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An Investigation of the Development of Cultural Competence in Undergraduate Nursing Students: A Mixed-Methods Study

Janet G. Knecht, Joyce. S. Fontana, Beth Fischer, Jessie Tetrault, Katherine Spitz

Department of Nursing, University of Saint Joseph, West Hartford, USA

*Corresponding author: Janet G. Knecht, Department of Nursing, University of Saint Joseph, West Hartford, USA. Tel: +1-8602315280; Email: jknecht@usj.edu

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Abstract

Background: American nursing students are required to competently care for patients from diverse cultural backgrounds, yet few studies have demonstrated effective methods for increasing cultural competence in undergraduate nursing programs.

Methods: A convergent mixed-methods study explored the effect of participation in an embedded, culturally diverse service-learning program on students' development of cultural competence. The Inventory for Assessing the Process of Cultural Competence Among Health Care Professionals-Student Version (IAPCC-SV) and focus group interviews were used for data collection and analysis.

Results: Students who participated in the culturally diverse program had significantly higher mean scores on the IAPCC-SV. Focus group interviews revealed themes of enlightenment, competence and connection, which were congruent with the quantitative data.

Conclusion: Results support the use of a culturally diverse service learning program as a means to increasing cultural competence in undergraduate nursing students.

Keywords: Cultural Competence; Diversity; Humility; Nursing Education and Service-Learning, Nursing Students; Immersion/ Experience; Only Literature Pertaining to Nursing Was Considered

Background and Significance

The world is a global community increasingly interconnected by technology and transportation. Nursing students throughout the United States are required to competently care for patients of many ethnicities. The American Association of Colleges of Nurses [1] and other accrediting bodies require the integration of culture into baccalaureate curriculum and provide the standards to measure them. Students are grossly underprepared to care for the diverse landscape of population.

Almost 40 percent (n=239,895,283) of the population in the United States identifies their race as non-white [2]. Hispanic individuals comprise between 17 and 20 percent (n=6,3780,000) followed by Black individuals from any nation at 13 percent (n=41,457,000). Middle Eastern, Asian, American Indian, Pacific Islander, and two or more races comprise other top ranking categories. Almost 15 percent of American citizens (n=47,835,000) between 2009 and 2013 identified themselves as foreign born and 33 percent (n=105,237,000) spoke a language other than English in the home [2].

Religion parallels race in the cultural development of individuals [3]. Over 75 percent of Americans (n=235,500,00) identify themselves as Christian. Other religions include Judaism, Buddhism, Muslim, and Hinduism (U.S. Census Bureau, 2014). Among all of these are many subgroups. Globally, slightly more than 30 percent (n=2,200,000,000) of the population self-identify as Christians with 23 percent (n= 1,500,000,000) Muslims, and 15 percent (n=1,000,000,000) Hindus [3].

Research has demonstrated that both baccalaureate and graduate prepared nurses are inadequately prepared to provide culturally-competent care to the increasing diversity of our population [4]. Classroom education of nursing students about the values and beliefs of individual cultures can foster stereotypes

and generalizations of populations [5]. Critical examination of the complexity of disparities is required to begin to understand current perspectives of individuals and populations facing complicated barriers. Vanderburg (2010) argues, "attempts to apply culture theory, without knowledge of important historical, political, and economic factors, has often resulted in oversimplified versions of what was originally intended" (p. 238).

Quality patient care includes an appreciation for the patient's values and belief system in any setting to optimize successful outcomes of patients. Quality and Safety in Education of Nurses' (QSEN) "Patient-Centered Care" competency requires attention to patient's preference, values, and needs [6].

Student nurses must be exposed to a variety of encounters that require them to critically reflect, examine their values and beliefs (AACN, 2011), and to foster the development of Emancipatory Knowing [7]. Students are then required to approach uncertainty, complexity and multiple perspectives, through others' eyes or worldviews [8]. Critical reflection fosters the examination of unintended bias [9]. Avis and Foster (2006) argure that critical reflection in tandem with evidenced-based practice promotes the understanding of the experience and awareness of the background. According to Campinha-Bacote (2014) cultural encounters is a pivotal construct that provides the foundation to begin the development of cultural competence.

