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### Student Retention in BSN Programs

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STUDENT RETENTION IN BSN PROGRAMS

by

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A Dissertation Submitted to the Faculty of  
Old Dominion University in Partial Fulfillment of the  
Requirements for the Degree of

DOCTOR OF PHILOSOPHY  
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August 2013

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## ABSTRACT

### STUDENT RETENTION IN BSN PROGRAMS

Katherine Pittman Hensley

Old Dominion University, 2013

Director: Dr. Mitchell Williams

This study examined, by use of a researcher-developed survey instrument, perceptions between three groups on reasons why students drop out of nursing programs. Also examined are recommendations from the three groups on how to try to avoid nursing student attrition. Specific groups surveyed included native BSN students, RNB students, and a mixed group of nursing faculty. Survey items were divided into two general groups: student-related issues, and institutional issues. Since RNB students (which include a larger number of non-traditional students) and BSN students (which include more of the native university population of traditional students) have many differences, the author attempted to identify what those perceptions are. Two ANOVAs were used in the study, one to identify perceptions from each group on all survey items. The second ANOVA was done to identify the recommendations from each group on how institutions could help prevent attrition. Eight of the sixteen survey items

showed significant differences in perception between groups, and two of the five items showed significant differences in recommendations between groups. Strategies for preventing nursing student attrition were proposed in the last chapter with recommendations for further studies.

This dissertation is dedicated to my  
husband, David, and children,  
Emily, David, and Travis,  
who have been “the wind beneath  
my wings” over the past six years while  
I worked on this important project.

## ACKNOWLEDGEMENTS

I would like to thank my committee members for their attention to my study as it progressed over the past three years. Thanks for staying on my committee even when things became very busy for you; it certainly made completing this work easier for me. There have been quite a few bumps in life's road for me while I have completed this dissertation, and I applaud you for all your patience and steadfastness as I worked toward this important goal.

## TABLE OF CONTENTS

	Page
LIST OF TABLES .....	ix
LIST OF FIGURES.....	x
INTRODUCTION.....	1
CHAPTER.....	
INTRODUCTION	
THEORETICAL FORMULATIONS.....	6
PURPOSE.....	8
PROBLEM.....	9
METHOD AND PROCEDURE.....	11
II. BACKGROUND OF THE STUDY	
REVIEW OF THE RESEARCH.....	17
AGENCY SETTING.....	54
DESCRIPTION OF THE STUDY SAMPLE.....	73
III. ANALYSIS OF THE DATA.....	69
IV. RESULTS AND DISCUSSION.....	106
V. CONCLUSIONS.....	116
REFERENCES.....	117

## APPENDICES

A. SURVEY TOOL.....	135
VITA.....	140



## LIST OF TABLES

Table	Page
1. <i>Demographics of survey respondents</i> .....	71
2. <i>Students over the age of 35 have more difficulty than other students completing the program and graduating.</i>	80
3. <i>Students who have young children have more difficulty completing the program.</i>	81
4. <i>Students who took math and science pre-requisites within the five years just before admission to the nursing program are more likely to complete the program.</i>	82
5. <i>Becoming engaged in campus activities helps nursing students remain in the program to completion.</i>	83
6. <i>Being involved in a study group helps nursing students complete the last year of the nursing program.</i>	84

7. *Most students who leave the program prior to completion do so because of non-academic events in their personal lives.* 85
8. *The presence of a student center for tutoring and/or writing assistance helps students to remain in school the last year of the program.* 86
9. *Most students who leave during the last year prior to completion do so because of course failure.* 87

## LIST OF FIGURES

Figure	Page
1. Tinto's Student Integration Model.....	21
2. Jeffrey's NURS Model.....	47

Running Head: STUDENT RETENTION IN BSN PROGRAMS

Student Retention in BSN Programs

Kathy Hensley

Old Dominion University

## CHAPTER I

### INTRODUCTION

For several years, a nursing shortage in the United States has attracted the attention of national, state, and local governments. Following a number of nursing shortages during the 20<sup>th</sup> century, this phenomenon became a predictable event (Master Plan for Nursing Education, 2008). For decades, the nursing profession has experienced episodes of shortages and surpluses. The shortages have generally led to increased wages for nurses, increased recruitment of students, and expansion of educational programs (Fondiller, 2001; Sochalski, 2002). The surpluses have resulted in stagnant wages and declining enrollments in nursing schools that later led to more shortages (Master Plan for Nursing Education, 2008).

The current nursing shortage is different. The urgent need for an increased number of nurses in the community is illustrated by the confluence of two major demographic phenomena in this country: the aging of the nursing workforce and the emerging increased need for health care. The national average age of a nurse in 2004 was 46.8 years (Bureau of Health Professions, 2006). In Washington State, 31.6 % of the current RN population is aged 55 years or more (Skillman, Andrilla, & Hart, 2007).

The aging of the demographically huge “Baby Boomer” generation will have the dual effect of reducing the supply of nurses while also dramatically increasing the demand for nursing care (Master Plan for Nursing Education, 2008). Considering the fact that there is opportunity for lucrative jobs in many professions besides nursing for those college students who might have otherwise chosen nursing, it is estimated there will be a

shortage of at least 340,000 registered nurses (RNs) by the year 2020 (Auerbach, Buerhaus, & Staiger, 2007; Master Plan for Nursing Education, 2008). This situation will create a significant void in nursing care at a time when it is needed the most. Just as the demand for nursing care is expected to increase, due to the aging of the general population, an enormous cohort of experienced professionals will be leaving the field. Who will replace them? (Master Plan for Nursing Education, 2008).

### *Retention of Nursing Students*

A positive step toward potentially improving the numbers of new nurses in our communities is to improve retention in the nursing schools. Since the 1970s when Tinto (1975, 1989) began his groundbreaking work on college student retention, the subject has been widely researched. Much of this work has focused on different categories of college students, among them traditional, nontraditional, and minorities, as well as on variables, both institutional and personal, determining why students left the university (Astin, 2002; Cameron, 2005; Higgins, 2005; Pascarella, 2008; Tinto, 1992;). Studies based on student experiences in the community colleges have revealed both institutional and personal reasons for leaving school (Karp & Hughes, 2008) and recent research has identified some of the perceived barriers to the student (Gardner, 2005; Stickney, 2008). Although the collection of research on college student retention is voluminous, there is a surprising dearth of research on retention in nursing programs. This study compared the retention rates between a group of nursing students who began at a community college and transferred to a university for degree completion (transfer students) and a group of native university-based nursing students.

This study examined the differences in perceptions and recommendations among two categories of BSN students and two categories of BSN faculty members on causes of attrition in the BSN and RNB programs. The research was based on data obtained from two BSN programs and three RNB programs in Washington State. Specifically, the data came from the responses of continuing nursing students and faculty members from both RNB programs and BSN programs on a researcher-designed survey instrument. The study was conducted in response to the high attrition rates (22%) among students in associate-degree nursing (ADN) programs in the state as compared with the relatively low (4%) attrition rates in Washington's BSN programs (Master Plan for Nursing Education, 2008). The students who articulate to the RNB, (or transfer-to-BSN) programs at the universities are those ADN graduates who want to complete their BSN. An examination of this type should be of interest to faculty and students in community colleges and universities in Washington State as well as officials with state nursing agencies.

Studies have shown community college students in general to be different from university students. Community college students do not persist as well toward degree or certificate completion as students at universities (Gardner, 2005; Karp & Hughes, 2008; McIntosh & Rouse, 2009; Stickney, 2008). In 2007, the U.S. Department of Education reported community college students as being only half as likely to complete an associate degree in three years (30%) as university students are to complete a bachelor's degree in six years (60%).

The lower persistence rate among students in community college programs is thought to be related to the high percentage of nontraditional students. Nontraditional students are

over age 25, are likely to have more life responsibilities, such as children, spouses, and jobs, and therefore experience more difficulty dedicating time to educational endeavors (Frederickson, 1998; Jeffreys, 2004; McIntosh & Rouse, 2009). This study compared the retention rates between a group of nursing students who began at a community college, then transferred to a university for degree completion (transfer students) and a group of native university-based nursing students. In this study, completion rate to graduation is examined. Since RNB programs in Washington State are full time programs usually completed in one year's time, data was collected on that entire one year time frame to graduation. In BSN programs, only the last year is examined. Respondents were asked to consider only the last year of the BSN Program or the last year of the RNB program in their responses.

### *Background*

The number of new nurse enrollees in nursing programs is too low to effectively meet future health care needs (Stickney, 2008). Workforce shortages faced by hospitals are indicative of an overall decline in the nursing population as a whole. In 1996, there were 798 RNs for every 100,000 persons in the United States; by 2000, that number had dropped to 782 (Viterito & Teich, 2002). These data are supported by the fact that since 1973, there has been a 30% decrease in college freshmen who choose nursing as a career (Shelton, 2003). By the year 2020, it is estimated the RN workforce will be 20% below the projected requirements for health care (Beurhaus, Ataiger, Auerbach, 2000). Considering there is opportunity for lucrative jobs in other professions besides nursing for those who would have otherwise chosen nursing, it is estimated there will be a shortage of at least 340,000 RNs by 2020 (Auerbach, Beurhaus, & Stager, 2007; Master



Plan for Nursing Education, 2008). This situation will create a significant void in nursing care at a time when it is needed the most.

Attrition in nursing programs slows down both the supply of registered nurses from the community colleges as well as the supply graduating from universities (Cameron, 2005; Higgins, 2005). A positive step toward improving the numbers of new nurses in our communities is to improve retention in both ADN and BSN schools. Upon comparison with the 58% general college retention rates, the national retention rates for nursing schools look encouraging (McIntosh & Rouse, 2009). Nine out of every ten students enrolled in 2005 in a BSN program graduated the following year, and in 2004, the retention rate in ADN programs for the first year was 83% (nlm.org, 2007). However, considering the national deficit of registered nurses, reducing ADN attrition by 50% could add 200 nurses into Washington State's workforce annually (Master Plan for Nursing Education, 2008).

Playing a key role in nursing education, the community colleges produced 60% of all the U.S.-educated RNs who entered the workplace in 2000. Indeed, fully 79% of all ADN nurses that year graduated from a community college (Viterito & Teich, 2002). Without the critical venue of ADN nursing education, health care institutions would be in a far more serious nursing deficit than already exists.

Theorists who provide important information on student persistence are Tinto (1993), Bean (1990) and Jeffreys (2004). Non-traditional students, who are older, often feel the opportunity cost of their time is high, and tend to work and attend school only part-time (McIntosh & Rouse, 2009). The lower persistence rate of this group can be interpreted as

either low benefits or high costs associated with educational investment. Jeffreys (2004) developed a nursing school retention model relevant to both ADN and BSN programs. Areas Jeffreys has identified as being problematic for ADN students include elements similar to both Tinto (1984) and Bean (1980): student profile characteristics, professional integration factors, environmental factors, and academic factors. As Jeffreys (2004) said, “The most persistent trend in student persistence research is that student attrition persists” (p.4). Why nursing students leave nursing school is a question in need of exploration. Improving retention in all nursing programs is a potential method of increasing nursing numbers in the community.

#### *Rationale for Comparison of Programs*

The rationale for comparing perceptions and recommendations of students and faculty members in traditional BSN and transfer-type RNB programs lies in the differences in program types and the students they attract. Those students progressing through the RNB programs are demographically different from the students in the traditional BSN programs. If the survey responses reveal significantly different perceptions and recommendations between the two groups, those differences can be evaluated and addressed as a result of the study. Sharing of information gleaned from this study can be identified in articles written in educational journals, particularly those for nursing education. This information can be utilized in the educational setting to shore up identified deficiencies, hopefully improving the educational experience and decreasing student attrition.

*Purpose Statement*

The purpose of this study was to examine the factors which affect the retention rate of students in BSN (native students) and RNB (transfer students) programs in Washington State. A researcher-developed survey instrument was administered to students and faculty members regarding their perceptions of personal, academic, and institutional barriers to nursing student retention. Additionally, the instrument gathered data on student and faculty members' recommendations for changes which could improve retention for both native and transfer nursing students.

*Research Questions*

The research will be guided by the following questions:

1. What are the perceptions of nursing students and faculty members concerning the factors which affect the retention of RNB students (students who transferred from an ADN program) during the last year of a nursing program in Washington State?
2. What are the perceptions of nursing students and faculty concerning the factors which affect the retention of BSN (native students) students in a nursing program in Washington State?
3. Is there a statistically significant difference in the perceptions of faculty and students regarding the factors which affect student retention of RNB students and BSN students in nursing programs in Washington State?
4. What are the recommendations of nursing students and faculty concerning institutional changes which could improve student retention for RNB students

(students who transferred from an AND program) and BSN students (native students).

5. Is there a statistically significant difference in the recommendations of faculty and students regarding institutional changes to improve student retention in BSN programs?

It is reasonable to speculate RNB programs suffering from a higher attrition rate than BSN programs due to previous data presented on the high attrition rates from the associate-degree nursing programs. Since the RNB programs are designed for those students who transfer, after completion of the associate-degree nursing program, to the RNB program, there is an assumption that the RNB programs may also see higher attrition rates during the beginning of the last year to graduation than the native BSN programs.

### *Significance of Study*

Nursing faculty, practitioners, and researchers need the information this study provides to help plan the future for nursing in this country. There is already a severe shortage of registered nurses, and as the Baby Boomers age, the need will increase tremendously. Today, the number of nursing graduates is insufficient for the patient demand, and over the next twenty years, the problem will grow to crisis proportions (Master Plan for Nursing Education, 2008).

This study identifies faculty and student perceptions at several schools in Washington State regarding reasons why both native and transfer BSN students leave college. Since a few studies have been done addressing both reasons why 22% of ADN students fail to

persist to the end of the ADN programs (Master Plan for Nursing Education, 2008) and several studies have been completed revealing perceived reasons for attrition in BSN programs (Jeffreys, 2004; Uyehara, Magnussen, Itano, & Zhang, 2007), there exists a need for comparison between the two student groups. If gaps can be identified between groups identifying reasons for stop out or failure, measures may be taken to address these issues, and hopefully, persistence rates will increase.

Since BSN programs clearly enjoy a greater persistence rate than the ADN programs in Washington State, it will be interesting to find out what the institutional and student reasons for attrition are among both groups. Since the ADN graduates, who, as a whole, are older and have previously experienced more student-related issues than the typical BSN student, transfer on to the RNB programs, one wonders whether the RNB student continues to grapple with the same types of student issues they dealt with as an ADN student. Moreover, it will be interesting to find out whether any issues are severe enough to cause them to drop out of the RNB program. Input from faculty members from both types of programs will help illuminate what some of the perceived barriers are from a different perspective.

If the survey reveals information that can be utilized by nursing program faculty to remove barriers for students and improve retention, these findings have the potential to be significant from an educational perspective. Information gleaned may also suggest implementation of new teaching/learning methodologies, suggestions on types of resources needed, and practical solutions to common student problems. Improving nursing student persistence rates not only helps the educational facility, but it ensures employment of increased numbers of nurses into the hospitals, extended care facilities,

clinics, and nursing schools. These increased numbers of graduates will help alleviate the existing nursing shortage.

### *Methodology*

In this quantitative study, application was made to the Internal Review Board at Old Dominion University prior to implementation. Research questions one through five were answered with data gathered from a researcher-developed survey instrument.

Introductory letters describing the study were sent to all faculty and students prior to survey administration. The strictly volunteer nature of the study was emphasized in the letter. The student survey was administered electronically to a group of transfer students and their faculty members, and a group of native students and their respective faculty members (n=706) at four nursing programs, including both private and public universities in the northwest. The researcher collected the completed surveys and place numerical Likert-type ratings on an SPSS grid. Additionally, space was provided at the end of the survey to give the student or faculty member greater ability to fully answer questions and make comments. Descriptive statistics and two analyses of variances (ANOVAS) were conducted to determine whether there are significant differences between the perceptions and recommendations of participants from each program type for each question. Differences in perception between participants from both BSN and RNB programs on reasons for attrition were identified.

Information obtained from the survey provided insight into types of student factors and institutional factors existing within each type of program, among students, and in the educational institution. This data may be useful in many ways. An examination of these

two groups may provide further information on why the attrition rates differ so much between the BSN and the ADN programs, and, if there is a significant difference in attrition between the BSN and the RNB programs, may also provide information to help educators reduce the difference in attrition rates.

### *Delimitations*

A student could transfer from an ADN to a BSN and could impact the sample. We will not differentiate the students in the BSN program in spite of the fact some ADNs may have transferred to BSN. We will not look at any students who have transferred to BSN from ADN because it would not be to their advantage to do so.

The study was conducted using population samples from four universities in Washington State, so information gleaned is limited to this small geographic area. Since the vast majority of both BSN and RNB students come from the University of Washington and Washington State University, these two schools were utilized. Additionally, BSN and RNB programs in two other schools in Washington State were examined. The research was quantitative, and taken from the results of a researcher-developed survey. Thus, no participant interviews were conducted to clarify results from surveys. Data was collected over a month-long period electronically, hopefully providing a large enough sample to allow a valid evaluation of both groups.

Administration of the student survey was limited to continuing nursing students in both native BSN and transfer-to-BSN (RNB) programs, so students from both types of programs were adequately evaluated. Administration of the faculty survey was administered to both full-time and adjunct nursing faculty who were asked to identify the

number of years they have taught nursing students. The survey was administered in Likert-type scale format with an area under the item for the participant to write a comment. Beneath the Likert-type scale there were several open-ended questions designed to give the survey participant freedom to expound on perceptions and recommendations.

### *Results*

After all data have been collected, the researcher entered data into SPSS software for analysis. Survey data was analyzed via descriptive statistics and two ANOVAs using SPSS software. Results were placed on tables by the researcher consultant for evaluation. Significance between any items was identified and reported. Information gleaned from the research was limited to the procedures mentioned above.

### Definitions

The following terms are used in this study:

#### *Academic factors:*

Academic factors include personal study skills, attendance, class schedule, study hours, and grade-point average (GPA).

#### *ADN students:*

ADN students are those who attend an associate-degree in nursing (ADN) program at a community college. After they complete the ADN program, these students may transfer to RNB programs at the universities through articulation agreements.



*Attrition:*

Attrition refers to a student dropping out of a nursing program.

*BSN student:*

A BSN student is a native university student who is in the last (usually the fourth) year of a Bachelor of Science nursing program.

*Developmental education:*

Coursework below college level.

*Institutional factors:*

Institutional factors include general academic services, such as library services, college counseling services, and computer library services. Other factors include access to instructor, tutoring, peer-mentoring, and advising (Jeffreys, 2004).

*Involuntary attrition:*

Involuntary attrition refers to student failure or dismissal from the nursing program due to substandard performance (Tinto, 1982).

*Native students:*

Native students include traditional college nursing students progressing through a four-year institution with the goal of obtaining a BSN.

*Retention rate for BSN students:*

Retention rate for BSN students is the persistence rate of native students in a traditional BSN program from the beginning of the last year of the BSN program through graduation.

*Retention rate for RNB students:*

Retention rate for RNB students is the persistence rate of nursing transfer students in a transfer-to-BSN (RNB) program from the beginning of the last year of the RNB program until graduation.

*RNB student:*

RNB student is a student in the last year of an RNB (RN-to-BSN) program. Typically, this student transferred from completing an associate-degree nursing (ADN) program, via an articulation agreement, to the RNB program. The RNB program usually only lasts one-year for a full-time student, but may be a two-year version. Only the last year will be examined. Usually, this student is already licensed as a registered nurse.

*Self-efficacy:*

Self-efficacy is the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations (Bandura, 1994).

*Student factors:*

Student factors are attrition factors related to the student. This can include attitudes, values, intent to persist, beliefs about learning, cultural values and beliefs, and self-

efficacy (Jeffreys, 2004). Other factors are family issues, child care, employment, finances, grades, and transportation.

*Student profile characteristics:*

Student profile characteristics describe student demographics such as age, race, gender, and other possible identifying criteria (Jeffreys, 2004).

*Transfer students:*

Transfer students include former community college ADN students who have completed the AND program, obtained a registered nurse (RN) license, and transferred to a BSN completion program (RNB) at a four-year school.

*Voluntary attrition:*

Voluntary attrition refers to a student dropping out due to personal (non-academic) reasons (Tinto, 1982).

In the following chapter, existing student retention literature is examined. The chapter will begin with discussion of early student retention researchers, such as Tinto, and will show how student retention research evolved over the next thirty years to include first traditional university students, then later, community college students. Lastly, the chapter will introduce and provide discussion on nursing student retention.

