ATTRITION OF ON-LINE GRADUATE NURSING STUDENTS BEFORE AND AFTER PROGRAM STRUCTURAL CHANGES

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This study assessed attrition rates and reasons for withdrawal among on-line graduate students before and after the implementation of program structural changes in 2008. A descriptive retrospective cohort study was conducted using the academic and advising records of 853 on-line graduate nursing students enrolled between 2005 and 2010. Three student cohorts were examined: (Cohort 1) students who entered and withdrew prior to 2008, (Cohort 2) students who entered before and withdrew after 2008, and (Cohort 3) students who entered and withdrew after 2008. The proportions of student attrition from each cohort were 43% (97 out of 225 students), 19% (52 out of 277 students), and 7.4% (26 out of 351 students), respectively. Results indicated that students' attrition rates in Cohorts 2 and 3 were significantly less than Cohort 1. Supported by Alexander Astin's input–experience–output model, 2 major themes emerged as reasons for withdrawal—personal and academic. Findings from this study provided a critical view for further investigation and serve as an evaluation tool to identify trends and develop appropriate supportive interventions that facilitate positive student outcomes. Further research is warranted to investigate the effects of the program structural changes on students' attitudes and program satisfaction. (Index words: On-line; Graduate; Nursing; Attrition) J Prof Nurs 29:181–186, 2013. © 2013 Elsevier Inc. All rights reserved.

T HE NATIONAL NURSING shortage makes attrition a major concern for nurse educators and administrators of nursing programs (Fowler & Norrie, 2009). Although student attrition is one of the most important challenges of financial, educational, and workforce development for the health care fields, attrition data serve as only one measure of the quality and effectiveness of an academic program. Professional nursing accrediting bodies such as the National League for Nursing and the Commission on Collegiate Nursing Education require reporting of degree completion rates and program satisfaction as indicators of program success.

It is widely believed that student satisfaction with the nursing program and attrition rates are directly related. Systematic analysis of attrition data can provide valuable information to support a program's continuous quality improvement efforts. Student attrition rates and reasons for withdrawal have been reported for traditional on-ground undergraduate nursing programs. However, there is a paucity of data available related to attrition from on-line graduate nursing programs.

This study was an attempt to report the change in attrition rates before and after the implementation of program structural changes in a private higher education institution. Program structural changes implemented in 2008 were specifically directed at influencing variables within the academic environment. Specifically, program changes were designed to (a) provide opportunities for integration into the academic environment; (b) provide access to the relationships, skills, and resources needed for student success in the program; (c) structure course

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delivery to enhance student engagement and support optimal learning in the on-line environment and; finally, (d) enhance student commitment to program completion. The primary goal of these changes was to impact the student's academic experience in ways to support a more positive outcome evidenced by both a decreased attrition rate and a decrease in academic reasons for withdrawal. The structural and process program changes implemented in January 2008 included the following: (a) a transition from monthly rolling enrollments to cohort admission three times a year, (b) a 3-day on-campus orientation program for new master of science in nursing (MSN) students focusing on skills and resources to support student success, (c) an expansion of 8-week session course offerings to 16-week trimester course offerings, and (d) the development of three program completion contract options that were discussed and signed by students at the new student orientation session.

A variety of terms are found in the literature to describe students who leave a program of study prior to completion. Perry, Boman, Care, Edwards, and Park (2008) stated that although numerous studies have focused on persistence rates from various perspectives, there is a lack of clarity on terms and concepts and their relation to on-line educational practices. For the purposes of this study, the term *attrition* referred to students who had withdrawn from the on-line graduate nursing program after being formally accepted and actively enrolled in their first course. Program withdrawals are categorized as administrative withdrawal (failure to start or maintain active enrollment), academic withdrawal (dismissal because of two course failures), or student-initiated withdrawal (students who leave for reasons unrelated to administrative or academic requirements).

Background

The growth of on-line graduate programs is unprecedented (Allen & Seaman, 2008). These programs offer the student greater convenience, flexibility, and the opportunity to complete clinical requirements in their own communities. Most graduate students have both professional and family responsibilities, and the on-line environment provides a viable option for completing a degree. Because of these benefits, on-line programs and institutions have realized increased enrollments and program inventories. Yet, the issue of low persistence/high attrition rates raises concern for on-line graduate programs. National statistics are not available, but dropout rates ranging from 20–50% have been reported by The Chronicle for Higher Education (Frankola, 2001).

The on-line student has different characteristics and needs than that of the traditional student. In addition, the on-line learning environment is considerably different than the on-campus setting. Recent studies of persistence and attrition rates continue to provide valuable information for higher education programs about why students choose to stay or leave a program of study. Rovai (2003) noted, however, that although many studies have focused on traditional on-campus programs, there is a dearth of

literature concerning issues at the graduate level and issues of the on-line learner. In addition, there is a need to evaluate the effects of program design and processes intended to promote faculty–student and student–student interactions (Lovitts, 1996).

Limited research related to the attrition or persistence of on-line graduate students was found. Multiple variables including demographic, academic, administrative, and personal have been examined in relation to student attrition rates. Overall, research results indicated that students were more likely to drop out early in a program (Willging & Johnson, 2004) and that students' reasons for leaving were multivariate and unique (Li & Killian, 1999; Willging & Johnson, 2004; Glogowska, Young, & Lockyer, 2007). Reasons for withdrawal were primarily categorized either as program related or as personal related. Program-related reasons included issues related to program administration and management such as student support services, available resources, instructional strategies, content delivery format, curriculum, and so forth. Personal reasons most often included issues related to family, health, financial status, commitment to academic pursuits, and career/work expectations (Perry et al., 2008; Rovai, 2003). Demographics were not predictive of attrition, and no evidence of students withdrawing related to lack of social integration or sense of learning community was found (Rovai, 2003).

Willging and Johnson (2004) conducted an on-line survey to determine when and why students dropped out of an on-line program. Various factors were identified and compared between students who dropped out of an on-line program and those who persisted. Data revealed that most of the students dropped out after completing only a few courses, often because of frustration or inexperience with technology. Students who have completed several courses were less likely to drop out because of the time and effort invested in the program.

In summary, there is a dearth of research available related to student attrition from on-line graduate nursing programs. Results have shown that demographic variables were not predictive of attrition and that reasons for leaving are multivariate and unique. Insights from available research provide a limited but critical view of the complex issues surrounding graduate student attrition and a better understanding of the on-line learning experience. Integration of information regarding students' reasons for leaving and the impact of changes in program structures and/or processes provide opportunities for further research, program improvement, and decreased rates of attrition.

Theoretical Framework

Alexander Astin (1984) outlined a rather precise input–environment–output (I-E-O) model for analyzing student data. The "I" refers to inputs (personal qualities students bring to the university experience), the "E" refers to the university environment (the student's actual campus experience), and the "O" refers to outputs (change or impact on the student talent development