A small Catholic University, committed to service, developed a partnership with an inner city parish in an attempt to provide a more socially relevant curriculum and prepare interdisciplinary students to confront the issues and challenges of disparity. The service-learning program has been growing for over ten years ago. Students engage clients to provide health screenings, teaching, and referrals at soup kitchens, subsidized and transitional housing programs, and mobile health vans weekly throughout the calendar year.

Review of Literature

A search of the literature was conducted using online reference databases from 1990-2015. CINAHL Plus with Full Text, PubMed, and PsycINFO were searched using the The negative consequences resulting from poor nurse-patient relationships in the presence of cultural differences has been presented Browne & Fiske, 2001; Browne, 2007; Johnstone & Kanitsaki, 2008. Difficulties and challenges described by nurses included their awareness of their lack of understanding of patients' cultural backgrounds and the nurses' inability to assess patients' priority concerns due to this lack of understanding. The perceptions of registered nurses and baccalaureate students' caring for patients of different cultures has also been described by several researchers [10]. Students verbalized concern and inhibition when addressing patients of different races and ethnicities McClimens et al., 2014. Other studies noted the lack of student and faculty satisfaction in the substantive discussion of cultural concepts and issues within the curriculum.

Kokko [11] conducted a systematic literature review of seven studies conducted in Scandinavia, Australia, and the UK, that sought to examine the development of cultural competence in traditional undergraduate baccalaureate nursing students. The studies provided anecdotal evidence of students participating in study abroad programs. All of the studies included in the review focused on qualitative data harvested from journals, interviews, and observation. Qualitative themes that emerged were the students' perceived increased in their cultural knowledge base and personal growth.

Caffrey, Neander, Markle, and Stewart (2005) demonstrated increased self-perceived knowledge, self-awareness, and comfort with skills of cultural competence in a small sample of students (22) who participated in integrating cultural content (ICC) and those who participated in an additional 5-week clinical (ICC plus) immersion program (7). Cultural competence was measured using the Caffrey Cultural Competence in Healthcare Scale (2005) [12].

In addition, other studies presented descriptions of cultural immersion experiences of nursing students Jones, 2012; Long, 2014. Ultimately, studies were located that measured cultural competence before and after a community clinical rotation Goldberg & Coufal, 2009; Amerson, 2010; however, none reflected a semester-long community clinical service-learning experience with the participation in programs closer to home.

Kardong-Edgren and Campinha-Bacote [13] measured the cultural competence scores of students from four different baccalaureate programs upon graduation. Two utilized Leininger's model of transcultural nursing and one program employed no specific model to integrate culture throughout the curriculum. One program included a two-credit culture course; however, there was no significant difference in cultural competence between the programs and students only scored in the culturally aware range.

Finally, it is well documented that nursing faculty are often ill-prepared to present effective cultural material Bond, 2004; Leininger & McFarland, 2002. No mixed-methods research could be found that sought to measure the effect of an innovative embedded service-learning curriculum that emphasized critical reflection, on the development of cultural competence in nursing students. This study was designed to address this gap.

Theoretical Framework

The Process of Cultural Competence in the Delivery of Healthcare Services [14] is the framework to guide the proposed study. Cultural competence is defined as "the process in which the healthcare provider continuously strives to achieve the ability to

work effectively within the cultural context of a client, individual, family or community" (Campinha-Bacote, 2003, p. 54). It is a dynamic process meant to continue throughout one's lifetime. The framework includes five constructs: 1) cultural awareness is the self-examination phase; 2) cultural knowledge is the sound information the student seeks; 3) cultural skill is the ability to conduct a culturally sensitive assessment; 4) cultural encounters is the process of engaging in cultural interactions; 5) cultural desire is the motivation of students to become engaged in the process. Competence develops when one fully synthesizes the five concepts. Campinha-Bacote suggests that desire must be present to move forward. Individuals must want to consider multiple perspectives. In addition, student must be presented with opportunities for cultural encounters.

Aim

The aim of this mixed-methods study was to explore whether participation in diverse clinical settings in an ethnically diverse inner city that serve the underserved followed by guided critical reflection would significantly increase students' level cultural competence as measured by the Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version (IAPCC-SV) © [14].

Research Questions

Quantitative

What is the effect of participation in diverse service learning clinical placements vs. traditional clinical placements on cultural competence scores in students from a traditional undergraduate program?