## CHAPTER II

### REVIEW OF LITERATURE

In this review, existing college student retention literature is examined. Early in retention research, only one student group was studied (Tinto, 1975). As this research expanded and diversified, student groups from different types of educational institutions were encompassed. Hence, the term “early retention research” refers to studies conducted utilizing only traditional undergraduate students at universities. “Later retention research” includes community college students, non-traditional students, and the traditional university students within the “early retention research” group. The term “traditional student” refers to an undergraduate baccalaureate student between the ages of 18 and 23 living on campus in a university setting. “Non-traditional student” refers to a college student age 24 and older. For this study, “native” students are described as continuing university students enrolled in a 4-year degree program, and “transfer” students are those students transferring from a community college to a 4-year university program (RNB) for degree completion. These terms are used to clarify the difference between the two groups examined in this study.

#### Method of Reviewing the Literature

This review of student retention literature was developed through a comprehensive review of scholarly studies found in databases available via Old Dominion University and the University of Washington. Databases used include but are not limited to ERIC, ProQuest, Education Research Complete, SAGE, and CINAHL. Information gathering was focused on topics addressing student retention in higher education, retention issues

relevant to different educational institutions, transfer as compared to native student characteristics, and issues embedded in nursing student attrition. Boolean searches were conducted using key words such as retention, attrition, persistence, non-traditional student, traditional student, community college, baccalaureate, associate-degree nursing, and transfer, using appropriate operators.

### Background of Retention Research

Student retention in higher education has been studied extensively over the past three decades in the United States. With the current national experience of greatly reduced financial resources among schools in higher education, institutions appreciate, as they never have before, the need to retain as many students as possible (wacenterfornursing.org, 2008). Researchers have examined the subject using a variety of methodologies in attempts to capture the real issues behind student attrition in the nation's universities and community colleges. Despite these efforts, reasons for attrition remain unclear. For this literature review, student retention is examined utilizing a historical time frame approach to include three areas: 1) early retention research conducted at the university level with native undergraduate students, 2) later retention research conducted, with variations, on the original group plus transfer and community college students [which includes non-traditional students], and 3) recent retention findings in the area of nursing including both native and transfer students. The objective in utilizing this approach is to examine the findings of earlier studies, account for those research questions already answered, and identify the existing gaps to create a nursing retention study design.

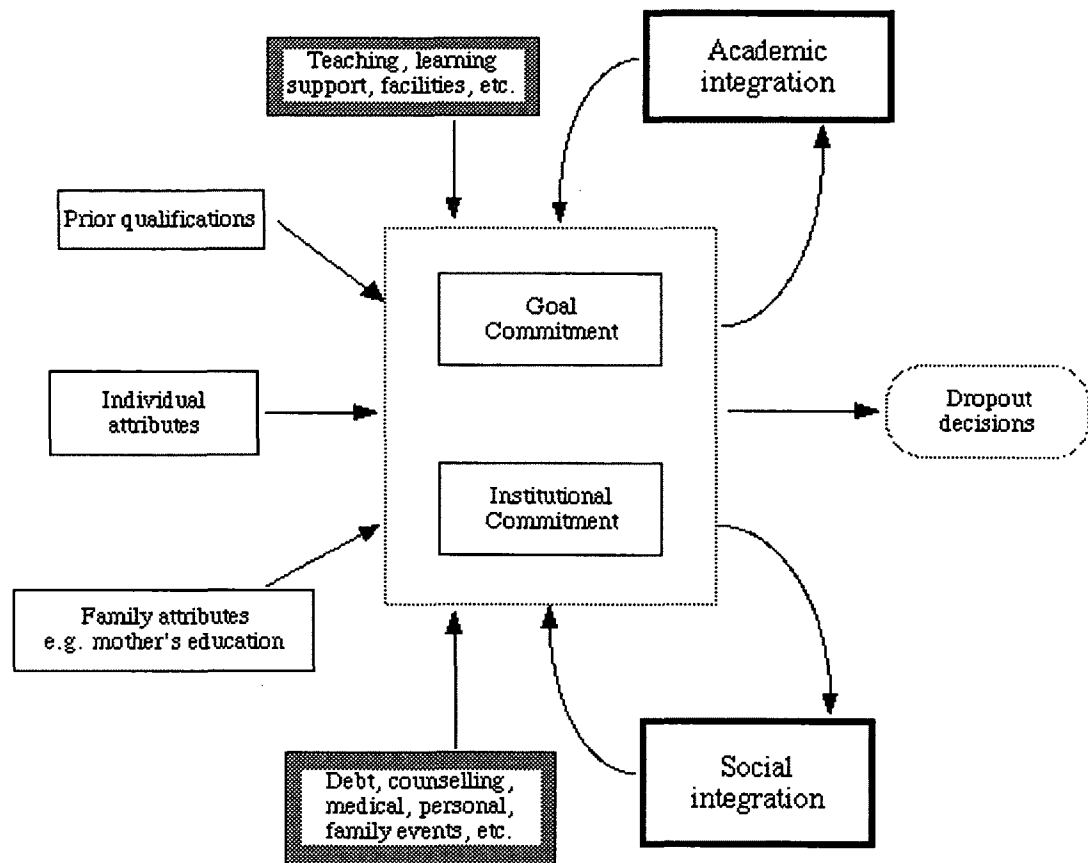
### Early Retention Research

Academic research on college student retention began with Spady (1970) and later, Tinto (1975; 1993), a sociologist who piloted the most intensive of the early student retention projects. Theoretical underpinnings of Tinto's early retention research included a sociological model by Durkheim (1961), who studied the implications of the phenomenon of suicide. Durkheim correlated the act of "egotistical suicide" with the failure of an individual to integrate into society (Durkheim, 1961). Tinto, in examining the university student community with its differing cultures, identified a correlation between the isolated person, unable to find a niche in society and the university student, unable to find a social comfort zone in college. Durkheim referred to two types of integration- social and intellectual- through which membership in the communities of society may be accomplished. Social integration refers to that which results from personal affiliations and daily interactions with members of society. Intellectual integration comes from the sharing of values held in common by other members of society. Holding values which deviate from those of other members of society may lead to insufficient integration and the absence of community membership and/or from insufficient personal affiliation with other members of society. These are the critical connections that must be made; otherwise the person may be at risk for dysfunctional behaviors, of which one of the most extreme is suicide (Durkheim, 1961). Using Durkheim's model as a guideline while conducting his early research, Tinto went on to formulate his "Student Integration Model" of college student retention, which will be further addressed in this chapter.

Tinto first studied undergraduate students living on-campus, enrolled in university baccalaureate programs. Working with the data of Durkheim and Spady (1970), who believed a student's academic potential and normative congruence strongly affect retention, Tinto went on to identify several factors involved in college student dropout. Tinto (1975) asserted, similar to Spady's conclusions, university student retention was dependent upon the student's academic and social integration into campus life. This statement further strengthened the model of student integration in higher education (Allen, 2008; Pascarella & Terenzini, 1979). Although still a major milestone in student retention research, this model has been studied, critiqued, rebuffed, and redesigned by subsequent researchers over the years. Figure 1 is Tinto's Student Integration Model.

Figure 1

## Tinto's Student Integration Model



Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. (2<sup>nd</sup> ed.). Chicago: University of Chicago Press.



### Theoretical Model of Dropout from Higher Education

In 1975, Tinto introduced his longitudinal institutionally-oriented model of dropout from college based on his synthesis of academic research. At that time, research had already identified several variables thought to be related to student retention or dropout. These variables include family background, individual characteristics, social status, past educational experiences, goal commitment, interaction with the college environment, academic integration, social integration, and institutional characteristics such as size, quality, and type (Tinto, 1975).

Upon reviewing the work of previous retention researchers, Tinto found the family variable to be all-important in student intent to persist in college (Congdon, 1964; Hackman & Dysinger, 1970; Trent & Ruyle, 1965). Important findings were high-quality relationships between the student and parents, and high levels of interest and expectations from the parents for the child's success in college. A conclusion in Tinto's findings was the notion that "patterns of intergenerational mobility may be built upon the passing on of family expectations to their children" (Tinto, 1975, p.100.)

Outweighing the family support variable was individual characteristics (Tinto, 1975). Student ability was measured in standardized tests and high school grade performance, with the latter being considered the more reliable of the two (Sewell & Shah, 1967; Wegner & Sewell, 1970). Measured ability was found to be almost twice as important as family characteristics (Blanchfield, 1971; Chase, 1970; Jaffe & Adams, 1970; Lawhorn, 1971; Panos & Astin, 1968; Smith, 1971; Taylor & Hanson, 1970; Tinto, 1975). Other individual characteristics considered in student dropout were personality and attitudinal

differences. Vaughan (1968) found dropouts tend to be more impulsive than persisters, lacking a strong commitment to education. At the time these studies were conducted, men completed degrees in greater numbers than women, although females left academia voluntarily more than men (Astin, 1972; Cope, 1971; Fenstemacher, 1973; Spady, 1970; Tinto, 1975).

Researchers have attempted to examine student personality type in determining to what degree students are to persist in college to completion, and upon reviewing the research of others, found the reports to be conflicting. Astin (1964) found that leavers were more aloof, self-centered, impulsive, and assertive than persisters. Others, such as Trent and Ruyle (1965) found leavers to be more autonomous, mature, intellectually committed, and creative than persisters. Vaughan (1968) and Hannah (1971) found persisters to be irresponsible, anxious, impulsive, rebellious, unstable, immature, and unimaginative. Adding to the confusion, researchers using the Minnesota Multiphasic Inventory to study the role of personality type in student departure found their results were so different from those of previous researchers that they concluded previous studies were either incorrect or were sample specific (Sharp & Chason, 1978). After acknowledging that personality type is probably important, Tinto (1993) came to the conclusion that previous studies have blurred potentially important differences, and research is unable to say just how different elements of personality affect student leaving in different institutional settings. The role personality plays in college student retention remains vague, and thus may be considered a gap in the retention literature.

Early on, past educational experiences, such as high school performance, proved to be very important in student persistence. Astin (1971) found performance in high school,

either by grade point average (GPA) or rank in class, to be an important predictor of future college performance. Nelson (1972) and St. John (1971) found that both ability level of students in the school and the social status composition of the school affect not only the student's perception of ability level, but also student expectations for future college education. Overall, these factors affect the student's commitment to the goal of college completion.

Other studies found higher levels of student commitment were likely to help a student remain in college. Sewell and Shah (1967) found the level of educational plan held by the individual was the strongest independent influence on college completion. If the student is fortunate enough to know exactly what degree he/she wants at the beginning of freshman year, he is more likely to persist to the degree. Only about a third of students have this advantage (Tinto, 1993). Many have no idea what degree they want; they are driven only by a family expectation that they attend college. Others have an idea in the beginning, but change their mind during the process, which usually causes the educational time frame to be extended. One interesting discussion centered on positive student retention when the prevailing intellectual climate of the institution is congruent with the intellectual development of the student. Voluntary withdrawal was described as a means of coping with the lack of congruency between the individual and his environment (Rootman, 1972).

After ability, the individual's expectation for future occupational status was the single most important predictor of educational attainment (Spaeth, 1970). Student higher-level commitment to a goal was found to be related to families passing on their expectations for development via higher education to their children. Therefore, according to Tinto

(1993), families pass on the advantages of their social position to their children through the process of expectational development, which leads children of higher income backgrounds to expect more of themselves, all other factors held equal, compared to children from lower socioeconomic backgrounds.

Notwithstanding the previous variables mentioned, once the student becomes involved in the academic process, dropout is considered to be related to the longitudinal process of interactions between the individual and the institution (Tinto, 1975). Tinto commented that if there is a secret to successful student retention, it lies in the ability of the institutions to involve themselves in the social and academic development of students. Thus, the point became clear that attrition is largely an issue related to what occurs after entry into college (Tinto, 1993).

The remaining variables reported by researchers included two variables related at least in part to the institutional environment. These variables are academic and social integration (Tinto, 1975). With respect to academic performance, again many researchers have identified grade point average (GPA) as the single most important predictor to persistence in college (Ammons, 1971; Astin, 1972; Jaffe & Adams, 1970; Kamens, 1971). Grade performance becomes a symbol of the student's attributes and achievements as related to the institution's values and objectives. Overall, Tinto (1975) found those with high grades to be more in congruence with the prevailing institutional climate of the college, and those who dropped out appeared to have had insufficient integration into the academic system as well as less institutional commitment.

Tinto (1975) found social integration of students to be multidimensional. Congruence with the prevailing social climate of the institution seemed to not be as important as the student's ability to develop, through friendship associations, some degree of assimilation into the college community. Several researchers (Cope, 1971; Flacks, 1963; Jones, 1962) found social integration via friendship support to be directly related to persistence in college. Insufficient social interaction was found to lead to voluntary withdrawal, whereas excessive social interaction led to decreased academic performance leading to either dropout or dismissal (Tinto, 1975). Participation in extracurricular activities seemed to help create friendships and reduce strain between the demands of the two systems. Thus students participating in extracurricular activities tended to persist in college (Tinto, 1975).

Interaction with the college faculty was found to be important in student persistence, (Centra & Rock, 1971; Gekoski & Schwartz, 1961; Spady, 1971), increasing social integration, institutional commitment, and even the student's academic integration. Tinto concluded that if there is a secret to retention, it lies within the institutions, and whether they are willing to engage in the campus life and intellectual development of their respective students. The more willing institutions are to do this, the better student retention will be (Tinto, 1975).

In order to explain the scope and patterning of student departure in higher education, Tinto examined two specific questions. The first question was related to the percentage of entering students who completed their degree program within a six-year period. To put it succinctly, only 50.2 percent of those full-time freshmen starting a four-year college in 1986 earned their bachelor's degree in their institution of initial registration within five

years of entry. Only 43.4 percent of full-time community college students completed a degree within three years of initial registration (Tinto, 1993). The second question examined to what degree rates of student departure varied for different groups of students and types of institutions. In short, there was a gradual increase in student departure in both the four-year and the two-year schools over a nine year period. Interestingly, the departure rate in the four-year schools, 46.7, was larger than the departure rate, 38.7, in the two-year colleges (Tinto, 1993). Nineteen years later, there was not much improvement. In 2005, roughly 30 percent of first-time, two-year college students seeking an associate's degree had earned that degree within three years. Six years after starting college, twice as many students who began at four-year colleges attained a degree compared to students who began at two-year colleges (McIntosh & Rouse, 2009).

Overall, Tinto's theory asserts that the matching between a student's motivation and academic ability and the institution's academic and social characteristics help shape two underlying commitments: commitment to an educational goal and commitment to remain with the institution. The higher the goal of college completion or level of institutional commitment, the greater is the possibility the student will persist in college (Cabrera, Castaneda, Hengstler, & Nora, 1992). Tinto's theory has become paradigmatic in nature due to considerable consensus on its validity among scholars of college student departure (ASHE-ERIC, 2004).

### Later Retention Researchers

After Tinto presented his Student Integration Model, it was tested by many researchers, first using traditional university undergraduate students and later, nontraditional students. For the most part, researchers found validation in the model across different types of institutions with differing student populations. The obvious gap in Tinto's body of work is the lack of consideration of external factors in shaping perceptions, preferences, and levels of student commitment (Cabrera, Castaneda, Hengstler, & Nora, 1992).

Later researchers expounded upon Tinto's Student Integration Theory. After years of research conducted on the student/faculty relationships variable, Pascarella and Terenzini (1977; 1980; 1983) demonstrated that the degree and quality of personal interaction with other members of the institution they attend is paramount in determining student persistence. In fact, the absence of contact with institutional single personnel proved to be the most important predictor of student departure even after considering background, personality, and academic performance. Results of one study by Pascarella (1980) showed with all student pre-enrollment characteristics held constant, "significant positive associations exist between extent and quality of student-faculty informal contact and students' educational aspirations, their attitudes toward college, their academic achievement, intellectual and personal development, and their institutional persistence." This extensive body of research (Munro, 1981; Pascarella, 1980; Pascarella & Terenzini, 1977; Pascarella & Terenzini, 1983; Pascarella, & Wolfle, 1988; Terenzini & Pascarella, 1991; Tinto, 1993) demonstrated that the degree of student-student and student-faculty contact within the institution are critical predictors of student attrition or persistence.

Other retention studies also showed when students are more involved in campus activities and interactions with faculty, they are more inclined not only to persist but also to learn (Astin, 1991; Ory and Braskamp, 1988; Terenzini & Wright, 1987.) Recently, Oseguera and Rhee (2009) examined peer retention climate and faculty-perceived campus environment to attempt to highlight the role of institutional variables in understanding student departure. The results of this study showed institutional retention climate independently determined whether a student would persist or not (Oseguera & Rhee, 2009). In a 2006 study, where student-faculty informal interpersonal relationships were measured in six components, (academic integration, peer relations, social integration, informal faculty relations, faculty concern, and student commitment), the social interaction component was able to explain 34% of the variance in students' intellectual development and 45% of the variance in students' personal development (Halawah, 2006).

#### Retention Findings on Traditional and Non-traditional Students

Following this long time frame wherein only traditional students were studied, an interest in examining the retention rate of non-traditional students emerged. Bean, (1980; 1990), a psychologist who began studying college student retention during the 1980s, originally focused his study on determining what variables affect traditional students, later expanding to include non-traditional students. Bean believed there are psychological theories that can inform retention/departure model development. Concepts he examined in relation to student retention in higher education are attitude-behavior theory, coping behavioral theory, self-efficacy theory, and attribution theory (Bean & Eaton, 2000).



According to the attitude-behavior theory, over time, beliefs lead to attitudes, which lead to intentions, which lead to behavior. After the variable of past behavior was added to this process, it then showed past behavior, attitudes, and norms all influence intention. The conclusion was all four of the variables have a direct effect on future behavior (Fishbein & Ajzen, 1975). Bean conducted studies on this theory, and found intention to leave college was the best predictor of actual departure.

The second concept Bean examined, coping behavioral theory, is related to the coping skills of the college student. Coping is the collection of behaviors an individual uses in order to adapt to a situation (Lazarus, Averill, & Opton, 1974). Bean & Eaton, (2000), believing in adjustment as being similar to what Tinto referred to as integration, felt within that context, adaptation may be considered the process by which an individual achieves integration in a new environment. Thus, students who cope well with the difficulties of college are those who successfully reduce stress with positive outcomes. Since these students are more likely to gain the attitudinal perspectives of successful academic and social integration, they are less likely to leave college before graduating (Bean & Eaton, 2000).

The third concept Bean considered was Bandura's self-efficacy theory. Bandura defined self-efficacy as an individual's own perception of his or her ability to carry out the necessary actions to reach a certain outcome (Bandura, 1997). As the individual recognizes his/her competence and gains self-confidence, that individual will demonstrate higher aspirations for persistence, task achievement, and personal goals. If a student observes other students succeeding, and believes that he can succeed in academic tasks, he is more likely to invest the emotional energy necessary to achieve academic goals.

Several studies have shown self-efficacy to provide insight into the motivational and behavioral components of academic and social integration and persistence (Bean & Eaton, 2000).

Lastly, Bean examined the attribution theory in his research. Weiner's (1986) model of attribution is useful in examining academic performance and integration. This model contains three categories of attribution, but the most frequently studied one is locus of control. Locus of control is described as being either external or internal. A person with an external locus of control attributes outcomes to factors outside of the person's control, such as fate or luck (Weiner, 1986). The person with an internal locus of control recognizes that personal, internal attributes, such as aptitude or skill, are responsible for an outcome. The student with an external locus is less likely to be motivated to produce the effort to perform well academically, since he perceives the situation to be outside of his control. In recent years, this model has been used to study academic performance in college. Several researchers have found students who have an internal locus of control have strong positive association with academic success (Bean & Eaton, 2000).

Bean and Eaton (2000) found support for the above four theories in studies done by other psychologists. Van Overwalle, Mervielde, and De Schuyser (1995) found that along with other emotional contributors, internal locus had a strong positive association with academic success. Wilhite (1990) also found that internal locus of control was positively related to academic success. Yan and Gaier (1994) found that the internal attributes of effort and ability were significantly related to academic success in both American and Asian students. Perry, Hechter, Verena, and Weinberg (1993) provided more support for attributional retraining, showing it provides activities designed to reorient individuals so

they perceive that future situations are controllable. Studies showed students can reorient their perceptions of causal attribution, such as locus of control, and can become more successful academically. Also supported was the theory of causal attribution and locus of control as processes that contribute to students' success in achieving academic integration. Attribution as locus of control explains some of the process dynamics of how a student becomes integrated in the academic environment and, by analogy, the social environment of the institution (Bean & Eaton, 2000).

