y	Total: .90 Subscales: .80 - .94
Rogers-Walker, M. (2014). <i>Examining the relationship between participation in service-learning and</i>	55	Quasi-experimental , one group,	Y Y Y Y	Pre-test Total: .99

<p><i>the levels of transcultural self-efficacy reported by associate of science in nursing students.</i> Unpublished doctoral dissertation, Capella University.</p> <p>Rogers - Walker, M. (2016). TSET Research Exhibit 9.3. <i>Examining the relationship between participation in service-learning and the levels of transcultural self-efficacy reported by associate of science in nursing students.</i> In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (3rd ed., pp. 307–310). New York: Springer Publishing.</p>		pre and post-test					<p>Subscales: .96 - .98</p> <p><u>Post-test</u> Total: .99 Subscales: .98 - .99</p>
<p>Rudnick, L. E. (2004). <i>Nursing students' perceived self-efficacy to provide culturally competent nursing care: An educational outcomes assessment study.</i> (Doctoral dissertation). Wilmington College, NJ. Retrieved from ProQuest Dissertations and Thesis. (Accession OrderNo. UMI 3156560).</p>	43	Longitudinal, descriptive, pre and post-test	NS	N	N	N	<p>Total: N/I</p> <p>Subscales: N/I</p>

B. Undergraduate Nursing Students: (AD and Bachelor of Science [BS])

Author / Citation	*Sample	Study Design	Statistically Significant Differences or Changes (*p < .05)				Cronbach Alpha (Ranges)
			Total TSET	<u>Subscales</u>		A	
Ferguson, P. (2007). <i>Transcultural self-efficacy in graduating nursing students</i> . (Doctoral dissertation). Illinois State University. IL. Retrieved from ProQuest Dissertations and Thesis. (Accession OrderNo. UMI 3280900)	203 AD + BS	Cross-sectional	NS	Y	Y	N	Total: .98 Subscales: N/I
Jeffreys, M.R. & Smoldaka, I. (1998). Exploring the factorial composition of the Transcultural Self-Efficacy Tool. <i>International Journal of Nursing Studies</i> , 35, 217-225.	1197 AD 63 BS (1 st + 2 nd + 3 rd + 4 th semester students)	Single survey design, factor analysis	NS	Y	Y	Y	Total: .98 Subscales: .96 -. 97

C. Undergraduate Nursing Students: BS

Author / Citation	*Sample	Study Design	Statistically Significant Differences or Changes (*p < .05)				Cronbach Alpha (Ranges)
			Total TSET	Subscales C	Subscales P	Subscales A	
Adams, T. M., & Nevel, K. M. (2010). TSET Research Exhibit 6.3, Evaluating the effectiveness of a transcultural nursing course on students' transcultural self-efficacy. In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (2 nd ed., pp. 136–140). New York: Springer Publishing.	58	Quasi-experimental	NS	Y	Y	Y	Total: .97 Subscales: .87 - .97
Adams, T. M. A. (2012). <i>The evaluation of service-learning as an innovative strategy to enhance BSN students' transcultural self-efficacy</i> . Unpublished doctoral dissertation, Alvernia University, Reading, PA.	111	Quasi-experimental, non-equivalent, pre and post-test	NS	Y	Y	Y	<u>Pre-test</u> Total: .98 Subscales: .94 - .98 <u>Post-test</u> Total: .98 Subscales: .96 - .98
Allen, J., Brown, L., Duff, C., Nesbitt, P., & Hepner, A. (2013). Development and evaluation of a teaching and learning approach in cross-cultural care and antidiscrimination in university nursing students. <i>Nurse Education Today</i> , 33, 1592-1598.	33 (Australia)	Interventional, pre and post-test	NS	Y	N	N	Total: N/I Subscales: N/I
Amerson, R. (2009). <i>The influence of international service learning on cultural competence in baccalaureate nursing graduates and their subsequent nursing practice</i> . (Unpublished doctoral dissertation). The Graduate School of Clemson University, Clemson, SC. Retrieved from ProQuest. (3389233). Amerson, R. M. (2010). The impact of service-learning on cultural competence. <i>Nursing</i>	60	Pre and post-test	NS	Y	Y	Y	<u>Pre-test Total:</u> .97 <u>Post-test Total:</u> .99