Qualitative

What are the common themes shared by students who participate in diverse clinical settings that serve the underserved?

To what extent do the quantitative scores of students participating in diverse clinical settings that serve the underserved inform the themes derived from qualitative interviews?

Methodology Worldview: Pragmatism

The philosophical foundation of the mixed methods approach to research is pragmatism Creswell and Tashakkori, 2007. This approach blends the singular and multiple views of reality [15]. Mixed-methods researchers sought to describe a problem within the social political landscape [16]. Morgan (2007) advocates this method provides the opportunity for invesstigators to move between the induction/deduction and subjectivity/objectivity throughout the research process. It is through this working back and forth between the theory and approaches to knowledge that the depth of the pragmatic approach is discovered.

Design and Methods

Mixed-Methods

A convergent parallel mixed-methods study was conducted. It involved collecting quantitative and qualitative data on senior students at the completion of their community health class within a traditional baccalaureate-nursing program at a small urban university. Grounded in the Patterns of Knowing [17], the curriculum seeks to provide relevant community clinical experiences to reveal emancipatory knowing [6]. As part of their undergraduate nursing curriculum, nursing students from the University participated weekly in many different community-based sites in an inner city. The community class is placed during the students' last semeseter in tandem with their capstone clinical course. The Diverse Clinical Settings (DCS) sites include the Wellness Center which provides transitional housing and support services to women who have a history of substance abuse and homelessness. Students also work with a community meals program, a program offering a day shelter, noon meal, and support services to the underserved population of the inner city. Students work side-by-side with transition nurses in clinics in subsidized housing complexes to assess, triage, and refer underserved patients. Finally, students provide assessment and triage for a mobile health clinic offering free primary health care services to the uninsured population. Through these cites, students provide outreach services to the underserved population in greater Hartford. Durning the study, all students were brought together weekly in groups of 6-8 to engage in critical reflection facilitated by experienced faculty in nursing and social work. The Traditional community settings (TCS) included students working with visiting nurses at regional Visiting Nurses' Associations (VNA). In these settings, students are assigned to a visiting nurse during each weekly clinical experience and travel with him/ her to patients' homes to fulfill the plan of care. These students also have post-conference with the university clinical faculty.

Instrument

The Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version (IAPCC-SV) © [14] was used to measure the cultural competence of students. It was developed based on the previously validated Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals- Revised (IAPCC-R) (Campinha-Bacote, 2007). It includes 20-items that measure five constructs: desire, awareness, knowledge, skill, and encounters. A four-point Likert scale measures responses from strongly agree, agree, disagree, to strongly disagree. Results indicate the level of cultural competence of the student: cultural proficiency, cultural competence, cultural awareness or cultural incompetence. Higher scores depict a higher level of cultural competence (Table 1).

Level of Cultural Competence	Score
Culturally Proficient	75 - 80
Culturally Competent	60 - 74
Culturally Aware	41-59
Culturally Incompetent	20-40

Table 1: Level of Cultural Competence.

It has been used extensively and previously validated with the average Cronbach's alpha of 0.78 (Fitzgerald, Cronin, & Campinha-Bacote,2009).

Sample

The sample for this study was drawn from the university's undergraduate program, which primarily serves low- and moderate-income students, and is increasingly educating students from underserved populations. Over 95 percent of the undergraduate women receive need-based financial aid and 41 percent receive Pell Grants, which are provided by our government to exceptionally low-income students. While only 28 percent of students self-identify themselves as black, African American, and/ or Latina, the university approximates that this actual percentage is approximately 40 percent. In addition, about 35 percent of its undergraduate full-time female student's state that they are the first in their families to go to college, but this characteristic is also likely underreported.

A total of 58 students enrolled in the community course. Twenty-five students were invited to participate in Diverse Clinical Settings (DCS) serving the underserved. Two students opted to stay in Traditional Community Settings (TCS). Two other students were invited and accepted. 25 students participated and 33 students comprised the TCS control group. All students in the DCS study group completed the survey with 28 competing it from the control group. In all, 53 students completed the inventory.

The university is a women's undergraduate college; therefore, all participants were women with an average age of 23, range 21-38. The average age of the control group was 22.3 compared to 24 in the control group. All students had completed two global issue courses to fulfill the university undergraduate requirement for the baccalaureate degree. The DCS and TCS groups had one black student in each group, two Hispanic students in the DCS group and three in the TCS group, and one Asian and Indian student participated in the TCS group).

