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Students' Perceptions of Persistence in a Florida Associate Degree Nursing Program

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2017

Abstract

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MS, Florida Atlantic University, 2010

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

At a community college in Florida, the associate of science in nursing (ASN) program has experienced low persistence rates especially after the first semester of study. Framed by Jeffreys's nursing undergraduate retention and success model, a mixed-method approach was used to investigate first-semester and final-year ASN students' perceptions of factors influencing persistence and successful persistence strategies. In the quantitative sequence, first-semester students (N = 95) completed the Student Perception Appraisal-Revised-2 (SPA-R2) survey measuring perceptions of 5 persistence factors (environmental, institutional integration, personal academic, college academic, and friend support persistence). ANOVA and t tests were conducted by age, gender, language, ethnicity, marital status, employment, and number of dependents to identify differences between students' perceptions of factors influencing persistence. Results showed that: for males, environmental and personal academic factors were significant; for those employed 1 to 10 hours, the institutional integration factor was significant; and for the 45 to 49 age group, all persistence factors were significant. In the qualitative sequence, final-year students (N = 12) were interviewed to understand the persistence factors that contributed to their success. Thematic analyses revealed that family, peer, and financial support, as well as employing strategies for study habit modification and personal motivation influenced students' persistence toward program completion. Findings were used to develop an online curriculum plan for incoming ASN students that includes training on study habits and encourages students to form support systems to promote students' program completion resulting in positive social change in the nursing community.

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Dedication

I dedicate this study to my pets, my therapy animals. Many nights, through my Bachelor's, Master's, post-graduate studies, and now doctorate, there was a furry or feathered friend staying up with me. To those who knew academia is a part of my life and encouraged it, I dedicate this study to you because you encouraged my mind to wonder into science, education, and art. I also dedicate this study to my professors and friends who guided me through my undergraduate and graduate studies. One professor in particular, Dr. Joseph P. Caruso, left a lasting mark. Dr. Caruso was always happy to write a letter of recommendation for a scholarship application or chat about cooking or music. I came to appreciate his courses and became a better student and instructor. I dedicate this study in his memory, not only because he was a great teacher, but a colleague and friend, too.

Last, but definitely not least, I dedicate this study in the memory of my dear friend, Wayne VanDyke. Since we met in 2011, Wayne would constantly call me, "Professor." Those were the days when Wayne boasted that I drove hours, from Fort Lauderdale to St. Petersburg, to see him wrestle. This year, in one of our last conversations, he joked that he would have to call me "Doctor." I am pretty sure that wherever Wayne is, he is boasting about this dedication.

Acknowledgments

I would like to thank Dr. Wendy Edson, my committee chair, for her encouragement and guidance since 2015. Thank you for showing me that there was a light at the end of this academic tunnel. Thank you to Drs. Joanna Karet and Andrea Wilson for guidance and suggestions throughout this process. Thank you to the residency students, faculty, and staff who made a huge impact on my life and academic path.

Looking back on journey toward my B.S. and M.S. degrees, I'd like to thank Dr. Sarah Milton, my then committee chair, and the faculty from Florida Atlantic University; you helped me grow and I would not the professor I am today, without you. I'd also like to thank the faculty and staff in Florida and Texas who encouraged the utilization of my art, science, and education backgrounds. You never made me pick a lane, instead you encouraged the way that I would swerve back and forth. Overall, this is a special thank you to those in academia who helped me along the way, from grade school through college. As an immigrant, growing up in America, and trying to figure it out on my own, I needed you to help me navigate through the education system and life.

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Section 1: The Problem

Introduction

The downturn of the economy and high demand for healthcare jobs have resulted in an increase in college enrollment for those considering higher education in nursing (Florida Department of Health, 2015; Harris, Rosenberg, O'Rourke, & Marilyn, 2014; Jeffreys, 2004, 2012; Raman, 2013). Over the last 30 years, the nursing student body has expanded resulting in a greater diversity of students, increased access to higher learning, and wider availability of programs and degrees, such as nursing degree programs, for students without prior nursing education (D'Amore, James, & Mitchell, 2012; Jeffreys, 2004, 2012; MacCann, Fogarty, & Roberts, 2012). Therefore, the demographics of today's nursing students vary greatly, continually change, and represent the diverse student body of traditional and nontraditional students entering contemporary higher education in community colleges (D'Amore et al., 2012; Lewis, 2005; MacCann et al., 2012; Staykova, 2012).

Employment prospects for registered nurses (RNs) are projected to increase by 26% from 2010 to 2020 because there is a projected shortage of RNs between 2009 and 2030 (Bureau of Labor Statistics [BLS], 2014; Florida Department of Health, 2015). Community colleges are major suppliers of new graduates in professional careers (Staykova, 2012). For community college students, the associate degree in nursing (ADN) program offers a short pathway to professional practice (Staykova, 2012). A Florida community college, under the pseudonym *Community College*, offers an associate of science in nursing (ASN) program as an ADN program (Community

College, 2011a). The mission of the Florida community college is to prepare nursing graduates for the workforce and meet educational and institutional requirements for licensure as an RN (American Association of Colleges of Nursing [AACN], 2014; Community College, 2011b).

The setting for this study was a public, not-for-profit, community college within the 28-member Florida College System (FCS), which ranked highly among four-year institutions awarding associate degrees. The study site was originally a two-year community college, but started offering four-year degree programs since 2008. The ASN is considered a two-year program within the four-year college. This setting offered an affordable, entry-level, nursing program option for in- and out-of-state applicants without prior nursing education (Community College, 2014). The student body is diverse, with a large population of nontraditional students. Statewide in Florida, ADN student profile characteristics reflect the racial and ethnic diversity of Florida more generally, where 23% are black, 24% are Hispanic, 41% are white, and 18% are men (Florida Center for Nursing [FCN], 2014). According to the study site, the overall student body in my study contained 71% minorities and represents over 175 countries. However, student profile demographics also encompass differences in gender and age (Jeffreys, 2004, 2012). There are 42% male and 58% female students with an age span of 18 and under through 55 and over (Community College, 2014).

Although the high demand for healthcare jobs may drive the enrollment of various types of students, there is a lack of persistence to graduation, which poses a threat to nursing degree programs (Schrum, 2015; Wray, Barrett, Aspland, & Gardiner, 2012).

Attrition has been a challenge that served as a measure for the quality and effectiveness of nursing degree programs (Rice, Rojjanasrirat, & Trachsel, 2013). However, the recurring history of national nursing shortages has made persistence to graduation a concern for educators and administrators (Rice et al., 2013). The attrition rate may attribute to the nursing shortage due to students entering the nursing program, but not successfully completing the rigorous curriculum, for various reasons (Missildine, Fountain, Summers, & Gosselin, 2013). Therefore, the purpose of this study was to understand final-year ASN students' persistence strategies and to understand first-semester ASN students' perceptions of factors influencing persistence to graduation in a Florida college. Two different groups of students were studied because the ASN program spans two academic years. Graduating students, in the last year of the ASN program, were interviewed to understand how they persisted to graduation; whereas, first-semester students enrolled in first-semester coursework were surveyed to understand how they perceive different factors that influence persistence. The results of the study may inform educators and students about persistence to graduation in an under-researched program. The evaluation of existing measures and the development of viable solutions are necessary to support the total nursing student experience and increase graduation rates.

Definition of the Problem

In the study setting, approximately 750 to 800 students are admitted annually into the ASN program; however approximately 33% to 35% students persist to graduation (Community College, 2011b; former Community College Dean of Nursing, personal communication, June 11, 2015). The February 2015 Accreditation Commission for

Education in Nursing (ACEN) report showed that 41% of the Fall 2012 cohort completed either the generic or the bridge, licensed practical nurse to registered nurse (LPN-RN), ASN programs within 27 months (Community College, 2015). In this report provided to the accreditation board, of the Fall 2012 cohort, 14% graduated in 18 months and 27% graduated in 27 months. Within seven 2010- 2012 cohorts, an average of 17% graduated in 18 months and 20% graduated in 27 months (Community College, 2015). Overall, there are low percentages of students who persist to graduation from the ASN program in this study setting.

Persistence rates improved with students in the last semesters of study, whereas persistence rates were lower during the first semester of study (Community College, 2011a, 2011b, 2015; Community College Dean of Nursing, personal communication, January 30, 2015). Students who persisted to graduation were ultimately successful with the National Council Licensure Examination (NCLEX-RN) and felt well-prepared through clinical experiences, nursing skills laboratories, and classroom theory (Community College, 2011b, 2015; Community College Dean of Nursing, personal communication, January 30, 2015; Florida Board of Nursing [FBN], 2014). Between 300 and 400 graduates took the NCLEX-RN yearly, where 92% passed in 2011, 98% passed in 2012, 94% passed in 2013, 91% passed in 2014, and 97% passed in 2015 (FBN, 2014). Compared to the ASN program, according to the study site, cohorts in Bachelor of Science in nursing (BSN) programs have at least 80% retention rates. Despite success with licensure examination at the end of the ASN program and improved retention throughout the BSN program, an average of 34% of withdrawals and failures occurred in

the first semester of the ASN program, potentially influenced by underestimating the rigor of the course, the lack of lifestyle adjustments, and commitment level to the program (Community College, 2011b, 2015; Schrum, 2015).

There has been little formal inquiry on persistence in the study setting's ASN program to compare with existing research for congruency. It has been difficult to track the persistence of students as they progress through the program because of withdrawals in the first semester and nonconsecutive semester enrollment, which in turn alters the 20-month or two-year graduation timeframe (former Community College Dean of Nursing, personal communication, June 11, 2015). Therefore, it has been difficult to understand how students perceive the supportiveness or restrictiveness of persistence factors and how student demographics influence such perceptions. The study of the students' perceptions of persistence factors and persistence mechanisms may help form recommendations on how to manage the rigor of the ASN program.

