Nurse Educator

Student Issues

Predictors of Success on National Council Licensure Examination for Registered Nurses for Accelerated Baccalaureate Nursing Graduates

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Accelerated nursing curricula (ANC) were first offered in 1971, and the nursing shortage has fostered the development of additional programs across the country.[1] Employers look favorably on ANC programs because they produce nurses more rapidly than traditional programs. Students are partial to them because they can reach their goal in a shorter period of time. Accelerated nursing curricula may have different prerequisites and admission criteria; however, they offer qualified, previous-degree students the opportunity to graduate with a bachelor of science in nursing in 1 year.

Because of the unique characteristics of ANC students and programs, predictors for success on the National Council Licensure Examination for Registered Nurses (NCLEX-RN) may differ

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from those for traditional students. There are gaps in the literature concerning predictors of NCLEX-RN success in ANC students in the predictive value of pre-RN examinations, previous degree, and coursework. In an effort to evaluate a newly revised curriculum and address declining school NCLEX-RN pass rates, a retrospective study was conducted to identify variables that predicted NCLEX-RN in our graduates. Variables examined included the following: admission grade point average (GPA), previous degree (science or nonscience), senior complex care (SCC) grade, and pre-RN assessment score.

Background

The outcomes of the NCLEX-RN affect students, schools of nursing, and prospective employers. Failing is a devastating setback that can result in loss of self-esteem and confidence.[2] Nursing programs perceive pressure to increase the supply of graduates, and the nursing shortage is exacerbated because prospective employers are unable to fill positions. Multiple reports indicate that NCLEX-RN success cannot be predicted by a single variable. Variables such as the Scholastic Aptitude Test and American College Test scores, high school rank, grades in prenursing and

nursing courses, and performance on standardized nursing examinations have been identified as predictive for traditional graduates.[3-6] Classroom success in traditional programs was predicted by prenursing and nursing GPAs,[5] junior and senior semester course grades,[6] and comprehensive pre-RN examinations.[7]

Methods

In this retrospective, descriptive study, select academic variables of ANC graduates from 1999 through 2002 completing the NCLEX-RN were examined. The variables included science or nonscience degree; course grades; the Health Education Systems, Inc (HESI) score [probability score of 85% = benchmark for Creighton University Medical Center School of Nursing (CUSON)]; and the NCLEX-RN. A convenience sample of 127 ANC graduates whose NCLEX-RN results were available were included. Multivariate analysis of covariance with discriminant analysis follow-up was completed.

Results

Of the 127 students in this study, most were white women with science majors who had a B average in their

previous degree. Seven (5.5%) of the students failed the initial NCLEX-RN. The HESI scores for those that passed the NCLEX-RN were higher for both degrees, with an average mean score approximately 10 points higher than those who failed. Both science and nonscience degree students who failed the NCLEX-RN had similar mean HESI scores. Students with science degrees received higher SCC grades than those with nonscience degrees regardless of NCLEX-RN outcome. Students with science degrees who failed the NCLEX-RN were found to have lower grades than those who passed. The mean SCC grade for students with nonscience degrees (mean = 2.76) was almost a full-letter grade higher for those who passed the NCLEX-RN than for those who failed (mean = 1.75).

There are statistically significant findings with SCC grades and NCLEX-RN results (P = .02), HESI scores and NCLEX-RN results (P = .03), and SCC grades and previous degree (P = .01). Admitting GPA, SCC grades, and HESI scores were higher in those students with science degrees who passed the NCLEX-RN than with all other groups. Admitting GPA for both science and nonscience degree students who passed the NCLEX-RN was higher than for those who failed. The HESI scores of students with science degrees who passed the NCLEX-RN were 10% points higher than those of all students who failed.

Discussion

Results show that there is a difference in how students with science degrees perform when compared with those with nonscience degrees. They had higher classroom grades and were more likely to be successful on the initial NCLEX-RN. In attempt to address this difference, CUSON reviews science GPAs before admission and monitors nonscience majors for academic struggles so that early intervention can be initiated. Intervention begins within CUSON, and students may be referred to the University's Academic Success Program where they receive individual consultation. This is supported by Bently's work suggesting that admission committees look critically at science GPAs.[8] The faculty of CUSON has promoted program success and has improved the school's NCLEX-RN pass rates by focusing individualized attention on nonscience degree students. This was achieved through changes in the admission process and early identification of at-risk students with content-specific deficiencies identified in coursework and on HESI.

Numerous studies have reported the relationship between classroom grades and NCLEX-RN results.[1,5,6,9] This study found that students who performed well on HESI and in the SCC were more likely to be successful on the NCLEX-RN. This is important because it validates that the SCC prepares students for the HESI, which, in turn, is an indicator for success on the NCLEX-RN. Students with nonscience degrees who scored low on HESI and in the classroom may be at greater risk for failing the NCLEX-RN without proper intervention.

Although this study indicates that previous degree and HESI scores have potential for predicting NCLEX-RN success for ANC students, there remains a clear need for further study on the differences between those with previous science versus nonscience degrees. To ensure success of these graduates, schools should continue to examine variables that potentially predict NCLEX-RN success. Considering the shortened nature of ANCs, it is important to identify students at risk for failing the NCLEX-RN as early as possible in order to intervene.

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