<p><i>Education Perspectives</i>, 31 (1), 18-22.</p> <p>Ameson, R. M. (2010). TSET Research Exhibit 9.2. Evaluating the effectiveness of a community health course and service-learning on students' transcultural self-efficacy. In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (3rd ed., pp. 302–306). New York: Springer Publishing.</p>				
<p>Amerson, R. M. (2012). The influence of international service-learning on transcultural self-efficacy in baccalaureate nursing graduates and their subsequent practice. <i>International Journal of Teaching and Learning in Higher Education</i>, 24 (1), 6-15.</p>	22	Qualitative, explanatory case study	Themes related to increased self-efficacy in the cognitive, practical, and affective learning dimensions of cultural competence consistent with underlying CCC model.	Total: N/A Subscales: N/A
<p>Amerson, R. & Livingston, W. G. (2014). Reflexive photography: An alternative method for documenting the learning process of cultural competence. <i>Journal of Transcultural Nursing</i>, 25(2), 202-210. (A Qualitative Study)</p>	10	Qualitative, reflective photography technique	Themes related to increased self-efficacy in the cognitive, practical, and affective learning dimensions of cultural competence consistent with underlying CCC model.	Total: N/A Subscales: N/A
<p>Bayik, Temel, A., & Basalan, Iz, F. (2006). TSET Research Exhibit 4.1. The Reliability and Validity of the Transcultural Self-Efficacy Tool–Turkish (TSET–Turkish). In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (3rd ed., pp. 104–107). New York: Springer Publishing.</p>	485 (Turkey)	Methodological, Factor analysis	Factor analysis yielded three factors. Age (older), to be employed, ability to speak a second (another) language, and caring for an individual from a different culture were found to be significant predictive variables for internal criterion validity ($p < .05$).	Total: .98 Subscales: .96 -.97
<p>Blackstock, S. (2003). <i>An examination of senior nursing students' perceptions of culturally competent nursing practices and their self-efficacy in delivering quality health care to culturally diverse patients.</i> (Doctoral dissertation). The</p>	22	Instrumental case study	NS Y Y Y	Total: .98 Subscales: .94 -.99

University of North Carolina, Greensboro, NC. Available from ProQuest Dissertations and Theses database. (UMI No.3093858).							
Burrell, P. (2010). TSET Research Exhibit 6.1 Evaluating the effectiveness of cultural competence threads throughout a baccalaureate curriculum. In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (2 nd ed., pp. 131–134). New York: Springer Publishing.	249	Single survey design	N/S	Y	Y	Y	Total: .81 Cognitive: .99 Practical: .99 Affective: .40
Curtis, M. P., Bultas, M. W., & Green, L. (2011). <i>The effect of cultural competence educational strategies on the transcultural self-efficacy perceptions of an accelerated nursing student cohort</i> . (Unpublished study). Barnes Jewish College, St Louis, MO. Curtis, M. P., Bultas, M. W., Green, L. (2016). Enhancing cultural competency. <i>Online Journal of Cultural Competence in Nursing and Healthcare</i> , 6(1), 1-13.	56	Quasi-experimental pre and post-test	N/S	Y	Y	N	Total: N/I Subscales: N/I
Czanderna, H. K. (2013). <i>A Qualitative Study on the Impact of a Short-Term Global Healthcare Immersion Experience in Bachelor of Science Nursing Students</i> . (Doctoral dissertation). The University of Kansas, Lawrence, KS. Retrieved from ProQuest Dissertations and Thesis. (Accession Order No. UMI 3587761)	9	Qualitative, descriptive study design	N/A	N/A	N/A	N/A	Total: N/S Subscales: N/S
Grossman, S., Mager, D., Opheim, H., & Torbjornsen, A. (2012). A bi-national simulation study to improve cultural awareness in nursing students. <i>Clinical Simulation in Nursing</i> , 8 (8), 341-346.	73 (48 USA + 25 Norway)	A bi-national simulation study, pre and post-test	American: Y	Y	Y	Y	Total: N/I Subscales: N/I
			Norwegian: Y	Y	N	Y	