Rationale

Evidence of the Problem at the Local Level

Graduation and retention rates in the study setting's ASN program are lower than those at the national and statewide level. Nationally, the reported graduation rates ranged from 50 to 60% for basic RN students (National League for Nursing [NLN], 2016a, 2016b, 2016c). In the study setting, approximately 33% to 35% students persist to graduation (Community College, 2011b; former Community College Dean of Nursing, personal communication, June 11, 2015). Nationwide, approximately 20% to 42% of nursing students leave in the first year of study (NLN, 2017). Low graduation rates may

be due to academic and nonacademic factors unique to nontraditional, nursing students (Jeffreys, 2004, 2012; Lewis, 2005; Missildine et al., 2013; Morrison & McNulty, 2012; Raman, 2013; Starkey, 2015). The gap in formal inquiry may be due to difficulties with monitoring students' progress, especially if there are program withdrawals and re-enrollment or varied timeframes toward graduation (Community College, 2015; former Community College Dean of Nursing, personal communication, June 11, 2015).

Student persistence to graduation is a major challenge for undergraduate nursing programs in two-year colleges, where the highest percentage of attrition occurs within the first year of the curriculum (Community College, 2011a, 2011b, 2015; Knauss & Wilson, 2013; Salamonson, Everett, Cooper, Lombardo, Weaver, & Davidson, 2014). According to the NLN, first-year retention rates for full-time RN students were 80% for ADN programs (Knauss & Willson, 2013; NLN, 2016d). Statewide, the total percentages of students retained a year after admission ranged from 85% in 2012 to 78.5% in 2014 (FBN, 2013, 2014, 2015). Per ACEN accreditation follow-up data, 74% of the bridge and generic ASN students who successfully completed the first two nursing courses, within the first semester, completed the ASN programs (Community College, 2015). Within the first year of study, an average of 66% of 2009-2011 generic ASN cohorts was retained upon enrollment in the second semester (Community College, 2011b). The retention rates, of students who lack prior nursing education, in the study setting are lower than those of the state and nation.

According to studies conducted in Florida, commitment, adjustment, inner drive, familial support, motivation, overcoming difficult tests, and faculty and student

interactions contributed to high retention rates (Lewis, 2005; Raman, 2013). The greatest barriers for students with gaps in education were time constraints, financial concern, and family and work conflicts (Morrison & McNulty, 2012). Additionally, *conscientization*, which consists of reflection, dialogue, and action, was required to teach nursing students who have language barriers (Starkey, 2015). Similarly, in a study conducted in the northeastern United States, Raman (2013) analyzed themes associated with ASN students' academic success, which included support, self-motivation, and prior experience in health science. The best practices for persistence to graduation were primarily based on human interactions (Lewis, 2005).

Despite the availability of student and learning resources, the lack of persistence to graduation continues (Community College, 2011b, 2015). This problem may potentially pose a threat to the study setting's funding, accreditation, enrollment, faculty employment, and student morale if there are substantiated grievances (Commission on Collegiate Nursing Education [CCNE], 2013; Jeffreys, 2007b; Hinsliff-Smith, Gates, & Leducq, 2012; Morrison & McNulty, 2012; Southern Association of Colleges and Schools Commission on Colleges [SACSCOC], 2014; Schrum, 2015; Starkey, 2015). The FCS and Florida Department of Education (FLDOE) determine funding based on retention and completion of degree programs, which reflect the phenomenon of persistence (FCS, 2015). The study setting therefore emphasizes student enrollment, completion, and retention rate improvement to maintain performance funding. Among seven peer community colleges, the study setting displayed low-performance measures for completion and time to graduation (FCS, 2015). It may be necessary to re-evaluate

the development and implementation of college-wide procedures and policies to ensure funding and nursing student persistence to graduation.

Evidence of the Problem from the Professional Literature

Academic failure has been described as "endemic;" and therefore, several studies have focused on persistence through nursing degree programs to draw parallels from advanced nursing degrees, multidisciplinary programs, and nontraditional student experiences (Karsten & DiCicco-Bloom, 2014). Multiple factors influence persistence to graduation from ADN programs similar to the ASN program offered in the study setting. Student profile characteristics, psychosocial factors, and academic factors were found to be interwoven variables that influence progression beyond the first semester or year of study.

As the demographics of the United States change and the nursing student body becomes more diverse, students feel isolated due to their profile characteristics, the enrollment rate of English as a Second Language (ESL) nursing students increases, and the lack of support becomes more evident (Harris, et al., 2014; Starkey, 2015). According to the study site, there is a large population of immigrant and ESL students from 150 countries of origin. On average, 47% of the overall associate of science (AS) students do not persist to graduation; however, 15% to 85% of minority students do not persist to graduation (Harris et al., 2014).

In the community college setting, nursing students may encounter additional barriers due to the balance between work, family, and education (Jeffreys, 2004, 2012). Age, employment, and gender may present barriers for nontraditional students, even if

nursing was the primary career choice (Salamonson et al., 2014). Dumais, Rizzuto, Cleary, and Dowden (2013) found that although first- and continuing-education adult students were confident in their academic abilities, highly demanding work environments may hinder the ability to balance other responsibilities. Early detection and screening of students who are at-risk or may need supplemental or remedial courses may be costly; however, the lack of persistence in nursing degree programs is costly to students and educational programs (Harris et al., 2014).

Coping strategies, faculty and emotional support, and self-esteem are important for novice nursing students, because stress is an inevitable part of the nursing student experience. Karsten and DiCicco-Bloom (2014) found that the acknowledgement of stress, help from family, student support, and faculty advice help students persist to graduation from ADN programs. Raman (2013) found that psychosocial and academic aspects such as faculty support, motivation, and commitment played key roles in ADN student success.

The purpose of this study was to understand final-year ASN students' persistence strategies and to understand first-semester ASN students' perceptions of factors influencing persistence to graduation. In a local Florida college, there is a lack of formal inquiry on persistence in the study setting's ASN program. There are low persistence rates and potential variables involved in persistence, early in the program (Community College, 2011b, 2015). For the qualitative sequence, interviews were analyzed to understand the plans of action implemented to manage those factors, from the perspectives of students who have completed most of the program. For the quantitative

sequence, surveys were analyzed to understand which specific, discrete factors influence persistence, from the perspectives of students at the beginning of the program. These understandings can be used to compare findings with existing research for congruency, and to develop understandings and suggestions for viable solutions related to persistence to graduation.

Definition of Terms

The following definitions are offered to clarify special terms used throughout the study.

Academic factors: Academic factors are the students' primary involvement with processes that include study skills and hours, attendance, course schedules, and academic services through libraries, advising, counseling, and computer laboratories (Bean & Metzner, 1985; Jeffreys, 2004, 2012).

Adult students: An adult student is defined as a student who is 25-years-of-age or older and enrolled in higher education; and therefore, adult students are a subset of nontraditional students (Bergman, Gross, Berry, & Shuck, 2014; Staykova, 2012).

Associate of science in nursing (ASN): The ASN program is offered as an associate degree in nursing (ADN), 2-year college degree program that allows for RN licensure after passing the NCLEX-RN (Knauss & Willson, 2013).

Generic associate of science (ASN) registered nurse (RN) program: Generic RN programs are synonymous to basic RN programs in which nursing students pursue an associate degree and have not attained prior degrees or licensure from nursing education (Raman, 2013).

Nonacademic factors: Nonacademic factors are environmental and outside surrounding variables that influence academic performance, which include learning abilities, income and financial concerns, employment, language barriers, familial commitments, and psychosocial aspects of motivation and self-regulation (Davidson & Holbrook, 2014; Jeffreys, 2004, 2012).

Nontraditional student: A nontraditional student is a learner enrolled in any college program who is at least 25-years-of-age (an adult learner), male, of ethnic or racial minority groups, an English language learner (ELL), or a first-generation college student, and may delay enrollment, work full-time, commute, enroll at least part-time, have dependents, need remedial courses, or hold a general equivalency diploma (Cochran, Campbell, Baker, & Leeds, 2014; Dumais et al., 2013; Jeffreys, 2004, 2012; Schrum, 2015; Staykova, 2012).

Persistence: Persistence refers to the phenomenon in which learners progress or continue toward achieving a goal, such as a degree or has completed a degree (Bergman et al., 2014; Jeffreys, 2004, 2012; Tinto, 1993; Wray et al., 2012).

Student profile characteristics: Student profile characteristics refer to demographic data that describe the student before enrollment, such as age, ethnicity and race, gender, native language, personal and familial educational experience, work experience, and enrollment status (Jeffreys, 2004, 2012).

Traditional student: A traditional student is 18 to 24 years-of-age, enrolled full-time in any college program directly from high school, reports parents as the primary source of income, has had little career development, and is more focused on the social

aspects of college (Cochran et al., 2014; Schrum, 2015; Staykova, 2012; Tinto, 1975, 1993).

Significance of the Study

This project is unique because I explored the under-researched area of ASN student persistence to graduation in a study setting. One of the overall goals of this study was to provide formal inquiry specifically based on the students in the generic ASN program. These ASN students are termed "generic" because they do not have prior nursing education and may be new to performance standards, position requirements, and the nursing job description, while coping with academic and nonacademic factors that impact persistence (Raman, 2013). Novice and experienced nursing students may not have the same perspectives or knowledge at different points in the program. Generic ASN students pursue a profession as an RN, but may experience factors that are unique to their cohort, which is different from other cohorts, such as students enrolled in the bridge LPN-to-RN and RN-to-BSN programs. Additionally, the Florida community college student body is diverse, and findings may indicate statistically significant differences between student profile characteristics and persistence factors.