The Student Attrition Model shows how individual psychological processes can be understood in the retention process. Each of the psychological theories is complicated in its own right, and with limited space and limited empirical evidence for the various components, the model is a simplification. Bean tried to render the complex simple, recognizing that, in doing so, accuracy is diminished. Bean's Student Attrition Model shows some overlap with Tinto's model, especially in terms of organizational factors, such as courses and academic integration, and commitments to the institution, such as institutional commitment and institutional fit. Unlike Tinto's Student Integration Model, Bean's Student Attrition Model emphasizes the role of factors external to the institution in affecting both attitudes and decisions about leaving college (Cabrera, Castaneda, Hengstler, & Nora, 1992). When researchers examined the two models, they came to the conclusion that there are major differences. The Student Integration Model suggests that academic integration, social integration, institutional commitment, and goal commitment exert the highest effects on student persistence. On the other hand, the Student Attrition Model emphasizes the role of intent to persist, attitudes, institutional fit, and external factors in the form of family approval, friends' encouragement to continue, financial

attitudes, and perceptions about opportunity to transfer (Cabrera, Castaneda, Hengstler, & Nora, 1992). Some of the non-traditional students Bean studied were community college students. The community college student group includes a large number of nontraditional students. Forty percent of two-year college students are older than 24, compared to 36 percent of four-year college students. Sixty percent of four-year college students are ages 18 to 24, whereas only half of students at the community colleges are traditional age (McIntosh & Rouse, 2009). The differences between these two student groups greatly impact student progression through higher education. The following discussion will include a short history of students from both the universities and the community colleges, and the students who typically attend them.

#### Baccalaureate Students

Porter (1989) found a substantial difference in six-year baccalaureate attainment between students at four-year private universities (54.1 percent) and two-year public institutions (43.7 percent). In 2005, 60 percent of baccalaureate students had received their bachelors within six years, while only 30 percent of two-year students had received an associate's within three years (McIntosh & Rouse, 2009). Pascarella and Terenzini (1991) identified student opportunity (such as baccalaureate attainment) as being linked to their respective starting place, and this has been confirmed by Christie and Hutcheson (2003). One major difference when four-year schools are compared with two-year colleges is the four-year schools are 25 percent public and 75 percent private, while two-year colleges are 63 percent public and 37 percent private (McIntosh & Rouse, 2009).

Another advantage baccalaureate students enjoy is greater access to financial aid for tuition and costs. Baccalaureate students enjoy the advantage of more grants (58.5 percent), loans (51.6 percent), and work study (10.8 percent) opportunities across the board than two-year college students, who receive lower levels of grants (51.5 percent), loans (26.4 percent), and work study (7.1 percent) opportunities (McIntosh & Rouse, 2009). Because tuition at the two-year colleges is lower, and socio-economic and academic differences between the two types of students, students are less likely to obtain loans, grants, and work study experiences.

### Community College Students

Uniquely American in their genesis, community colleges are founded on democratic traditions (Wattenbarger & Albertson, 2004). Development of the community colleges occurred during the twentieth century growth of all higher education. The percentage of students graduating from high school increased from 30 percent in 1924 to 75 percent by 1960. In 1910, only five percent of eighteen-year-olds entered college, whereas in 1960, 45 percent of high school graduates went on to higher education. During the 1970s, high school graduation rates stabilized at about 73 percent, but increased again during the 1990s (Cohen & Brawer, 2008).

The reason behind the emergence of community colleges is embedded in the beliefs of some 19<sup>th</sup> and 20<sup>th</sup> century educators that universities should abandon the teaching of freshman and sophomore students in the interest of becoming true research centers, and have a new type of institution, junior colleges, to educate the younger group. This would mean the universities would be responsible for the higher-order scholarship, and the

lower schools would provide general and vocational education through age nineteen or twenty. This idea seemed to catch on, because community colleges became the institutions where those who were less prepared or those wanting continuing education were educated while it allowed the universities to cull the poorly prepared students and send only the best on to upper division. While there were many pros and cons in regard to the eventual development of the community college systems, the obvious unfortunate side effect was that it doomed the community colleges to the status of alternative institutions (Cohen & Brawer, 2008).

In 1930, there were 440 junior colleges, located in all but four states, with a total enrollment of 70,000 students, about 160 students per institution. At the end of the 1960s, the number had increased to 993 two-year colleges, and in 2005, there were 1,173 two-year colleges in this country (Cohen & Brawer, 2008). During the 1940s, when the population was growing rapidly, the universities were starting community colleges to use as “feeder” institutions. This concept of a “feeder” institution continues to be reflected in the articulation agreements community colleges maintain with local universities today.

The past three decades have seen the number of two-year colleges grow seven percent more than the number of four-year colleges, with growth rates of 48 and 41 percent respectively (McIntosh & Rouse, 2009). Fall enrollment at two-year colleges has increased from about one million students in the early 1960s to over six million in 2005. As a comparison, four-year college enrollment has increased from four million to 11 million over the same time frame. This identifies a growth rate in the community colleges of over 600 percent, while the growth rate at universities was less than 200 percent. Indeed, in 2005, community colleges made up about 40 percent of all degree-granting

postsecondary institutions while two-year college students made up one third of total enrollment (McIntosh & Rouse, 2009). The community college mission of accessibility and affordability has truly made college education a reality for many Americans.

During the 1980s and 1990s, community colleges, due to their expansion and growth, began to attract the attention of retention researchers. According to the Center for the Study of College Student Retention (2008), despite easier access to higher education, almost 50 percent of students entering higher education will not earn a degree. It is also apparent from research results that two-year colleges have a lower student retention rate than their four-year counterparts (McIntosh & Rouse, 2009).

Two-year students differ in almost every measurable dimension from four-year students. Two-year students tend to be older than four-year students with only about half being traditional-aged (18-24 years old). They are more than twice as likely as the four-year students to be enrolled part-time, and are slightly more likely to be of minority descent. Community colleges enroll a larger number of students who are the first in their family to attend college (McIntosh & Rouse, 2009). Additionally, two-year students are generally not as well-prepared academically, tend to come from families with lower socioeconomic status, and are more likely to have taken at least one remedial course when compared with four-year students (CSCSR, 2008).

Although the community colleges enroll almost half of American undergraduates, these schools are challenged by many of the students they enroll. There are many more non-traditional students in the community colleges than there are in the university setting. One way of differentiating traditional students from non-traditional students is by age.

The typical university student is under age 25, and any student over the age of 25 is considered “non-traditional”. National statistics show that in 2011, 87% of the students in the university setting were under age 25, whereas in the community colleges, only 65% of the students were under age 25 (nces.ed.gov, 2011). Thus, university students tend to be younger overall than community college students. A significant sector of these students are low-income, first-generation college students and students of color, those typically underserved by higher education (AACC, 2005). While the community colleges have long been committed to and have made significant gains in providing access, access alone does not always translate to success (Roman, 2007). Nontraditional students, such as community college students, have multiple commitments, are multi-tasking, often struggle to balance work, family, and school, and are commuters, because community colleges are largely non-residential (Roman, 2007). Increasing diversity of American undergraduates has been noted in both four- and two-year institutions. Future enrollments in community colleges are projected to increase even more because of both demographic changes, and because increasing percentages of the population will pursue higher education for the opportunities they offer (Boswell, 2004). Among traditional-aged college students, most of the increase will be of students of color and those from low-income households (Roman, 2007).

National studies investigating the impact of community college attendance upon educational attainment reveal that initial attendance at a community college (instead of a 4-year college) reduces the likelihood of attaining a bachelor’s degree by 15-20% (Pascarella & Terenzini, 2005, p.592). In quantitative studies comparing baccalaureate attainment rate between students based on whether they first attend a community college



or go straight on to the 4-year institution, the hypothesis is that equally matched students (holding all other variables constant) should be equally likely to attain the baccalaureate, regardless of where they begin. When this is found to not be so, the culprit is assumed to be the community college. However, these studies fail to address why so many students choose to begin at a community college.

There are several reasons why students would want to begin at a community college to obtain a baccalaureate. Tuition at the community colleges is much less than at 4-year institutions. Community colleges are located, as the name suggests, within the student's local community; hence, it is usually more easily accessible to the student. Students who graduated from high school with a low grade point average may need to attend the community college because of its open access mission. These students see the value in attending a low cost, accessible school that will accept them (Cohen & Brawer, 2003). These important qualities, accessibility and affordability, are two concepts critical to the community college mission.

### The Community College Mission

If there is one over-arching concept that defines the community college, it is access via the open door mission, whereby Americans have equality of access to higher education regardless of race, color, religion, sex, national origin, disability, age, or socioeconomic status (Cohen & Brower, 2008; Bragg, 2001). This open door admission concept is the foundation upon which all community colleges function (Shannon & Smith, 2006), and evidence of the importance of that mission abounds in areas such as admissions, enrollment, curriculum, faculty, hiring, advising and counseling, in

responding to regional economic needs, and in establishing relationships with four-year institutions. This adoption of the egalitarian view of access to higher education ensures all students have the right to the educational and social mobility higher education affords. This mission is being severely tested by the current increase in general higher education student numbers, particularly at the community college level. In order to fully appreciate the current strain on the community colleges, one must note the state of the general workforce in the United States today (Cohen & Brawer, 2008).

### *The Adult Workforce in the United States*

The U.S. workforce is projected to total 165 million people in 2021 (NCEE, 2007). It will include nearly 100 million people who are today already out of school and at work. Currently, 30 percent of entering high school students do not graduate with their class in four years (NCEE, 2007). Thirty-one million Americans age 16 and older – 20 percent of adults age 25 and over – are out of school and do not have any type of high school credential. Although the majority of this group do eventually earn a high school credential, it is usually a GED. In 2001, over one-third of applicants for employment with American employers lacked the literacy and /or math skills to perform the jobs they sought. According to the Bureau of Labor Statistics, 63 percent of the 18.9 million new jobs that will be created by 2014 will require some postsecondary education (changemag.org, 2009). The federal government currently leaves programs for basic education of adults extremely underfunded. Total monetary investment by both the federal government and state aid provides services to fewer than three million adults each year (NCEE, 2007).

Two measures that could be undertaken to improve the literacy of our workforce would be to improve language skills and productivity of immigrant workers. If current trends continue, educational attainment of the workforce is likely to increase by only three percent over the next 15 years, despite the fact that college enrollment rates are at their highest levels. This is partly due to the fact that the prime-age, native-born workforce in the U.S. will not grow through 2020. Growth in the U.S. labor force over the next 20 years will be fueled solely by the entry of immigrants to our shores and into the workforce. An increase in immigration between 2000 and 2020 is projected to be about six million persons over age 25 (NCEE, 2007). Thus, many new community college students will be those from other countries, further increasing the diversity of the student body. At the present time, community colleges are struggling to accommodate a significant increase in student numbers over the past two years. Many of these are formerly employed students who have lost their jobs as a result of the economic recession and are returning to college for retraining. Students are literally being turned away from campuses due to unavailability of any remaining classes. Slashed budgets cause community colleges to be unable to accommodate the increased enrollment by adding classes.

### *The Underserved*

As previously acknowledged, community colleges educate non-traditional post-secondary students as well as historically underserved groups. Nationally, this section of academia enrolls 47% of black undergraduate students, 56% of Hispanic undergraduates, 48% of Pacific Islanders, and 58% of Native American students (AACC, 2006). In enrolling these populations, they both idealize and demonstrate in a practical way the

means by which new generations of students from disadvantaged backgrounds can receive skills that will lead to employment and prosperity (Raby & Thomas, 2006). Without the community college concept of the open door, few out of these groups of students would be able to access higher education, much less obtain a college degree. The dual situation of the increasing numbers of high school graduates (Hussar, 2005) combined with the poor academic accomplishments of some current high school graduates make the open door an essential requirement of the community college mission.

### *The Under-Prepared*

The open-door mission further requires that students are not merely allowed to enter, but are provided with the tools to be successful in college level coursework (Vaughan, 2000). In order to accommodate the students with underdeveloped skills, the community colleges offer developmental education. Research indicates up to 76% of all first-year students enroll in at least one developmental education English or math course (Asera, 2006). Students most likely to be referred for remediation are those who are over the age of 23 (Lake, 2001), economically disadvantaged (Jenkins, 2002), or minority students (Lake, 2001). As student numbers and diversity increase, community colleges are finding more need for making remedial courses available. Adding extra remedial classes and instructors, although necessary, severely taxes community college budgets.

Thus, the community colleges have many challenges. They serve a disproportionate share of low income students, have lower funding levels than the four-year schools, are likely to enroll students who face greater academic, social, and economic problems, and

serve groups traditionally underserved by higher education (Bailey & Morest, 2006). The community college goal of providing access for those from the lowest socioeconomic quartile of society remains a serious challenge.

A large number of students who have to take remedial coursework prior to taking pre-requisites for a certificate or associate degree are interested in the Allied Health pathway. Thus, many nontraditional students with significant life and academic challenges want to enter associate-degree nursing programs. Those students who do gain admission to the nursing programs continue to struggle with their respective life issues.

### *Nursing Students*

Given that fully 60 percent of the newly-licensed registered nurses each year come from the associate-degree programs in the community colleges, there is reason to examine the various issues associated with the community college nursing student. Since four-year college nursing student retention is noticeably better than that of the two-year students, one should identify the retention challenges relative to both groups of students and their respective programs. The following is a discussion of the current state of nursing student retention.

### Nursing Student Retention

One of the strategies cited in research for alleviating the current nursing shortage is retention of nursing students (Stickney, 2008; wacenterfornursing.org, 2008).

Predictably, many of the same barriers to retention have been identified in the nursing sector as are found in the general higher education student population. Current nursing retention literature provides insight, considering findings and identifying gaps found in

recent studies as to how improvement in student retention might be accomplished. There has been a lack of empirical research conducted on retention rates of associate degree nursing graduates who transfer to BSN programs. There is, however, a small body of research on baccalaureate and transfer nursing students.

As previously discussed, variables describing why students leave college can be broadly grouped into two categories: institutional factors and student factors. Institutional factors are those related to the school itself, such as large class size, lack of instructor access, or no freshman orientation to college (Cameron, 2005; Frederickson, 1998; Meggison, 2008; Tinto, 1992). Student factors include personal issues with which many students struggle, such as financial strain, geographic inconvenience, or working while attending college (Cameron, 2005; Frederickson, 1998; Meggison, 2008).

Transfer students were examined closely in a quantitative longitudinal study by Frederickson (1998). The study revealed many of the complexities and variations that characterize transfer students, and emerged with a common characteristic found among community college students: they frequently balance part-time academic loads with part-time employment (Frederickson, 1998). Both types of factors were discovered by Cameron (2005) upon examining the experiences of transfer students in a baccalaureate nursing program. The students had completed the first two years of their nursing at a community college and had transferred to a university BSN program to complete the last two years. Some of the major themes emerging from this mixed methods study pointed to institutional factors such as academic shock, professional transformation (Cameron, 2005), and the student factor of geographic inconvenience. The majority of students reported a drop in grade point average (GPA) that persisted into the second semester after

transfer. This phenomenon, called “transfer shock”, has been widely documented in transfer studies (Cameron, 2005; Diaz, 1992; Hills, 1965).

A sample of six participants enrolled in RN-BSN programs provided themes for a phenomenological design described by Van Manen (1990), and the researcher Meggison (2008) conducted interviews with continuing RN-BSN students, age 23-52 years. Themes discovered were differentiated as incentives for BSN completion and barriers to BSN completion. The two most significant student-related barriers that were identified were not enough time (Frederickson, 1998; Master Plan for Nursing Education, 2008; Meggison, 2008), and not enough confidence (Meggison, 2008).

Student grades offered insight into requirements for lowering attrition rates and passing the NCLEX-RN test for nursing licensure. The purpose of one study (Uyehara, Magnussen, Itano, & Shuqiang, 2007) was to identify the predictors of program success, withdrawal, and NCLEX-RN passing from data collected at three phases of student matriculation in a BSN program: admission, within the program, and at exit. In the results, among all of the variables, only the grades in the pathophysiology course were significant, meaning that the higher the grade, the higher the probability of program success (Uyehara, 2007). Another study (Higgins, 2005) linked the academic variables of two biology courses and three components of the preadmission test to completion of the nursing program. The results showed the students would benefit from additional testing at key points before, during, and after the program. If areas of weakness are revealed by the test results, review classes could be implemented for remediation. The need for advisement and referral for study skills was identified (Higgins, 2005), and counseling was recommended for use by students in need of it. As discussed previously, many

studies show faculty interactions with students outside the classroom play a significant role in students' decisions to persist (Pascarella, Seifert, & Whitt, 2008).

McLaughlin, Moutray, and Muldoon (2007) discussed the prospect of using psychological profiling when selecting students for nursing program admission. Conducted in response to high attrition rates in nursing programs and high nursing dropout from the profession after their first job, the researchers wanted to examine the role of personality using Bandura's (2003) theory of self-efficacy. Based on the findings of their study, the authors suggested psychological profiling before admittance to nursing school may help reduce attrition during school and during the first job (McLaughlin, Moutray, & Muldoon, 2007). These findings suggest the feasibility of nursing schools requiring a student to demonstrate enough self-efficacy to complete the program.

Given the various and divergent reasons listed above for community college nursing student attrition, it becomes obvious that community college student and institutional attrition issues are different, at least in some areas, from those at the universities. Therefore, care should be taken in how they are addressed. A study should be done that addresses the issues above and possibly others in the literature. A survey with items from the above retention literature should be administered to two groups of students: BSN students and RNB students. Faculty members teaching these two groups should also be involved. The results would hopefully reveal any differences in institutional issues and student issues among the three groups. These differences could then be further interpreted and addressed.



### Conceptual Framework

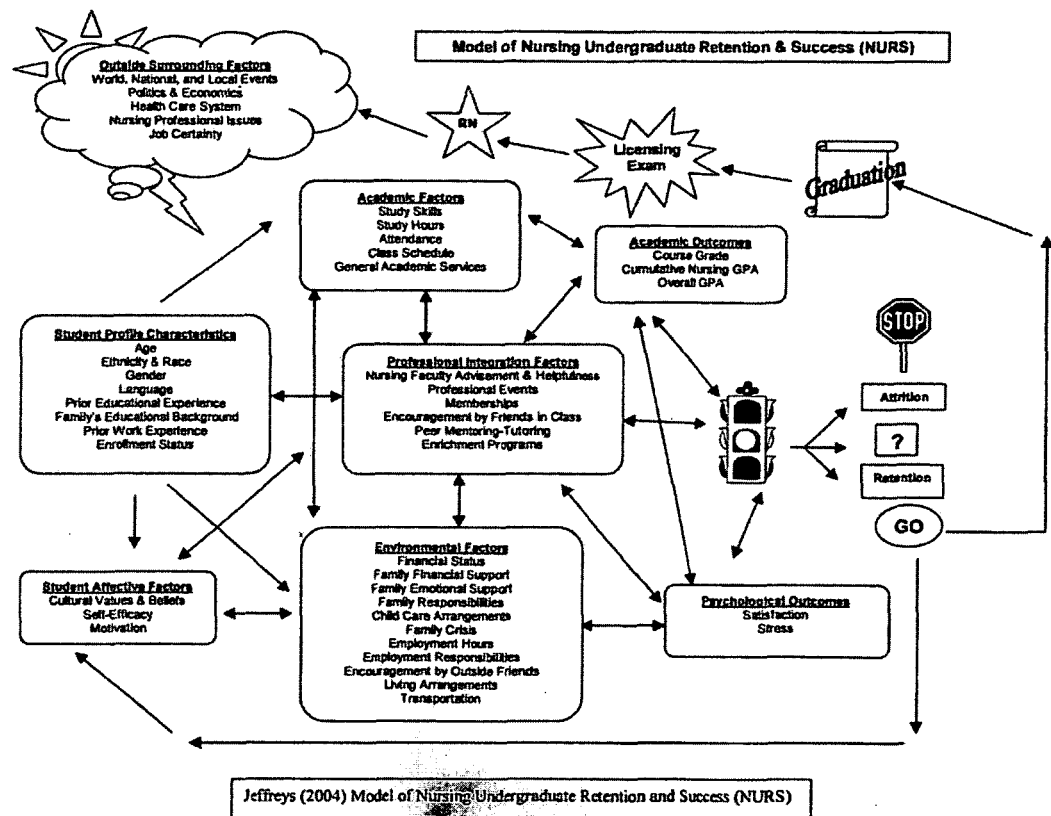
As the professional literature demonstrates, research on retention has been broadly conducted, both in higher education as well as in nursing. Unfortunately, there are inconsistencies in methods and conclusions, causing difficulties in interpretation. Examples of some of these inconsistencies are differences in operational definitions, lack of differentiation among some variables, and diverse methodologies as well as sample types and sizes (Jeffreys, 2004). After examining the overall results in this body of research, Jeffreys (2004), confirmed the continuing problem of nursing student attrition.