<p>Halter, M., Grund, F., Fridline, M., See, S., Young, L., & Reece, C. (2014). TSET Research Exhibit 4.4 and 4.5, Transcultural self- efficacy perception of baccalaureate nursing students. In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (3rd ed., pp. 120–126). New York: SpringerPublishing.</p> <p>Halter, M., Grund, F., Fridline, M., See, S., Young, L., & Reece, C. (2014). Transcultural self-efficacy perceptions of baccalaureate nursing students. <i>Journal of Transcultural Nursing</i>, 1-9. Doi:10.1177/1043659614526253</p>	236	Longitudinal , intervention al	Y	Y	Y	Y	Total: .95 Subscales: > .95
<p>Larsen, R., & Reif L. (2011). Effectiveness of cultural immersion and culture classes for enhancing nursing students' transcultural self-efficacy. <i>Journal of Nursing Education</i>, 50 (6), 350-354.</p> <p>Larsen, R., & Reif L. (2011). TSET Research Exhibit 9.1. Evaluating the effectiveness of an immersion experience on cultural competence. In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (3rd ed., pp. 299–3012). New York: SpringerPublishing.</p>	39 Treatment group: (n=14) Control group: (n=25)	Quasi-experimental , pre and post-test	Immersion Group, Pre and Post-tests: N/S	Y	Y	Y	Total = .99 Subscales: .98 - .99
<p>Lim, J., Downie, J., & Nathan, P. (2004). Nursing students' self-efficacy in providing transcultural care. <i>Nurse Education Today</i>, 24, 428-434.</p>	196 (Australia)	Single survey design, contrasted group approach	N/S	Y	Y	Y	Total: .93 Subscales: .91 - .92
<p>MacQuarrie, D. (2004). <i>Assessment of student nurses' transcultural self-efficacy perceptions when caring for culturally diverse clients.</i> (Unpublished master</p>	308 BS 181 Registered Practical Nursing	Single survey, descriptive	N/S	Y	N	N	Total: .95 - .98 Subscales: N/I

dissertation). MacMaster University, Hamilton, ON.	(RPN) students (Canada)						
Mesler, D. M. (2014). A comparative study of cultural competence curricula in baccalaureate nursing programs. <i>Nurse Educator</i> , 39 (4), 193-198.	759	Exploratory, cross-sectional, between group design	Y	N/S	N/S	N/S	Total: .99 Subscales: N/I
Sarafis, P. A., & Malliarou, M. (2013). Cultural self-efficacy of baccalaureate nursing students in a Greek University. <i>Iranian Journal of Nursing and Midwifery Research</i> , 18 (6), 446-450.	136 (Greece)	Cross-sectional, contrasted group approach	N/S	Y	Y	Y	Total: .96 Subscales: .90 - .96
Schmidt, L. (2012). <i>An evaluation of the impact of an intercultural service learning experience on the development of transcultural self-efficacy of nursing students</i> (Doctoral dissertation). Indianapolis, IN: Indiana University.	56	Quasi-experimental, non-equivalent group, pre and post-test	N/S	Y	Y	Y	<u>Pre-test</u> Total: .99 Subscales: .96 - .99 <u>Post-test</u> Total: .97 Subscales: .91 - .98
Schroeder, P. A. (2012). <i>The influence of cultural immersion on transcultural self-efficacy for nursing students at private faith-based baccalaureate-nursing programs</i> (Doctoral dissertation). The University of South Dakota, Vermillion SD. Retrieved from ProQuest Dissertations and Thesis. (Accession Order No. UMI3524460).	180	Interventional	N/S	N	N	N	Total: N/I Subscales: N/I
Shattel, M. M., Nemitz, E. A., Crosson, N., Zackeru, A. R., Starr, S., Hu, J., & Gonzales, C. , (2013). Culturally competent practice in a pre-licensure baccalaureate-nursing program in the United States: A mixed-methods study. <i>Nursing Education Perspectives</i> , 34 (6), 383-389.	111	Mixed method, case study approach	N/A	N/A	N/A	N/A	Total: N/A Subscales: N/A
Spalla, T. L. (2012). <i>Building the ARC in nursing education:</i>	33	Quasi experimental	N/S	N/S	N/S	N	Total: N/I

<i>Cross-cultural experiential learning enabled by the technology of video or web conferencing.</i> (Unpublished doctoral dissertation). Ohio State University, Ohio, OH.	Treatment group: (n=18) Control group: (n=15)						Subscales: N/I
Weideman, Y. L., Young, L., Lockhart, J. S., Aocn, C., Grund, F. Y., Fridline, M. M., & Panas, M. (2016). Strengthening cultural competence in prenatal care with a virtual community: Building capacity through collaboration. <i>Journal of Professional Nursing</i> , 32 (5S), S48–S53.	141	Pre and post-test, educational intervention	Y	Y	Y	Y	Total: N/I Subscales: N/I

