Student Demographics with Changing Admission Criteria: Is Nursing Diversity at Risk?

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May 15, 2006

The Editor
Nursing Education Perspectives
National League for Nursing

Dear Editor,

I am enclosing a submission to Nursing Education Perspectives entitled “Student Demographics with Changing Admission Criteria: Is Nursing Diversity at Risk?” The manuscript is 22 pages long and includes 5 figures and all references. The body of the paper is 13 pages formatted per the journal’s submission standards. I wish for the manuscript to be given a masked review by the editorial staff.

My coauthors and I do not have any interests that might be interpreted as influencing the research, and APA ethical standards were followed in the conduct of this study.

This research is timely and appropriate for this journal since it provides information regarding demographics of nursing students admitted into various nursing programs. In addition, this research promotes the mission of this journal by addressing diversity when schools of nursing increase their admission criteria for entrance.

I will be serving as the corresponding author for this manuscript. All of the authors listed in the byline have agreed to the byline order and to submission of the manuscript in this form. I have assumed responsibility for keeping my coauthors informed of our progress through the editorial review process, the content of the reviews, and any revisions made. I understand that if accepted for publication, a certification of authorship form will be required that all coauthors will sign.

Sincerely,

Jung Yoon, BS, RN
MS candidate, San Jose State University
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Student Demographics with Changing Admission Criteria: Is Nursing Diversity at Risk?

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Virgil Parsons, DNSc, RN and Katherine Abriam-Yago, EdD, RN

Abstract

Schools of nursing are challenged with choosing from an increasing number of applicants and the need to prepare as many successful nurses as possible to meet the nursing shortage. Strategies have included increasing student enrollment, utilizing accelerated programs, and changing admission criteria. This study describes the demographic characteristics of three classes of nursing students admitted under different criteria to the same nursing school. The value of maintaining a high level of ethnic diversity is guided by Leininger’s theory of cultural care diversity and universality. Although changes occurred in the demographic constitution of each nursing class, ethnic diversity was maintained as admission criteria were made more stringent.

Class A is the last class admitted before the new admission criteria were implemented, in fall of 2004, and included 63 students. The 85 students of Class B began the traditional BSN program in the spring of 2006 under the new admission criteria. Class C started in the summer of 2005 with the strictest admission criteria and is the first class of 31 students admitted into the accelerated program.

Figure 1. Percentage of male students in each class.
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Figure 2. Percentage of students in each age group by each class.

Figure 4. Ethnic representation by each class (White or other.)

Figure 3. Percentage of students in each class possessing bachelor’s degree or higher on entrance.

Figure 5. Language ability of students in each class (English speaking only or multilingual)
Student Demographics with Changing Admission Criteria:

Is Nursing Diversity at Risk?

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Schools of nursing are challenged with choosing from an increasing number of applicants and the need to prepare as many successful nurses as possible to meet the nursing shortage. Strategies have included increasing student enrollment, utilizing accelerated programs, and changing admission criteria. This study describes the demographic characteristics of three classes of nursing students admitted under different criteria to the same nursing school. The value of maintaining a high level of ethnic diversity is guided by Leininger’s theory of cultural care diversity and universality. Although changes occurred in the demographic constitution of each nursing class, ethnic diversity was maintained as admission criteria were made more stringent.

Key words: demographics, admission criteria, accelerated program, diversity, and ethnicity
Student Demographics with Changing Admission Criteria:

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Nursing schools are attempting to address the nursing shortage through increasing enrollment, creation of accelerated programs, and implementing selective admission strategies to improve pass rates of both the curriculum and the National Council Licensure Exam-Registered Nurse (NCLEX-RN) (Crow, Handley, Morrison, & Shelton, 2004). At the same time, as society becomes increasingly multicultural, graduating diverse and culturally sensitive nurses is essential. This pilot comparative study of students in a nursing school that has implemented all of the above programs was initiated to explore demographic characteristics of three groups of admitted students, with an emphasis on possible changes in ethnic minority representation.

Little has been published addressing the demographic characteristics of nursing students in the various traditional and accelerated undergraduate nursing programs. Information about the gain or loss of diversity in nursing school students in nursing program types under certain admission criteria would be valuable in assessing nursing education programs.