Procedure

Institutional Review Board approval and informed consent were obtained prior to commencement of the study. Undergraduate nursing students who were enrolled in their senior level community health course comprised the sample of students (n=58). Half participated in DCS that serve the underserved and the other half attended TCS at visiting nurses' associations weekly to fulfill their community course clinical requirement. While all students participated in post-conference with the aassumption of critical reflection, students who participated were afforded the opportunity to critically reflect with the faculty advisor and Sister of Mercy with a background in social work. Each participant completed an instrument, the Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Student Version (IAPCC-SV)© [14] upon completion of the curriculum. In addition, each student in the study group participated in a focus group to further inform the quantitative data from the surveys.

Threats to Integrity/ Limitations

Limitations of this study included that students were from one undergraduate female nursing program. Students who did not opt out of participation in the community curriculum may have been more highly motivated to engage in cultural encounters; however, the value of the design and the data collected outweigh the threat. Furthermore, independent student demographic attributes or cultural experiences may contribute to her scores.

The definition of the concepts and the theoretical foundation provided the qualitative researcher with the framework to guide the study and ensure the reliability of data generated. Further protection of integrity was achieved through the careful application of Krippendorff's method of content analysis for qualitative study [18]. The researcher is committed to reflexivity; that is, required to set aside any prior experience or bias with the population in order to enter the qualitative data collection phase and continue to self-reflect throughout the data collection and analysis Beck & Gable, 2012. An audit trail was maintained by the primary researcher in order to provide a reference for future researchers.

Data Analysis

In alignment with the Convergent parallel design, data from the quantitative and qualitative strand were analyzed independently using procedures suited for the methodologic approaches (Creswell and Plano Clark, 2011).

- Quantitative coded data were entered into an SPSS (version 19) data file. Descriptive analyses were examined on all variables organized by race and age. Frequency distributions were analyzed.
- Audiotaped focused group sessions recorded during the qualitative interviews were transcribed verbatim by the researcher. Transcripts were analyzed using Krippendorff's (2004) method of qualitative content analysis to uncover themes.
- Mixed-methods analysis included the identification and comparison of dimensions. Constructs were defined. Side-by-side comparison were conducted during the merging process and finally quotes from the qualitative interviews were used to support analysis (Creswell and Plano Clark, 2011).

Quantitative Results

Independent-samples t-test analyses were conducted to compare the mean IAPCC-SV scores for students who participated in DCS serving the underserved and those who participated in TCS. In addition, independent-samples t-test analyses were conducted to compare scores between the two groups for each of the constructs measured by the IAPCC-SV. The mean IAPCC-SV score for students who participated in DCS group was M= 68.71 (SD=4.9) compared to M= 58.86 (SD=3.2) for the TCS group. Significance was achieved, $p < .001$. A significant difference was also noted between groups in all constructs except awareness. A significant increase was demonstrated in four of the constructs: knowledge (DCS group M = 15.9, SD = 2.1; TCS group M =12.7, SD = 1.6; $p < .001$); skill (DCS group M = 9.3, SD = 1.4; TCS group M =7.3, SD = 1.0; $p < .001$); encounters (DCS group M = 17.4, SD = 1.9; TCS group M =15.0, SD = 1.2; $p < .001$); and desire (DCS group M = 15.2, SD = 0.7; TCS group M =13.2, SD = 1.1; $p < .001$).

Qualitative Results

After completion of these experiences, the students participated in focus groups which were transcribed and analyzed using Krippendorf's Method of Qualitative Content Analysis (2004). Results revealed three themes that mirrored the theoretical constructs of cultural awareness, cultural knowledge and skills, and cultural encounters. The themes identified were: enlightenment, competence, and connection. These themes emerged from the stories told by the students during the focus group interviews. Quotes from the students will be used to validate the derived themes.

Enlightenment

Students described these cultural experiences as "eye opening" and stated that they cultivated in them views that were not previously understood. They consistently referred to being surprised at the unexpected conditions the people they cared for were living in and the lack of resources available to them.

We think about ourselves and our lifestyles and we think what their lives may be like, but we just couldn't have imagined the reality until we saw it.

