The Impact of Service-Learning *on Cultural Competence*

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Community-based clinical experiences require students to work in local communities to address health issues of populations and apply population-based interventions. *But communities today are changing.* With approximately one in three residents within the United States members of minority groups (US Census Bureau, 2007), there is concern about the abilities of nurses to provide culturally congruent care. Studies are needed to link the efficacy of specific pedagogies to research-based practice for teaching cultural competence. • Service-learning, a "form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally designed to promote student learning and development" (Jacoby, 1996, p. 5), can introduce nursing students to clients of different cultural backgrounds. With service-learning, students become aware of health care issues faced by clients of different cultures and they learn to provide culturally appropriate care. "Reflection and reciprocity are key concepts of service-learning" (Jacoby, p. 6). • THIS ARTICLE REPORTS ON A STUDY DESIGNED TO EVALUATE THE SELF-PERCEIVED CULTURAL COMPETENCE OF BACCALAUREATE NURSING STUDENTS ENROLLED IN A COMMUNITY HEALTH NURSING COURSE FOLLOWING THE COMPLETION OF SERVICE-LEARNING PROJECTS WITH LOCAL AND INTERNATIONAL COMMUNITIES. Students worked in clinical groups to complete an in-depth community assessment, identify community health needs, develop an educational program, and implement the plan with their assigned community. A special emphasis was placed on working with at-risk populations, including members of minority groups, the homeless, low-income school children, victims of domestic violence, and single-parent families. *One small group of students in this study participated in a weeklong immersion experience in Guatemala.*

RESEARCH

ABSTRACT Service-learning provides an excellent pedagogy for introducing students to clients of different cultural backgrounds, helping students become aware of the issues these clients face related to culture and health care, and teaching culturally appropriate care. The Transcultural Self-Efficacy Tool was used to evaluate self-perceived cultural competence in a convenience sample of 60 baccalaureate nursing students enrolled in a community health nursing course following the completion of service-learning projects with local and international communities. Pre- and posttests were analyzed based on total scores and subscale (cognitive, practical, and affective) scores. A paired-samples *t* test compared the mean pretest total score to the mean posttest total score, which demonstrated a significant increase. In addition, paired-samples *t* tests demonstrated a significant increase in each subscale.

Service-Learning and Cultural Competency Service-learning has long been evident in nursing and social work curricula as a pedagogy for teaching social awareness and addressing health disparities that exist within vulnerable populations. The hyphen that appears in the term is important to emphasize the relationship between the concepts of *service* and *learning*.

According to the federal National Service Act of 1993, students are encouraged to actively participate in service experiences. Such participation provides opportunities to use newly acquired skills and knowledge in real-life situations in their own communities. O'Grady (2000) states that service-learning enhances what is taught in school and helps foster the development of a sense of caring for others. The community reflected in the definition of service-learning may refer to local neighborhoods, the state, the nation, or global regions.

Cultural competence in the delivery of health care services is an ongoing process consisting of five cultural constructs: awareness, knowledge, skill, encounters, and desire (Campinha-Bacote, 2002). Awareness involves examining and recognizing one's own prejudice and biases. Knowledge refers to the common health beliefs, practices, and disease incidence and prevalence among ethnic groups. Skill is the collection of cultural data and the application of a culturally based physical assessment. Encounters are direct experiences with people of different cultural backgrounds. Desire is the motivation to work with people of different cultures and is influenced by the first four constructs.

Jeffreys (2000) explained the phenomenon of developing cultural competence through the construct of transcultural self-efficacy, the individual's self-perceived confidence level for applying concepts of transcultural nursing to diverse client populations. According to Jeffreys, cultural competence incorporates three dimensions (cognitive, practical, and affective) that influence confidence as the nurse strives to provide culturally congruent care. The cognitive dimension focuses on knowledge and understanding of cultural beliefs and practices. The practical dimension focuses on the ability to interview clients and conduct a cultural assessment. The affective dimension addresses attitudes, awareness, appreciation, recognition, and advocacy. Jeffreys (2006) developed the Transcultural Self-Efficacy Tool (TSET) to measure and evaluate confidence levels of nursing students working with clients of diverse backgrounds.

