Use of Simulation to Integrate Cultural Humility Into Advanced Health Assessment for Nurse Practitioner Students

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ABSTRACT

Background: Increasing cultural humility among nursing students requires the application of knowledge and skills. The integration of an Objective Structured Clinical Examination (OSCE) offered nurse practitioner students practice in simulation. Method: This learning activity included pre- and postassessments of knowledge regarding cultural issues and level of student satisfaction. Course content included an exemplar video and a simulation interview with an African American standardized patient. Results: Of the 65 students enrolled, 97% completed OSCE interviews and 81% completed pre- and postsurveys. A 2-domain × 2-time within-subjects ANOVA indicated a statistically significant interaction effect, reinforced by descriptive statistics. Follow-up paired t tests detected a significantly large knowledge increase. Standardized patient scenarios scored highest for satisfaction, followed by critical thinking, and with self-confidence scoring lowest. Conclusion: The favorable knowledge outcomes from this teaching intervention support future applications of OSCE methodology for teaching sensitive cross-cultural content. [J Nurs Educ. 2017;56(9):567-571.]

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In accordance with nurse practitioner (NP) core competencies (National Organization of Nurse Practitioner Faculties, 2012), advanced health assessment integrated course content to enhance students’ ability to provide high-quality nursing care to a culturally diverse population. Annual student course evaluations consistently indicated that expectations on cultural humility were not met. To bridge this gap, an Objective Structured Clinical Examination (OSCE) was implemented to improve cultural humility. This educational innovation assessed pre- and postintervention effects on NP students’ knowledge and awareness of cultural diversity. The multiple components of this module included a pretest cultural assessment survey; didactic content, with a reference video depicting a cultural assessment interview; a digital recording of each student-conducted clinical interview with a male African American standardized patient (SP) with hypertension; and a posttest cultural assessment and satisfaction surveys.


Teaching nurses essential scientific and clinical skills requires both classroom didactics and clinical practice. Transformational learning theory, using communicative learning through dialogue, provided the theoretical framework for this educational intervention. This theory supports the concept of raising consciousness through the transformation of meanings (Mezirow & Taylor, 2009). This project provided an innovative mechanism for delivering cultural humility content and cultural awareness by interviewing SPs.

The overarching aim of this teaching innovation was to enhance the cultural humility and interviewing skills of NP students. Cultural humility is an ongoing process. It requires sustained openness of hearts and minds to gain appreciation of another’s perspective without judgment. Cultural humility acknowledges the influence of cultural factors on health care perceptions and treatment decisions (Fahlberg, Foronda, & Baptiste, 2016).

This concept was based on a previously piloted OSCE innovation to teach cultural humility to first-year nursing students at another university (Ndiwane, Koul, & Theroux, 2014). Findings
indicated that the OSCE integration exercise helped students to gain insight in critical thinking and cultural competence and enabled most of them (76%) to ask culturally appropriate questions of their patients (Ndwane et al., 2014).

Literature Review

Limited studies have cited the use of simulation in nursing education with minority ethnic groups in cultural humility training. Cultural humility incorporates a commitment to lifelong self-reflection practices that address patient–provider inequities, advocating on behalf of individuals and communities, and establishing mutually beneficial and nonjudgmental relationships (Tervalon & Murray-Garcia, 1998). By the year 2042, it is projected that the U.S. population will be predominantly non-White; therefore, incorporating cultural humility is paramount for all nursing students (Darnell & Hickson, 2015).

McWilliam and Botwinski (2012) indicated that SPs in the OSCE exercise provided reliable and valid clinical experiences to nursing students. Distinct from high-fidelity simulation, SPs preserve nurse–patient verbal and nonverbal communication cues. Using SPs may strengthen students’ health assessment skills prior to patient encounters in the clinical setting. Student preparation for the OSCE, and subsequent debriefing and feedback on performance have been identified as critical components of OSCE success (Traynor & Galanouli, 2015). Face-to-face debriefing with faculty feedback provides a more positive effect on student learning than Web-based, written feedback, and it provides a student-centered learning environment that promotes critical thinking (Elson & Axelson, 2012; Jefferies, 2005; Maloney, Storr, Morgan, & Ilic, 2012; Overstreet, 2010; Wickers, 2010).