D. Nursing Students: (BS, Registered Nurses (RNs), and Multidisciplinary Healthcare Providers [MHP])

Author / Citation	*Sample	Study Design	Statistically Significant Differences or Changes (*p < .05)				Cronbach Alpha (Ranges)
			Total TSET	Subscales C	Subscales P	A	
Andrews, M. M. et al., (2011). Developing a culturally competent workforce through collaborative partnerships. <i>Journal of Transcultural Nursing</i> , 22 (3), 300-306. Andrews, M. M. et al., (2011). Developing a culturally competent workforce through collaborative partnerships. <i>Journal of Transcultural Nursing</i> , 22 (3), 300-306.	<u>Objective 1:</u> 702 RNs and 91 NPs	Interventional, pre and post-test	N/S	Y	Y	Y	Total: N/I Subscales: N/I
	<u>Objective 4:</u> 600 BS and graduate students		N/S	Y	Y	Y	
Odreman, H. A., (2015). <i>Videotaped role-play simulation in teaching transcultural self-efficacy to interprofessional healthcare students.</i> (Doctoral dissertation). Walden University, Minneseto. Retrieved from ProQuest Dissertations and Thesis. (Accession Order No. UMI3739773).	196 Interprofessional education (IPE) students	Quasi experimental	Y	N/S	N/S	N/S	Total: N/I Subscales: N/I
Sarafis, P. A., & Malliarou, M. (2016). TSET Research Exhibit 4.2, Evaluating the Transcultural Self-Efficacy Perceptions of Baccalaureate Nursing Students in Greece. In M. R. Jeffreys (3 rd Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (3 rd ed. pp. 107–110). New York: Springer Publishing.	136 BS + 202 staff nurses (Greece)	Cross-sectional, Factor analysis	N/S (Six factors were revealed)	Y	Y	Y	Total: .96 Subscales: .90 - .96

E. Graduate Nursing Students: (Master of Science in Nursing [MSN] and Doctoral of Nursing Practice [DNP])

Author / Citation	*Sample	Study Design	Statistically Significant Differences or Changes (*p < .05)				Cronbach Alpha (Ranges)
			Total TSET	Subscales			
			C	P	A		
Creech, C., Filter, M., Wehbe-Alamah, H., McFarland, M. R, Andrews, M., & Pryor G. (2017). An intervention to improve cultural competence in graduate nursing education. <i>Nursing Education Perspectives</i> , 00 (0), 1-4.	53	Pre and post-test, intervention	Y	Y	Y	Y	Total: N/I Subscales: N/I
Lonneman, W. H. (2014). <i>Dealing with realities: Teaching interventions to increase cultural awareness in nursing students.</i> (Unpublished doctoral Capstone paper). Madonna University, Livonia, MI. Lonneman, W. H. (2015). Teaching strategies to increase cultural awareness in nursing students. <i>Nurse Educator</i> , 40 (5), p. 285-288.	91 MSN Intervention group: (n = 34) Control group: (n = 57)	Quasi-experimental, non-probability convenience sample	N/S	N/S	N/S	Y	Total: N/I Subscales: N/I
Singleton, J. K., & Slyer, J. T. (2015). TSET Research Exhibit 7.2 Evaluating the enhancement of cultural competence throughout a Doctor of Nursing Practice (DNP) program. In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (3 rd ed., pp. 224–227). New York: Springer Publishing.	16 DNP	Longitudinal	Y	Y	Y	Y	Total: .99 Subscales: .98 - .99
Singleton, J. K. (2017). An enhanced cultural competence curriculum and changes in transcultural self-efficacy in doctor of nursing practice students. <i>Journal of Transcultural Nursing</i> 00(0), p. 1-7.	54 DNP	Pre and post-test	Y	Y	Y	Y	Total: .99 Subscales: N/I