Jeffreys found several conceptual models to explain undergraduate student attrition, some of which have been discussed. The only model specifically targeting the nontraditional student, by Bean and Metzner (1985), was utilized by Jeffreys (2004) to conduct research on nontraditional undergraduate nursing student retention. After utilizing the Bean and Metzner model, Jeffreys came to the conclusion the model was not satisfactory for her specific population of nursing students.

Since no student attrition model specifically targeted or adequately addressed the distinguishing characteristics of the undergraduate nursing student, and considering the escalating nursing shortage and societal health care needs, Jeffreys developed a model designed for examining traditional and nontraditional undergraduate nursing student retention and success. The Nursing Undergraduate Retention and Success (NURS) Model is an organizing framework created by Jeffreys (2004) proposing that retention decisions are based on the interaction of a group of nursing student characteristics. These include student profile characteristics, student affective factors, academic factors, environmental

factors, professional integration factors, academic outcomes, psychological outcomes, and outside surrounding factors (Jeffreys, 2004). Jeffreys considered these components appropriate for studying nursing students at the community colleges as well as those at the universities (Jeffreys, 2004). Jeffrey's NURS Model is found in Figure 2.

Figure 2: Jeffrey's nursing undergraduate retention and success model (NURS)



Jeffreys, M.R. (2012). *Nursing student retention: Understanding the process and making a difference* (2<sup>nd</sup> ed.). New York: Springer Publishing.

Although several different models addressing attrition have been proposed, the NURS Model specifically focuses on retention and targets a specific student population (Jeffreys, 2004). While the main goal of the model is to promote undergraduate nursing retention, it is based on several general assumptions underlying nursing student retention. These assumptions are:

- Undergraduate nursing student retention is a priority concern for nurse educators.
- Student retention is a dynamic and multidimensional phenomenon that is influenced by the interaction of multiple variables.
- For undergraduate nursing students, environmental and professional integration factors greatly influence retention.
- All students can benefit from professional socialization and enrichment throughout pre-professional and professional education.
- Psychological and academic outcomes may interact and influence persistence.

(Jeffreys, 2004).

### *Jeffrey's NURS Model*

The NURS Model includes concepts related to those of several previous student retention researchers. Psychological and psychosocial reasons for departure are common in nursing and are related to the work of Bean and Eaton (2000), who studied psychological reasons for student attrition, such as low self-efficacy and outer locus of control. Institution-related factors examined by Tinto (1975) and Pascarella & Terenzini

(1977), such as student integration into campus life and student interaction with faculty members are also considered in the NURS Model.

In the NURS Model, as in the Bean and Metzner (1985) model, environmental factors rather than academic factors prove more important for nontraditional undergraduate nursing students (Jeffreys, 2004). “Academic outcomes interact with psychosocial outcomes, and positive academic performance results in retention only when accompanied by positive psychosocial outcomes for the nursing program and profession” (Jeffreys, 2004, p.10).

Jeffreys (2004) believes immediate attention is needed to develop, implement, and evaluate new retention strategies for nursing. This model serves as an organizing framework for demonstrating the multiple and multidimensional factors leading to attrition in nursing programs. Although Jeffreys (2004) has some interesting ideas for programs to help improve retention of nursing students, such as the Peer-Mentor-Tutor Program, Personal Enrichment Programs, a Nursing Student Resource Center, and Nursing Study Groups, (and two of these are items on the survey), closer examination of these is outside the scope of this study. In order to facilitate administration of an electronic survey, variable groups listed by Jeffreys for nursing student attrition will be consolidated and aligned into two main areas: student factors and institutional factors.

Chapter three describes the methodology of the research study. In it, the type of tests to be utilized are discussed along with tools and methods used to collect data. Included are creation and administration of the survey, panel members providing input on the survey, methods of establishing validity and reliability of the survey, method of piloting the survey, administering the survey, and data analysis.

## CHAPTER III

### METHOD

This study provides a preliminary investigation into nursing student retention in two different groups of nursing students and a faculty group in Washington State. The information contributes to the existing nursing student retention literature in this country and provides insight into the status of nursing student retention in a specific region. By examining the relevance of the NURS Model (Jeffreys, 2004) to associate-degree nursing students in RNB programs as well as nursing students in traditional BSN programs, previously unidentified factors affecting nursing student retention may be identified and explored. Again, these two groups differ. The students from the RNB programs are students who have transferred from an associate-degree nursing program via an articulation agreement to what is usually a one-year completion program leading to a bachelor's in nursing. The BSN student is a native university student who is in the last year (usually the fourth year) of a bachelor's of science in nursing program. Both will have a degree and both will be qualified, but the preparation is somewhat different.

In order to understand student retention issues within the institutions and with the student populations in RNB and BSN programs, the study examines the perceptions of nursing leaders within the four-year universities in Washington State as well as those of the progressing nursing students in both types of programs. In order to explore and better understand community college student intent to persist, the study utilizes an electronic survey instrument informed by review of the professional literature. The content validity was established through a review by a panel of experts with experience in nursing

education. The survey was administered to the nursing faculty as well as the students in both types of programs to identify differences between faculty and student views, as well as to identify the perceptions of students from both types of programs regarding influences on nursing student retention. The survey explores strategies for improving nursing retention rates in both program types. The information gained from this study should provide insight into how progress could be made to improve student retention in both RNB and traditional BSN programs.

This chapter discusses and explains the research design, the methodology, procedures utilized, and the data analysis completed in order to answer the research questions. Specifically, this chapter provides a detailed explanation of the research questions and proposed study participants. Also discussed is the development of the survey instrument, the process for establishing the validity of the survey instrument, the pilot study, all data collection procedures, and the analysis of data generated by the survey instrument. An evaluation of the study's limitations concludes the chapter.

The study was conducted in five phases: instrument design, evaluation of the survey instrument by a panel of experts to establish the content validity of the instrument, piloting the survey instrument, administration of the survey instrument, and analysis of the data.

### Purpose of Study

The purpose of this study is to examine the retention rate of students in BSN (native students) and RNB (transfer students) programs in Washington State. A researcher-developed survey instrument was administered to students and faculty members regarding their perceptions of personal, academic, and institutional barriers to nursing student retention. Additionally, the instrument gathered data on students and faculty members' perceptions of changes which could improve retention for both native and transfer nursing students.

### Research Questions

The research was guided by the following questions:

1. What are the perceptions of nursing students and faculty members concerning the factors which affect the retention of RNB students (students who transferred from an ADN program) during the last year of a nursing program in Washington State?
2. What are the perceptions of nursing students and faculty concerning the factors which affect student retention in Washington State BSN programs at four BSN-granting universities during the last year of either program in Washington State?
3. Is there a statistically significant difference in the perceptions of faculty and students regarding the factors which affect student retention of RNB students and BSN students in nursing programs in Washington State?
4. What are the recommendations of nursing students and faculty concerning institutional changes which could improve student retention for RNB students (students who transferred from an ADN program) and BSN students (native students).



5. Is there a statistically significant difference in the recommendations of faculty and students regarding institutional changes to improve student retention in BSN programs?

### Research Design

The nature of the problem being investigated dictates the research design as well as the research questions. This cross-sectional survey used a non-experimental quantitative design (Wiersma & Jurs, 2009). The purpose of the design was to capture a “snapshot in time” in which to discover the differences among groups (Fitzpatrick, Sanders, & Worthen, 2004). The research questions were answered through the use of a cross-sectional, researcher-developed survey instrument. Survey research is a well documented method of collecting quantitative data about attitudes, opinions, and perceptions (Creswell, 2003). The survey questions address the perceptions of both nursing faculty and nursing students as to the reasons behind attrition in both BSN and RNB nursing programs. Students and faculty from each type of nursing program responded to the same survey as it relates to their specific program type.

Electronic survey administration was chosen as the method of gathering data. Some studies have shown that survey mailings have resulted in low response rates, and it has been determined that reduced response rate and non-coverage response error are improved somewhat by administering surveys electronically (Dillman, 2007). Electronic administration is a good way to survey divergent groups from widely differing types of academic institutions, including both public and private institutions. Additionally, the risk of data-error is reduced by administering a survey electronically (Dillman, 2007).

### *Participants*

Random sampling was conducted to collect appropriate information from members of the study population. Four-year schools with baccalaureate nursing programs in Washington State, both public and private, were included in the potential research candidate pool. Because of the large number of nursing students at the two Washington public universities, the original plan was to use both schools. However, one of the schools declined to participate. Sampling was completed at a private university. Also conducted concurrently was sampling at the RNB programs within the state. This method was selected to ensure adequate numbers of participants from a varied sample.

Participants were faculty members from both BSN programs and RNB programs. Thus, there were three groups studied: 1) native BSN students, 2) transfer RNB students, and 2) a mixed group of BSN and RNB faculty members. The total numbers of BSN and RNB students and faculty members combined was 706.

### *Variables*

Variables are determined after considering the purpose statement, research questions, and results from existing research. Research question one was answered using descriptive data. Question one asks about the perceptions of two groups of nursing students and a mixed group of faculty members concerning the factors which affect the retention of RNB students (students who transferred from an ADN program) during the last year of a nursing program in Washington State.

Research question two was answered using descriptive data. Question two asks about the perceptions of two groups of nursing students and a faculty group concerning the factors which affect the retention of BSN (native students) students in a nursing program

in Washington State. The first two questions are important in differentiating whether the factors involved in nursing student attrition are more related to the institution, which would include faculty, or whether the factors are more related to the student.

The third research question explores the question of whether there is a statistically significant difference in the perceptions of the faculty group and the two groups of students regarding the factors which affect student retention in BSN programs. For this question, the independent variables are the faculty and the students. The dependent variable is the perception of each group.

Question four explores the recommendations of students and faculty concerning institutional changes to improve student retention in BSN programs for both native and transfer students. This question was answered with descriptive data.

Research question five examines whether there is a statistically significant difference in the recommendations between the faculty group and the two groups of students regarding institutional changes to improve student retention in BSN programs. In this question, the dependent variable is recommendation, and the independent variables are the faculty and the students.

For each of three distinct groups, respondents used a Likert-type scale (1-4) , (with “1” being “strongly agree” and “4” being “strongly disagree”), to rate their perceptions on two subscales addressing (a) factors affecting student retention rates, and (b) potential changes to improve student retention rates. For each group examined, scores on the subscales were scored to generate a group score. The survey instrument is located in the appendix section of this document.

### Instrument Development

There are no existing instruments to assess these specific factors which have been discovered by this researcher. Therefore, the initial instrument was based on a review of the professional literature and professional experience. A cross-sectional survey was developed to gather data from universities with BSN and RNB programs across Washington State. This instrument addresses the community college student because those enrolled in the RNB programs have transferred from a community college associate-degree nursing (ADN) program, usually via an articulation agreement with a nearby university. Native students in traditional BSN programs were also surveyed. The other group surveyed was faculty members from both types of nursing programs. Utilizing the findings of research reviewed in the literature review, the survey was written to address variables, both student-related and institution-related, identified in this study. The tool utilized Survey Monkey software to assess student and faculty perceptions on reasons for student attrition. The draft instrument includes Likert-type items and multiple-choice questions.

The survey was designed to gain an understanding of faculty and student perceptions of factors affecting nursing student retention in two types of BSN programs and perceptions of possible interventions to improve nursing student retention in two types of BSN programs. Although many tools exist to assess student retention or persistence, the need was recognized for a newly created survey to address the two specific student groups. The survey design follows the principles for web-based survey design outlined by Dillman (2007), including a welcome screen, clear instructions, simple layout, minimal use of color, and presentation of questions in logical groupings. The survey instrument

includes continuous, Likert-type, and categorical items to assess student and faculty perceptions of factors affecting student retention and factors to possibly improve student retention in both native BSN and BSN-completion (RNB) programs.

Items on the survey instrument are relevant to research questions number one through five. Questions one and two ask about the perceptions of students and faculty concerning the factors which affect student retention in BSN programs at the BSN-granting universities in Washington State. Students and faculty responded to questions related to both institutional factors and student factors in student retention. Students and faculty also responded to research question number five, which asks about the recommendations of students and faculty concerning institutional changes to improve student retention in BSN programs for both native and transfer students.

The same procedure was followed by nursing students enrolled in the same program. These students responded to research question number one, which asks, "What are the perceptions of nursing students and faculty members concerning the factors which affect the retention of RNB students (students who transferred from an ADN program) during the last year of a nursing program in Washington State?" Students responded to the same list of items to which the faculty responded. Lastly, students responded to research question number five, which asks, "Is there a statistically significant difference in the recommendations of faculty and students regarding institutional changes to improve student retention in BSN programs?" Again, students viewed the same list of items to which faculty members responded.

*Establishing Validity*

Instrument validity was established by ensuring clear linkages between the instrument items and the study's research questions (Kumar, 2005). Each survey item helped to provide data relevant to a research question. Appropriate subheadings were listed under each heading.

Kumar (2005) defined content validity as addressing whether "... the items and questions cover the full range of the issue or attitude being measured" (p.154). Content validity was established by sending the proposed survey out to a panel of five subject-matter experts. The proposed survey included items related to the research findings in the literature review. Survey items were divided into two groups to include both student factors for both student-related and institution-related factors for student attrition. The panel of experts included the following practitioners and scholars who have extensive experience in academic and faculty issues:

- Dr. Marianne Jeffreys, Professor of Nursing at City University of New York College of Staten Island. A highly-regarded nursing retention researcher, Dr. Jeffreys has written three books on nursing student retention. Her research interests include student retention and achievement, transcultural nursing, and nontraditional nursing students.
- Dr. Sharon Fought, Dean of Nursing Programs and Health Care Leadership at the University of Washington at Tacoma, Tacoma, WA. Dr. Fought has spent many years teaching nursing students in the university setting. Currently, she advises transfer-to-BSN, MN, and DNP nursing

students. She is also involved with the associate-degree nursing programs at the local community colleges, attending advisory meetings and serving as a mentor for ADN program directors. Nursing students from the local community colleges enjoy an articulation agreement to the transfer-to-BSN (RNB) program at the UWT. Dr. Fought is acutely aware of the struggles of community college students, and has designed the transfer-to-BSN (RNB) program at the UWT to help this group of students be successful. She holds a PhD in Higher Education from The University of Texas. Her areas of expertise and publication are in critical care nursing, transporting unstable patients, and sleep.

- Dr. Mary Baroni, Professor and Director of Nursing Programs at the University of Washington at Bothell, Bothell, WA. Dr. Baroni, like Dr. Fought, has a sincere interest in assisting associate-degree nurses from the community colleges to complete a BSN via the UWB's transfer-to-BSN (RNB) program. Dr. Baroni holds a PhD in Human Development and Family Studies from Cornell University. Her areas of interest and publication are centered in pediatric nursing and growth and development.
- Dr. Rita Amerio is Director of the School of Nursing at Lewis University in Romeoville, Illinois. Dr. Amerio is familiar with both types of nursing bachelors programs, as Lewis University has both. She has over 25 years of administrative and instructional experience in nursing education at two and four-year institutions of higher education. A former Department Chair in Nursing Education at Moraine Valley Community College, Dr. Amerio

has a doctoral degree in Community College Leadership from Old Dominion University. Dr. Amerio has expertise in nursing bachelor degree programming at private four-year institutions.

- Dr. Caroline Rivera is Dean of Science and Health at Tidewater Community College in Norfolk, Virginia. A fellow doctoral cohort member, she has recently completed her PhD in Community College Leadership. Since she has taught many anatomy and physiology classes, which are nursing program prerequisites, she is very aware of nursing program and nursing student issues. This makes her a good candidate to evaluate the survey and provide input.

The proposed survey instrument with an evaluation form attached was sent to each of the five panel members. The survey instrument included questions both faculty and students answered, as both groups received the same survey. Survey questions were related to variables found in the literature review regarding causes of both institutional-related and student-related attrition. Items related to student issues grouped together on the survey tool, and items related to the institution were grouped together in the same fashion. Panel members had the opportunity to examine all proposed survey items. As previously noted, for each of two distinct student and one mixed faculty groups, respondents used a Likert-type scale (1-4) to rate their perceptions on two subscales addressing (a) factors affecting student retention rates, and (b) potential changes to improve student retention rates. For each group examined, scores on the subscales were aggregated to generate a group score.



Attached to the survey was the evaluation form for the panel member to complete. Each panel member was asked to respond to two questions on each item on the survey tool. The panelist was asked to rate whether the specific item is relevant to the survey. The panelist got three choices for answers: (a) retain this item, (b) keep but revise this item, and (c) delete this item. The second question the researcher asked is whether the items are worded clearly. The panelist had the option of either answering “yes” or “no”.

Panel members were asked to send their responses within two weeks of receiving the instrument. Changes were made to the survey by the researcher based on the responses of the panel members. After the recommended changes were made, the instrument was ready to be piloted.

Through the use of the pilot study, the content validity of the instrument was further established, and the reliability of this instrument was tested. The pilot study was designed to ensure items are clearly related to research goals, identify areas of confusion, and to estimate the amount of time necessary to complete the survey.

Initial correspondence with the pilot group occurred about one week prior to the pilot study. An email message was sent to each participant thanking them for their participation. The purpose of the study and their role in it was explained. The correspondence included an attachment including the study purpose statement, the research questions, and a link to an evaluation instrument whereby the participant may identify areas needing improvement. All three of these documents were placed in the appendices section at a later date. The evaluation instrument included the proposed

survey with embedded questions whereby the panelist addressed the content validity of the items.

### *Establishing Reliability*

Reliability is the consistency of the instrument in measuring whatever it measures (Wiersma & Jurs, 2009). To establish the reliability of the draft survey instrument, the instrument, as revised after review by the Panel of Experts, was piloted with a group of ten students and five faculty members who did not participate in the actual study. Pilot participants were contacted via e-mail inviting them to participate in the study using the Invitation to Participate in Pilot Group that explains not only the purpose of the study, but the role of the pilot group. A second e-mail, Email Correspondence to Pilot Group, was sent. This e-mail provided a link to the survey instrument with four additional questions for the pilot participants as follows:

1. Are the instructions provided on the survey instrument clear and unambiguous?
2. Was the wording of any item or question on the survey instrument confusing?
3. Was there any item on the survey instrument which could be considered offensive to anyone?
4. How long did it take you to complete the survey instrument?

Two weeks after the pilot group first completed the instrument, a third e-mail, Email Correspondence to Pilot Group for Retest, requested the pilot group to complete the survey a second time. Consistency between the two administrations of the instrument was determined through calculation of Cronbach's alpha, a popular reliability statistic that

determines the internal consistency of items in a survey instrument to measure its reliability (Wiersma & Jurs, 2009). Cronbach's alpha was calculated for the first administration of the instrument and the second administration of the instrument in order to establish the reliability of the instrument, and a value of 0.82 was obtained. This so-called "test-retest procedure" is a common method for establishing the reliability of a newly formed survey instrument.

#### *Data Collection Procedures*

For the survey, data was compiled from Survey Monkey after either all the electronic surveys have been completed, or the time frame for completing them has expired. Two weeks were allowed for return of the surveys after they were sent out to respondents. To manage confidentiality, the researcher was asked that no names be written on the surveys to ensure anonymity. The surveys were printed off and kept in a locked file cabinet in the researcher's office until they were destroyed.

The survey was administered using the tailored design method, which includes the use of multiple electronic contacts, personalized communication, and brevity in communication (Dillman, 2007). Dillman reported electronic surveys preceded with hardcopy announcements had lower response rates than those using electronic announcements. For this reason, all communication was conducted electronically. This study included an electronic invitation to all potential participants as well as a reminder to non-respondents, both of which included the survey link.