ASN students displayed high attrition rates and may not initially adjust to the program (Community College, 2011b, 2015). Time and experience make a difference in persistence; and therefore, final year students are likely to have experience with coping mechanisms (Cochran et al., 2014; Community College, 2015; Knight et al., 2012). Knowing how to study and adjust to higher education may not have been apparent in past educational experiences and takes time to develop (Community College, 2015; Hunter,

Pitt, Croce, & Roche, 2014; Karsten & DiCicco-Bloom, 2014; Phillips, Turnbull, & He, 2015). Nursing education requires critical thinking, study skills, motivation, and self-regulation, in which stress and emotions can impact learning and persistence (Karsten & DiCicco-Bloom, 2014; Pence, 2011; Raman 2013). Insights from this study can be used to provide helpful information to students and faculty members about persistence to graduation in the ASN program.

As part of the accreditation process, the administrators of the ASN program report persistence and graduation rates (Community College Dean of Nursing, personal communication, January 30, 2015; Community College, 2015). Although students who persist to graduation from the ASN program within the study setting score highly on the NCLEX-RN, accreditation may be at risk due to student complaints about instruction, course content, attrition rates, and advisement (Community College Dean of Nursing, personal communication, January 30, 2015; CCNE, 2013; Community College, 2015; SACSCOC, 2014). In addition to accreditation maintenance, a college-wide emphasis is placed on enrollment, retention, and completion to maintain performance-based funding (FCS, 2015). Therefore, findings will be presented to stakeholders such as deans of the nursing colleges and administrative bodies.

Supporting persistence to graduation allows for student and institutional growth. Currently, nursing instructors advise students about the rigors of the nursing program and expectations in the field, and students are familiarized with the program during welcome orientation (Central Campus Dean of Nursing, personal communication, January 30, 2015; Community College, 2015; former Community College Dean of Nursing, personal

communication, June 11, 2015; Community College Dean of Nursing, personal communication, January 29, 2015). However, formal inquiry lends current data to the advice given and reinforces the presence of factors that influence persistence. Students may contemplate whether the ASN program is their desired educational and career choice based on research findings (Salamonson et al., 2014). Solutions to the research problem may involve recommendations for institutional changes, such as additional student and academic support, as well as adjustments on the students' part.

Guiding/Research Questions

The research problem in the study setting is the low percentages of students persisting to graduation from the ASN program. However, due to lack of research in the ASN program, the exploration of persistence factors and mechanisms is necessary to compare findings to existing literature. Understanding the perceptions of factors that influence persistence compared to different demographics of students and how students persist are necessary to address completion, retention, and enrollment goals within the study setting. Understanding persistence is important to produce students who are equipped to work in the nursing field. The following research questions were framed and measured by the Student Perception Appraisal– Revised-2 (SPA-R2) survey and Demographic Data Sheet-Prelicensure (DDS-P).

Qualitative Research Questions

RQ1: Using thematic analysis, what are final-year ASN students' perceptions of factors that influence persistence to graduation?

RQ2: Using thematic analysis, what have final-year students experienced in terms of successful persistence strategies in the ASN program?

Quantitative Research Questions

RQ3: As measured by the SPA–R2 survey, what are the first-semester ASN students' perceptions of factors that influence persistence to graduation?

RQ4: As measured by the SPA–R2 and modified DDS-P, what are the differences among first-semester ASN students in their perceptions of factors that influence persistence to graduation by: (a) gender; (b) age; (c) ethnicity; (d) English as a first language; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly?

$H_0$4: There is no difference among the first-semester ASN students in their perceptions of factors that influence persistence by: (a) gender; (b) age; (c) ethnicity; (d) English as a first language; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly.

H_a4*:* There is a difference among the first-semester ASN students in their perceptions of factors that influence persistence by: (a) gender; (b) age; (c) ethnicity; (d) English as a first language; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly.

See Table 1 for the research approaches with respect to the groups of participants.

Table 1

Research Approach by Participant Enrollment Status

Research Approach	Instrument	Participants' Enrollment Year at the Time of Study	Participants' Enrollment Semester at the Time of Study	Research Question(s)
Qualitative	Interviews	Second	3, 4, or 5	RQ 1 and 2
Quantitative	Surveys	First	1	RQ 3 and 4

Review of the Literature

The purpose of this study was to understand final-year ASN students' persistence strategies and to understand first-semester ASN students' perceptions of factors influencing persistence to graduation in a local Florida college. The literature review was limited to studies conducted during the past five years, 2012 through 2015, and focused on scholarly research related to the study topic of persistence through the ASN program in a community college setting. The following databases were used: Dissertations & Theses at Walden University, Education Research Information Center (ERIC), Google Scholar, ProQuest Nursing & Allied Health Source, ScienceDirect, and UMI ProQuest Digital Dissertation. The following keywords were applied to the database search: *ADN*, *ASN*, *adult learner*, *attrition*, *barriers*, *community college*, *completion*, *Florida*, *nontraditional*, *nursing*, *persistence*, *preregistration*, *retention*, *RN*, *stressors*, *success strategies*, and *undergraduate*.

Conceptual Framework

Choosing the appropriate conceptual framework was instrumental in developing a mixed-method study that explores ASN students' persistence to graduation. Due to different factors that influence persistence to graduation, it was important to understand

how students perceive factors as restrictive or supportive and how those factors differ among student profile characteristics. It was also important to understand the successful strategies that aid persistence, from the perspectives of the students who have advanced through the program. The conceptual framework that guided this study is Marianne R. Jeffreys' nursing undergraduate retention and success (NURS) model, which is a component of the Nursing Student Retention Toolkit (Jeffreys, 2003, 2004, 2012). I obtained permission to use the Nursing Student Retention Toolkit, which includes the reprinting and usage of the NURS model, DDS-P, and the SPA-R2 (Appendix B). The NURS model was developed to determine multidimensional factors that influence retention and success among nontraditional students, and later modified to encompass traditional students in nursing education. The NURS model was most applicable to this study due to the emphasis on understanding persistence rather than attrition (Jeffreys, 2004, 2012).

Several models have been developed to explain undergraduate progress in higher education, but few are specific to nursing students in the community college setting. Vincent Tinto's (1975, 1993) Student Integration Model (SIM) and John Bean and Barbara Metzner's (1985) Student Attrition Model (SAM) preceded the NURS model. Tinto's (1975, 1993) model theorized that academic and social domains are intertwined with the degree of success in higher education and level of commitment to academic, career, and institution goals. If a traditional student fails to integrate, attrition is more likely. Tinto (1975, 1993) highlighted that individual attributes such as race, gender, and academic ability, family background, and precollege experiences impact institutional

commitment. This model is applicable to local ASN students because unique academic and social factors that influence persistence among traditional students are recognized. Findings from Lewis (2005) were contingent with Tinto (1993) where students and faculty from ADN programs in the FCCS found that withdrawal from college depended on intention, commitment, adjustment, isolation, obligation, finances, and congruence.

Diverging from Tinto's model, Bean and Metzner's (1985) SAM model placed greater emphasis on external factors, academic performance, family responsibilities, employment, and background. Bean and Metzner (1985) proposed a model of student retention for nontraditional students who exceed 24-years-of-age, reside off-campus, commute, are enrolled part-time, do not integrate into social domains, and are more concerned with academic domains. This model framed the NURS model and is applicable to local ASN students because unique environmental factors that influence persistence among nontraditional students are recognized.

Guided by the NURS model, Pence (2011) conducted a quantitative, descriptive non-experimental study and found that student profile characteristics and motivation were related to retention. Also guided by the NURS model, Schrum (2015) found statistically significant relationships between the use of retention specialists and tutors and the academic performance of prelicensure ADN students. Based on multiple regression analysis, environmental factors were the most influential and restrictive variables on retention among nontraditional nursing students, who were enrolled in associate degree programs (Jeffreys, 2007a). However, other student profile characteristics are potential variables for analysis.

Review of the Broader Problem

The research problem in the study setting is the low percentage of students persisting to graduation from the ASN program. The study setting's ASN program is under-researched. There is a 33% to 35% persistence to graduation rate (Community College, 2011b; former Community College Dean of Nursing, personal communication, June 11, 2015). Persistence is most at risk during the first year of the program, where 66% to 74% of ASN cohorts were retained upon enrollment in the second semester (Community College, 2011b, 2015). Statewide, the total percentages of students retained a year after admission ranged from 85% in 2012 to 78.5% in 2014 (FBN, 2013, 2014, 2015). Nationally, 80% of full-time ASN students were retained after one year in the program (NLN, 2016d). Current literature is abundantly related to persistence in associate degree programs in nursing, however, is scarce specific to persistence in the local, Florida college's ASN program.

Theories by Tinto (1975, 1993) and Bean and Metzner (1985) lend knowledge to understanding the experiences of traditional and nontraditional students. However, the NURS model was primarily considered for this study to focus on the different factors that specifically influence nursing students in a community college setting (Jeffreys, 2004, 2012). Students in the ASN program lack prior education in nursing and may experience different levels of restrictive and supportive factors depending on student profile characteristics. To understand persistence factors and coping mechanisms, resources stemmed from the accumulation of research in the areas of multidisciplinary,

nontraditional and traditional community college students and students specifically studying within undergraduate-level nursing degree programs.

Student profile characteristics. To highlight the specific areas in which students need support, it is important to identify the student profile characteristics that exist in the diverse community college and specifically the nursing student body. Academic and individual factors, such as employment, finances, family, and support systems, may interdepend and influence persistence to graduation (Knight et al., 2012). Furthermore, it is important to understand the unique factors related to discrete student profile characteristics, such as age, educational experiences, ethnicity, race, and language, and gender (Jeffreys, 2004, 2012).