Review of the Literature Many schools of nursing incorporate service-learning into their curricula, with the majority of projects in community health courses. Projects range from a mobile van serving rural communities (Hurst & Osban, 2000), to community-based care in underserved communities (Beauchesne & Meservey, 1999), to working with at-risk adolescents (Childs, Sepples, & Moody, 2003), to providing immunizations and health screenings (Ciaccio & Walker, 1998; Everson, Gierach, Dreke, & Dangel, 2005), and health fairs in communities (Dillon & Sternas, 1997).

While many projects have not been evaluated formally, there is some research evidence that supports the value of service-learning for nursing curricula. In one study (Bentley & Ellison, 2005), a random sample of students was assigned to address the needs of pregnant teenagers via a service-learning project. The students attended prenatal and ultrasound visits, and conducted home visits with the pregnant teenagers. The majority of students in the service-learning group thought that the experience helped them understand lectures and reading assignments. Statistical analysis indicated that these students scored higher on exams, including the comprehensive maternity specialty exam given at the end of the course.

Students enrolled in a women's health course were encouraged to develop sensitivity to the lived experience, increase their knowledge of community resources, and design an action plan for the improvement of women's health care services (Callister & Hobbins-Garbett, 2000). Through service journals, students identified five benefits of their service-learning experiences: a) a sense of personal satisfaction, b) professional growth, c) higher level critical thinking skills, d) improved preparation for nursing practice, and e) increased awareness of unmet needs of clients.

Van Hofwegen, Kirkham, and Harwood (2005) conducted a qualitative study based on the theoretical perspectives of community health and service-learning in community health sites in a rural area. The convenience sample included registered nurses, one clinical instructor, and undergraduate students who lived in the community for a two-week period. Although the curriculum did not specifically use the term service-learning, the findings supported the development of partnerships to build civic responsibility and provide service to the community.

Only limited research exists to demonstrate the effectiveness of strategies to teach cultural competence. Two groups of senior nursing students were evaluated for cultural competence and self-efficacy using the Bernal and Froman Cultural Self-Efficacy Scale (Alpers & Zoucha, 1996). Faculty observed that students with no previous training appeared to have greater difficulty in understanding and applying the concepts of transcultural nursing.

Caffrey, Neander, Markle, and Stewart (2005) used the Caffrey Cultural Competence in Healthcare Scale to determine

changes in self-perceived cultural competence in baccalaureate nursing students pretest and posttest. A small group of students participated in a five-week immersion experience in Guatemala. While all students received cultural diversity instruction during the program, posttest scores indicated that students perceived only moderate improvement in attitudes, knowledge, and skills during the program. The immersion students made greater improvements than the overall group. The non-immersion group scored lower on the posttest, which suggests overreported abilities and confidence levels on the pretest.

Two pilot studies (Nokes, Nickitas, Keida, & Neville, 2005) were used to evaluate the effects of service-learning on the critical thinking skills, cultural competency, and civic engagement in students enrolled in an RN-to-BSN program. Competencies were measured with the California Critical Thinking Disposition Inventory, the Inventory for Assessing the Process of Cultural Competence, and an adapted version of a civic engagement instrument. Pre- and postintervention scores indicated slightly lower critical thinking and cultural competence scores and significantly higher civic engagement scores. Lower scores in critical thinking and cultural competence may have resulted from increased insight into the student's own self-efficacy as a result of the service-learning experience

SERVICE-LEARNING has long been evident in nursing and SOCIAL WORK CURRICULA as a pedagogy for teaching SOCIAL AWARENESS and addressing health disparities that exist within VULNERABLE POPULATIONS. The hyphen that appears in the term is IMPORTANT TO EMPHASIZE the relationship between the CONCEPTS OF SERVICE AND LEARNING.