F. Registered Nurses (RNs), multidisciplinary health providers (MHP), and employees (licensed and unlicensed)

Author / Citation	*Sample	Study Design	Statistically Significant Differences or Changes (*p < .05)				Cronbach Alpha (Ranges)
			Total TSET	Subscales C	P	A	
<p>Andrews, M. M., & Collins, J. (2015). Using Culture Care Theory as the organizing framework for a federal project on cultural competence. In M. McFarland & H. Wehbe-Alamah, (Eds.) <i>Leininger's culture care diversity and universality: A worldwide nursing theory</i> (3rd Edition, p. 537-552). Boston, MA: Jones and Bartlett.</p> <p>Andrews, M. M., & Collins, J. (2015). TSET Research Exhibit 16.1. Using Culture Care Theory as the organizing framework for a federal project on cultural competence. In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (3rd ed., pp. 542–544). New York: Springer Publishing.</p>	1,024 RNs 113 NPs 149 faculty 1,830 students	Interventional	Y	Y	Y	Y	Total: N/I Subscales: N/I
Bloch, C. (2012). <i>Cultural competency intervention program for healthcare workers</i> . (Doctoral dissertation). Azusa Pacific University, Azusa, CA. Retrieved from ProQuest Dissertations and Thesis. (Accession Order No. UMI 3548294).	21 healthcare workers	Quasi-experimental, pre, immediate post-test, and 1-month repeated post-test	Pre and post-test: N/S	Y	Y	Y	Total: N/I Subscales: N/I
			Post-test – Follow up: N/S	N	N	N	
Chen, J. (2014). TSET Research Exhibit 4.3. Exploring the Validity of the Transcultural Self-Efficacy Tool (TSET)-Chinese With Staff Nurses in China. In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (3 rd ed., pp. 110–112). New York: Springer Publishing.	1034 staff nurses (China)	Factor analysis	N/I (Three factors were revealed)	Y	Y	Y	Total: .99 Subscales: .91 - .92

Courtney, R., & Wolgamott, S. (2015). Using Leininger's theory as the building block for cultural competence and cultural assessment for a collaborative care team in a primary care setting. In M. McFarland & H. Wehbe-Alamah, (Eds.) <i>Leininger's culture care diversity and universality: A worldwide nursing theory</i> (3 rd Edition, p. 345-368). Boston, MA: Jones and Bartlett.	11 healthcare team members	Mixed method, qualitative and longitudinal	N/S	N	Y	Y	Total: N/I Subscales: N/I
Dolgan, C.M. (2001). <i>The effects of cultural competency training on nurses' attitudes.</i> (Unpublished master's thesis). Cleveland State University, Cleveland, OH.	19 staff nurses	Pre and post-test	N/S	Y	Y	Y	Total: N/I Subscales: N/I
Francisco, S. (2013). <i>The effects of nurses' cultural competency upon patient satisfaction within BLHC healthcare system.</i> (Unpublished doctoral dissertation). Argosy University, Chicago, IL.	118 RNs	Correlational	N/S	Y	Y	Y	Total: N/I Subscales: N/I
Harper, M. G. (2008). <i>Evaluation of the antecedents of cultural competence.</i> (Doctoral dissertation). The University of Central Florida, Orlando, Florida Available from ProQuest Dissertations and Theses database. (UMI No. 3319244). (An online Delphi method study)	35 international nurse researchers	On-line Delphi method	N/A	N/A	N/A	N/A	Total: N/A Subscales: N/A
Hyun, D. J. J. (2012). <i>Development and evaluation of a teaching and learning approach in cross-cultural care and antidiscrimination in university nursing students.</i> (Unpublished doctoral dissertation). St. Paul University, Manila, Philippines.	260 staff nurses (Philippines)	Descriptive, correlational	(Statistically significant correlations only between age, educational attainment, willingness to work abroad and transcultural self-efficacy (TSE) perceptions were found).				Total: N/I Subscales: N/I
Kim, S-H. (2013). Transcultural self-efficacy and educational needs for cultural competence in nursing of Korean nurses. <i>Journal of Korean Academy of Nursing</i> , 43 (1), 102-113.	285 RNs (South Korea)	Single survey design	N/S	Y	Y	Y	Total: .98 Subscales: N/I