Age. The Annual Survey of Schools of Nursing indicated a substantial increase in enrollment of adult students over 30 years-of-age (Kaufman, 2013). Age is perceived as an advantage because adult students may exhibit more motivation, coping strategies, self-directed learning (SDL), effective time-management, and study habits (Jeffreys, 2004, 2012). Cochran et al. (2014) found age to be a significant persistence factor for health majors. Older students were less likely to withdraw from online courses than their younger cohorts, because older students have limited time to enroll in required courses and to repeat courses. Therefore, older students are more experienced and develop realistic expectations of themselves and their instructors (Cochran et al., 2014). Thematic analysis by Knight et al. (2012) also showed that students perceived age as an advantage because they developed a strong work ethic and experience on how to seek assistance.

However, findings have been inconsistent based on age and persistence (Cochran et al., 2014).

Despite increased enrollment, adult students have more responsibilities and less academic and support services, potentially leading to an increased risk of attrition (Jeffreys, 2004, 2012). Traditional-aged counterparts may not experience barriers with work, family, and education (Bean & Metzner, 1985; Cochran et al., 2014; Jeffreys, 2004, 2012). According to students who were at least 21 years-of-age, term-to-term or year-to-year persistence of adult students depended on environmental factors, such as family (Davidson & Holbrook, 2014). Unlike traditional students, age was perceived as a barrier for adult students who lacked tertiary education, because spending lengthy periods of time out of school made nursing education seem daunting (Knight et al., 2012). Survey respondents stated that age was a barrier because retirement was approaching and there was a low return on the education investment (Kovner et al., 2012).

Pence (2011) and Peterson-Graziose, Bryer, and Nikolaidou (2013) found that adult students may be more likely to withdraw during the first semester of ASN programs. Concurrently, through a retrospective cohort design, Wray et al. (2012) found that as age upon entry into nursing education increased, the likelihood of persistence beyond year one decreased. Clinical courses are taken in the last year of study in the study setting. Data from a larger qualitative study on prelicensure nursing programs indicated that older nursing students were perceived as unable to adapt, understand, or keep up with the clinical settings (Debrew, Lewallen, & Chun, 2014). Such perceptions

may indicate issues with persistence early in the program, which may continue throughout future terms.

Contrary to studies that identified age as a barrier or an advantage, other studies did not find age to be a significant persistence factor. Age was not found to be a barrier in a study by Shelton (2012), because students who persisted were similar in age to those who withdrew from nine ADN programs in Pennsylvania and New York. Bergman et al. (2014) examined factors that impacted adult student persistence through survey data from 437 adult students, and also did not find significant differences in persistence outcomes by age. The campus environment was key to adult student persistence instead of student entry characteristics or external factors (Bergman at al., 2014).

Education experience. The educational background and experiences of nontraditional students may differ from those of traditional students, based on such variables as persistence behaviors, high school performance, college credits, or gaps in education (Jeffreys, 2004, 2012). Traditional college students have college preparation courses and orientation programs to adjust to postsecondary education (Bergman et al., 2014; Dumais et al., 2013). These experiences may have never existed or have occurred years ago for nontraditional students. College preparatory aspects are less relevant to nontraditional students; and therefore, it may be expected that high attrition rates exist with nontraditional students (Bergman et al., 2014; Jeffreys, 2004, 2012). Even though prior academic performance and standardized test scores are predictors of persistence, students without college degrees may underestimate the rigor and time demands of nursing education (Karsten & DiCicco-Bloom, 2014).

Unlike first-generation students, continuing-generation students have at least one parent with some college education and therefore may possess the ability to navigate the college environment (Dumais et al., 2013). Kovner et al. (2012) found that having parents of non-nursing professions was positively associated with pursing a nursing degree. However, the educational experience of family members may lead to stress (Jeffreys, 2004, 2012).

Despite familial experience with college, gaps in the students' own education led to perceptions of nursing education as daunting and students needed to seek assistance (Knight et al., 2012). Although nontraditional and first-generation students are potentially at greater risk for attrition because of differences in prior education, they may be more motivated, self-directed, and drawn to self-help interventions (Bergman et al., 2012; Jeffreys, 2004, 2012). First-generation students may perceive themselves as at a disadvantage because they need more mentoring or tutoring services than traditional, continuing-generation students (Jeffreys, 2004, 2012). With mentoring and counseling, nontraditional students may understand how to balance their responsibilities and allocate time to the education responsibilities.

Employment, financial, and family responsibilities. Adjusting to the rigors of nursing curricula and simultaneously undertaking employment and family responsibilities may be too demanding for novice, nontraditional nursing students. Community college students are often adult students who are self-supporting, often need to work, care for others, and maintain the household (Lewis, 2005). Students work to meet the financial demands of college, but employment time reduces time devoted to studies, which can

hinder performance (Huie, Winsler, & Kitsantas, 2014). As a result, employment and financial constraints may influence the persistence early into their degree programs (Harris et al., 2014; Jeffreys, 2004, 2007a, 2012; Schrum, 2012; Shelton, 2012).

Mostly older and minority, nontraditional students in the Associate of Applied Science nursing program experienced the strain of the curriculum (Harris et al., 2014). Comparably, Bergman et al. (2014) found that persistence rates were 78% lower among adult students who perceived that work and school greatly conflicted. In the southwest Florida nursing community, the greatest barriers to consider with nursing school were time constraint conflicts between family and work schedules (Morrison & McNulty, 2012). Nurses in the field can also relate to financial issues that ADN students have. RNs, LPNs, diploma nurses, and BSN-educated nurses revealed that cost was a major barrier and students used loans and deferred wages to pursue an associate's degree (Kovner et al., 2012; Morrison & McNulty, 2012). Similar to MacCann et al. (2012), the lack of time while balancing work and family influenced attrition in a fundamentals nursing course during the first semester of study (Harris et al., 2014). Other student profile characteristics may influence persistence and employment.

Gender was also an influential factor among students who experienced barriers with balancing work, school, and family. In a study on community college students, MacCann et al. (2012) discussed that study time was displaced among female students, who are likely to work full-time while having competing demands from family. However, Salamonson et al. (2014) found that male students who worked at least 16 hours per week were less likely to complete their programs compared to their

counterparts. Overall, Shelton (2012) and Schrum (2015) agreed that over 20 hours of work per week presents barriers to retention and academic progress. Although gender, age, and responsibilities weigh on nursing education, ethnic, racial, and language diversity influence persistence as well.

Ethnicity, race, and language. Similar to adult student enrollment, the Annual Survey of Schools of Nursing indicated increases in enrollment of minority students (Kaufman, 2013). Differences in opportunities, education, and finances and the lack of sensitivity related to stereotyping, prejudice, discrimination, and racism can lead to persistence issues (Jeffreys, 2004, 2012). Ethnicity and race differences may be accompanied by language differences. Language proficiency may impact learning capacity and academic performance throughout the nursing degree program (Wan Chik et al., 2012).

Most minority groups are underrepresented in higher education, even though nursing enrollment trends suggest increases for certain minorities (Jeffreys, 2004, 2012). Concurrent with Jeffreys (2004, 2012), Pence (2011) and Veal, Bull, and Miller (2012) found that ethnically and racially diverse students are vastly underrepresented and experience high attrition rates, which may reflect the lack of support services for minorities. Black and Hispanic students remain underrepresented among basic RN students, although overall undergraduate degree enrollment increased (Harris et al., 2014; Kaufman, 2013). Kovner et al. (2012) focused on students who already received an associate's degree. However, similar to the findings from the Annual Survey of Schools of Nursing, survey analysis from 51 randomly selected metropolitan statistical areas

showed that Hispanic students were underrepresented among RNs who wished to further nursing education (Kovner et al., 2012).

In addition to the balance between work, family, and education, language differences constitute a nontraditional status and warrant exploration. In English-speaking countries, nursing students who do not speak English as their first language may encounter additional challenges (Zheng, Everett, Glew, & Salamonson, 2014). Congruently, Debrew et al. (2014) reported that within a larger qualitative study, foreign students for whom English was not their native language were likely to fail because they had difficulty communicating with patients or faculty members. Findings from the curriculum evaluation conducted by Knauss and Willson (2013) indicated that applicants to the ADN nursing program, who have sound English skills, are more likely to complete the program.

Jeffreys (2014) found that when more minorities enter nursing degree programs, academic advisement, counseling, and student support may then become more culturally congruent to enhance retention. Carthon, Nguyen, Pancir, and Chittams (2015) used survey and student enrollment data from 25 nursing schools in 15 states and found that differences in enrollment patterns among minorities may be attributed to support services tailored to diverse ethnic and racial backgrounds. Veal et al. (2012) used a grounded theory approach, and the data collected from focus groups and interviews showed that ethnically diverse students learned to balance stressors with moderators, thus having developed a mechanism for persistence.

The ESL experience encompasses diverse cultural values and beliefs, ethnic and racial identities, immigration status, socioeconomic status, and educational, lifestyle, and acculturation experiences (Jeffreys, 2004, 2012). Pertinent to language barriers, Knauss and Wilson (2013) found that it was important to evaluate applicants' vocabulary and overall knowledge to measure their ability to succeed. Through a prospective correlational study, Zheng et al. (2014) found that language acculturation among international and domestic nursing students was not sufficient for academic performance in higher education. Starkey (2015) conducted a grounded theory study in various nursing schools in southeast Florida and found that faculty engaged in overcoming barriers, coming to know, and facilitating processes to increase the effectiveness of teaching ESL nursing students. The more minorities attend nursing degree programs, the more aware faculty and administration should be to provide student resources that aid social isolation and advise on familial, financial, and educational aid (Jeffreys, 2014).

Familial and friend support. Due to the rigor of the nursing program, support may be key to endure the stress and demands. Similar to the study setting, students in Florida ADN programs cited that family support contributed greatly to their efforts to become an RN (Lewis, 2005). Bergman et al. (2014) found a 61% increase in the rate of persistence to completion of a degree among students who received encouragement from their families. Support was perceived as a necessary factor before and throughout nursing education.

