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A Comparative Analysis of Cultural Competence in Beginning and Graduating Nursing Students

Deborah Davenport

Helen Reyes

Lance Hadley

West Texas A&M University

The ethnic proportions of the population in the United States are rapidly changing, with the nation's minority population at approximately 101 million. This is also true for the West Texas region, where locally in a city with 183,000 residents, 43 different languages are spoken suggesting that cultural education needs to be included in nursing program curricula. Therefore, a study was conducted during a period of curriculum revision to determine if the current nursing curriculum at West Texas A&M University offers enough education and experience for graduating nurses to care for such a diverse population by comparing their perceptions of cultural competence with beginning sophomore nursing students' perceptions. Participants were asked to complete the Cultural Competence Assessment (CCA) tool in order to evaluate perceptions of cultural competence. Upon analysis of the data, perceptions of cultural competence among graduating nursing students was significantly higher ($p=.002$) than the perceptions of cultural competence among beginning nursing students. These results support that nursing students perceive they become culturally competent during their nursing education, leading to implications of the need for continued education relating to this concept, beginning with the first course and continuing throughout the nursing curriculum.

Keywords: cultural competence, nursing education, research, policy

It is expected by the year 2050, the Black, Hispanic, and Asian ethnic group percentages within the population will rise dramatically, and the Caucasian population will drop to approximately 51% (Zoucha, 2000). Yet, it is estimated that only 10% of registered nurses in the United States come from a minority group. The lack of diversity in the nursing profession mandates a need for cultural competence education in order to provide culturally competent care to an ethnically diverse patient population that is increasing (Gonzalez, Gooden, & Porter, 2000).

Nursing curricula must provide a foundation for the development of cultural competence that allows for acquisition of knowledge, skills, and attitudes (Campinha-Bacote, 2006; Breier-Mackie, 2007; & Calvillo et al., 2009). In studies of cultural competence education in nursing, findings support that the addition of culturally competent content increases scores on culturally competence measures, as students gain experience during progression through the curricula (Majumdar, Browne, Roberts, & Carpio, 2004; Doorenbos, Schim, Benkert, & Borse 2005; Lampley, Little, Beck-Little, & Xu, 2008; & Brennan & Cotter, 2008). Similarly, qualitative studies that examined cultural competence discovered emerging models for increasing cultural competence through education based on the patients' perspectives, as well as that of nurses, and student nurses (Reeves & Fogg, 2006; Leishman, 2004; Upvall & Bost, 2007; Garrett, Dickson, Young, Whelan, & Forero, 2008; & Wikberg & Eriksson, 2008).

Purpose, Rationale, and Research Question of the Study

The research question which framed this study was: Is there a higher perception of cultural competence among graduating nursing students as compared to beginning nursing students? For the purpose of this study, culture was defined as beliefs and values of a particular group that are learned and shared (Leininger & McFarland, 2002). Cultural competence was theoretically defined as a process by which nurses strive to achieve the ability and availability to work within a cultural context of a patient, family, or community (Campinha-Bacote, 2003). Cultural competence was

operationally defined by a total score on the Cultural Competence Assessment (CCA) tool (Doorenbos, Schim, Benkert, & Borse, 2005). A beginning nursing student was defined as a nursing student in the first clinical semester and a graduating nursing student was defined as a nursing student in the last clinical semester of a baccalaureate nursing curriculum.

Theoretical Frameworks

Leininger's Transcultural Nursing Theory (1978) posits that caring serves to improve human conditions through behaviors, techniques, processes, and patterns. In addition, caring behaviors are illuminated as key concepts to providing quality care through the lens of culture. Culture is determined by one's personal life and worldviews. Caring and culture are linked to one another, and nursing education should be aimed at preserving, maintaining, accommodating, negotiating, and restructuring care patterns as these relate to the individual's cultural perspectives (Chinn & Kramer, 2004).