The use of video playback following the OSCE exercise can be a powerful tool to reinforce reflective aspects of the learning experience (Jefferies, 2005; Maloney et al., 2012). When students contrast their personal performance against a benchmark, positive effects exist on clinical skill acquisition (Maloney et al., 2012). The current project addressed the current recommendations to integrate classroom teaching with clinical practice (Benner et al., 2010) and to create a higher level of patient-centered education (IOM, 2010).

Method

Preintervention activities included the development of didactic content, the creation of a benchmark video, and recruitment and training of culturally diverse SPs.

Students of the adult gerontological advanced health assessment class were recruited. The demographic composition of students in the school of nursing is 62% White, 10% Asian, 5% African American, 5% Hispanic, and 18% other. These direct-entry students were pursuing a Master’s of Science degree in nursing. Their ages ranged between 20 to 38 years, with an average age of 21 years. In total, 64% of the students indicated they had no prior experience taking a course, nor a program on cultural humility. Participants completed a pretest, viewed the exemplar video, conducted and reviewed their own video-recorded health history interview with an African American SP. Students then completed a posttest outcome evaluation of knowledge and satisfaction. The university’s institutional review board approved this project as exempt for educational quality improvement purposes.

Didactic Content

Faculty posted the course content for students to review prior to class. Content included two seminal articles on cultural humility in therapeutic communication (Carrillo, Green, & Betancourt, 1999; Tervalon & Murray-Garcia, 1998).

Reference OSCE Video

Students viewed an exemplar video of an NP conducting a cultural health assessment interview with an African American SP. Students then completed a posttest outcome evaluation of knowledge and satisfaction. The university’s institutional review board approved this project as exempt for educational quality improvement purposes.

Recruitment and Training of Standardized Patients

African American actors were recruited from a local talent agency. Course faculty rehearsed the scenario with the actors using a detailed script and exemplar video. Each SP received
instructions on completing the student feedback form. Standardized patients were interviewed consecutively by four students in timed intervals, with breaks to compile feedback on the adapted MIRS (Master Interview Rating Scale) (Association of American Medical Colleges, 2006). The SPs evaluated student performance in obtaining culturally relevant information about the SP’s illness during the interview process.

In-Class Activities

A project faculty member described the study and answered any student questions. The pretest assessed knowledge of cultural competency, followed by an in-class presentation (30 to 45 minutes) on cultural sensitivity content. The cultural OSCE module used a total of 80 minutes of class time and was not graded.

Simulation Experience With OSCE

Course faculty briefed the students on the SP experience and distributed the patient information. Students conducted a 20-minute health interview with the SP. The student–SP interaction was digitally recorded and remotely observed by course faculty.

Watching the Videos

Students received a digital recording of their own interview and were instructed to critique their performance in comparison with the reference video.

Debriefing Discussion and Satisfaction Survey

A debriefing session was conducted by course faculty after students had critiqued their own videos. The faculty encouraged open dialogue, listened to student concerns, and validated their challenges and successes.

Posttest and Satisfaction Surveys

Following the OSCE experience, the students completed the posttest and student satisfaction survey (Figure 1).

Instruments

The Cultural Assessment Survey, used by permission from Godkin and Savageau (2001), measured students’ awareness of cultural diversity and biases regarding cultural issues and practices. This instrument consisted of 17 items. Three items recorded demographic data. Responses to seven knowledge items were measured with a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

The Student Satisfaction Survey, used by permission from Robinson-Smith, Bradley, and Meakim (2009), consisted of 10 questions with a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The 10 questions were grouped into three subscales that were used to evaluate (a) satisfaction with learning, (b) self-confidence in learning, and (c) the effect of SP care scenarios on critical thinking. Two open-ended questions asked the students what they liked most and least about the learning experience.

Data Analysis

All quantitative statistical tests were conducted using IBM® SPSS® Version 22 with alpha set at p < .05. Means and standard deviations were conducted for the continuous variables, whereas frequencies and percentages were reported for categorical variables. Internal consistency was assessed with Cronbach’s alpha with a coefficient of .70 to be acceptable for research purposes. A 2-domain (opinion [coded as 1], and knowledge [coded as 2]) by 2-time (pre–post OSCE) within-subjects ANOVA was conducted with follow-up paired t tests. Qualitative data were interpreted through content analysis.

