

Research Brief

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An Intervention to Improve Cultural Competence in Graduate Nursing Education

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Abstract

Noting the small number of studies on the influence of an entire curriculum on graduate nursing students' cultural competence, the researchers examined the effect of a curricular intervention using a pretest-posttest design. The study, conducted from 2012 to 2014, focused solely on the Doctor of Nursing Practice program at a midwestern university. Results from a pre- and postintervention faculty curriculum survey indicated that the percentage of courses including a cultural competence objective increased from 65 percent to 81 percent. Results from the pre- and postintervention administration of the Transcultural Self-Efficacy Tool showed a statistically significant improvement in students' overall score and three subscale scores.

KEY WORDS Cultural Competence – Curriculum – Doctor of Nursing Practice Program – Graduate Nursing Education

The increasing diversity of the US population and the globalization of health care require advanced practice nurses to be culturally competent. "With projections pointing to minority populations becoming the majority by 2043, professional nurses must demonstrate a sensitivity to and understanding of a variety of cultures to provide high quality care across settings" (American Association of Colleges of Nursing [AACN], 2015). In addition, *The Essentials of Doctoral Education for Advanced Nursing Practice* (AACN, 2006) states that a Doctor of Nursing Practice (DNP)

program "prepares the graduate to...synthesize concepts, including psychosocial dimensions and cultural diversity...in developing, implementing, and evaluating interventions" (p. 16).

Educators must integrate cultural competence content into the curriculum and evaluate its effectiveness in producing culturally competent graduates to meet this requirement. The literature lacks recommendations for evidence-based approaches to educating culturally competent nurses in both undergraduate and graduate programs. Currently, multiple curricular approaches are being used in nursing programs to teach cultural competency (Kardong-Edgren et al., 2010; Long, 2012).

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LITERATURE REVIEW

A review of the literature was performed, and one article that focused on graduate nursing students was found. The review was expanded to include undergraduate preparation as well. Blanchet Garneau and Pepin (2015) stated in their article that "several authors found a lack of consensus on the content taught in nursing education and how to best integrate cultural competence in nursing" (p. 11).

The most common approach to producing culturally competent graduates has been to integrate the topic across the curriculum (Kardong-Edgren et al., 2010). Other methods included stand-alone courses, cultural immersion experiences, and inclusion of persons of diverse cultures in simulation. Recently, a study by Kardong-Edgren and colleagues (2010) used a posttest design to assess curricular differences among six undergraduate nursing programs to gauge the cultural competency of senior students ($n = 559$). Cultural competency was measured using the Inventory for Assessing the Process of Cultural Competence-Revised by Camphina-Bacote. Results indicated that no curricular approach was more effective in achieving cultural competency than any of the others.

Krainovich-Miller and colleagues (2008) investigated evidence of cultural competence at the beginning and end of an undergraduate nursing program ($n = 87$) and graduate nursing program ($n = 139$). Cultural awareness was measured by administering Rew's 2003 Cultural Awareness Scale. Results showed no statistically significant differences in the before and after scores and subscale scores for the undergraduate program. However, a significant difference was found among the master's program students in both the total instrument score and the general educational experience subscale. The authors stated that intervention studies should be conducted to determine the impact of curricular changes related to student cultural competence at multiple educational levels.

Hughes and Hood (2007) conducted a study at a small nursing college to measure undergraduate nursing students' attitudes and behaviors using Freeman's 1993 Cross-Cultural Evaluation Tool prior to teaching cultural content and after completing the entire program. The tool assigned students a cross-cultural interaction score indicating how well they made culturally sensitive choices. Five separate classes (total $n = 218$) were assessed. Pretest scores ranged from 53 to 100, and posttest scores ranged from 64 to 100. Results showed significant increases in cross-cultural interaction scores after completing the curriculum, indicating that integrated transcultural teaching strategies changed student attitudes and behaviors regarding cultural diversity.