Upon distributing the survey, an electronic invitation to participate was sent to anticipated participants in all three groups. A personal message was attached to establish

rapport, explain the relevance of the research, and emphasize brevity and the nature of the survey instrument. The invitation included a link to the online instrument. The importance of the strictly voluntary nature of the study was emphasized along with the importance and confidentiality of the data. All invited participants were asked to respond to the survey within two weeks. At the two-week deadline, a reminder message was sent to non-responders to encourage participation. One week after the deadline, data was downloaded for analysis.

### *Data Analysis*

Research questions one and two were answered using descriptive data. The goal of univariate descriptive statistics is to portray accurately and succinctly data from a variable (Green & Salkind, 2008). Descriptive statistics are techniques for organizing, summarizing, and displaying sets of numerical data. Descriptive statistics enable researchers to organize, summarize, and describe observations. In the proposed study, the observations are respondents' perceptions of factors which affect student retention in BSN programs at the BSN-granting universities in Washington State. Descriptive data are presented in the form of tables and charts in the text or summarization by means of percentiles and standard deviations.

The third research question identified whether there were any statistically significant differences between the perceptions of faculty and the two groups of students at each type of program. Analysis of variance (ANOVA) was utilized to evaluate whether significant differences existed between these groups. The mean score for students and faculty at each program type were calculated and compared to determine if there were statistically

significant differences between the groups on each item on the survey instrument by using analysis of variance.

There are three assumptions when using a one-way ANOVA. The first is that the dependent variable is normally distributed for each of the populations as defined by the different levels of the factor. If population distributions are non-normal, the power of the ANOVA may be reduced. The second assumption is that the variances of the dependent variable are the same for all populations in the study. If they are not the same, the level of significance ( $p$  value) for the size of differences between groups relative to the size of variation within each group ( $F$  test), will not be trustworthy. If variances are unequal, a post-hoc test called Fisher's Least Significant Difference (LSD) will be utilized. The third assumption is that cases taken from the population are randomly selected and the scores on the test variable are independent of each other. If this assumption is violated, the  $F$  yields inaccurate levels of significance, or  $p$  values (Green & Salkind, 2008). To clarify this information in a bulleted format, the ANOVA should only be made after the researcher has considered the following requirements:

- The researcher is making a comparison between three or more independent means.
- The interval level of data (as compared to nominal or ordinal) must be used. Categorized or ranked data should not be used.
- Random sampling must be used.
- There should be a normal distribution of the sample characteristic to be measured in the underlying population.

- ANOVA assumes the population variances for the different groups are all equal. Moderate differences among the sample do not invalidate the results of the  $F$  -test. However, when differences are extreme, the  $F$  test may not be appropriate. (Levin & Fox, 2006)

In a one-way ANOVA, there is a factor dividing participants into groups and one quantitative dependent variable. In this case, the two student groups are BSN and RNB students plus a mixed group of nursing faculty from both program types. The dependent variable is perception.

Research questions one, two and four ask about the perceptions (questions #1 and #2) and recommendations (question #4) of both faculty and students concerning institutional changes to improve student retention in each type of BSN program. Descriptive statistics were utilized to summarize and organize these data. Once the descriptive statistics are obtained, they were analyzed and reported in text and table format.

Data retrieved from question five was analyzed via the ANOVA to determine if there are statistically significant differences between the mean score on each item of the survey instrument for members of the three groups. Again, the three groups used for comparisons were native BSN students, transfer RNB students, and one mixed group of faculty members. The dependent variable is recommendation.

### *Limitations*

This study attempted to conduct a population census by e-mailing the survey link to the entire population; however, the study was limited by the level of the response rate. The researcher used introductory emails and follow-up emails to encourage participation;

however, there was the possibility of low response rate and an increase in non-response error. This study used an electronic survey which may require the design capabilities to factor the reduction of the non-response error (Dillman, 2007).

The researcher relinquished some control over the knowledge of student and faculty participant numbers due to the fact that the respective nursing directors or their secretary sent the survey link out to the student and faculty groups. Because of this, there was no way to determine exactly how many students and how many faculty actually received the survey link. Estimates were made based on verbal totals obtained from those sending out the survey link.

If the survey response is low, making the sample size small, the question of powering the sample could be addressed. Statistical power analysis is a procedure for studying the likelihood that a particular test of statistical significance will be sufficient to reject a false null hypothesis (Gall, Borg, & Gall, 1996). The larger the sample, the higher the statistical power, assuming that other factors are held constant. Therefore it was necessary to determine the minimal total sample size required. In this study, the sample for faculty, which is 44, is slightly smaller than what is called for in Olejnik's Minimal Total Sample Sizes for Different Hypothesis Tests. Olejnik gives a minimum sample size of 51 at the .05 Level of Significance and with statistical power at the .7 level.

Students attending RNB programs are those students who transferred to the RNB program via an articulation agreement with the university after the student completed their associate-degree in nursing (ADN) from the community college. Most of these

students are already licensed as registered nurses. There may be a few students who have transferred from an ADN program into a native BSN program.

Using an electronic survey lends itself to those in a population with easy access to the Internet and who are comfortable using the Internet. The data collected from the survey responses are self-reported and are subject to reporting bias (Halsne & Gatta, 2002). Internal validity may be affected by students not responding candidly and self-reporting their intention to persist (Laughlin, 2006). Also, there will be no way to determine if the invited respondent was actually the person who completed the survey. External validity is the extent to which the results can be generalized (Wiermsa & Jurs, 2009) and may be limited to the universities and community college BSN programs in Washington State.

This chapter outlines procedures used in this study. An electronic survey was written, piloted, administered, and analyzed to determine impressions of both faculty and students in both RNB and BSN programs on perceived reasons behind nursing student attrition. The next chapter will describe findings obtained by using these methods and quantitative analyses.



## CHAPTER IV

### RESULTS

The purpose of this study was to examine the factors which affect the retention rate of students in BSN (native students) and RNB (transfer students) programs in Washington State. This chapter includes the results of the survey instrument administered to faculty members and students regarding these factors as well as the analysis of these data. A researcher-developed survey instrument was administered to students and faculty members regarding their perceptions of student-related and institution-related barriers to nursing student retention. Additionally, the instrument gathered data on student and faculty members' perceptions of changes which could improve retention for both native and transfer nursing students. Once the raw data were obtained, SPSS was utilized to obtain descriptive statistics on each item. Two ANOVAs were done to compare differences on perceptions or recommendations between the three groups on each survey item. This chapter presents those results as well as some additional survey participant comments.

### Research Questions

This research was guided by the following questions:

1. What are the perceptions of nursing students and faculty members concerning the factors which affect the retention of RNB students (students who transferred from completion of an ADN program) during the last year of a nursing program in Washington State?
2. What are the perceptions of nursing students and faculty members concerning the factors which affect the retention of BSN (native students) students in a nursing program in Washington State?
3. Is there a statistically significant difference in the perceptions of faculty, RNB students, and BSN students regarding the factors which affect the retention of RNB students and BSN students in nursing programs in Washington State?
4. What are the recommendations of nursing students and faculty concerning institutional changes which could improve student retention for RNB students (students who transferred from an ADN program) and BSN students (native students)?
5. Is there a statistically significant difference in the recommendations of faculty, RNB students, and BSN students regarding institutional changes which could improve student retention in BSN programs?

### Response Rate

Out of 706 total surveys sent out to four different nursing program directors in Washington State, there were a total of 199 surveys returned. Seven were left out of the analysis because of inability to identify to which group they belonged; thus, 192 surveys were included in the final analysis. Not all participants answered every question, and this accounts for some discrepancy in response numbers for individual items on the survey. The overall response rate was 28%.

### Responses to Demographic Questions

Survey questions one and two ask about student/faculty demographics. Question one serves to delineate the participant into one of two groups: that of either student or faculty member. In question one, 148 of participants identified themselves as a student and 44 as a faculty member. Question two asks whether the student or faculty member is involved in a BSN program or an RNB program, with the option for faculty to self-identify as being involved in both groups. In question two, 77 of the students self-identified as being involved in native BSN programs, 71 responded they were in an RNB program, and the 44-member faculty group is mixed. "Mixed" means the group includes faculty who work in BSN, RNB, or both program types. More specifically, 13 faculty members responded from native BSN programs, 17 responded from the RNB programs, and 14 faculty members responded that they worked in both types of programs. These data are shown in Table 1.

Table 1: *Demographics of Survey Respondents*

Student Type and Faculty	Group Size	Group Proportion
BSN students	77	40%
RNB students	71	37%
Faculty:		
BSN	13	
RNB	17	
Both	<u>14</u>	<u>23%</u>
Total	192	100%

#### Test for Homogeneity of Variance

The test for homogeneity of variances was conducted for both ANOVAs in this study. For the first one-way ANOVA, which answers research question number three, “Is there a statistically significant difference in the perception of faculty and students regarding the factors which affect the retention of RNB students and BSN students in nursing programs in Washington State?”, item 9 on the survey was shown to be significant ( $p < .05$ ). Item 9 states, “Students who take math and science pre-requisites within the five years just before admission to the nursing program are more likely to complete the program.” For this particular item, since the variances are statistically significant ( $p < .05$ ), the assumptions for the ANOVA are not met (Levin & Fox, 2006). However, this may be the case because of the large difference in the group size between the faculty members

(45) and the two student groups (71 and 77). No other item on the test for homogeneity of variances for research question number three was shown to be significant.

For the homogeneity of variances for the second ANOVA, which answers research question number five, “Is there a statistically significant difference in the perceptions of faculty, BSN students, and RNB students regarding institutional changes which could improve student retention in BSN programs in Washington State?”, none of the five items was significant.

### Significant Survey Findings

The purpose of this quantitative study was to examine perceptions of three different groups on how specific situations, some student-related and others institution-related, may impact nursing student retention. The three groups are native BSN students who are in their fourth year of the program, RNB (also called “transfer-to-BSN”) students who are in the one-year full-time completion program, and a mixed group of nursing faculty members, some teaching in BSN, some in RNB, and some in both types of programs.

The study examined students at four Washington State nursing programs, one of which only includes a BSN group, two of which only include an RNB group, and one university which includes survey results from both types of programs. This latter group was chosen in order to enhance generalizability across the population of nursing students in Washington State. Also, the sample compared perceptions of each group identified by the literature which make up the populations of undergraduate nursing in Washington State. The study then sought to determine whether there are differences in perceptions about the items between each of the three groups. Finally, the study sought to identify

recommendations between groups on changes which could improve nursing student retention in the state.

Significant findings among groups were found on eight items on the survey. These survey items include:

- perception of whether students over the age of 35 have more difficulty than other students completing the program and graduating (Item #5)
- whether students who have young children have more difficulty completing the program (Item #8)
- whether students who took math and science pre-requisites within the five years prior to admission to the nursing program are more likely to complete the program (Item #9)
- whether becoming engaged in campus activities helps nursing students remain in the program to completion (Item #10)
- whether being involved in a study group helps students complete the last year of the program (Item #12)
- whether most students who leave the program prior to completion do so because of non-academic events in their personal lives (Item #16)
- whether the presence of a Student Center for tutoring and/or writing assistance helps student to remain in school (Item#17)
- whether most students who leave the program in the last year prior to completion do so because of course failure (Item #18)

Analysis of variance was used on research questions three and five to test for significant differences between the mean scores from the three groups, and was also utilized to evaluate whether significant differences exist in perceptions of faculty and students between programs. The mean score for students and faculty at each program type was calculated and compared to determine if there were statistically significant differences between the groups on each item on the survey instrument by using analysis of variance.

The ANOVA determines the proportion of variability attributed to the component represented in the survey instrument items. In this study, the one-way ANOVA compares the means of three groups of participants that vary on a single independent variable. ANOVA reduces the possibility of Type I error which would result from conducting multiple *t*-tests (Cronk, 2008). The ANOVA compensates for these multiple comparisons, and provides a single answer indicating if any of the groups are significantly different from the other groups.

### Findings Among Groups

On the survey results, there was relative “agreement” with no significant differences among groups on survey items 3, 4, 6, 7, 11, and 14. There was relative “disagreement” with no significant differences among groups on survey item 15 (See survey in Appendix.)

There was general agreement on student-related survey items 3, 6, 7, 8, 11, 12, and 16 by the RNB group. This same group agreed on institutional-related survey items 4, 13,

14, and 17. The RNB group showed relative disagreement with student-related survey items 5, 9, 15, and 18, and also disagreed with institutional-related survey item 10.

For the native BSN group, there was general agreement on student-related survey items 3, 5, 6, 7, 8, 9, 11, 12, 16, and 18. The BSN group showed relative disagreement with student-related survey item 15. Relative agreement was shown by the BSN group on institutional items 4, 13, 14, and 17, and relative disagreement was expressed by this group on institutional survey item 10.

In reviewing the survey item responses from the faculty group, there was general agreement on student-related survey items 3, 6, 7, 8, 9, 11, 12, 16, and 18. Faculty members disagreed on items 5 and 15. The faculty group expressed agreement with institutional survey items 4, 13, 14, and 17, and expressed disagreement with institutional item 10.

As discussed previously, findings indicate relative agreement between all groups on eight of the survey items, and significant differences ( $p < .05$ ) between some of the groups on the other eight items. Five of the survey items are institution-related, and the remaining 13 are student-related. After analysis of the results, two of the eight significant items are institution-related, and the other six significant items are student-related. For this study, the overall survey results generally agreed with findings of studies in the literature review, with very few differences. Since Jeffrey's NURS Model encompasses many of the items in classic retention research and research theories, and is related specifically to nursing, several elements of this model are included in the study.



### Findings for Research Questions One through Five

Research questions one through five are discussed in this section. Survey items which seemed most relevant to the question asked were included in the discussion of each of the five research questions. In a few cases, discussion of an item may be repeated because it is relevant to more than one research question.

#### *Findings for Research Question One*

Research question 1 asks what the perceptions are of nursing students and faculty members concerning the factors which affect the retention of RNB students (students who transferred after completion of an ADN program) during the last year of a nursing program in Washington State. Significant differences were found between the RNB students and the BSN students on several survey items, including items 5, 9, 10, and 16. The RNB group disagreed (3.4) at a significantly higher level than the BSN group (1.17) on item 5, which states that “students over the age of 35 have more difficulty completing the program.” On item 9, which states, “students who took math and science prerequisites within five years before admission are more likely to complete the program”, the RNB group (2.54) disagreed more than the BSN group (2.00). On item 10, “becoming engaged in campus activities helps students remain in the program to completion”, an institutional item, the RNB group (3.11) disagreed more strongly than the BSN group (2.81). Results for item 10 are contrary to the Tinto (1993) literature for both groups. And for item 16, which states, “most students who leave the program prior to completion do so because of non-academic events in their personal lives”, the RNB group (1.9) agreed more strongly than the BSN group (2.22). Both groups agreed with item 16, and the result is consistent

with the retention literature. See tables 2, 4, 5, and 7 for data on these four survey items.

Below is one student's comment on this problem:

I believe personal life issues in a student's life affect their chance for dropping out as opposed to the school not offering the right support.

Another student provided more insight into the factors which can help a student succeed:

The only people we "lost" in our class were due to having children, and most of these students went part time while one left the program for a while. I think the key to our high retention is our staff wants us to succeed. We are a small class, which I believe helps. The successful RNB or BSN student usually has a strong support system because school is challenging on many levels.

#### *Findings for Research Question Two*

Research question two asks about the perceptions of nursing students and faculty members concerning the factors which affect the retention of BSN (native) students in a nursing program in Washington State. Survey item 5, "Students over the age of 35 have more difficulty than other students completing the program and graduating", showed strong differences between the BSN group (1.17) and the RNB group (3.04). For item 5, the BSN group response was consistent with the retention literature, but that of the RNB group was not. On survey item 9, which correlates taking math and science prerequisites within five years of nursing program admission with program completion, the BSN students agreed (2.00) that taking the coursework closer to time of admission helps. The RNB students (2.54) disagreed with this statement. This result is consistent with the literature, because the RNB group, which includes more nontraditional students,

reportedly must sometimes choose between working and attending a class and may also have to obtain school credits part-time over several years rather than several semesters. The BSN student, as a native university student, has more financial means to complete schooling all at one time, and does not struggle as much with juggling a job and classes at the same time. See tables 2 and 4 for data on survey items 5 and 9.

### *Findings for Research Question Three*

Eight survey instrument items indicated significant differences between groups in the first one-way ANOVA, which answers the third research question, "Is there a statistically significant difference in the perceptions of faculty and students regarding the factors which affect the retention of RNB students and BSN students in nursing programs in Washington State?" Item five, "Students over the age of 35 have more difficulty than other students completing the program and graduating" was significant,  $F = (1, 189) = 10.77, p < .05$ . After the application of Fisher's Least Significant Difference (LSD) post-hoc test to item three, differences between two groups were shown to be significant. There was a significant difference between the perceptions of faculty and BSN students,  $m = .59, se = .145, p > .01$ . When Fisher's test was applied to the comparison between the perceptions of the RNB group and the BSN group, the difference was also significant,  $m = .31, se = .127, p = .014$ . However, the difference between the faculty group and the RNB group was not significant. Table 2 indicates the descriptive statistics of faculty, BSN students, and RNB students to the survey item.

Table 2

*Students over the age of 35 have more difficulty than other students completing the program and graduating.*

Participant Group	N	Mean	SD	F	<i>p</i> -value
Faculty members	44	3.31	.601	8.607	.000
BSN students	70	2.72	.788	8.607	.000

Participant Group	N	Mean	SD	F	<i>p</i> -value
RNB students	70	3.04	.788	8.607	.000
BSN students	77	2.72	.837	8.607	.000

Item eight, “Students who have young children have more difficulty completing the program,” was significant,  $F = (2, 186) = 4.194, p < .05$ . Fisher’s post-hoc test was applied, to reveal a significant difference in perception between the faculty group and the native BSN group,  $m = .374, se = .129, p = .004$ . Table 3 identifies the differences. Differences in perception between the faculty group and the RNB group and the BSN group and the RNB group were not significant.

Table 3:

*Students who have young children have more difficulty completing the program.*

Participant Group	N	Mean	SD	F-test	p-value
Faculty members	43	2.34	.529	4.19	.017
BSN students	77	1.97	.706	4.19	.017

Item nine, “Students who took math and science pre-requisites within the five years just before admission to the nursing program are more likely to complete the program”, was significant,  $F = (2, 184) = 8.692 = p < .05$ . Fisher’s Post-hoc testing revealed a significant difference in perception between the faculty group and the BSN group,  $m = .372, se = .15, p = .014$ . There was also a significant difference in perception between the RNB group and the BSN group,  $m = .537, se = .131, p > .01$ . The difference in perception

between the faculty group and the RNB group was not significant. Table 4 identifies the significant differences.

Table 4

*Students who took math and science prerequisites within the five years just before admission to the nursing program are more likely to complete the program.*

Participant Group	N	Mean	SD	F-test	p-value
Faculty Members	43	2.37	.618	8.692	.000
BSN students	77	2.0	.743	8.692	.000
Participant Group	N	Mean	SD	F-test	p-value
BSN students	77	2.0	.743	8.692	.000
RNB students	67	2.53	.926	8.692	.000

Item 10, “Becoming engaged in campus activities helps nursing students remain in the program to completion”, was significant,  $F = (2,189) = 4.313, p < .05$ . Fisher’s post-hoc testing revealed significant differences in perception between the faculty and the RNB group,  $m = -.362, se = .141, p = .011$ . Significant difference in perception also existed between the RNB group and the BSN group,  $m = .294, se = .121, p = .016$ . There was no significant difference in perception between faculty and BSN students. Table 5 presents the significant differences in perception between groups.

Table 5

*Becoming engaged in campus activities helps nursing students remain in the program to completion.*

Participant Group	N	Mean	SD	F-test	p-value
Faculty Members	44	2.75	.614	4.313	.015
RNB students	71	3.11	.687	4.313	.015
Participant Group	N	Mean	SD	F-test	p-value
RNB students	71	3.11	.687	4.313	.015
BSN students	77	2.81	.838	4.313	.015

Item 12, “Being involved in a study group helps students complete the last year of the nursing program,” was significant,  $F = (2, 186) = 3.183, p < .05$ . The Fisher’s post-hoc test revealed significant difference in perception between the faculty and the RNB group,  $m = .304, se = .149, p = .043$ , and also revealed a significant difference in perception between the RNB group and the BSN group,  $m = .283, se = .126, p = .026$ . The difference between the faculty member perceptions and the BSN student perceptions was not significant. Table 6 identifies the differences in perceptions between groups on the significant items.