Background

The setting for this study was one California state supported baccalaureate nursing program located in a multicultural community. The student body largely reflects the surrounding area. As a public university, this nursing school shares an historic mission of providing access to all students who meet the admission
criteria. This nursing school has been successful in having fairly proportional representation of ethnic groups in the student body, with the exception of Mexican-Americans/Hispanic students. The percentage of these students is lower than this population in the surrounding community.

The nursing school was affected by budget cuts that reduced the number of available spaces for students, from 90 per semester to 60, a loss of 1/3 capacity. Applications for admission to the nursing school continued to rise following the loss of technology jobs and the increasing popularity of the nursing profession. The school of nursing was fortunate to receive the support of two sources to educate more nursing students. One source was a grant that created an accelerated baccalaureate program, accommodating three sequential classes of 30 students each that would graduate in 18 months rather than the traditional 3 years. In the traditional baccalaureate program, funding for an additional 20 students per semester for the next 5 semesters was received from another source.

Despite these additional openings for nursing students, the ability to accommodate all qualified applicants remained unmanageable, and the school of nursing implemented additional criteria to rank applicants for admission to the nursing program. Budget cuts at the state level meant the school could ill afford to admit students who might fail or drop out. Because only measurable objective criteria could be used as supplemental admission criteria, the nursing school selected grade point average in select prerequisites, recent science courses, and a
score on the Test of Essential Academic Skills (TEAS) to rank applicants. The TEAS, developed by Assessment Technologies Institute (2006), provides a uniform post-secondary scholastic aptitude assessment in math, reading, English, and science. Admissions were then prioritized based on a referenced score obtained from a calculation of these data.

Selection criteria were also needed to select students most likely to succeed for the accelerated program. Research has linked accelerated nursing program students with significantly higher nursing course GPAs and pass rates on the licensure exam (Youssef & Goodrich, 1996). Admission into the accelerated program required a GPA of at least 3.4, agreement not to be employed during the 18 month program, completion of the 11 pre-requisites courses, a pass score on a writing test, a score greater than 75% on the TEAS, and prior completion of all other graduation requirements. Students enrolled into the accelerated program were eligible to receive financial support from hospital "partners." In return, students committed to working at their partner hospital for 2-3 years following licensure.

Literature Review

Diversity

Racial and ethnic minorities now comprise a quarter of the American population (U.S. Census Bureau, 2000), which challenges schools of nursing to develop culturally competent nurses to meet the needs of a diverse population.

The current registered nurse (RN) workforce does not reflect the US demographic diversity, with 86.6% of nurses identified as white, non-Hispanic (Sullivan Commission, 2004). "In California, the nation's most populous state,...the nursing workforce does not represent the racial and ethnic diversity of the state's population as a whole" (Seago & Spetz, 2005, p. 555). Enrolling, retaining, and graduating ethnic minority nurses will further proportional ethnic representation in nursing, the largest healthcare profession, with more than 2.7 million registered nurses in the United States (American Nurses Association, 2006). The AACN (2001) has issued a report on the best strategies for increasing diversity in nursing programs. A phenomenological study by Gardner (2005a) describes the issues that are experienced as barriers for minority students in nursing programs. Gardner (2005b) also describes a "Minority Retention Project that included interventions designed to enhance the integration of minority students..." (p. 566). Schools of nursing in Mississippi, New York, and Rhode
Island speak to barriers in their comprehensive strategies for recruitment, retention, and matriculation of ethnic minorities (Fletcher et al., 2003; Soroff, Rich, Rubin, Strickland, & Plotnick, 2002; Williams & Newman, 2003). The specific needs of students for whom English is a second language have also been addressed (Abriam-Yago, Yoder, & Kataoka-Yahiro, 1999; Choi, 2005). One strategy that also should be emphasized is to encourage children at a young age to explore nursing as a profession because it is found that children may reject particular career options by age 11 (Hart, 2005). Outreach programs have been designed to reach minority youth at middle and high schools (Hunter Yates et al., 2003; Stewart & Cleveland, 2003).