One student described an encounter with a person who had just been discharged from a local hospital. He was wearing a hospital gown. He still had a bracelet on, gauze taped to both arms. The student was told that the hospital had put him in a taxi and sent him to a shelter. It was dumbfounding to me. I was oblivious that might happen.

All students reflected the sentiments of one participant when she stated: I learned what I could never get from a book.

Students reported being enlightened about the people's motivation to stay healthy and the extent of their ability to manage even with chronic illness and limited assistance. I was surprised by how much they worked to help themselves.

They told stories of how people were coping surprisingly well with serious conditions, advocating for themselves to get the help that they needed. We had a patient that had been discharged after DKA, he was really motivated and knew that he wanted to come and meet with the diabetic educator.

They reflected on the motivation of patients in general. It is frustrating to me that there are patients in better socioeconomic status that lack that motivation. Overall, the students agreed that the experiences opened their eyes to a new reality that they previously had not understood, and their stories confirmed their cultural enlightenment.

Competence

While learning this new reality, although afraid at first, students developed confidence that they had the knowledge and skills to be of assistance, that they were competent and able to face the challenges of the day. We were in the back to take BPs and BSs and we felt like we were helping them. They really appreciated us being there.

They discussed the knowledge they had and the resources they had available which allowed them to help others.

I felt like we had all the resources. If we had questions we had our instructor. If they needed more than we could give, we could refer them somewhere else. We were aware of the resources.

Students developed the knowledge and the skills to work within a broken system and overcome barriers that were encountered each day. They became very resourceful and were proud of what they could do. We had a patient who was discharged on a Sunday. We visited on Tuesday. He did not have any of this medications. He was prescribed cardiac medications and antibiotics. We took the prescriptions to the pharmacy and they delivered them the same day. He had nobody. It was eye opening. It felt really good, he was very appreciative.

Another student expressed her competence in fulfilling the role of advocate for the underserved. I think we are helping to empower people to take better care of themselves and to take control and break down some of those barriers they have encountered from others.

All students expressed confidence that no matter what they encountered, there was something they could do to help. They knew they had something to offer. If they need to talk, you listen. If they need a referral, you try to get them to where they need to be.

The notion of active presence was prominent throughout the qualitative data. Analysis of the transcripts revealed that the presence of the students led to a reciprocal relationship between

members of the community and the students which emerged as the third theme, connection.

Connection

Cultural encounter is the construct that promotes participant engagement in cross-cultural experiences. The University has a continuing presence in the community and the participating students recognized the value this has in forming trusting relationships. We go every week. We go twice a week, 52 weeks a year. We have a continued presence. The students' faces may change, but it is still our school.

The students got to know the community they served and individuals with unique challenges. We saw a lot of different types of people, very diverse. Everyone had a different story to tell. I know most of the people by name and they know my name.

The time immersed in the community allowed the students to develop an understanding of the importance of trust in this therapeutic relationship. Students mentioned that just being present was a key factor in gaining trust. They know us, and they look forward to coming to see us. They may not need their blood pressure or blood sugar checked because they have gotten it under control, but they come to talk to us. They trust us and they continue to ask us questions.

The connection between the students and the community members developed even when barriers existed. The connection was made in other ways. Some of the people we worked with, we did not even speak the same language, but they were willing to share all of their personal health care issues with us. We worked through a translator. We made eye contact, we smiled, we touched.

The participating students came away from the cultural encounters with the knowledge that they had the ability to make a difference in peoples' lives, even for people who were quite different than themselves. If you take the time, especially with people who are not trusting in the health care system or who have a lot of barriers, one interaction can make a difference.

The qualitative data revealed the three themes of enlightenment, competence, and connection in nursing students who engaged in diverse cultural encounters during a semester of community clinical education.

Mixed-Methods Results

A pragmatic approach, which underpins this study, recognizes both a single reality as well as each individual's unique interpretation of experiences. Thus, both realities are blended and informed by the other. This was evident during the mixed method analysis which revealed congruence between constructs measured by the IAPCC-SV and the themes derived from the participant interviews. A unique reality of cultural awareness emerged, which, although not found to be statistically higher in the participating group, was expressed artfully by students describing their cultural experiences as "eye opening". This enlightenment, which was not successfully measured, was nonetheless important to the students.