Table 6

*Being involved in a study group helps students complete the last year of the nursing program.*

Participant Group	N	Mean	SD	F-test	p-value
Faculty members	42	1.95	.730	3.183	.044
RNB group	70	2.25	.735	3.183	.044
Participant Group	N	Mean	SD	F-test	p-value
RNB group	70	2.25	.735	3.183	.044
BSN group	77	1.97	.810	3.183	.044



Item 16, “Most students who leave the program prior to completion do so because of non-academic events in their personal lives,” was found to have significance between groups,  $F = (2, 187), 4.183, p < .05$ . Fisher’s post-hoc testing revealed significant differences in perception only between the BSN and the RNB student groups,  $m = .320, se = .110, p = .004$ . Differences in perception between faculty and BSN, and faculty and RNB, were not significant. Table 7 identifies the significant differences in perceptions between the BSN student group and the RNB student group.

Table 7

*Most students who leave during the last year prior to completion do so because of non-academic events in their personal lives.*

Participant Group	N	Mean	SD	F-value	p-value
BSN students	77	2.22	.70	4.183	.017
RNB students	70	1.90	.617	4.183	.017

Item 17, “The presence of a Student Center for tutoring and/or writing assistance helps students to remain in school the last year of the program,” showed significance between groups,  $F = (2, 188), 9.386, p < .05$ . Fisher’s post-hoc testing reveals significant differences were found between recommendations of the faculty members and the BSN students,  $m = .575, se = .135, p > .01$ . There were also significant differences found in

recommendations between the faculty members and the RNB students,  $m = .453$ ,  $se = .137$ ,  $p = .001$ . Differences between the two student groups were not significant. Table 8 demonstrates the significant differences in recommendations between the faculty group and the RNB students, and the faculty group and the BSN students.

Table 8

*The presence of a student center for tutoring and/or writing assistance helps students to remain in school the last year of the program.*

Participant Group	N	Mean	SD	F-value	p-value
Faculty members	43	1.81	.627	9.386	.000
RNB students	71	2.26	.716	9.386	.000
Participant Group	N	Mean	SD	F-value	p-value
Faculty members	43	1.81	.627	9.386	.000
BSN students	77	2.38	.746	9.386	.000

Item 18, "Most students who leave during the last year prior to completion do so because of course failure," was significant,  $F = (2, 184), 5.352, p < .05$ . Perceptions differed significantly between faculty members and BSN students on Fisher's post-hoc test,  $m = .297, se = .142, p = .038$ , as well as between BSN and RNB students,  $m = .387, se = .122, p = .002$ . Differences between the perceptions of faculty members and RNB students were not found to be significant. Table 9 identifies the significant items.

Table 9

*Most students who leave during the last year prior to completion do so because of course failure.*

Participant Group	N	Mean	SD	F-value	p-value
Faculty members	42	2.54	.771	5.352	.006
BSN students	76	2.25	.750	5.352	.006
Participant Group	N	Mean	SD	F-value	p-value
RNB students	69	2.63	.708	5.352	.006
BSN students	76	2.25	.750	5.352	.006

*Findings for Research Question Four*

Research question four asks for recommendations on how the institution can help promote retention of students in BSN programs. Institutional items were items 4, 10, 13, 14, and 17. Survey item four was related to faculty support, and was strongly supported by all groups. The item references the work of Pascarella and Terenzini (1977), which identified faculty involvement with students as being predictive of student retention. The response to item four, the only item rated by all groups as “strongly agree”, indicates the need for continued and/or increased faculty/student interaction in the current college campus milieu. In the “open-ended comments” section at the end of the survey, there were several student comments strongly supporting faculty-student interaction on campus. Student comments on faculty support were divergent. Comments ranged from, “Faculty support is the most important, and there is a lot of it in CON (College of Nursing)” to “Myself as well as many other students have had to deal with a difficult faculty member who has tried to put our education at risk.” One student explained this situation further:

Several students I know have struggled due to poor professionalism with clinical instructors and abusive situations. From my experience this and also inability to pass classes are the primary causes of failure in our program.

All three groups disagreed with survey item 10, which refers directly to the work of Tinto (1993). Tinto believes there is a positive relationship between student engagement and student retention, and item 10 identifies student interaction in on-campus activities as being conducive to retention. Faculty members (2.75) disagreed, as did BSN students

(2.81) and RNB students (3.11). It should be noted this study is about nursing students, who spend less time on campus than many other student groups, regardless of any other life issues. This situation probably impacts the results of this item, even from a faculty perspective.

There was overall agreement on institutional-related survey items 13, 14, and 17 among all groups. This result supports Jeffrey's model (2012), which calls for increased nursing-related teaching-learning opportunities for nursing students on campus in order to increase retention. For item 17, which promotes the idea of a Student Center for tutoring/writing assistance, the faculty group agreed most strongly (1.81), followed by RNB students (2.27), and then BSN students (2.39).

#### *Findings for Research Question Five*

The fifth research question is supported by the results of the second one-way ANOVA. The question asks, "Is there a statistically significant difference in the recommendations of faculty and students regarding institutional changes which could improve student retention in BSN programs?" Institutional factors are those factors related to faculty members, buildings, campus activities, tutoring centers, and other accommodations possibly advantageous to the student. These are all factors related to the university institution itself. Items 4, 10, 13, 14, and 17 from the survey were identified as institutional items. They include the presence of faculty member support for the student, student engagement in campus activities, lab availability with nursing staffing, practicing nursing scenarios in a simulation setting, and the availability of a Student Center for academic assistance.

Significant findings were identified in two of the five survey items which addressed institutional issues. These were item 10, “Becoming engaged in campus activities helps nursing students remain in the program to completion,” and item 17, “The presence of a Student Center for tutoring and /or writing assistance helps students to remain in school that last year of the program.” Thus, on the second one-way ANOVA, two of the five items were identified as significant.

Item 10, “Becoming engaged in campus activities helps nursing students to remain in the program to completion” was significant,  $F = (2, 189), 4.313, p < .05$ . Fisher’s LSD testing revealed significant differences in recommendations between the faculty and the RNB group,  $m = -.362, se = .141, p = .011$ . Significant difference in recommendations also existed between the RNB group and the BSN group,  $m = .294, se = .121, p = .016$ . There was no significant difference in recommendations between faculty and BSN students. Please refer to Table 5 to view results for this item.

Item 17, “The presence of a Student Center for tutoring and/or writing assistance helps students to remain in school the last year of the program”, showed significance between groups,  $F = (2, 188), 9.386, p < .05$ . Significant differences were found between recommendations of the faculty members and the BSN students,  $m = .575, se = .135, p > .01$ . There were also significant differences found in recommendations between the faculty members and the RNB students,  $m = .453, se = .137, p = .001$ . Differences between the two student groups were not significant. Table 8 demonstrates the significant differences in recommendations between faculty group and RNB students, as well as faculty group and BSN students.

### Participant Comments

Some respondents wrote comments at the end of the survey, and specific ones are mentioned here. Several comments confirmed faculty support as being a potential cause for student retention. Many cited student's personal issues as being a reason for attrition, with more than one confirming the difficulty with balancing home life, work life, and school life. Nursing program issues were mentioned as being the cause of difficulties, such as "frustrations with coordination" and "lack of direction primarily in the clinical setting." Another mentioned sometimes students underestimate the amount of time and work involved in the program and also identified the current job shortage as a possible cause of attrition. Poor academic performance was identified several times as a perceived cause of attrition, with one of these participants saying the GPA at her specific institution is set too high for success. Also identified was the discovery by the student that nursing may not be the profession they want once they realize what being a nurse really involves. One student identified a combination of problems, from his/her perspective:

(There are) a mix of personal issues and course failure that makes people quit the program. Many times, people are on the cusp of passing/failing, and are not supported through this. Additionally, then these students are on the cusp and are not notified, they cannot prepare for the test, then that decides their fate. In my school, there is no tutoring for senior nursing students.

Another student comment identified a chain-of-events type of problem that clearly illustrates typical student struggles, and underscores the complex nature of nursing student retention:

I think the incredibly high tuition for the nursing program plays a large factor in student success in the program. When there is a financial gap, students are forced to either work long hours, which takes away from their study time, or forces them to cut costs by living at home, or live far away from school. Doing so puts additional stress on students and makes it more challenging to be a part of study groups that nursing students rely on as study tools for successful exam completion.

These respondent observations address several of the items on the survey instrument. Additionally, these comments tell a short story about the struggles of non-traditional nursing students.

### *Conclusion*

The items discussed in this section demonstrate the significant differences between groups for the two research questions requiring the two one-way ANOVAs. On the first ANOVA, a significant difference was found between the groups on eight out of the sixteen items. On the second ANOVA, a significant difference was found between groups on two of the institutional items on the survey instrument. These differences will be discussed in Chapter Five. The remainder of the chapter includes participant comments, of which there were several. Many of the participant perceptions of problems were supported by virtue of being one of the variables in the survey. Other student comments addressed issues not included in the survey. Some of the most revealing discussions were included in this section.



## CHAPTER V

### DISCUSSION

This study was conducted to examine the differences in perceptions of three groups regarding factors affecting nursing student retention. The three groups included faculty members, Bachelor of Science in Nursing (BSN) students, and transfer-to-BSN (RNB) students in Washington State who responded to a survey sent to them by their nursing directors. Survey items included concepts discovered through a review of the college student retention literature published over the past forty years. Perceived causes for attrition in nursing programs are contained in the instrument, including both institutional and student-related factors.

The context of the study includes the nation-wide nursing shortage, which is expected to become even more serious as the demographically huge group of Baby Boomers, those born between 1946 and 1964, grow elderly and develop increased needs for nursing care. Another anticipated problem is that a large percentage of the nursing population will retire within the next ten years. This population is not being replaced in the volume of numbers needed. Thus, the idea of improving nursing student retention in nursing programs could be a method of helping to mitigate the current nursing shortage.

In Washington State, where the study was completed, there has been a notable difference in nursing student retention between two nursing groups, the BSN (native) students and the ADN (associate-degree nursing) students. The BSN students are those enrolled in the university 4-year nursing programs. The ADN students are those who complete an associate-degree nursing program in a community college setting. After

obtaining registered nurse licensure, some of these ADN students go on to the university as a transfer student for completion of the bachelor's degree. The ADN students enrolled in a bachelor's completion program are called RNB students. In 2008, the associate-degree programs in Washington State had a 22% attrition rate, and the BSN programs had a 4% attrition rate. The disparity in attrition rates between programs attracted the attention of the researcher, and is the impetus for this study.

The current study investigated whether students with associate-degrees in nursing (ADN) who transferred to the RNB programs for bachelor's completion shared the same perceptions of those of the native BSN students and faculty members. A brief look at how these two groups differ age-wise is important, since one way traditional versus non-traditional students are identified is by age. Traditional students are under age 25, and non-traditional students are over age 25. As discussed in the literature review, community college students tend to be older than university students. Nationwide, in 2011, 65% of the community college students were under age 25, and 87% of university students were under age 25 ([nces.ed.gov](http://nces.ed.gov), 2011). Since ADN programs, and thus, RNB programs, have a higher percentage of nontraditional students than the BSN groups, it is reasonable to make specific comparisons between these groups. Many reasons, both institutional and student-related, have been proposed for the higher attrition rate for the RNB group of students, and this study examines some of the proposed reasons. Through administration of the survey, perceptions and recommendations related to the sixteen survey items have been identified from each of the groups, informing the reader as to whether those items previously determined to be a cause of nursing student attrition are perceived to still persist today. It is also important to determine whether there is a difference in the

perceptions of the three groups regarding the factors affecting retention and the recommendations for changes which could improve nursing student retention.

### Purpose Statement

The purpose of this study was to examine the factors which affect the retention rate of students in BSN (native students) and RNB (transfer students) programs in Washington State. A researcher-developed survey instrument was administered to students and faculty members regarding their perceptions of personal, academic, and institutional barriers to nursing student retention. Additionally, the instrument gathered data on student and faculty members' perceptions of changes which could improve retention for both native and transfer nursing students.

### Research Questions

The research was guided by the following questions:

1. What are the perceptions of nursing students and faculty members concerning the factors which affect the retention of RNB students (students who transferred from an ADN program) during the last year of a nursing program in Washington State?
2. What are the perceptions of nursing students and faculty members concerning the factors which affect the retention of BSN (native students) students in a nursing program in Washington State?
3. Is there a statistically significant difference in the perceptions of faculty and students regarding the factors which affect the retention of RNB students and BSN students in nursing programs in Washington State?

4. What are the recommendations of nursing students and faculty concerning institutional changes which could improve student retention for RNB students (students who transferred from an ADN program) and BSN students (native students)?
5. Is there a statistically significant difference in the recommendations of faculty and students regarding institutional changes which could improve student retention in BSN programs?

### Methodology

The study was conducted in five phases: instrument design, evaluation of the survey instrument by a panel of experts to establish the content validity of the instrument, piloting the survey instrument, administration of the survey instrument, and analysis of the data. Survey items were written after a comprehensive examination of student retention research over the past forty years. A few of the items were taken from research conducted with university students many years ago. However, in order to make the research more applicable to today's students, most items were taken from more recent studies. This included research on community college students, who have higher numbers of nontraditional students, and on nursing students. Also included in the survey items were concepts recently identified in nursing retention research which are believed to help improve retention of nursing students. Five of the survey items are institution-related. The remaining eleven address either student or academic issues, which, for convenience, have collectively been called, "student-related". Likert-type options on the survey

instrument ranged from 1 (strongly agree) to 4 (strongly disagree); there was no neutral or “no response” option.

The content validity of the survey instrument was established through a review by a five-member panel of experts. Minor changes were suggested by members of the panel. No items were removed or added to the survey as a result of feedback from the panel.

To conduct a pilot study, the survey instrument was sent to eight nursing students and five faculty members. A test-retest procedure was used to establish instrument reliability. Each participant took the survey twice. After comparison of the scores on each of the two tests from each participant, an acceptable Cronbach’s Alpha coefficient (0.82) was obtained for each item on the survey. Cronbach’s Alpha is a popular reliability statistic that determines the internal consistency of items in a survey instrument to measure its reliability (Wiersma & Jurs, 2009).

When the final version of the survey instrument was prepared, an email with an attachment containing an explanation of the study and an invitation to participate was sent out to the nursing directors of the four identified nursing programs. This attachment was sent by the director of each program to all nursing students in the one-year RNB program, all students in the last year of the BSN, and a mixed group of faculty members. A week later, each nursing director received a link to the actual survey to send out to the same group of students and faculty members. There was a month spent waiting for all the results to arrive, with a reminder sent out to all participants a week prior to closing the survey. An email thank you note was then sent to each nursing director to forward to all participants.

After all surveys were collected, the data were then exported from Survey Monkey to SPSS for analysis. The test for homogeneity of variances was conducted, and one item was significant. This was believed to be due to the size of the faculty group, which was much smaller than the two student groups. Survey results were displayed using descriptive statistics. Multiple comparisons were conducted using a post hoc test, Fisher's Least Significant Difference (LSD).

For the ANOVA conducted to analyze the data related to Research Question 3, all 16 survey items were analyzed, and statistically significant differences were found between groups on eight of the items. For the ANOVA conducted to analyze the data related to Research Question 5, only the five institutional-related variables were analyzed, and two of those items were found to be significant. At the end of the survey, there was a space where the participant could write a comment, and a few students did so.

### Summary of Interpretation of Findings

The results of several survey items are included in each research question discussion. These results include both student-related and institution-related issues. For some survey instrument items, there was no significant difference between the responses of the three groups. For other survey instrument items, there was a significant difference in the responses of the three groups. Those items with no significant differences between groups (survey items 3,4,6,7,11,13,14, & 15) are nonetheless discussed due to response relevance to student attrition/retention.

*Discussion of Research Question One Results*

Research question one asks, “What are the perceptions of nursing students and faculty members concerning the factors which affect the retention of RNB students (students who transferred from completion of an ADN program) during the last year of a nursing program in Washington State?” Differences were found in the responses of RNB students and BSN students on three items on the survey instrument related to research question one – item 5:  $F = (1, 189) = 10.77, p < .05$ , item 9:  $F = (2, 184) = 8.692 = p < .05$ , and item 16:  $F = (2, 187), 4.183, p < .05$ .

Previous research on non-traditional students was generally supported by the results on these items. However, on item 5, which states that “students over age 35 have more difficulty completing the program”, the RNB group (3.04) disagreed at a significantly higher level than the BSN students (1.17). The BSN student response agrees with the literature; however, the RNB student response is contrary to the literature. One reason for the difference in response may be that once the RNB students gain admission, they often experience a motivating rise in self-efficacy. Since this group of non-traditional students may be older and may have not previously had the chance to attend college or be as successful as they envision, they may feel it is the fulfillment of a dream, and be very determined to complete the program. Therefore, their response on the survey makes sense. It seems reasonable that native BSN students, who are traditional-age, 18 to 22-year-old students, would believe it to be more difficult for older students to succeed, given their years away from formal instruction and subsequent increase in life demands.

On item 9, which states “students who took math and science prerequisites within five years before admission are more likely to complete the program”, there was significant disagreement between the RNB group (2.54), and the BSN group (2.00.) Again, this response from the RNB group could be based on a newfound determination to complete the program. Another interpretation of this RNB response could be that this group does not feel these pre-requisites play a major role in their ability to complete the nursing program. Surprisingly, there was significant disagreement on this item between the faculty group (2.37) and the BSN group. The group most strongly agreeing with this item was the BSN group.

For item 16, which states, “Most students who leave the program prior to completion do so because of non-academic events in their personal lives”, there was significant difference between the responses of the two student groups. The RNB group (1.9) agreed more strongly on this item than the BSN group (2.22). This response is supported by the literature on non-traditional students. Personal issues such as financial problems, child care issues, transportation difficulties, and lack of support was a recurring theme in the open-ended comments on the survey, and are well known to be a complication of student life that affects non-traditional students.

#### *Discussion of Research Question Two Results*

Research question two asks, “What are the perceptions of nursing students and faculty members concerning the factors which affect the retention of BSN (native) students in a nursing program in Washington State?” Survey items 10,  $F = (2,189) = 4.313, p < .05$ ,



and 18,  $F = (2, 184), 5.352, p < .05$ , showed significant differences between the BSN group and the RNB group. On item 10, which states, "Becoming engaged in campus activities helps nursing students remain in the program to completion," the means of both groups were in the "disagree" range, with the BSN group (2.81) assigning more importance to being engaged in on-campus activities than the RNB group (3.11). This is supported by the literature on non-traditional students. The RNB student group likely has more members who do not have easy access to campus and would not live on campus, thus prohibiting them from becoming engaged in campus activities. In addition, factors such as family and work responsibilities may also influence the response from the RNB students.

On item 18, which states, "Most students who leave during the last year prior to completion do so because of course failure", the BSN students (2.25) showed a higher level of agreement than the RNB students (2.64.) This finding is consistent with student literature, because BSN students, who generally "agreed" with the item, would usually not have a need other than grades to leave school, whereas the RNB group, which showed "disagreement" with the item, usually has other life issues that might require them to leave the program. Some of these issues may include lack of funds for college, child care issues, elder care challenges, or having to work to support the family.

Overall, BSN students are more likely to believe older students with greater life responsibilities have more difficulty completing college than other students. BSN students value interactions with faculty members and must feel students may have much to gain by positive interactions with faculty. It seems paradoxical that BSN students do

not see much value in being active in on-campus activities, when at the same time, they value interactions with faculty.

### *Discussion of Research Question Three Results*

Statistically significant differences were found in the perceptions of the respondents from the three groups on eight survey instrument items, survey items 5, 8, 9, 10, 12, 16, 17, and 18. These significant items correspond with the third research question, “Is there a statistically significant difference in the perceptions of faculty and students regarding the factors which affect the retention of RNB students and BSN students in nursing programs in Washington State?” These items include both institutional and student-related factors. Results showed that the eight survey items included significant differences between at least two of the three groups, if not between all of them. Items found to have significant differences between groups included whether :

- Students over the age of 35 have more difficulty completing the program,  
 $F = (1, 189) = 10.77, p < .05$ .
- students with young children have more difficulty completing the program  
 $F = (2, 186) = 4.194, p < .05$ .
- those who took math and science pre-requisites within five years before admission are more likely to complete the program,  $F = (2, 184) = 8.692 = p < .05$ .
- becoming engaged in campus activities helps students remain in the program  
 $F = (2, 189) = 4.313, p < .05$ .
- being involved in a study group helps students complete the program,  
 $F = (2, 186) = 3.183, p < .05$ .