Grounded-theory driven coding and thematic analysis of focus group data by Mckendry, Wright, and Stevenson (2014) revealed that first-year nursing students utilized

a range of support mechanisms before and during their studies to maintain motivations and balance many demands, which included support from family, friends, and fellow students. Hinscliff-Smith et al. (2012) found that support from family members aided adult nursing students in their transition to a 3-year full-time diploma or BSN program, and throughout their pre-registration program. Among first-year pre-registration nursing students, having dependents was linked to the increased prospect of advancement to the second year of study (Wray et al., 2012). Among second-year pre-registration nursing students, Crombie, Brindley, Harris, Marks-Maran, and Thompson (2013) found that focus group participants substantially agreed that support was needed from peers and family, which included students' parents undertaking childcare tasks and the presence of active encouragement from peers and family. Similarly, Raman (2013) analyzed a single, qualitative, survey question from second-year ADN students, which revealed a predominant theme related to positive perceptions of support from peers, family members, and coworkers. Potentially due to a more developed circle of social and family support, older students may persist better than their younger peers (Hinscliff-Smith et al., 2012; Wray et al., 2012).

Perceptions of support were not uniform throughout previous studies. Thematic analysis by Knight et al. (2012) revealed that although family and peer support were important, goal setting and the desire to achieve were more critical for degree completion. Students stated that their families were their primary supporters and friends and peers were secondary supporters, yet unplanned events with their supporters added stress and uncertainty with finishing their degree programs and willingness to carry on

studying (Knight et al., 2012). Survey responses showed that students who pursued a second degree in nursing relied on family for support; however, more traditional students relied on their peers and friends for support (Reeve, Shumaker, Yearwood, Crowell, & Riley, 2013). Additionally, Kovner et al. (2012) found that unmarried students displayed positive affectivity and the motivation and Hinscliff-Smith et al. (2012) found that when students focused on themselves, they did not feel guilty about studying late and sacrificing time with others. In addition to nontraditional student characteristics, the promotion of support should extend to gender differences (Wan Chik et al., 2012).

Gender. Gender was reported as a defining variable that influenced nontraditional student persistence, although findings are inconsistent (Bean & Metzner, 1985; Jeffreys, 2004, 2012). Community colleges have large part-time student populations who are likely to be employed female students, and those students' study time was found to be limited by work and child care responsibilities (Bergman et al., 2014; Dumais et al., 2013; MacCann et al., 2012). As a predictor of achievement, time management may be particularly important for part-time students, who are more likely to be female (MacCann et al., 2012). Davidson and Holbrook (2014) found that female students balanced childcare, family, domestic, and academic demands, in which some students felt restricted by having dependents. Davidson and Holbrook (2014) also found that female students persist to graduation, whereas male students persist beyond the first semester but not necessarily to completion. Male student concerns also warranted formal inquiry.

Bean and Metzner (1985) reported that nontraditional male students were at risk for higher attrition rates than nontraditional female students. Similar to ethnicity and race underrepresentation, Pence (2011) found low percentages of male students in the study sample, which may reflect the lack of support services, based on gender, in nursing degree programs. Wan Chik et al. (2012) also found that among undergraduate nursing students who averaged 20 years-of-age, male students were underrepresented and had lower academic performance compared to female students. Despite the academic performance, poor communication skills and the lack of a caring attitude were cited as reasons for failure among male students (Debrew, Lewallen, & Chun, 2014). Compared to business, science, and mathematics majors, male students were underrepresented in health majors and were more likely to withdraw from online courses than female students (Cochran et al., 2014). Promoting the support of various student profile characteristics can influence motivation and self-regulation factors to ensure persistence to graduation.

Individual psychosocial aspects. Nonacademic, individual psychosocial aspects that influence persistence are composed of motivation and self-regulation. Motivation focuses on the academic self-discipline, goal orientation, and commitment to degree programs (Huie et al., 2014). Self-regulation focuses on matters of emotion, control, coping mechanisms, and confidence, as well as how students regulate their behaviors and motivational beliefs to enhance learning (Huie et al., 2014). Motivation and self-regulation are not necessarily independent of student profile characteristics.

Motivation. Metzner and Bean (1987) identified goal commitment as a predictor of retention. As previously stated, a qualitative phenomenological study by Knight et al.

(2012) indicated that the students who persisted and graduated with a nursing degree perceived that personal goal setting and the desire to achieve were more critical than family, friend, peer, and faculty support. Phillips et al. (2015) found that age, gender, and length of exposure to tertiary studies were not factors that determined SDL in undergraduate, nursing degree programs. Supplemental to curricula design and levels of learning, Phillips et al. (2015) suggested that motivation should be explored to determine learning capability and persistence. However, Del Prato (2013) found that motivation was affected when ADN students did not establish collegial relationships during clinical practices. Morrison and McNulty (2012) discussed the fear of losing motivation because of various barriers, such as completion time, cost, academic and admission requirements, issues with obtaining credits from past coursework, and access to nursing degree programs. Motivation may stem from intrinsic or extrinsic reasons.

Lewis (2005) found that the intention to become a nurse was intrinsic. Prerequisite course completion and seeking the best program required commitment that was necessary before entering an ADN program (Lewis, 2005). Survey data analyzed by Dumais et al. (2013) indicated that first-generation adult learners had greater intrinsic motivation toward degree completion and cited personal fulfillment as their motivation. Similarly, Salamonson et al. (2014) found that students who chose nursing as their first career choice exhibited motivation to persist beyond the first semester. However, statistical significance was found between retention at the end of the first term of ADN programs and extrinsic motivation, such as participation in a task, grade performance, evaluation by others, and peer competition (Pence, 2011). Karsten and DiCicco-Bloom

(2014) and Raman (2013) found that ADN students entered the program for financial reasons and job security, in which students were extrinsically motivated. Students who are motivated may exhibit self-regulatory behaviors.

Self-regulation. The approach to self-regulation of learning may be useful in persistence to graduation from nursing degree programs. Bergman et al. (2014) found that self-discipline to adhere to educational goals played a significant and positive role in persistence to graduation. Reeve et al. (2013) studied traditional-aged and second-degree, undergraduate, nursing students using a mixed-method approach, and found that students experienced high levels of anxiety, stress, depression, rejection, and inadequacy. Undergraduate and novice nursing students have also shown high stress levels compared to students in other degree programs and more experienced students (Jeffreys, 2004, 2012; van der Riet, Rossiter, Kirby, Dluzewska, & Harmon, 2015).

Emotional intelligence (EI) has the potential to enable better coping strategies and to experience less stress. However, Pence (2011) found that although a potential relationship existed between EI and retention, that relationship may not be evident with first-semester data. Older students or students in more advanced courses of nursing degree programs tend to handle stress more effectively than younger and first-year students due to experience and trial-and-error. Khan, Ali, Vazir, Barolia, & Rehan (2012) used a descriptive cross sectional study design, with qualitative and quantitative approaches, and found that second-year nursing students recognized that positive attitudes and reflection were needed to improve knowledge and learning strategies. Similarly, Kovner et al. (2012) found that mature students with positive affectivity and

work motivation were likely to persist. Students acknowledged failure, recognized events that attributed to failure, discussed the depressive emotions that accompanied failure, and utilized resources to deal with the rigorous curriculum during repeated courses (Karsten & DiCicco-Bloom, 2014). Using a descriptive correlational design, Peterson-Graziose et al. (2013) found self-esteem and self-efficacy to be predictors of attrition in first-semester ADN students.

The ongoing process of managing stress allowed students to continue with nursing education, and in general, students had multiple relationships they could depend on (Reeve et al., 2013). In Florida, successful ADN students needed to adjust their lives and seek support to handle emotional distress in the field and outside of school (Lewis, 2005). Similarly, students cited that when they lost confidence and belief in themselves after failing nursing courses, they sought emotional support from other individuals and religion to regain confidence and belief (Karsten & DiCicco-Bloom, 2014). Although self-regulation of learning is related to metacognitive techniques, academic factors can influence self-efficacy, confidence, stress, and coping mechanisms. Early recognition and interventions can target at-risk students, to address self-regulation issues (Peterson-Graziose et al., 2013). The implementation of academic factors is related to human interaction; and therefore, motivation, self-regulation, and academic factors are not isolated variables that influence persistence.

Academic factors. Academic factors involve the students' primary involvement with the academic process of college and include critical thinking and study skills, guidance, mentorship, and support services (Bean & Metzner, 1985; Jeffreys, 2004,

2012). Even though college preparatory courses are relevant to traditional students, novice nursing students may need guidance to understand the academic factors applicable to the nursing curricula. Students also need advice on how to transition from the educational setting to the professional setting. Approximately 60% of nursing students graduate from community colleges, but the lack of academic preparation can influence the integration into professional practice (Staykova, 2012). Due to traditional and nontraditional student composition of the community college student body, the curricula and academic services should be supportive of both groups of students. Therefore, in-depth exploration of academic factors may reveal how each factor impacts various demographics of students differently (Bean & Metzner, 1985; Jeffreys, 2004, 2012).

Critical thinking and study skills. Teaching and learning are driven by different factors that influence study skills, which refer to attitudes about the responsibility for studying, time management, organization, and the efforts expended toward academic pursuits to retain information (Jeffreys, 2004, 2012). Hunter et al. (2014) found that age and gender were not predictive of critical thinking skills. Similar to the findings of Phillips et al. (2015), where novice students lacked self-regulation strategies, novice students also lacked mastery of critical thinking skills needed to become an RN (Hunter et al., 2014). By the third year of an undergraduate, nursing degree program, students gained critical thinking skills needed for clinical practice (Hunter, et al., 2014). Similarly, Karsten and DiCicco-Bloom (2014) found that ADN students recognized that critical thinking and clinical decision-making were vital skills that took time to master. Nursing students studied with other students, participated in exam reviews, and took

advantage of available resources to pass repeated courses. Because independent studying techniques were ineffective, students changed the way that they approached learning (Karsten & DiCicco-Bloom, 2014).