**Admission Criteria**

From 1995-2000, many nursing schools were faced with declining applicants (Rosseter, 2005). Declining interest in nursing resulted from increased options in other fields supported by the women’s movement and the rapid growth of the technology sector, while nurses’ earnings fell between 1994 and 2000. At the same time, high school graduates tapered off after the baby-boom graduates of the 1960s-1980s, and the population continued to age, increasing the need for medical care. Also, the RN workforce had aged and many were retiring. Baccalaureate and associate degree prepared nurses declined proportionally, leading to a shortage of nurses starting around 1998 (Buerhaus, Donelan, Norman, & Dittus, 2005; Seago & Spetz, 2003).
In 2005, despite 5 years of increasing enrollments, baccalaureate programs were unable to admit 32,000 plus qualified applicants due to faculty, clinical, and space constraints. A shortage of 800,000 RNs is predicted by 2020 (Rosseter, 2005). To meet this demand, nursing schools seek to admit students who will be successful in the curriculum as well as in their professional careers after graduation, and many have implemented higher criteria for acceptance into their programs. Studies have shown the successful correlation between admission criteria for nursing students and passing rates on the NCLEX-RN (Byrd, Garza, & Nieswiadomy, 1999; Crow et al., 2004). Entry GPA has been correlated with academic success (Houltram, 1996), and prerequisite science grades have correlated with nursing theory grades (Potolsky, Cohen, & Saylor, 2003).

**Accelerated Nursing Education Programs**

Accelerated nursing programs have increased since the very first program appeared in 1971 (Cangelosi & Whitt, 2005) and have served to create alternative paths into practice. As of March 2005, there were 168 accelerated baccalaureate programs and 50 accelerated master’s program in 41 states plus the District of Columbia (AACN, 2005). Accelerated nursing programs allow students to accomplish learning objectives while building on previous learning experiences. Although created to cater to the demands of the nursing shortage, these programs have also met the demands of the student population, and today have an important role in alleviating the nursing shortage. Wu and Connolly (1992) demonstrated
that an understanding of demographic variables of accelerated nursing students would enhance recruitment strategies and help identify prospective students. Accelerated programs attract students, many of them career changers, who bring a rich diversity of age, culture, ethnicity, education, and work experience to the profession of nursing (Steib, 2005).

Conceptual Framework

This study is based on Leininger’s (1991) theory of cultural care diversity and universality. Leininger’s theory identifies that patterns of person, family, group, or institution are influenced by culture and the social context in which one lives. Her theory emphasizes the need to provide culturally sensitive care to our diverse population. Cultural competence is a skill that is developed with time. Caffrey et al. (2005) illustrate that personal values and attitudes lay the foundation for “commitment to providing culturally competent care and ... requires experiences with culturally diverse individuals” (p. 234). Many authors have developed models to address culture diversity that guides practitioners in becoming culturally competent through consistent and conscientious practice in the healthcare setting (Campinha-Bacote, 1998; Giger & Davidhizar, 1999; Purnell & Paulanka, 1998). Since “cultural diversity of the California RN workforce is not equal to its population,” (Martin-Holland, Bello-Jones, Shuman, Rutledge, & Sechrist, 2003, p. 245) many believe that developing a workforce that is multilingual and multicultural is essential in healthcare.
Research Design

Demographic and other data on all students of each nursing class were collected by the nursing school on admission. Data were aggregated and no individual was identifiable. This study was a subset of a larger investigational study looking at outcome variables for academically successful nursing students. For this study, the research questions were:

1. What are the demographic characteristics of three groups of nursing students at the same school admitted under different criteria?
2. Are there significant differences in demographic characteristics between the three groups?

Data Collection Procedures

Secondary data analysis was used to describe a convenience sample of all of the students in three different classes at the same nursing school. Class A is the last class admitted before the new admission criteria were implemented, in fall of 2004, and included 63 students. The 85 students of Class B began the traditional BSN program in the spring of 2006 under the new admission criteria. Class C started in the summer of 2005 with the strictest admission criteria and is the first class of 31 students admitted into the accelerated program.