In alignment with Campinha-Bacote, (2003) students strived to work effectively with individuals within the community setting. A pivotal construct to begin the process of cultural competence [14] is desire. Coupled with multiple cultural encounters students developed knowledge and skills.

All of us said that we don't really see the other side of discharge, what our patients are going through. We take so much for granted. We think about our lifestyles and we think what we think their life may be like but we just couldn't have imagined what this reality is. Until I saw it … Some people really have nothing. They have no support, they have no family, they have no guidance… Another stated, "There seems to be a lot of mistrust in health care system, which when you hear all of these stories…. Why would they trust it… they face so many barriers related to it"?

Students verbalized that patients trusted them to provide accurate information, teaching, and referrals. One student of Hispanic descent had not spoken much Spanish prior to her experience at the mobile van. She related that the patient's need to be understood forced her to overcome self-consciousness in what she perceived as imperfect Spanish. I gave them a voice, so the providers could help them. She reflected that she felt changed by the experience.

Students actively participated in critical reflection following the clinical experience; they discussed events and barriers that led populations to be underrepresented. They looked through others' eyes [8]. This data clearly supports the development of cultural awareness, knowledge and skills, and cultural encounters, all components of the Process of Developing Cultural Competence. A dynamic process meant to continue throughout the nurse's lifetime, students with this clinical experience return after graduation to continue to work in areas in which they had served.

Discussion

The University enrolls students who are often less privileged than most traditional undergraduate nursing majors, yet these students expressed surprise, and articulated enlightenment to a new reality after working with the underserved population. Students within both groups scored high in awareness. There are only three questions defined by this construct and they reflect some information students would glean from the multiple courses in the curriculum: including Fundamentals of Nursing, Community Health Nursing, and Public Health Nursing. Alternatively, cultural awareness is developed through self-examination of personal biases and exposure to different cultural groups [14]. One might argue that one doesn't recognize the lack of awareness until a

process of self-reflection is fostered.

Many publications were located that presented different strategies for the presentation of cultural information to undergraduate nursing students [5] and many more on service-learning experiences Gillis & MacLellan, 2010; Stallwood & Groh, 2011; Terhune, 2006. Few presented the student with a synchronous approach [19,20]. Schaffer et al. (2010) presented population-based competencies to be utilized in public health courses to provide a framework for population-based student projects. Within the competencies students reflect on cultural sensitivity and social justice when developing projects. Lashley (2007) presented a description of a similar partnership program.

A curriculum that focuses on Emancipatory Knowing [7] provides students an environment that offers multiple experiences and perspectives in which to discover uncertainty. Nairn, Hardy, Parumal, and Williams (2004) question the presentation of cultural competence education without a focus on the relationship of power and oppression. In addition, in the absence of social justice conversations, classroom education of nursing students about the values and beliefs of individual cultures fosters stereotypes and generalizations of populations [21].

Cultural knowledge is knowledge of the patient's worldview [14]. It requires some degree of immersion and an open and trusting relationship so that patients express themselves. In addition, students must recognize their ethnocentrism. Cultural skill is the ability to collect relevant health data that is culturally sensitive [14] and provide the necessary health information at the appropriate level of health literacy. Students in this study scored significantly higher in both of these constructs and their words demonstrated their changed perceptions and the ingenuity they utilized to collect assessment data and provide needed care. Within the critical reflection, students verbalized the experience was transformative.

Conclusion

Results of both qualitative and quantitative data analyses support the use of an embedded service-learning program in undergraduate nursing curriculum. In addition to uncovering themes of enlightenment, competence, and connection, reflecting cultural awareness, knowledge/skills and desire, this study demonstrated a statistically significant difference in mean scores on the IAPPCC-SV measuring cultural competence between groups. Students who participated in the embedded service-learning program scored higher when compared to students who participated in ore traditional, less diverse clinical experiences. Taken with the qualitative themes that emerged, the data demonstrates emerging cultural competence in the participating students. As a result, they may be better prepared to care for the increasingly complex and diverse health care population and as a result may be better positioned to challenge the sociopolitical realities that currently contribute to inequities in health care.

All undergraduate nursing students should be afforded this opportunity. If nursing education is to properly prepare students to be culturally competent practitioners, an embedded service-learning experience with underserved populations for undergraduate nursing majors can now be considered an evidenced-based approach to achieving this goal.

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