The study described in this article attempted to expand on previous pedagogical research by further examining the integrated curricular approach to cultural competence education by conducting a quality improvement study. This study's goal was to determine if students' cultural competence scores increased from entry to exit in a four-year graduate nursing curriculum by requiring faculty to implement a cultural competence objective in every course. The study also hoped to provide educators with a replicable method to increase student scores in this area. The study used an educational theoretical framework called the spiral curriculum that was originally developed by Jerome Brunner (Harden and Stamper, 1999). In this framework, cultural competence content is recurring or spiraled in the curriculum to allow knowledge levels to increase over time.

METHOD

The study was conducted at one Midwestern university after institutional review board approval. The specific intervention was to require all 34 courses in the DNP curriculum to include at least one cultural competence objective. Cultural competence experts with graduate education in transcultural nursing and extensive teaching experience in DNP programs were available to assist faculty with the development of the objective and corresponding course content if requested. The graduate nursing curriculum committee members reinforced the intervention at each semester course review. If a course lacked the required objective, the faculty member received a letter requesting that he/she include one.

Data were collected in pre- and postintervention surveys that were developed by the faculty and administered to all DNP program faculty with separate surveys for each DNP course. The postsurvey was administered to faculty approximately two years later. Students' cultural competence was examined using the 83-item Transcultural Self-Efficacy Tool (TSET; Jeffreys, 2010) at two points in time (both before and after the intervention in 2012 and 2014). This study included an entire cohort group and, though not randomly selected, was believed to be representative of the population.

The TSET was designed to measure and evaluate students' transcultural self-efficacy in performing general transcultural nursing skills. This instrument has consistently high estimates of internal consistency (Jeffreys, 2000). A graduate exit survey item about awareness of diverse organizational cultures and populations was added to help identify DNP students' cultural competence at the conclusion of the program.

RESULTS

The presurvey had an 88 percent response rate from faculty ($n = 22$) for 34 courses. The faculty demographics included a mean age of 59 years; all participants were women, and all were Caucasian. The results of the presurvey showed that most faculty (65 percent) included some cultural competence content in their courses, both in lectures and assignments (Table 1). This was expected as the curriculum included a required stand-alone cultural competence course and an elective, cultural immersion, travel-abroad course. The postintervention survey, distributed approximately two years later, had a 90 percent response rate ($n = 28$) for 44 courses. This was intended to see if the percentage of faculty that included a cultural competence objective had increased from the initial intervention and if cultural content was being integrated.

The total number of courses in the curriculum had expanded from pre- to posttest from 34 to 44 as increased numbers of sections of each course were needed. No faculty resigned during the study period, though a few new faculty were added as additional sections and a few new clinical and theory courses were added. All new faculty were told of the requirement to have a cultural competence objective and were given assistance developing it if needed. Students in the sample were not exposed to these changes in curriculum over the study period, as changes affected only later admitted cohorts.

Results indicated the percentage of courses including a cultural competence objective had increased from 65 percent to 81 percent (Table 1). The postintervention survey also produced some unanticipated results. Whereas the item measuring inclusion of a cultural competence objective and content increased, every other item (including questions about teaching unit/lecture material, assignments, and specific cultural issues) decreased slightly. This paradoxical finding is being explored by the investigators.

Students in the study were 84.6 percent female and 15.4 percent male ($n = 53$). The largest percentage of students were in the 30- to 39-year-old group (39.6 percent). Students' races were reported as 75.5 percent White, 7.6 percent Asian, 5.6 percent African American, 5.6 percent more than one race, 3.8 percent Alaskan Native or American Indian, and 1.9 percent Arabic or Middle Eastern. These students were a single cohort in the program and were required to complete the cultural competence testing both near the beginning and conclusion of the program. All students received the identical DNP curriculum with a slight variation of up to three courses based on their population concentration.