Similar to varied learning methods, nursing education is composed of varied teaching methods that permit hands-on practice and tools beyond textbooks. D'Amore et al. (2012) used a cross-sectional survey and identified that first-year, undergraduate, part-time nursing students exhibited different learning styles influenced by student profile characteristics. Prior study habits of reading textbooks, without the application of rationale and critical thinking skills, were revised when courses were retaken (Karsten & DiCicco-Bloom, 2014). Khan et al. (2012) found that demonstrations, videos, and problem-based learning (PBL) were perceived as effective tools in the enhancement of knowledge among second and third-year nursing students. Related to self-regulation, Khan et al. (2012) also found that metacognitive techniques, such as concept mapping, was perceived as effective tools in expressing and enhancing knowledge and visualizing thought processes of second and third-year nursing students. Guidance may be necessary from the nursing faculty to help students understand and explore learning styles.

Guidance, mentorship, and support services. Timing is important, as guidance may be needed before or as students begin nursing degree programs, in order to make informed decisions about external variables including childcare, workload, and finances (Jeffreys, 2004, 2012, 2014). Interview data analysis from adult students enrolled in a 3-year BSN program led to the development of themes that influenced persistence, which included coping strategies, pre-entry advice and guidance, and pre-entry institutional

interventions (Hinscliff-Smith et al., 2012). Similarly, McKendry et al. (2014) found that first-year nursing students utilized support mechanisms before and during their programs, which included university staff, fellow students, and professionals in the nursing and midwifery field. Nursing educators can impact development and the transition of nursing students to professionals who can handle the rigorous field.

Congruent with Tinto (1993), Lewis (2005) also found that interaction with students and faculty aided persistence. Del Prato (2013) found that nursing students felt vulnerable when they did not establish connected relationships with others, thus affecting their feelings of belongingness, self-concept, self-efficacy, confidence, and motivation. Karsten and DiCicco-Bloom (2014) found that students sought counsel from faculty members for social and academic support. Nursing faculty members and a healthy work environment may be key to persistence, but the lack of such support can worsen negative feelings toward nursing education (Crombie et al., 2013). Students stated that they needed faculty interaction, but their relationships were primarily with peers (Lewis, 2005).

Supplemental to faculty support, peer mentors are useful and tend to be first-generation college students who have the experiences to relate to other nontraditional students (Jeffreys, 2004, 2012). Reeve et al. (2013) reported that traditional students gravitated toward fellow nursing students and friends. A mechanism that alleviated the fears of returning to school was communication with other students, who also returned to school, to discuss the pros and cons of being a nontraditional student and balancing the workload (Morrison & McNulty, 2012). Overall, guidance is needed to navigate through

many variables because student profile characteristics, psychosocial aspects, and academic factors do not exist independent of each other.

Implications

The push for degree completion warrants that quality practices are implemented to maintain academic rigor, support and advise students, and avail institutional resources (Bergman et al., 2014). The study setting is focused on retention, completion, and enrollment related to FCS standards and funding (2015). The implications of this study will focus on understanding why students persist to graduation and how to improve attrition rates. Perspectives from students in the beginning and ending terms of the program will shed light on a program in which progress is difficult to track.

Nursing students encounter unique challenges early in the rigorous program, which may influence the decision to persist to graduation from an associate degree program (Jeffreys, 2004, 2012; Pence, 2011). Thus far, advanced nursing students are available as mentors in the study setting's nursing club and nursing faculty discuss the rigors and expectations of the nursing programs with prospective students (Community College Dean of Nursing, personal communication, January 30, 2015; Community College Dean of Nursing, personal communication, January 29, 2015). Conducting a study of the students' perceptions of persistence factors and persistence mechanisms will aid in forming recommendations on coping mechanisms. Based on findings, a project may be designed to enhance pre-entry advice or interventions. Tentative directions for this study include the presentation of results to administrators who determine funding,

dissemination through professional publications, and continued faculty and peer mentoring and advice.

Summary

Nursing students represent great diversity due to trends in globalization, restructured workforce, career changes, and population growth (Jeffreys, 2007a). Therefore, nursing faculty and administrators should recognize that persistence to graduation is complex and multidimensional (Jeffreys, 2014). Both traditional and nontraditional students tend to struggle with nursing education for various reasons. Academic and institutional factors, such as tutors and mentors, may directly influence persistence (Davidson & Holbrook, 2014). Guidance and mentorship from experienced individuals can alter students' motivation and perceptions of persistence to graduation.

Student profile characteristics, psychosocial aspects, and academic factors do not exist as discrete, isolated variables that influence persistence to graduation. Low rates in persistence to graduation are costly to students and institutions. Therefore, understanding factors that restrict and support students, as well as persistence mechanisms, are vital to the development of provisions to meet the demands of the education and healthcare systems. In the following section, I detailed methodology that I used to examine nursing students' perceptions of factors and mechanisms that influence persistence to graduation in an ASN program.

Section 2: The Methodology

Introduction

Through this project study, the central focus was persistence mechanisms and factors that influence persistence to graduation in a Florida college's ASN program. This under-researched nursing program has a 33% to 35% persistence to graduation rate (Community College, 2011b; former Community College Dean of Nursing, personal communication, June 11, 2015). There is a lack of formal inquiry on persistence to graduation in the study setting's ASN program. A mixed-method approach can be used to develop or facilitate research on student persistence to graduation (Gerrish & Lacey, 2006, 2010). By using the concepts of the NURS model, the methodology for this study was a concurrent, non-experimental, explanatory, mixed-method design to explore nursing students' perceptions of restrictive and supportive factors that influence persistence and mechanisms that aid persistence.

Data were collected and analyzed from two different groups of participants. Students who were in the last year of the ASN program were interviewed. This qualitative sequence afforded the opportunity to gain a more comprehensive understanding and explanation of persistence mechanisms. At the point of data collection, students who were in the first semester of the ASN program were surveyed. This quantitative sequence afforded the opportunity to identify the perceptions of factors that influence persistence and then compare those findings to the students' profile characteristics. Students were interviewed or surveyed if they were currently enrolled and present in the ASN program and were 18 years-of-age or older. Overall, the mixed-

method research design built on the strengths of qualitative and quantitative methods to provide a better understanding of the problem in the study setting (Creswell, 2011).

Research Design and Approach

For this project study, a mixed-method design with a concurrent, non-experimental, explanatory approach was chosen. The project study was non-experimental and explanatory because it was intended to understand the research problem from the first and last year nursing students' perspectives (Creswell, 2012; Polit & Beck, 2010). The intent of using a mixed-method design was to expand upon survey responses from the first-semester students by using interview responses from the final-year students'. Concurrent data collection and analyses were conducted to constantly compare findings and determine if the two databases yielded similar or dissimilar results.

The concurrent approach was intended to save time using simultaneous data collection and analysis (Creswell, 2012; Glesne, 2011; Holloway & Wheeler, 2010). It might have been difficult to determine how to proceed with sequential designs if insufficient amounts of data were collected in either approach. However, the disadvantage of using a concurrent approach was the lack of primary focus to both qualitative and quantitative sequences. Analysis of quantitative sequence completely and then incorporating the findings into the qualitative questions was not conducted, rather both sequences were analyzed to draw conclusions.

The use of a single, qualitative design was considered to collect students' explanations of how they persisted in the ASN program. Qualitative research relies on general interviews with open-ended questions that do not restrict participants' views, and

typically pre-established instruments are not used (Creswell, 2012). A basic snapshot approach was considered because different perspectives at the time of research are collected and compared to one another (Flick, von Kardoff, & Steinke, 2004). However, a qualitative design would not have been appropriate for the larger number of students who have not gained much experience with nursing education (Community College, 2011a, 2011b, 2015; Creswell, 2012).

First semester students would not have been able to provide in-depth, qualitative data on how to persist to graduation. Still, those students would provide their perceptions of different factors that influence persistence using pre-established instruments (Jeffreys, 2002, 2003, 2004, 2007a, 2007b, 2012). Interviews would not provide quantifiable perceptions of persistence factors during early semesters, when persistence is most at risk (Community College, 2015). Instruments have been developed to quantify the perceptions of such factors and there has been an abundance of literature on factors that influence persistence through nursing education (Jeffreys, 2002, 2003, 2004, 2007a, 2007b, 2012). Additionally, there would be a lack of generalizability of any findings to a broader population with a sole qualitative approach (Seale, Gobo, Gubrium, & Silverman, 2004).

The use of a single, quantitative design was considered to identify the perceptions of factors that influence persistence and compile student demographics. Instruments have been developed to survey the perceptions of nursing student retention (Jeffreys, 2002, 2003, 2004, 2007a, 2007b, 2012). Surveys are commonly used for collecting and analyzing non-experimental data from a larger group (Creswell, 2012; Fowler, 2002,

2009, 2013). There have been considerably fewer students who persist to graduation, because only 33- 35% of students accepted into the program have persisted to graduation (Community College, 2011a, 2011b, 2015). The survey approach was also useful for statistical hypothesis testing to explore whether student profile characteristics lead to differences in perceptions of persistence factors. However, the quantitative approach would not have obtained in-depth explanations of how students persisted through the final year of the ASN program. Students in the first semester have not undertaken courses that students in the last year have; and therefore, it would have been more useful to obtain detailed information from students who have persisted through most the ASN program (Community College, 2015).