- most students who leave the program leave due to non-academic events in their personal lives,  $F = (2, 187), 4.183, p < .05$ .
- the presence of a Student Center for tutoring and/or writing assistance helps students complete the program,  $F = (2, 188), 9.386, p < .05$ .
- most students leave due to course failure,  $F = (2, 184), 5.352, p < .05$ .

BSN students strongly agreed that students over 35 have more difficulty completing the program, whereas the RNB students and faculty disagreed. The native BSN student enjoys a somewhat protected learning environment many non-traditional students are never able to enjoy. From their perspective, most people who get college degrees are under age 35, and it is difficult for the native student to imagine leaving university and returning years later to obtain a degree. In the same vein, BSN students believe those who took math and science pre-requisites within five years of admission will have greater success and complete the program, and RNB students felt it was less important for success. Non-traditional students may have historically had greater difficulty deciding between attending class or working an extra shift for more pay. BSN students are more committed and more “integrated” into the college environment, and thus, believe they would never find themselves in the RNB student’s situation. Due to their dedication to university life, BSN students agreed that most students who leave during the last year do so because of course failure. This is in contrast with the other two groups, the faculty and the RNB students, who were both close in their response to “disagree” on this item. RNB student typically leave school more for personal reasons than academic, although not always. Non-traditional students are more “at risk” for course failure due to their demanding life responsibilities which can cause absenteeism in academia, leading to

course failure. Because of their young age and more limited life experiences, BSN students likely view the life of an RNB student differently than it is actually experienced. Faculty, often having worked with students across the age groups, probably have a more realistic perception.

#### *Discussion of Research Question Four Results*

This research question is only related to the institutional survey items, which include items 4, 10, 13, 14, and 17. The question asks, “What are the recommendations of nursing students and faculty concerning institutional changes which could improve student retention for RNB students and BSN students?” Survey item four is related to faculty support, and was strongly supported by all groups. The response to item 4 indicates a need for continued faculty and student interaction in the current college campus milieu. The more time a student is able to spend around a faculty member, the more comfortable that student will become in regard to asking questions about coursework. It is also probable that students will be more aware of their academic progress through regular conversations with faculty, thus affording them an opportunity to adjust their studies and performance prior to finding themselves encountering major course challenges.

All three groups disagreed on item 10. This item suggests a positive relationship between on-campus activities and student engagement. It could be argued this result was found prior to the introduction of cell phones and other technology. The ability to be in contact without being physically present might have some influence on why current students may not feel the need for as much physical presence on campus. It should also

be noted that nursing students typically do not spend as much time on campus as students in other majors, because they generally spend at least one day per week off-campus in clinical practicums. Less time spent on campus usually means less engagement in student activities. Nursing programs are usually somewhat separated from other general classes due to the nature of the curriculum and demands for clinical experience. Students may see little need to participate or interact with the student body. For all of these reasons, it should not be surprising to find less enthusiasm among groups of nursing students for on-campus activities.

The last three items, 13, 14, and 17, are all related to learning resources and activities in the nursing lab or in a student tutoring center. Practicing skills and participating in simulation scenarios have been identified as activities that build self-efficacy in nursing students and help develop critical thinking abilities. All groups agreed these resources are needed, and all participant groups agreed with the need for student tutoring and/or writing assistance.

#### *Discussion of Research Question Five Results*

Research question five asks, “Is there a statistically significant difference in the recommendations of faculty and students regarding institutional changes which could improve student retention in RNB programs?” The two items with significant differences were items 10,  $F = (2,189) = 4.313, p < .05$ , which addresses student engagement in campus activities, and 17,  $F = (2,188), 9.386, p < .05$ , which proposes the presence of a Student Center for tutoring and /or writing assistance.

Although all three groups disagreed with item 10, the RNB group (3.11) disagreed more strongly than the faculty group (2.75) and the BSN group (2.81). Clearly, engagement in campus activities was not something any of the groups felt was important for student retention in nursing. On item 17, the faculty (1.81) showed the most enthusiasm for the Student Center, and the BSN students (2.38) showed the least interest. There was positive interest from all three groups in on-campus learning opportunities for students. The responses of BSN students indicated less interest in academic support, probably because they are already on campus and may have other opportunities for study that many RNB students might not enjoy. The RNB students are more likely than BSN students to have difficulty coming to campus to complete labs and to participate in tutoring opportunities, although they are the group that needs these advantages the most.

#### Comparison of Findings to Previous Literature

Tinto's "Student Integration Theory" (1993), which stated the more the student is engaged in on-campus activities, the more likely she/he will be to complete college, was rejected by the nursing group. This should not be surprising, since nursing spends much of their time off-campus in clinical areas, and typically do not have much time to participate in campus life. The work of Pascarella and Terenzini (1977), who conducted studies demonstrating the positive results of on-campus student-faculty interactions, was strongly supported. Generally speaking, Bean's Student Attrition Theory (1990), based on the personal struggles inherent in the experience of the non-traditional student, was supported. Bean's assessments of the complicated problems associated with non-traditional students continue to be relevant. The NURS Model by Marianne Jeffreys (2004) has provided comprehensive information on how to help nursing students succeed.

The NURS Model correlates with several of the survey items, including the proposals for having lab availability, simulation scenarios, and a Student Center for student academic support. Her model includes several institutional items included on the survey, and responses to these survey items indicated they were found to help enhance retention.

### Discussion

Judging from the results of this study, the factors affecting nursing student retention are varied and numerous. Survey results show eight factors as helping retain students.

Those factors include:

- living close to campus
- support of the student by faculty members
- student high grade point average
- students taking math and science pre-requisites within five years of admission to the program
- student involvement in a study group
- lab availability with faculty assistance
- practicing focused simulation scenarios
- having a Student Center for tutoring and/or writing assistance

Factors shown to impede student retention include:

- difficulty in affording tuition
- having young children at home
- working more than twenty hours per week

- non-academic events in a student's personal life (i.e. personal issues)
- leaving due to course failure

Recommendations to improve nursing student retention include:

- having the advantage of faculty support
- the availability of an open lab with nursing staffing for practicing nursing skills
- practicing focused simulation scenarios in the lab setting
- having access to a nursing Student Center for tutoring and/or writing assistance

There were two paradoxical situations uncovered in this study. The first paradox is that while students claimed to feel faculty support was very important, they disagreed as a group to the survey item on student engagement on campus being a predictor of student retention. While it is true students (and faculty also) communicate largely by email, texting, and other non-face-to-face situations these days, there is much to be said for interacting personally with others on campus. It is largely in participating in activities on campus that students tend to encounter faculty members and enjoy informal visits with them. In this way, the student becomes more comfortable being around the faculty member, and may become more comfortable asking him/her questions. If the student becomes comfortable in the faculty member's presence, this will lead to an increased comfort level in discussing problems the student may be having with coursework.

The idea of on-campus interactions with faculty for RNB students is less realistic than for BSN students. Since the RNB student spends less time on campus than the BSN group, this student is less likely to encounter a faculty member outside of class. When not in the school setting, this student is home with children, home with elderly family



members, working to support themselves and family members, and involved in a multitude of other responsibilities.

The second paradox is one that is well-known among nurse educators. While it has been determined in this and other studies that non-traditional students (which in this study includes the RNB group) often need more assistance in their coursework to be successful, they are also the very students who have little additional class or study time for performance improvement. Due to family, work, and other demands on their time, they are unable to attend extra study sessions or labs, even when these are sometimes arranged specifically for their own benefit.

There are some important recommendations from the findings of this study. The first notable discovery was, as mentioned above, the importance of faculty member presence in student academic life. Faculty members should be advised on the importance of establishing a professional relationship with the student, and new faculty members should be mentored by a faculty member who is very adept at student relations and retention.

Another finding was how little time non-traditional students may have to spend on campus due to having busy lives. The higher level of identification of this group with the problem of personal issues is consistent with the literature, and agrees with the reflections on the community college students by various student retention authors. Personal reasons can include poverty, lack of confidence, limited support from family or friends, transportation challenges, and work or family responsibilities.

Because of the problem of not having much time on-campus, it may be reasonable to examine the possibility of turning a small number of nursing courses into hybrid format.

A hybrid course is taught part in the classroom, and part online, with the goal of helping the distance and/or time-challenged student to be able to complete the course. In a hybrid class, the student would only have to travel to campus about half the time as for that of a regular class. This will enable students with many life responsibilities to engage in classroom discussions and listen to lectures while still able to attend to responsibilities at home. Hybridizing a course could be a strong factor in retention.

The last item for consideration is that we need to continue to create more means of support for non-traditional students so they will be better able to complete nursing programs. A popular means of support in academia is cohort learning, or placing students in groups with other students for assistance, study, socialization, and encouragement. Jeffreys (2012) calls this idea “peer partnerships”, where students are carefully paired with other students to encourage supportive relationships. Other means of support for nursing students include on-campus evening daycare hours, open labs with assistance present, extra practice opportunities for skills trainings, and more simulation scenarios for development of critical thinking.

### Strategies for Assisting Nontraditional Nursing Students

Nursing students who are older than the traditional student, take care of other family members, have young children, and/or must multi-task with other life issues, may suffer from “Multiple-Role Stress” (Jeffreys, 2012). To assist these students, educators should explore strategies for minimizing stress and anxiety, so they can be assisted in managing their multiple roles and responsibilities and still complete the program.

When a faculty member is working with a class of beginning nursing students, it would be reasonable to administer some short surveys to gather self-assessments from the group. Obtaining information on student learning styles and preferences, as well as time constraints, is potentially helpful in promoting retention. Carefully-designed tools used to measure self-efficacy can be designed and given to nursing students. Review of survey data to identify those students with enough self-efficacy as well as those who need better self-efficacy could be accomplished. This will allow for early intervention and assistance in enhancing realistic self-efficacy appraisal and hopefully, promoting retention. Surveying students early in the program to determine ways to help them succeed based on their self-assessment may be helpful if the student needs assistance during their tenure in the program. Having this input from students may assist the instructor in identifying unrealistic expectations, trends among the students, group similarities, individual differences, and perceived needs on the part of the student (Jeffreys, 2012).

The increasingly academically diverse nursing student population represents very diverse study skills. Study skills affect nursing student retention through both academic performance and psychological outcomes (Jeffreys, 2012). Nursing students need well-developed skills in listening, reading, writing, note-taking, research, paper presentation and study skills in order to be successful. Effective time management, organizational, and planning skills are imperative and are good predictors of academic success. Thus, study skills should be evaluated in the student self-appraisal in case this information is needed for remediation in the future.

Bean (2000) found absenteeism to be an academic variable influencing attrition. In the case of the non-traditional student, absenteeism may be more frequent than for the

average student due to life responsibilities. Attendance should be monitored in nursing programs to help identify at-risk students. Since undergraduate nursing programs typically have both classroom and clinical components, with one providing the theory component and the other providing the experiential piece, good attendance is even more important for program success. The learning experienced in nursing programs is applied in many ways, with one mode of learning informing the other, and multiple absences leave the student without those essential experiences necessary for success. Student issues such as tardiness and absenteeism should be addressed in each program's Nursing Student Handbook and in individual course syllabi. The instructor may be able, early in the program, to identify existing gaps in student and instructor expectations and address these in order to curb possible problematic outcomes.

The class schedule is an important subject to assess with nursing students. It interacts with other academic and environmental factors in impacting student retention. An incompatible class schedule increases the nontraditional student's risk for attrition due to multiple-role stress. A two or three day class schedule during the week is more compatible than a 4-day class schedule, and it increases the likelihood for more consistent class attendance, more concentrated and productive study hours, participation in professional events, satisfaction, and academic achievement (Jeffreys, 2012).

The computer lab could be utilized for nursing students to help manage nursing licensure test anxiety. If the nursing program has a contract with a nursing testing company, frequent tests should be taken by the students to ensure an understanding of nursing concepts. Since the test for licensure is taken on a computer, this practice is often appreciated by students, and should be used to assess understanding and gain confidence.

In this way, the student may be made comfortable with completing multiple-choice testing by computer before they must sit for the computerized licensure test.

One suggestion for dealing with student stress is to provide advance notice regarding any required events students are expected to attend. This type of activity would involve the student becoming “engaged in campus activities”. Nursing students often attend professional nursing conferences, meetings, and other events in order to help develop the characteristics of the professional nurse. Providing lead time so the student has the opportunity to arrange care for child care, elder care, or time off from work, is essential for this group.

A personal method of helping nontraditional students manage stress levels is to hold discussions at appropriate times with other students in similar situations, or with former students who struggled with Multiple-Role Stress (Jeffreys, 2012) and persisted to completion of the program. Asking successful students to share their own experiences and discuss how they managed their stressful lives may inspire and energize those who are currently struggling. This may give them the desire to continue and complete the program. If the university has an on-campus child care center, the nursing instructor could establish an ongoing relationship with that facility and possibly arrange for the center to extend services to the nursing students who need child care, to cover some professional events. If a student is having trouble getting a day off from work so they can attend a nursing professional event, it might be helpful for the educator to write a letter to the department and explain the benefit of the professional event for the student.

Cohort learning has proven to be a very successful method for promoting professional growth among students. Student members of cohorts learn new professional skills from each other and can tap into each other's experiences for life management ideas. This type of learning model needs to be set up in such a way as to offer the best chance of being advantageous for every student involved. Jeffreys (2012) refers to this model as the "Peer Partnership". The nurse educator cannot force friendship to occur, but can create opportunities and conditions that support and nurture peer interactions. Carefully planned student-centered interactive experiences between students or groups of students can help promote productive peer partnerships. In this way, if vulnerable students are paired with others with similar issues and become friends, they can help each other to succeed.

If nurse educators are able to do so, they should attempt to eliminate known stressors. As discussed throughout this study, known stressors found in the research include student affective factors and the environmental (student-related) factors mentioned previously. If stress cannot be eliminated, the instructor can promote stress management strategies such as teaching deep breathing techniques or music therapy before an exam to help manage test anxiety. The educator could also make the connection for the student with a counselor. School counselors, nurse educators, or tutors can help students develop time-management strategies, task prioritization, and task delegation to help manage multiple-role conflict (Jeffreys, 2012).

Review classes have been shown in Washington State to be helpful in nursing student retention as well as in improved scores on the licensure exam. The class can be done in different ways; there can be one class lasting an hour per week where the week's content is reviewed. If the need is perceived, the review class can be offered more frequently. The

timing and amount of time dedicated to the review can be assessed by talking with the students about their learning needs.

If the program has a Nursing Student Center, a gathering place for students in the program, nursing faculty should strongly encourage its use, especially by non-traditional students. Assistance with writing and math skills, as well as materials and computers to support study skills, are important items for such a center. An area for group study should be available so students have a place to go to study when they are not able to access other areas.

If it is determined a student must leave the nursing program, nursing faculty should consider ways that student might possibly be readmitted at a later date for program completion when the student's life responsibilities are more manageable. If the door must be shut, a window should be opened for possible completion later, unless specific circumstances prevent this. A student who stops out at one point in time may be better able to handle academia a few months later. If the student qualifies for readmission into the program, allowing them one more chance to complete is a reasonable option.

#### Recommendations for Future Research

Future research on this topic could include dramatically different changes from this study, or could include basically a repeat of the same study with small variations. This same study could be repeated in a different state in the country to determine whether there are any significant differences in survey results among the same groups. A nursing student retention researcher could replicate a study by Dr. Marianne Jeffreys utilizing her survey tool in the western part of the country. Comparisons could be made on results

between the different groups in divergent areas of the country. This study could be conducted in a qualitative format, using individual interviews with members from each of the three groups, and then perhaps a focus group discussion.

A gap found in the non-traditional student literature was an examination of the type of student personality characteristics that may promote retention in programs. The role personality plays in college student retention remains vague, and thus may be worth investigating. This type of study could be created for a nursing program to determine nursing student personality characteristics that lead to retention.

A study comparing the retention of non-traditional nursing students enrolled in on-campus nursing programs with non-traditional nursing students enrolled in hybrid programs might be revealing. It would be interesting to find out whether life issues still interfere even when the student is enrolled in a hybrid program. These programs might be more student-friendly for the person with lots of responsibilities who is unable to come to a college campus to participate in classes.



## Conclusions

The nontraditional nursing student has many challenges, and nursing program personnel are in key positions to assist these students in their path to becoming valuable members of the nursing work force. Most of these students are sincere in their desire to become nurses, but some have too many life responsibilities to manage their student lives without being provided with some degree of assistance. Flexibility and creativity on the part of nursing faculty is needed to make program completion a more realistic goal for this group. Although the student still must be held accountable for academic responsibilities, making some aspects of the program more realistic for a multi-tasking adult student to complete is worth considering. Some students from this group are only one crisis away from having to drop out of academia, since, in many households, attending college is a luxury rather than an expectation. It is in the students' best interest to assist them in this endeavor, and it is in society's best interest as well.

## References

American Association of Community Colleges (2006). *Fast Facts*. Washington, D.C.:

American Association of Community Colleges. Retrieved from

<http://www.aacc.nche.deu/Content/NavigationMenu/AboutCommunityColleges/>

Fast\_Facts.htm

Ammons, R.M. (1971). *Academic persistence of some students at St. Petersburg Junior*

*College*. Report by the Office of Testing Services, Saint Petersburg Junior

College, St. Petersburg, Florida.

ASHE-ERIC Higher Education Report, 30,(3), 7-20. Tinto's interactionalist theory.

(2004).

Asera, R. (2006). *Pipeline or pipedream: another way to think about basic skills:*

*Carnegie perspectives*. Menlo Park, CA: Carnegie Foundation for the

Advancement of Teaching.

Astin, A.W. (1964). Personal and environmental factors associated with college dropouts

among high aptitude students. *Journal of Educational Psychology*, 55, 219-227.

Astin, A.W. (1972). *College dropouts: A national profile*. American Council on

Education Research Reports. Washington, D.C., American Council on Education.

American Association of Community Colleges. (2006). Retrieved from  
AACC.org.

Auerbach, D.I., Buerhaus, P.I., & Staiger, D.O. (2007). Better late than never: Workforce  
supply implications of later entry into nursing. *Health Affairs*, 26 (1): 178-185.

Bailey, T. & Morest, V.S. (2006). *Defending the community college equity agenda*.  
Baltimore: Johns Hopkins University Press.

Bandura, A. & Locke, E.A. (2003). Negative self-efficacy and goal effects revisited.  
*Journal of Applied Psychology*, 88, 87-89.

Bean, J.P. (1980). Dropouts and turnover: the synthesis and test of a causal model of  
student attrition. *Research in Higher Education*, 12, 155-187.

Bean, J.P. (1990). Why students leave: Insights from research. In D. Hossler & J.P. Bean  
(Eds.), *The strategic management of college enrollments*. San Francisco: Jossey-  
Bass.

Bean, J.P. & Eaton, S.B. (2000). A psychological model of college student retention. In  
*Part I: Revising Tinto's Theory*, p.48-61.

Becker, G. (1964). *Human capital: A theoretical and empirical analysis*. New York:  
Columbia University Press.

- Blanchfield, W.C. (1971). College dropout identification: A case study. New York: Utica College.
- Boswell, K. (2004). Keeping America's promise: A discussion guide for state and college community leaders. In K. Boswell and C.D. Wilson (Eds.). *Keeping America's promise: A report on the future of the community college*, (p.47-52). Denver, CO: Education Commission of the States and the League for Innovation in the Community College.
- Bragg, D. (2001). Community college access, mission, and outcomes: Considering intriguing intersections and challenges. *Peabody Journal of Education*, 76(1), 93-116.
- Buerhaus, P.I., Staiger, D.O., & Auerbach, D.I. (2000). Implication of an aging nursing Workforce. *Journal of the American medical Association*, 283:2948-2954.
- Bureau of Health Professions (2006). *The registered nurse population: Findings from the March 2004 National Sample Survey of Registered Nurses*. Washington, D.C.: U.S. Department of health and Human Services, Health Resources and Services Administration. Retrieved from: <http://bhpr.hrsa.gov/healthworkforce/rnsurvey04/>
- Cabrera, A.F., Castaneda, M.B., Hengstler, D., & Nora, D. (1992). The convergence between two theories of college persistence. *Journal of Higher*

*Education*, 63(2), 143-164.