The TSET data were collected from students, and changes in TSET overall and subscale scores were analyzed using paired *t*-tests (see Table 2). A statistically significant improvement in the overall TSET score and each of three subscale scores was found: the Cognitive subscale examining knowledge confidence; the Practical subscale examining interview confidence; and the Affective subscale examining values, attitudes, and beliefs about cultural constructs. The overall TSET mean score increased 27.8 percent, indicating that

Table 1: Pre- and Postintervention Cultural Competence Content in the Curriculum

Survey Item	Preintervention Survey (2012)	Postintervention Survey (2014)
	Percentage of Courses with Item	Percentage of Courses with Item
<i>Does your course include a/an...</i>		
Cultural competence objective and educational content	65%	81%
Teaching unit/lecture material addressing the incorporation of culturally sensitive approaches to client care	63%	59%
Teaching unit/lecture material addressing issues related to health disparities	63%	47%
Teaching unit/lecture material addressing issues related to social justice, equity, and/or ethics	37%	32%
Assignment addressing culturally competent care	76%	73%
Assignment addressing health disparities and equity	76%	60%
Assignment addressing social justice issues	24%	17%
Assignment addressing ethical issues	82%	67%
Information on how to conduct comprehensive and focused assessments of health and illness in patients using developmentally and culturally appropriate approaches	50%	47%
Information on how to develop an awareness of patients' and health care professionals' spiritual beliefs/values and how these beliefs/values impact health care delivery	70%	53%
Information on how to acknowledge biases, personal and otherwise, and their effect on the health care system as related to nursing practice	80%	71%

students' cultural competence increased between the pretest and posttest period. In addition, results for the graduate exit survey's cultural competence item done at the time of the postintervention survey were reported at 6.36 on a scale of 0 to 7.

DISCUSSION

Survey results showed that the inclusion of a cultural competence objective and related content in the graduate curriculum increased after

the intervention with faculty. However, a postintervention decrease in every other item was found, which raises doubt about whether the cultural competence objective was integrated successfully into day-to-day course content. This highlights the need for the curriculum committee to expand its review process to determine if and how the course objective is incorporated into actual teaching units, assignments, and student outcome behaviors. The statistically significant improvement in students' overall and subscale TSET scores

Table 2: DNP Graduates' Pre- and Postintervention TSET Scores

TSET	Preintervention Mean Score (2012)	Postintervention Mean Score (2014)	t Value	p Value
Cognitive Subscale	159.1 ± 52.0	209.6 ± 26.2	-5.316	<.001
Practical Subscale	181.6 ± 56.7	236.4 ± 29.8	-5.590	<.001
Affective Subscale	247.2 ± 31.0	279.3 ± 15.5	-5.987	<.001
Overall	596.2 ± 110.5	732.2 ± 59.4	-6.182	<.001

corresponded to the intervention that may have helped to improve DNP students' cultural competence. The DNP graduate survey item was also found to be at a high level in graduates' cultural competence scores after the intervention.

Although other factors may have impacted the students' cultural competence, this study's results are similar to the literature where an integrated cultural competence curriculum could help increase students' cultural competence (Hughes & Hood, 2007; Krainovich-Miller et al., 2008). According to Long (2012), integration of cultural competence content throughout the curriculum is the most common method of teaching, though the content is often taught by only a few committed faculty. This study utilized an intervention that ensured that all faculty (not just a committed few) included cultural competence content in every course. This intervention is consistent with the spiral curriculum theoretical framework where content is revisited throughout the entire program and may explain the positive change in students' cultural competence scores.

IMPLICATIONS FOR NURSING EDUCATION

On the basis of the results of this study, nursing programs may require a cultural competence objective in all courses as a first step in helping increase students' cultural competence. Program leadership should seek integration of detailed cultural competence content into teaching units, assignments, and student outcome behaviors measurement. A strength of this study is a repeatable methodology that can be used with different content areas (evidence-based practice, leadership, and policy/advocacy) to improve curriculum content and possibly student outcomes.

Limitations include the quality improvement methodology, which makes it difficult to determine if the intervention (increasing the number of courses with cultural competence objectives and content) had an impact on students' cultural competence scores. Other variables, such as students' individual clinical experiences and other program and personal factors, may have contributed to this change. Future studies with varying types of cultural competence curriculum

frameworks replicating this curricular intervention are needed to determine if students' cultural competence scores can be impacted by a curricular change.

CONCLUSION

Cultural competence is an important outcome for graduate nursing students. Despite this, limited evidence supports specific teaching methods and curricular strategies to achieve this outcome. By describing one university's method of improving the cultural competence curriculum and corresponding student outcomes, this study may be valuable for other institutions as a model for future curricular development in this area.

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