The selection of a mixed-method design was finally considered due to the participant sample size and the types of data obtainable from students at different phases of the ASN program. Surveys were appropriate for the larger number of first-semester students, whereas, interviews were appropriate for the smaller number of students who persisted through most of the ASN program (Creswell, 2011, 2012). In-depth qualitative findings provided details about the context of the quantitative findings; and equal weight was allocated to both methods for a deeper understanding of the problem. Although a mixed-method design is described as complementary, the design was complex and drawbacks can stem from difficulties merging and assessing or interpreting two datasets (Creswell, 2012). Time was consumed with resolving discrepancies between the quantitative and qualitative approaches. This study was not generalizable to all nursing students in the study setting, because the students of interest lacked prior nursing

education. Therefore, based on a specific cohort of ASN students, a convenience sample was necessary to answer the following research questions:

Qualitative Research Questions

RQ1: Using thematic analysis, what are final-year ASN students' perceptions of factors that influence persistence to graduation?

RQ2: Using thematic analysis, what have final-year students experienced in terms of successful persistence strategies in the ASN program?

Quantitative Research Questions

RQ3: As measured by the SPA–R2 survey, what are the first-semester ASN students' perceptions of factors that influence persistence to graduation?

RQ4: As measured by the SPA–R2 and modified DDS-P, what are the differences among first-semester ASN students in their perceptions of factors that influence persistence to graduation by: (a) gender; (b) age; (c) ethnicity; (d) English as a first language; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly?

$H_0$4: There is no difference among the first-semester ASN students in their perceptions of factors that influence persistence by: (a) gender; (b) age; (c) ethnicity; (d) English as a first language; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly.

H_a4*:* There is a difference among the first-semester ASN students in their perceptions of factors that influence persistence by: (a) gender; (b) age; (c) ethnicity; (d)

English as a first language; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly.

Setting, Population, and Sample

Setting

The setting of this study was a local Florida college that offers the generic ASN program as one of the ADN programs, in which students can become RNs. The study setting's nursing program was approved by the FBN and accredited by the ACEN and the SACSCOC. According to the study site's course catalog, the North, Central, and South campuses offered the full-time only, 20-month, ASN program and were the sole locations for the Nursing Departments. Other campuses were excluded from this study because nursing courses were not offered and nursing departments were not located there.

The ASN program was only offered as a full-time program and courses are offered during the daytime. Full-time students were expected to complete 72 credits and spend 20 to 36 hours weekly in the classroom and clinical setting. Online students were not considered as potential participants because online course availability depended on student enrollment (Community College Dean of Nursing, personal communication, January 30, 2015). At the time of study, online courses were not offered. Students must also meet all educational and institutional requirements for an ASN program to be eligible for their names to be submitted to the FBN to be considered as a candidate for the NCLEX-RN.

During the first semester, students are expected to complete four lecture courses and two clinical courses. The remaining four semesters each require enrollment in two

lecture courses and two clinical courses, for a total of 10 credits per semester. During the summer term, students may enroll for five credits. Although persistence to graduation is most at risk during the first two courses, students adjusted to future courses in the program. Students are usually successful in future semesters and on the NCLEX-RN (Community College Dean of Nursing, personal communication, January 30, 2015; Community College, 2015).

Primary institutional review board (IRB) approval came from Walden University and the secondary IRB approval came from the study setting. The approval number from Walden University is 07-01-16-0428538. Prior to data collection, I received a letter of cooperation from the study setting's IRB to submit to Walden University's IRB as part of Walden University's IRB application process. Once permission was obtained by Walden University's IRB, I submitted an application to the study setting's IRB to conduct the study, including documentation of approval from Walden University. After IRB approval from the study site was obtained, communication, such as emails and face-to-face meetings with the deans of the nursing departments were conducted to further discuss the study and identify the gatekeepers in the setting. I contacted and informed the gatekeepers about the purpose of the study, confidentiality, volunteerism, and discussed potential benefits of the study and built trust in the early phases of the study (Creswell, 2012; Holloway & Wheeler, 2010). Contact with a gatekeeper was made initially via a phone call, in which I was given instructions on how to obtain access to rosters and students' institution-issued email addresses. During the data collection phase, I discussed

identity protection, volunteerism, and the potential benefits of the study with students who were eligible participants.

Population

The theoretical, target population for the study included all current, generic ASN students in the North, Central, and South campuses of the study setting, at the time of the study. Consideration was given to students who are repeating courses or do not enroll in consecutive semesters but are actively enrolled at the time of study. The administration of surveys or interviews depended on which semester and coursework each student was enrolled. Students who were enrolled in the first semester coursework were considered as first-semester students; whereas students who were in the third through fifth semester coursework were considered in the final year of study. Therefore, first-semester students were potential participants for the quantitative study, whereas students in their final year were potential participants for the qualitative study. Although part of the first year of study, I omitted the second-semester students from the study because they have been exposed to the curriculum and were not novice students at the point of data collection.

Approximately 750 to 800 ASN students are admitted annually (Community College, 2011b; former Community College Dean of Nursing, personal communication, June 11, 2015). However, I was interested in the students who lacked prior nursing education; therefore, LPN-to-RN students were excluded from the target population. Previous generic ASN cohort tracking indicated that fall and winter semesters had higher admittance of over 200 students, whereas the summer semester had lower admittance of approximately 100 students (Community College, 2011a, 2011b). Because the study

setting only offers the ASN program as a full-time program, it was not possible to have part-time students in this study. It was also not possible to include students enrolled in online nursing courses, because online courses were not offered during the time of study.

Sample

I selected students using purposive or purposeful, convenience sampling, in which the participants were easily accessible. After IRB approval, I discussed the study with the deans of the nursing departments and inquired who the gatekeepers of the ASN program were, to invite students to participate in the project study. I identified and communicated with one gatekeeper to obtain electronic lists of potential participants, with their respective institution-issued email addresses and enrollment status from the gatekeeper of the ASN program. I wanted to establish face-to-face contact and build trust among students, in addition to sending electronic invitations to participate in the study. Therefore, I asked the deans about seeking permission from the faculty advisor of the nursing club, to present the scope of the study to the nursing club members. However, the nursing club did not meet over the period that approval was granted. During the time of study, students in the nursing club consisted of senior, BSN, honors students; therefore, potential participants were not readily available within the nursing club (Community College Dean of Nursing, personal communication, January 30, 2015; Community College Dean of Nursing, personal communication, July 24, 2016). Therefore, I did not speak at the nursing club's meetings, as initially intended.

I created flyers about participation with approval from Walden University and the study setting, and posted the flyers in the nursing college facilities. Changes to the flyer

were not made. Provided by the study site's course catalog, I used the sample schedule of the generic ASN track to guide participant selection criteria (Appendix C). As previously stated, students who were enrolled in the first semester coursework were considered as first-semester students; whereas students who were in the third through fifth semester coursework were considered as the final-year students. I omitted second-semester students because they were not novice students, like first-semester students who were entering the program. Next, I emailed students who met the criteria for the qualitative or quantitative sequence.

Representation was limited with the purposeful, convenience sampling technique; however, I aimed to explore a problem among a specific cohort in a single setting (Fink, 1995). Purposeful sampling techniques were chosen to potentially adequately capture the differences in the population (Holloway & Wheeler, 2010; Maxwell, 2005, 2013; Miles et al., 2013). Perspectives of the novice and senior nursing students' experiences were interpreted as unique to their respective cohort. Additionally, particular comparisons illuminated the differences between the individuals within the last year of study. Those differences were compared to students in the first year of study for further analysis.

Lewis (2005) used purposeful sampling to explore Florida ADN programs that exhibited higher retention rates. Prior to data collection, Lewis (2005) contacted program directors via phone and email to specifically invite successful students to participate in the focus group study. Del Prato (2013) used convenience sampling in a qualitative study on students enrolled in three ADN programs in the northeastern U.S. Although Del Prato (2013) used a phenomenological design, interviews were used to collect data, like the

proposed explanatory approach. Hunter et al. (2014) used convenience sampling to conduct a cross-sectional descriptive study, because participants enrolled in a specific timeframe and undergraduate nursing program were studied. Beauvais (2014) used convenience sampling to conduct a descriptive correlational design, based on nursing students in a single, private, medium-sized, Catholic university in New England.

Qualitative Sequence

I asked the gatekeeper for course rosters containing students in the full-time, 20-month, ASN program to contact students through their institutional email address. I sought rosters to obtain the enrollment status of the students and specific courses and semesters that students were in at the time of study. To address RQ1 and RQ2, I included all students who were at least 18-years-of-age and enrolled in the last year of the generic ASN program. Because the ASN program is a two-year program, students in the third through fifth semester coursework were considered as final-year students and included in the interview process. Previous reports showed that students are expected to adjust to the ASN program by the third semester onward, which is within the last year of study (Community College Dean of Nursing, personal communication, January 30, 2015; Community College, 2011b, 2015). According to the study site's course catalog, the final-year coursework included Nursing Care of the Psychiatric Patient (NUR1520), Nursing Care of the Psychiatric Patient Clinical Lab (NUR1520L), Pediatric Nursing (NUR1310), Pediatric Nursing Clinical Lab (NUR1310L), Health Alterations II (NUR2221), Health Alterations II Clinical Lab (NUR2221L), Health Alterations III

(NUR2222), Health Alterations III Clinical Lab (NUR2222L), Trends, Practices, and Roles (NUR2811), and Trends, Practices, and Roles Clinical Lab (NUR2811L).