The 3-Dimensional Puzzle Model of Culturally Congruent Care was also chosen to guide this study. The four basic components of the cultural competence puzzle at the health care provider level include cultural diversity, cultural awareness, cultural sensitivity, and cultural competence (Schim, Doorenbos, Benkert, & Miller, 2007). This study tested quantitatively the fourth puzzle piece, cultural competence, using the CCA, as it measures perception to the actions taken in response to cultural diversity, cultural awareness, and cultural sensitivity.

Findings

The design of this study was a comparative, descriptive design, testing for differences between beginning nursing students ($n=46$) in their first clinical course and graduating nursing students ($n=53$) in a baccalaureate nursing program. The age range for the beginning nursing student participants was 19-35 years ($M = 22.54$) and for the graduating nursing student participants 21-65 years ($M = 27.53$). The average age of the graduating nursing students was statistically higher compared to the average age of the beginning nursing students ($t[df=97] = -3.617, p=.000$). The racial/ethnic self-identification of the beginning nursing students included 24% Hispanic/Latino, 61% White/Caucasian, 4% Black/African American, and 11% Asian. The racial/ethnic self-identification of the graduating nursing students included 4% Hispanic/Latino, 72% White/Caucasian, 19% Black/African American, and 4% Asian.

Mean scores for the beginning and graduating nursing students are reported in table 1. The graduating nursing students demonstrated a higher mean score for the CAS and the CCB (e.g., 6.018 & 4.590 respectively) as compared to the beginning nursing students (e.g., 5.695 & 3.453 respectively), indicating the graduating nursing students have greater perceived cultural awareness and sensitivity, and perceive that they demonstrate more culturally competent behaviors. However, it was noted the beginning nursing students demonstrated a lower score on the Marlowe-Crown Social Desirability Scale as compared to the graduating nursing students (e.g., 7.00 & 7.75 respectively). This indicates the beginning nursing students have a slightly less need for approval than do the graduating nursing students. Independent t test findings demonstrated that perceptions of cultural diversity were significantly higher in the graduating nursing student group ($t[df=97] = -3.233, p = .002$).

One confounding variable encountered was that the perceived cultural competence of the graduating nursing students was expected to be higher due to group's greater mean age, which was statistically significant. A generalized linear model was conducted, using the CCA scores as the dependent variable and age as a predictor ($X^2[df=23] = 22.47, p=.49$), which suggests older age alone is not a sufficient variable for being culturally competent. Univariate analysis of variance on the dependent variable of the CCA scores with age held as the covariate was not statistically significant ($F=0.60[df=1], p=0.80$). The amount of variance in the dependent variable that is shared with age is 0.1% ($R^2=.001$). Reliability statistics were completed on the CCA for this sample, which resulted in Cronbach's Alpha = .823.

See Table 1

Future Recommendations

The findings of this study cannot be generalized beyond the geographical setting, as these were specific to the nursing population at this university. An additional limitation was that only two cohorts were examined in one measurement in time; whereas, an ongoing analysis would provide stronger results. It is recommended that a longitudinal study be utilized throughout all levels of baccalaureate nursing education to measure progress of cultural competence education as each student cohort progresses through the nursing program.

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Table 1. Subscale Mean Scores

Student Group	CAS Subscale	CCB Subscale	Marlowe-Crown Social Desirability Scale
Beginning Student			
Mean	5.695	3.453	7.00
N	46	46	46
Standard Deviation	4.544	1.210	2.477
Minimum Score	4.454	0.000	1
Maximum Score	6.545	6.000	13
Graduating Student			
Mean	6.018	4.590	7.75
N	53	53	53
Standard Deviation	5.295	1.132	2.336
Minimum Score	4.727	2.142	3
Maximum Score	7.000	6.785	12

Dr. Deborah Davenport is the Associate Department Head for Undergraduate Nursing at West Texas A&M University. Her background is in critical care and complex situations and has been a nursing educator for 28 years.

Dr. Helen Reyes is the Department Head for Nursing at West Texas A&M University. She has a background in nursing administration and has been in academia for 14 years. She received her doctorate at Liberty University focusing on Educational Leadership.