Results

As the criteria for admission to this nursing school became more selective, several trends are notable. The gender distribution of the male student population
increased as shown in Figure 1 with 14% in Class A, 20% in Class B, and 26% in Class C. The student population also became older as the percentage of students over 30 years rose from 16% in Class A to 42% in Class C (see Figure 2.) As expected, the accelerated class C had a much higher ratio of students who possess a bachelor’s degree or higher on admission to the nursing program; at 29%, it was nearly three times the rate in Class A (see Figure 3). In addition, Class B had a lower incidence of previous degrees and students over 30 than Class A.

This school of nursing has no ethnic majority group, rather a plurality of ethnicities. Students were asked to self-identify on the survey within the following ethnic groups: African American, American Indian/Alaskan, Cambodian American, Chinese American, East Indian (India), Filipino, Japanese, Korean American, Mexican American, Other Hispanic, Pacific Islander, Vietnamese, Other Asian, White, and “Other.” The ethnicity of the student body shifted dramatically between classes, but in general there was a trend towards a higher percentage of students who identified as White as the criteria became more selective. In Class A, 18% of students identified as White which rose to 35% in Class C. The representation of all other ethnicities combined ranged from 79% to 84% in Class A and B, to 74% in Class C (see Figure 4.) Evaluation of the data
revealed an over count of respondents in Classes B and C, due to self-identification with more than one ethnic category. Class A had a few incomplete questionnaires resulting in 3% of missing ethnic data, but this would not significantly alter the results. Second language ability differed minimally between groups. As shown in Figure 5, Class A had 71% who could speak one or more languages (other than English), Class B had 63%, and Class C 68%.

Insert Figures 4 and 5 here

Discussion

As the admission requirements were strengthened, demographic differences were noted in gender, age, and prior education, with more males, older age, and increased numbers of previously awarded bachelor’s degrees represented. A strength of this school of nursing has been the rich ethnic mix of the student population as well as their multilingual capabilities. Although the percentage of students who identify as White rose as admission criteria became more selective, the class remains an ethnic plurality without a majority of any group. In addition to the ethnic diversity seen in this student population, this particular school of nursing has maintained a high level of students with second language ability.
As schools of nursing become more selective with their admission criteria, demographic shifts may occur. This study provides a glimpse into the demographic descriptions of nursing students from three different classes admitted under different criteria into traditional and accelerated programs at one large nursing school. Conclusions from this preliminary data suggest that demographic diversity in the student population is not compromised as admission criteria strengthens.

Limitations

This study is limited in its generalizability due to the small sample size and setting at a single nursing school. The Student Demographics Questionnaire (SDQ) was also changed slightly after class A. The mean age could not be calculated due to the use of age groups on the SDQ, and the SDQ uses different categories than the current US Census categories for race/ethnicity. Because of the broad diversity of students, the SDQ was modified to include additional categories of ethnic groups. Incomplete SDQ responses led to missing ethnic data for Class A, and some students in Classes B and C self-identified with more than one ethnic group, but these individual responses to ethnic identity were excluded in the analysis.

Conclusions

To meet the demands of the ongoing nursing shortage schools of nursing have implemented a number of strategies such as increasing admissions and
developing accelerated programs. Schools of nursing can also help ensure the success of students entering various nursing programs by strengthening admission criteria requirements. Although this inquiry found no significant changes in ethnic diversity, schools of nursing need to be aware of the effects of any changes implemented on their student demographics.

We live in an increasingly multicultural society. Cultural and linguistic diversity needs to be increased in nursing. Diversity in nursing brings cultural awareness and cultural sensitivity, which could also result in decreasing health care disparities. This study illustrates that at one particular school of nursing student diversity was maintained in the presence of making admission criteria more stringent.
References


Fletcher, A., Williams, P. R., Beacham, T., Elliot, R., Northington, L., Calvin, R., et al. (2003). Recruitment, retention, and matriculation of ethnic minority nursing students: A University of Mississippi School of Nursing approach. *Journal of Cultural Diversity, 10*, 128-133.


Figure 1. Percentage of male students in each class (Class A-previous criteria, Class B- newer, more stringent criteria, and Class C-accelerated class.)

![Bar chart showing percentage of male students in each class]

Figure 2. Percentage of students in each age group by each class

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Figure 3. Percentage of students in each class possessing bachelor’s degree or higher on entrance.

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