Results

Sixty-three students volunteered to participate in the project; 57 identified as women and 6 as men, representing 97% of class enrollment. Eighty-one percent (i.e., 51 students) completed pre- and postsurveys.

Outcomes: Knowledge

A statistically significant increase existed in Knowledge, F(1, 51) = 13.64, p = .001, η² = .21. The means and standard deviations are presented in Table 1.

Significant item differences existed between the pre- and posttests, with the exception of item 2, “Awareness of the obstacles faced by people of color in seeking access to health care locally,” F(6, 42) = 16.00, p < .001, η² = .24 (Figure 2).

Outcomes: Satisfaction, Self-Confidence, and Critical Thinking

Internal consistency as assessed by Cronbach’s alpha reported coefficients of .88, .78, and .82 for satisfaction, self-confidence, and critical thinking, respectively. Items were ag-

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**TABLE 2**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
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<tbody>
<tr>
<td>1. Satisfaction</td>
<td>3.83</td>
<td>.674</td>
<td>40</td>
</tr>
<tr>
<td>2. Self-Confidence</td>
<td>3.19</td>
<td>.782</td>
<td>40</td>
</tr>
<tr>
<td>3. Critical Thinking</td>
<td>3.59</td>
<td>.757</td>
<td>40</td>
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</tbody>
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Figure 2. Pre- (1) and posttest (2) results; knowledge by items 1 through 7.

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The Master Interview

The opportunity to discuss race and health. One student stated, “I liked potential learning, confidence, making learning real, and the opportunity to discuss race and health. One student stated, “I liked identifying methods of improvement. Scores indicated the need for future research investigations to identify methods of improvement. No significant differences existed between satisfaction and critical thinking scores. No significant differences existed between satisfaction and critical thinking scores. The means and standard deviations are presented in Table 2. Standardized patient scenarios obtained the highest overall scores for satisfaction, followed by critical thinking, with the lowest scores obtained for self-confidence (Figure 3).

Qualitative Results From the Student Satisfaction Survey

A content analysis of qualitative data was performed on students’ open-ended comments citing what they liked best and least. Students liked applying new interview skills in a practice environment. Although experience with the SPs raised students' consciousness about race and sexual orientation, students reported that their own discomfort with these questions took them by surprise.

Discussion

Results on the seven knowledge items, consistent with those of Ndiwane et al. (2014), demonstrated a statistically significant increase in posttest responses \( p < .001 \), suggesting that students felt more knowledgeable about patients’ cultural differences after the OSCE. Posttest responses indicated that most students agreed or strongly agreed they were satisfied with the cultural OSCE learning experience, and that the SP care scenario enhanced their critical thinking skills. Robinson-Smith et al. (2009) reported similar results. Low student self-confidence scores indicated the need for future research investigations to identify methods of improvement.

Positive themes from the content analysis included experiential learning, confidence, making learning real, and the opportunity to discuss race and health. One student stated, “I liked discussing the ways a patient’s culture affects their health care and the ways a provider can elicit information from a place of respect.” Negative themes from student feedback included self-consciousness and feeling underprepared. Several students described the experience as stressful and uncomfortable, with one student stating, “The fact that it was videotaped made [me] more anxious.” These outcomes highlighted multiple benefits of practicing interpersonal and assessment skills, problem solving, and synthesis of clinical knowledge through OSCE simulations (McWilliam & Botwinski, 2012).

Conclusion and Recommendations

As a teaching modality, OSCEs provide a better measurement than self-assessment or paper and pencil for assessing clinical competence (McWilliam & Botwinski, 2012). The OSCE can help to identify both clinical strengths and weaknesses and also effectively demonstrate a variety of interpersonal clinical behaviors, including interviewing and assessment skills, problem solving, patient teaching, and synthesis of clinical knowledge (McWilliam & Botwinski, 2012). Cultural humility may be associated with improved patient outcomes (Aeder et al., 2007). The favorable outcomes reported from this educational innovation support future applications for using OSCE as a methodology for teaching sensitive cross-cultural content.

References


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