Methodology SAMPLE A convenience sample of 69 baccalaureate nursing students enrolled in a community health nursing course was used to evaluate self-perceived cultural competence following the completion of service-learning projects with local and international communities. Approval for the research project was received from the institutional review board of the university prior to the initiation of the study. Students were assigned to seven clinical sections in groups of six to 11 students; one group of six students participated in a one-week international experience in Guatemala.

Each student was required to complete a cultural assessment based on the Giger and Davidhizar Cultural Assessment Model (2004) and develop a culturally appropriate plan of care. Students also conducted interviews with key informants to learn the emic view of health care issues within the community. They collected statistical data to analyze community demographics, environmental issues, morbidity and mortality rates, educational levels and resources, socioeconomic levels, medical services available, employment opportunities, and housing.

Based on the information gained through data collection and interviews, students worked with community leaders to develop a plan for education and implementation. Such work reflects the key concept of reciprocity that is integral to service-learning. All students were required to complete reflection notes prior to, during, and after the service-learning projects.

The students participating in the program in Guatemala worked with a multidisciplinary team as part of a medical mission in rural villages. The objectives for their projects were the same as for projects with local communities. Clinic opportunities included working directly with physicians to assist in minor surgeries and treatments, dispensing medications in the pharmacy, teaching basic hygiene and dental care, and administering vitamins and parasitic medications. While fluency in Spanish was not required, students learned key phrases in order to instruct patients regarding medications and basic education. Students also made home visits that allowed them firsthand knowledge of the poverty, culture, and health care in this Latin American country.

INSTRUMENT The Transcultural Self-Efficacy Tool was administered at the beginning and completion of the semester. Students were provided with informed consent forms and voluntarily completed surveys based on their own perceptions of self-efficacy with transcultural nursing concepts.

The TSET consists of 83 items that measure confidence on a 10-point rating scale (1 = not confident, 10 = totally confident). The three TSET subscales reflect self-efficacy strength (SEST), or level of self-efficacy perception. They are: cognitive (25 items to assess confidence in knowledge of cultural factors); practical (28 items to assess confidence interviewing clients of different cultural backgrounds), and affective (30 items to assess values, attitudes, beliefs about cultural awareness, acceptance, and advocacy). Construct validity has been reported (Jeffreys, 2000, 2006).

Table. Comparison of TSET Mean Subscores and Mean Total Score by Clinical Section

		PRETEST SCORES				POSTTEST SCORES			
Clinical Section	Sample Size	Cognitive SEST	Practical SEST	Affective SEST	Total Score	pCognitive SEST	pPractical SEST	pAffective SEST	pTotal Score
201	9	6.32	6.23	8.49	587	8.33	7.60	8.96	690
202	9	6.93	7.27	8.20	623	8.97	8.85	9.23	749
203	6	6.70	6.71	8.69	616	7.90	8.18	9.08	699
204	9	6.77	6.88	8.45	616	8.53	8.34	9.07	719
205	11	6.54	6.59	8.47	602	8.20	8.24	9.07	708
207	10	7.02	7.00	8.67	631	8.08	8.22	9.22	709
600*	6	5.61	5.95	8.18	552	9.12	9.26	9.56	774

* International group

Of the 69 students in the course, nine students chose not to complete the voluntary postsurveys at the end of the course. Sixty pretest and 60 posttest surveys were analyzed for statistical significance using SPSS software.

Findings Of the 60 students, 56 were women. Sixty-two percent of the students were 21 years of age; 32 percent were 22 years old; the remaining 6 percent were age 23 or older. Nearly all students (92 percent) indicated they were white; other ethnic groups were reported as follows: African American (5 percent), Asian or Pacific Islander (2 percent). All students reported English as their first language.

The TSET indicated adequate reliability as evidenced by an internal consistency of .974, pretest, and .986, posttest. Split-half reliability ranged from .731 on the pretest to .860 on the posttest.