Kim, Y. K. & Lee, H. (2016). The effectiveness of a cultural competence training program for public health nurses using intervention mapping. <i>Journal of Korean Academy of Community Health Nursing</i> , 27 (40), 410-422.	41 Public Health Nurses (experimental : 21, control: 20) (Korea)	Mixed method design	Y	N	Y	N	Total: .99 Subscales: .98 - .99
Li, J. He Z., Luo Y., & Zhang R. (2016). Perceived transcultural self-efficacy of nurses in general hospitals in Guangzhon, China. <i>Nursing Research</i> , 65(5), 371–379.	1156 RNs (China)	Cross-sectional	N/S	Y	Y	Y	Total: .99 Subscales: .97 - .99
Malliarou, M., Oikonomou, A., Nika, S., & Sarafis, P. (2017). Greek military nurses readiness to provide transcultural care to immigrants. <i>British Journal of Medicine & Medical Research</i> , 19(6): 1-11.	127 Military Nurses (Greece)	Non-experimental, Correlational	N/A	N/A	N/A	N/A	Total: N/I Subscales: .98
Nokes, K. M., & Gilmartin, M. J. (2014). <i>Exploring relationships between transcultural self-efficacy and core self-evaluations in Clinical Nurse Leader® graduate students</i> . (Unpublished study). Hunter-Bellevue School of Nursing, NY.	71 clinical nurse leader (CNL) graduate students	Cross-sectional	N/A	N/A	N/A	N/A	Total: N/I Subscales: .96 to .99
Olaivar, O. K. (2014). <i>Transcultural self-efficacy perceptions of nurse practitioners in Fresno, California</i> . (Master thesis). California State University, Fresno, CA. Available from ProQuest Dissertations and Theses database. (UMI No. 1553972).	30 NPs	Descriptive, Correlational	N/S	Y	Y	Y	Total: .99 Subscales: .97 to .99
Simmons, S. (2015). <i>Impact of nurses' transcultural self-efficacy on patient satisfaction scores among patients of varying cultural backgrounds</i> . (Doctoral dissertation). Capella University, Capella University, Minneapolis, MN. Available from ProQuest Dissertations and Theses database. (UMI No. 3732853).	131 RNs	Descriptive, cross-sectional	N/S	N	N	N	Total: N/I Subscales: N/I

Toney, D. A. (2004). <i>Exploring the relationship between levels of cultural competence and the perceived level of quality care among registered nurses caring for culturally diverse patients.</i> (Doctoral dissertation). Capella University, Minneapolis, MN. Available from ProQuest Dissertations and Theses database. (UMI No.3132753).	75 RNs	Descriptive, correlational	N/S	Y	Y	Y	Total: N/I Subscales: N/I
Velez, J. (2005). <i>The effects of cultural competency training using self-instruction on obstetrical nurses' awareness, knowledge and attitudes.</i> (Unpublished master thesis). Cleveland State University, Cleveland, OH.	20 Obstetrical nurses	Quasi-experimental, one group, pre and post-test	Y	Y	Y	Y	Total: N/I Subscales: N/I

G. Faculty and/or Academic Administrators

Author / Citation	*Sample	Study Design	Statistically Significant Differences or Changes (* p < .05)				Cronbach Alpha (Ranges)
			Total TSET	Subscales C	Subscales P	Subscales A	
Farber, J. (2015). <i>The relationship between cultural experiences and perceived transcultural self-efficacy of nurse faculty</i> . (Unpublished doctoral dissertation), Widener University, Chester, PA.	118 full time nursing faculty	Descriptive, Correlational	N/S	Y	Y	Y	Total: N/I Subscales: N/I
Hoyer, G. (2013). <i>Transcultural self-efficacy of nursing education leaders and faculty related to non-binarysexual identities</i> . (Doctoral dissertation). Eastern Michigan University, Ypsilanti, MI. Available from ProQuest Dissertations and Theses database. (UMINo.3619027). Hoyer, G. (2016). See TSET Research Exhibit 7.1. Exploring transcultural self-efficacy perceptions of nursing education administrators and faculty related tolesbian, gay, bisexual, transgender (LGBT) issues. In M. R. Jeffreys (Ed.), <i>Teaching cultural competence in nursing and health care: Inquiry, action, and innovation</i> (3rd ed., pp. 222–223). New York: Springer Publishing.	535 nursing administrators and faculty	Non-experimental, Correlational	N/A	N	N	N	Total: N/A Subscales: N/A
Kontzamanis, E. (2013). <i>An investigation of the relationship between nursing faculty attitudes toward culturally diverse patients and transcultural self-efficacy</i> . (Unpublished doctoral dissertation). The CityUniversity of New York (CUNY) Graduate College, NY, NY. Available from ProQuest Dissertations and Theses database. (UMI No. 3561605).	65 faculty	Descriptive, Correlational	N/A	N/A	N/A	N/A	Total: N/I Subscales: .96 to .99