Cameron, C. (2005). Experiences of transfer students in a collaborative baccalaureate nursing program. *Community College Review*, 33, 22-44.

Center for the Study of College Student Retention. (2008). Learning about college student retention. Retrieved from Learning About college Student Retention Web site: [http://www.cscsr.org/retention\\_issues\\_learning\\_retention.htm](http://www.cscsr.org/retention_issues_learning_retention.htm)

Centra, J., & Rock, D. (1971). College environments and student achievement. *American Educational Research Journal*, 8, 628-634.

Chase, C.I. (1970). The college dropout: His high school prologue. *Bulletin of the National Association of Secondary School Principals* 54,66-71.

Christie, R.L., & Hutcheson, P. (2003). Net effects of institutional type on baccalaureate degree attainment of “traditional” students. *Community College Review*, 31(1), 1-15.

Congdon, J.D. (1964). Personality factors and capacity to meet curriculum demands. *Personnel and Guidance Journal*, 42, 17-31.

Cohen, A.M., & Brawer, F.B. (2003). *The American community college* (4<sup>th</sup> ed.). San Francisco: Jossey-Bass.

Cohen A.M., & Brawer, F.B. (2008). *The American community college* (5<sup>th</sup> ed.). San

Francisco: Jossey-Bass.

Cope, R. (1971). An investigation of entrance characteristics related to types of college dropouts. *Washington, D.C.: Office of Education Reports*, BR-0-1-068. (ERIC document Reproduction Service No.ED 052 749).

Creswell, J.W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*. (2<sup>nd</sup> ed.). Thousand Oaks: Sage Publications.

Cronk, B.C. (2008). *How to use spss: A step-by-step guide to analysis & interpretation* (5<sup>th</sup> ed.). Glendale, CA: Pyrczak.

Diaz, P.E. (1992). Effects of transfer on academic performance of community college Students at the four-year institution. *Community/Junior College Quarterly*, 16,279-291.

Dillman, D. A. (2007). *Mail and internet surveys: The tailored design method*. Hoboken, NJ: John Wiley & Sons.

Durkheim, E. (1961). *Suicide*. Glencoe: The Free Press.

Fenstemacher, W. (1973). College dropouts: Theories and research findings. Unpublished Manuscript, Office of the Chancellor, Minnesota State College System.

Fishbein, M.. & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.

- Fitzpatrick, J.L., Sanders, J.R., & Worthen, B.R. (2004). *Program evaluation: Alternative approaches and practical guidelines*. (3<sup>rd</sup> ed.). Boston: Pearson.
- Fondiller, S.H. (2001). The advancement of baccalaureate and graduate nursing education: 1952-1972. *Nursing and health Care Perspectives*, 22 (1): 8-10.
- Flacks, R. (1963). Adaptations of deviants in a college community. Unpublished doctoral dissertation, University of Michigan.
- Frederickson, J. (1998). Today's transfer students: Who are they? *Community College Review*, 26, 43-55.
- Gall, M.D., Borg, W.R., & Gall, J.P. (1996). *Educational research: An introduction*. White Plains, NY: Longman Publishing.
- Gardner, E.A. (2006). Instruction in mastery goal orientation: Developing problem solving and persistence for clinical settings. *Journal of Nursing Education*, 45 (9): 343-347.
- Gekoski, N., & Schwartz, S. (1961) Student mortality and related factors. *Journal of Educational Research*, 54, 192-194.
- Green, S.B. & Salkind, S.J. (2008). *Using SPSS for windows and macintosh: Analyzing and understanding data* (5<sup>th</sup> ed.). New Jersey: Pearson Prentice
- Hall, E.E., Hackman, R. & Dysinger, W. (1970). Commitment to college as a factor in

- student attrition. *Sociology of Education*, 43,311-324.
- Halawah, I. (2006). The impact of student-faculty informal interpersonal relationships on intellectual and personal development. *College Student Journal*, 40(3), 670-678.
- Halsne, A.M. & Gatta, L.A. (2002). Online vs. traditionally delivered instruction: A Descriptive study of learner characteristics in a community college setting. *Online Journal of Distance Learning Administration*, 5(1), 1-18. Retrieved from <http://www.westga.edu/-distance/ojdla/sring51/halsne51.html>
- Hannah, W. (1971). Personality differentials between lower division dropouts and stay-ins. *Journal of College Student Personnel*, 12,16-19.
- Hills, J.R. (1965). Transfer shock: The academic performance of the junior college transfer. *The Journal of Experimental Education*, 33(3), 201-215.
- Higgins, B. (2005). Strategies for lowering attrition rates and raising NCLEX-RN pass rates. *Journal of Nursing Education*, 44,(12), 541-547.
- Hussar, W.J. (2005). *Projection of education statistics to 2014*. (NCES 2005-074). Washington, D.C.: U.S. Department of Education.
- Jaffe, A. & Adams, W. (1966). Academic and socio-economic factors related to entrance and retention at two and four year colleges in the late 1960s. *Proceedings at the American Statistical Association*, Social Statistics Section.



- Jeffreys, M. (2004). *Nursing student retention: Understanding the process and making a difference*. New York: Springer Publishing Company.
- Jeffreys, M. (2012). *Nursing student retention: Understanding the process and making a difference*. New York: Springer Publishing Company.
- Jenkins, D. (2002). *The potential of community colleges as bridges to opportunity for the disadvantaged: Can it be achieved on a large scale?* Chicago, IL: Chicago Great Cities Institution. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED466244&site>
- Jones, J. (1962). Some personal-social factors contributing to academic failure at Texas Southern University. *Personality Factors on College Campus*. Austin: Hogg Foundation for Mental Health.
- Kamens, D. (1971). The college “charter” and college size: Effects on occupational choice and college attrition. *Sociology of Education*, 44, 270-296.
- Karp, M.M., & Hughes, K.L. (2008). Information networks and integration: Institutional influences on experiences and persistence of beginning students. *New Directions in Community Colleges*, 144: 73-82.
- Kumar, R. (2005). *Research methodology: A step-by-step guide*. (2<sup>nd</sup> ed.). London:

SAGE Publications.

Lake, P. (2001). What should we know about developmental education? *Southern*

*Association of Community, Junior, and Technical Colleges Newsletter*, 35(1), 3-8.

Laughlin, J.T. (2006). *An examination of differences between occupational-technical*

*student and transfer student engagement at small community colleges in Virginia*

*(Doctoral dissertation). Available from ProQuest Dissertations and Theses*

*database. (UMI No. 3246898).*

Lawhorn, J. (1971). A study of persisters and dropouts in the secretarial science program

at Miami-Dade Junior College. Unpublished doctoral dissertation, The University of Miami.

Lazarus, R.S., Averill, J., & Opton, E. (1974). The psychology of coping: Issues of

Research and assessment. In G.V. Coehlo, D.A. Hamburg, and J.E. Adams (eds.),

*Coping and adaptation*. New York: Basic Books.

Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling non-response in social

science research. *Journal of Agricultural Education*, 42(4), 43-53.

Master Plan for Nursing Education, (2008). Retrieved at: [www.wacenterfornursing.org](http://www.wacenterfornursing.org)

McIntosh, M.F. & Rouse, E.R. (2009). The other college: Retention and completion rates

among two-year college students. Retrieved from [www.americanprogress.org](http://www.americanprogress.org).

McLaughlin, K., Moutray, M., & Muldoon, O.T. (2007). The role of personality and self-efficacy in the selection and retention of successful nursing students: A longitudinal study. *Journal of Advanced Nursing*, 61,(2), 211-221.

Meggison, L.A. (2008). RN-BSN education: 21<sup>st</sup> century barriers and incentives. *Journal of Nursing Management*, 16, 47-55.

Miller, M. (2009). Courageous conversations. *Change*, January-February. Retrieved from [www.changemag.org](http://www.changemag.org)

National Council of State Boards of Nursing. (2005). Meeting the Ongoing Challenge of Continued Competence. Retrieved from [https://www.ncsbn.org/Continued.Comp\\_Paper\\_TestingServices.pdf](https://www.ncsbn.org/Continued.Comp_Paper_TestingServices.pdf)

National Institutes of Independent Colleges and Universities. (ERIC Document Reproduction Service No. ED319343).

National Center for Education Statistics. (2011). Characteristics of Post-Secondary Students. Retrieved from [http://nces.ed.gov/programs/coe/indicator\\_csb.asp](http://nces.ed.gov/programs/coe/indicator_csb.asp)

Nelson, A.G. (1966). College characteristics associated with freshman attrition. *Personnel and Guidance Journal*, 44, 1046-1050.

- Oseguera, L., & Rhee, B.S. (2009). The influence of institutional retention climates on student persistence to degree completion: A multilevel approach. *Research in Higher Education, 50*, 546-569.
- Panos, R. & Astin, A. (1968). Attrition among college students. *Educational Research Journal, 5*, 57-72.
- Pascarella, E.T., Seifert, T.A., & Whitt, E.J. (2008). Effective instruction and college student persistence: Some new evidence. *New Directions for Teaching and Learning, 115*, 55-70.
- Pascarella, E.T. & Terenzini, P.T. (Eds.). (2005). *How college affects students: Vol. 2. A third decade of research*. San Francisco: Jossey-Bass.
- Pascarella, E., & Terenzini, P. (1991). *How college affects students: Findings and insights from twenty years of research*. San Francisco: Jossey-Bass.
- Pascarella, E. T. & Terenzini, E.T. (1977). Patterns of student-faculty informal interaction beyond the classroom and voluntary freshman attrition. *Journal of Higher Education, 5*, 540-552.
- Pascarella, E.T. & Terenzini, E.T. (1979). Interaction effects in Spady's and Tinto's conceptual model of college dropout. *Sociology of Education, 52*, 197-210.

- Pascarella, E.T. & Terenzini, E.T. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *Journal of Higher Education*, 51, 60-75.
- Pascarella, E.T. & Terenzini, E.T. (1983). Predicting freshman year persistence/withdrawal behavior in a residential university: A path analytic validation of Tinto's model. *Journal of Educational Psychology*, 75, 215-226.
- Perry, R.P., Hechter, F.J., Verena, H.M., & Weinberg, L.E. (1993). Enhancing achievement, motivation, and performance in college students: An attributional retraining perspective. *Research in Higher Education*, 34(6), 687-723.
- Porter, O.F. (1989). *Undergraduate completion and persistence at four-year colleges and universities: Completers, persisters, stopouts, and dropouts*. Washington, D.C.:
- Raby, R.L. & Thomas, D. (2006). Equity, access and democracy: The community college model. *Education and Society*, 24(1), 57-75.
- Roman, M.A. (2007). Community college admission and student retention. *Journal of College Admission*, Winter. Retrieved from [www. NACACNET.ORG](http://www.NACACNET.ORG).
- Rootman, I. (1972). Voluntary withdrawal from a total adult socialization organization: A model. *Sociology of Education*, 45, 258-270.

- Sewell, W. & Shah, V. (1967). Socioeconomic status, intelligence, and the attainment of higher education. *Sociology of Education*, 40, 1-23.
- Shannon, H.D. & Smith, R.C. (2007). A case for the community college's open access mission. In B. Townsend & K. Dougherty (Eds.). *Community College Missions in the 21<sup>st</sup> century: New Directions for Community Colleges* (pp.15-21). San Francisco: Jossey-Bass.
- Sharp, L.F. & Chason, L.R. (1978). Use of moderator variables in predicting college student attrition. *Journal of College Student Personnel*, 19:388-393.
- Shelton, E. (2003). Faculty support and student retention. *Journal of Nursing Education*, 42 (2):68-76.
- Smith, J. (1971). A multivariate combination of academic and non-academic factors related to student attrition. Unpublished doctoral dissertation, University of Pittsburgh.
- Skillman SM, Andrilla CHA, & Hart LG. (2007). *Washington State registered nurse supply and demand projections: 2006-2025*. Final Report #112. Seattle, WA: WWAMI Center for Health Workforce Studies, University of Washington.

Sochalski, J. (2002). Nursing shortage redux: Turning the corner on an enduring problem.

*Health Affairs, 21* (5): 157-164.

Spady, W. (1970). Dropouts from higher education: Toward an empirical model.

*Interchange, 2*, 38-62.

Spaeth, J. (1970). Occupational attainment among male college graduates. *American*

*Journal of Sociology, 4*, 632-644.

Stickney, M.C. (2008). Factors affecting practical nursing student attrition. *Journal of*

*Nursing Education, 47* (9).

St. John, N. (1971). The elementary school as a frog-pond. *Social Forces, 48*, 581-595.

Sue, V.M. & Ritter, L.A. (2007). *Conducting online surveys*. Thousand Oaks, CA/Sage

Taylor, R. & Hanson, G. (1970). Interest and persistence. *Journal of Counseling*

*Psychology, 17*, 506-509.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent

research. *Review of Educational Research, 45*(1), 89-125.

Tinto, V. (1982). Limits of theory and practice in student attrition. *Journal of Higher*

*Education, 53*: 687-700.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*.

(2<sup>nd</sup> ed.). Chicago: University of Chicago Press.

Trent, J. & Ruyle, J. (1965). Variations, flow, and patterns of college attendance. *College and University*, 41, 61-76.

Uyehara, J., Magnussen, L., Itano, J., & Zhang, S. (2007). Facilitating program and NCLEX-RN success in a generic BSN program. *Nursing Forum*, 42(1), 31-38.

Van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. New York: State University of New York Press.

Van Overwalle, F., Mervielde, I., & DeSchuyser, J. (1995). Structural modeling of the relationships between attributional dimensions, emotions, and performance of college freshmen. *Cognition and Emotion*, 9(1), 59-85.

Vaughan, R.P. (1968). College dropouts: Dismissed vs. withdrew. *Personnel and Guidance Journal*, 46:685-689.

Vaughan, G.B. (2000). *The community college story*. (2<sup>nd</sup> ed.). Washington, D.C.: Community College Press.

Viterito, A. & Teich, C. (2002). The nursing shortage and the role of community colleges in nursing education. *American Association of Community Colleges*, 1-12.

Wattenbarger, J.L. & Albertson, H.T. (2004). A succinct history of the Florida



community college system. Retrieved from <http://www.facc.org/history/fl.ccs.pdf>

Wegner, E. & Sewell, W. (1970). Selection and context as factors affecting the

Probability of graduation from college. *American Journal of Sociology*, 75, 665-679.

Weiner, B. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.

Wiersma, W. & Jurs, S.G. (2009). *Research methods in education: An introduction* (9<sup>th</sup> ed.). Boston: Pearson.

Wilhite, S. (1990). Self-efficacy, locus of control, self-assessment of memory ability, and student activities as predictors of college course achievement. *Journal of Educational Psychology*, 82(4), 696-700.

Yan, W. & Gaier, E. (1994). Causal attributions for college success and failure: An Asian-American comparison. *Journal of Cross Cultural Psychology*, 25(1), 146-158.

## APPENDIX A

### Survey for Student Retention in BSN Programs

Dear BSN Student or Faculty Member:

My name is Kathy Hensley, and I am a doctoral student at Old Dominion University. I am conducting a study investigating perceptions of the reasons for nursing student attrition in nursing programs. I am collecting data from students and faculty members in both traditional BSN programs and students and faculty members in Transfer-to-BSN or "RNB" programs.

This is a very SHORT survey, and it should only take you about 3 minutes to complete. Please complete it and submit it as soon as possible after you receive it!

Thank you so much for your assistance with my research! Your assistance contributes to the body of student retention research. Your input is valued, and your assistance is appreciated.

If you are interested in hearing about my results, I am happy to send it to you! My email address is khens010@odu.edu

## APPENDIX A continued

## Survey for Student Retention in BSN Programs

The purpose of this study is to examine the retention rate of students in BSN and RNB programs at several universities in Washington State. A survey instrument was developed and administered to students and faculty regarding their perceptions of barriers to nursing student retention and recommendations for changes which could improve nursing student retention for both native and transfer students.

## Research Questions:

This study was guided by the following research questions:

- 1) What are the perceptions of nursing students and faculty members concerning the factors which affect the retention of RNB students (students who transferred from an AND program) during the last year of a nursing program in Washington State?
- 2) What are the perceptions of nursing students and faculty concerning the factors which affect the retention of BSN (native students) students in a nursing program in Washington State?
- 3) Is there a statistically significant difference in the perceptions of faculty and students regarding the factors which affect student retention of RNB students and BSN students in nursing programs in Washington State?
- 4) What are the recommendations of nursing students and faculty concerning institutional changes which could improve student retention for RNB students (students who transferred from an AND program) and BSN students?
- 5) Is there a statistically significant difference in the recommendations of faculty and students regarding institutional changes to improve student retention in BSN programs?

Thank you for completing this survey. As you proceed through the questions, please choose one answer for each question. It is not necessary to provide comments, although you are welcome to do so.

APPENDIX A continued

Survey for Student Retention in BSN Programs

1. Are you either a full-time or a part-time student or faculty member in either a traditional BSN program or a Transfer-to-BSN (RNB) program?

1. Full-time BSN or RNB student

2. Full-time or part-time BSN or RNB faculty

2. Which type of program are you involved in?

1. Traditional BSN program

2. Transfer-to-BSN program

3. Both

4. Neither

If you checked “Neither” in the above question, you may exit the survey now. Thank you for your participation! If you checked anything except “Neither”, please complete the entire survey! It should only take you a couple of minutes!

APPENDIX A continued

Survey for Student Retention in BSN Programs

3. Living close to or on-campus helps the student to successfully complete the nursing program.
  1. Strongly agree
  2. Agree
  3. Disagree
  4. Strongly disagree
4. Students enrolled in a BSN program or an RNB (Transfer-to-BSN) program are more successful when faculty members provide support.
  1. Strongly agree
  2. Agree
  3. Disagree
  4. Strongly disagree
5. Students over the age of 35 have more difficulty than other students completing the program and graduating.
  1. Strongly agree
  2. Agree
  3. Disagree
  4. Strongly disagree
6. Difficulty in affording tuition is the most significant non-academic factor that causes students to drop out of the program before completion.
  1. Strongly agree
  2. Agree
  3. Disagree
  4. Strongly disagree

APPENDIX A continued

Survey for Student Retention in BSN Programs

7. Students with higher grade point averages are more likely to complete the program.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

8. Students who have young children have more difficulty completing the program.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

9. Students who took math and science pre-requisites within the five years just before admission to the nursing program are more likely to complete the program.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

10. Becoming engaged in campus activities helps nursing students remain in the program to completion.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

11. Students who work more than twenty hours per week have more difficulty with program completion.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

APPENDIX A continued

Survey for Student Retention in BSN Programs

12. Being involved in a study group helps students complete the last year of the nursing program.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

13. Lab availability with nursing staffing for practice of nursing skills helps students complete the program.

1. N/A
2. Strongly agree
3. Agree
4. Disagree
5. Strongly disagree

14. Practicing focused scenarios in simulation settings helps students complete the program.

1. N/A
2. Strongly agree
3. Agree
4. Disagree
5. Strongly disagree

15. Student ability in math and science is the most significant academic factor in completing the last year of the program and graduating.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

APPENDIX A continued

Survey for Student Retention in BSN Programs

16. Most students who leave the program prior to completion do so because of non-academic events in their personal lives.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

17. The presence of a Student Center for tutoring and/or writing assistance helps students to remain in school the last year of the program.

- 1.Strongly agree
- 2.Agree
- 3.Disagree
- 4.Strongly disagree

18. Most students who leave during the last year prior to completion do so because of course failure.

- 1.Strongly agree
- 2.Agree
- 3.Disagree
- 4.Strongly disagree

19. Please write any comments below that you may have about items on this survey.



## VITA

Katherine Pittman Hensley  
Old Dominion University  
Department of Educational Foundations and Leadership  
120 Education Building  
Norfolk, Virginia 23529

Katherine Hensley spent 15 years as a registered nurse in the hospital setting. After three years in the Air Force, she began work on her masters, and during that time, taught nursing students for the first time in a university setting. In 1996, she relocated to the Pacific Northwest and began her career in the community colleges, teaching in associate-degree nursing programs. She has served mostly as a nursing faculty member, but for four years, also served as director of a nursing program. She has a strong interest in helping non-traditional nursing students succeed.

Degree	Major	University	Date of Graduation
ADN	Nursing	Southern Arkansas University	1977
BSN	Nursing	University of Texas at Arlington	1986
MSN	Nursing	University of Texas at Galveston	1994
PhD	CCL	Old Dominion University	2013