All completed surveys were analyzed based on total scores and subscale scores. Means for total scores and subscale scores were calculated for each clinical section. (See Table.) A paired-samples *t*-test was calculated to compare the pretest total score (M = 606.68, SD = 76.43) to the posttest total score (M = 719.20, SD = 65.44). A significant increase from pretest to posttest was found (t (59) = –9.995, $p < .001$).

The same paired-samples *t*-test was used to analyze each subscale score and compare pretest mean scores to posttest mean scores. A significant increase was demonstrated in each subscale: cognitive [pretest, M = 6.60, SD = 1.29; posttest, M = 8.43, SD = .96, t (59) = –10.96, p <.001]; practical [pretest M = 6.70, SD = 1.27; posttest M = 8.34, SD = 1.08, t (59) = –8.03, p <.001]; and affective [pretest M = 8.46, SD = .94; posttest M = 9.1, SD = .65, t (59) = –5.40, p <.001].

Multivariate analysis was used to evaluate the effect of clinical section on pre- and posttest scores. A one-way MANOVA was calculated examining the effect of clinical section on each subscale pre- and posttest. A significant effect was found for the cognitive scores [Lambda (12,104) = .661, p = .032], although the follow-up ANOVAs for pre- and posttest cognitive scores demonstrated no significant effect [F(6,53) = 1.787, $p > .05$]. No significant effect was found with practical or affective scores [Lambda (12,104) = .736, $p > .05$], [Lambda (12,104) = .884, $p > .05$]. No significant effect was found with total scores either (Lambda (12,104) = .733, $p > .05$).

Discussion Cultural competence requires a continuous, evolving level of knowledge and skills in order to work with diverse populations. Self-perceived abilities of nursing students provide one measure for evaluation of competence levels. This study indicates that nursing students perceived an increase in their abilities in cognitive, practical, and affective dimensions following participation in a service-learning project. Paired-samples *t*-tests confirm this increase across all dimensions, with the greatest gain in the cognitive area, while students perceived their greatest abilities in the affective dimension.

These results are similar to findings reported by Jeffreys (2000). Findings from four studies utilizing the TSET with associate degree nursing students indicated that nursing students were least confident in knowledge, more confident when interviewing clients, and most confident about their attitudes about transcultural nursing.

When multivariate analysis was conducted, testing demonstrated a significant effect on the cognitive subscore by clinical section. Further testing was unable to determine which group demonstrated the effect. This is probably due to the limited sample size, as groups were small, with as few as six students and no larger than 11 students.

It was initially hypothesized that the international group would demonstrate higher self-perceptions following the trip to Guatemala. It is significant to note that the international group scored lowest in subscores and total score on the pretest, yet scored highest in all areas on the posttest. (See Table.) The

researcher believes this was the result of more realistic views of self-perceived abilities of those students taking part in the international study.

Several limitations exist for this study. No control group was used to evaluate self-efficacy perceptions for students not involved in service-learning projects. Future studies may need to compare schools of nursing that do not teach community health through service-learning projects with those that do.

While the overall group demonstrated sufficient sample size, analysis by clinical section was limited by group size. Analysis of clinical sections is important to evaluate the effects of international activities versus local community service on cultural competence. It must also be recognized that students volunteered to take part in the international group. They submitted applications and raised their own funds to take part in the trip to Guatemala; thus, they had a vested interest for increasing their cultural competence.

Conclusion Service-learning allows students to work with communities to address real-life health issues. Introducing students to cultural values and beliefs relevant to their targeted population initiates an awareness of the role culture plays in decision-making and health care practices. Students begin to see the health issue from a new perspective and must work with clients of diverse backgrounds to address health disparities. The hope exists that this awareness, and the knowledge and skills attained through encounters with different cultures, will lead to an increased desire to provide culturally congruent care as new graduates begin their roles as nurses of the future.

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Key Words Service-Learning – Cultural Competence – Transcultural Nursing – Transcultural Self-Efficacy – International Immersion

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