Although 750 to 800 students are admitted annually into the ASN program, the fall, winter, and summer enrollment rates vary (Community College, 2011a, 2011b; former Community College Dean of Nursing, personal communication, June 11, 2015). The fall and winter semesters may have cohort sizes that exceed 200 students; however, summer semesters have an average of 100 students. Approximately 33% to 35% of students persisted to graduation (Community College, 2011a, 2011b, 2014; former Community College Dean of Nursing, personal communication, June 11, 2015). Therefore, at the time of study, it was possible to have more than 100 students who were enrolled in the last year of study. Exclusion criteria included students who were not at least 18-years-of-age or had not completed the courses designated for the first year of study. A total of 267 students were in the last year of study; however, 11 students were enrolled in the LPN program and therefore excluded from the study. Electronic invitations to participate in the study were sent to 256 final-year students.

Given the reduced number of students that persist to graduation in the ASN program, the use of a purposeful, convenience sample was appropriate for a comprehensive understanding of the mechanisms students used (Community College, 2011b; Creswell, 2012; Flick et al., 2004; Holloway & Wheeler, 2010; Maxwell, 2005, 2013; Miles, Huberman, & Saldana, 2013). Large numbers of students in qualitative studies can be unwieldy and yield superficial results. A small number of participants is appropriate for typicality and relative homogeneity to establish confidence that the

developed conclusions represent the average members of the population (Flick et al., 2004). Although samples in qualitative approaches are smaller than those of quantitative approaches, the sample must be large enough to achieve data saturation and limit redundancy, in which new themes or ideas do not emerge (Creswell, 2012; Flick et al., 2004; Holloway & Wheeler, 2010; Merriam, 2009). A range of 10 to 15 interviews was desired; and overall, 12 interviews were conducted.

Quantitative Sequence

Like the qualitative approach, following primary and secondary IRB approval, I asked the gatekeeper for course rosters of students in the full-time, 20-month, ASN program, to contact students through their institutional email address. I used a purposeful, convenience sample because the survey was focused on a specific group of students in the ASN program who are easily accessible (Fink, 1995). Additionally, rosters detailed students by course and semester enrollment. This was helpful because I desired to use students in the first semester of the first year of study. Participants included first-semester students who were at least 18-years-of-age and enrolled in first semester courses: Nursing Process I (NUR1020), Nursing Process I Clinical Lab (NUR1020L), Nursing Process II (NUR1210), and Nursing Process II Clinical Lab (NUR1210L; Community College, 2011b; Fink, 1995; Holloway & Wheeler, 2010).

Although 750 to 800 students are admitted annually into the ASN program, the fall and winter semesters have cohort sizes that exceed 200 students, whereas summer semester admittance yield an average of 100 students (Community College, 2011a, 2011b; former Community College Dean of Nursing, personal communication, June 11,

2015). The first two nursing processes lectures and laboratory courses are difficult to complete and 27% to 46% of students repeat those first-semester courses (Community College, 2011b). If students were currently repeating coursework designated for the first semesters, they were not considered for the quantitative sequence. Exclusion of repeating students was based on the idea that students were already exposed to coursework in the institution and may have developed different perspectives on persistence factors or strategies on how to pass the repeated courses (Karsten & DiCicco-Bloom, 2014).

There is an average of 200 students who enroll in their first attempt of NUR1020; therefore, there was a chance for approximately 200 students to be enrolled in the first semester coursework (Community College, 2011a, 2011b, 2015). At the time of study, there were 138 students enrolled in the first semester coursework, for the first time. Electronic invitations were sent to those 138 students. There were 32 students who were repeating the first semester and were placed in specially marked rosters; therefore, I did not electronically invite said students to participate. Students who were enrolled in courses designated for the last year of study, NUR1520 onward, were excluded from survey participation. Additionally, students who were not at least 18-years-of-age were excluded via a consent page on the survey before asking any question items from the SPA-R2 and DDS-P.

I used the G*Power 3.1.9.2 Statistical Power Analyses for Mac to determine the number of surveys needed to yield statistical significance (Faul, Erdfelder, Buchner, & Lang, 2009; Softpedia, 2014). Given $\alpha = 0.05$ (two-sided), power = 0.90, and an effect size = 0.50, the total sample size was 44 participants for the *t*-test analyses of gender and

English as a first language. For statistical significance using one-way analysis of variance (ANOVA), the marital status item contained five categories and the total sample size needed was 70 participants. The number of dependents within the residence and number of hours employed off campus items contained six categories and the total sample size needed was 72 participants. Age and race and ethnicity items contained nine categories and the total sample size needed was 90 participants. Overall, the highest sample calculation yields that at least 90 participants were needed. The response rate was calculated by dividing the number of surveys returned by the number of surveys distributed. I sought a 70% response rate to reduce the risk of nonresponse bias. There were a total of 98 survey responses; however, 3 participants clicked on the "Disagree" button, thus disqualifying their surveys. Therefore, 95 survey responses were analyzed. A response rate of 68.84% was achieved because 95 out of 138 students participated in the survey. However, at most five of the surveys had incomplete responses on the DDS-P or SPA-R2 portions.

Measures to Protect Participants

If adverse events occurred during the study, I proposed to stop data collection and contact my supervising faculty member and the IRBs. Adverse events did not occur. I completed the National Institute of Health (NIH) web-based training course, "Protecting the Human Research Participants" (Appendix D). I first sought IRB approval from Walden University and then from the IRB in the study setting. Next, I spoke with the deans of the nursing program to access the facilities, faculty, and students, and to identify gatekeepers. One gatekeeper was contacted to obtain rosters of students and their

courses. I did not share the obtained information, because rosters contained financial aid and tuition information, students' phone numbers, institution identification numbers, photographs, and email addresses. Emails between myself, students, officials in Walden University, and officials in the study setting were exchanged and saved within the respective email systems. This served to protect the integrity of any communication and arrangements pertinent to the study.

Participants were excluded from the study if they were under 18-years-of-age. Participants were included in the study based on course and semester enrollment and age. I corresponded electronically using my Walden University email address and the participants' institution-issued email address, with the exceptions of interview transcripts. I provided an explanation of confidentiality and voluntary participation to all participants. I gave informed consent forms to participants and obtained signed consent forms prior to any data collection. I issued an initial electronic invitation, containing a statement that there will be three, weekly reminder emails to take the survey. I explained that I would cease to email those students who expressed that they did not want to receive reminder emails or that they did not want to participate. During the study, students did not contact me wishing to be excluded from receiving the electronic invitations.

Survey participants were prompted to agree or disagree with the terms of the survey, including age and course repetition, before responding to the survey. Interview participants were prompted to contact me through my Walden University email address, and scheduling arrangements and reminders were maintained via email. Interview participants had an alias for audio-recording purposes. Web-conference and phone

interviews were used to record the participants, excluding any persons in the background. I proposed to terminate the interview if participants displayed distress, strain, or fatigue during the interview process, or if they wished to stop at any point. During the interview, I discussed the options of physically mailing or emailing the interview transcripts to the participants. Sending transcripts via the institution-issued email may breach the confidentiality of students' data; therefore, sending transcripts via students' personal email addresses was an alternative method to physical mail. To establish that the developed concepts reflected their perspectives, I allowed participants to member check the accuracy of the interview transcription and notes (Creswell, 2012). I sent physical or electronic transcripts to the participants for member checking. The participants were asked to communicate any corrections to the transcripts. Corrections to the transcripts were not needed.

To protect the students' responses, I typed the raw data on my password-protected, MacBook laptop computer and saved the data on a Universal Serial Bus (USB) flash drive. I kept electronic files, such as the survey data, reflection journal entries, field notes, transcripts, and thematic analysis, as password-protected, Microsoft Word files on a password-protected, USB drive. I kept paper copies of the transcripts and field notes in my home office. I shared physical copies of the transcripts with the respective interview participants who wished to receive physical mail for member checking procedures. I had sole access to electronic information and physical documents, which were locked in my home office desk.

Electronic data will be destroyed after 5 years by deletion from my computer and physical destruction of the USB flash drive. Additionally, I will restore my MacBook to factory settings, thus removing Microsoft Office and any files created using that software. I will shred physical documents using a secure shredding bin, after 5 years. I will maintain records of how all forms of data are destroyed.

Data Collection Strategies

Qualitative Sequence

To address RQ1 and RQ2, I collected qualitative data through semi-structured interviews from students in the last year of the ASN program. I used one-on-one, semi-structured interviews to privately question supportive and restrictive experiences and successful persistence strategies employed by final-year students throughout the ASN program (Creswell, 2009; Fowler, 2002, 2009, 2013; Gerrish & Lacey, 2006, 2010). Semi-structured interviews allowed the flexibility to probe responses beyond the guiding questions (Creswell, 2009).

Prior to Walden University's IRB approval and data collection, I consulted with an expert panel of nursing faculty members within the North, Central, and South campuses of the study setting. It was desirable to consult with faculty members from each campus as the ASN program was offered at the three locations. The faculty members determined the validity of the self-constructed, interview protocol, and no revisions were made to the instrument (Creswell, 2011, 2012). The standard protocol (Appendix E) contained four primary questions with a 30-minute time limit, but time was exceeded for certain participants. The flexibility of semi-structured interviews allowed

for additional time to probe and record responses (Merriam, 2009). After approval was obtained to collect data from Walden University and the study setting, I designated one semester, up to 16 weeks, for data collection.

Data were collected until saturation was ensured; therefore, the length of time to collect interview data was proposed to exceed one semester. A range of 10 to 15 interviews was sought. Overall, 12 interviews were conducted within the one semester period, and data saturation was reached. I emailed electronic invitations on the first day of the data collection period. Using an electronic letter, I specified that the interview process would be available for the duration of the current semester. I provided participants with contact information if they had questions or concerns. On the electronic invitation, I explained that participants may discuss consent over the phone or via email, and that they may electronically submit consent forms. I also specified that eligible participants must be over 18 years-of-age and enrolled in third through fifth semester coursework. After the initial invitation, I sent a reminder email that was repeated three times, one week apart (Dillman, 2007; Fowler, 2002, 2009, 2013; Maxim, 1999).

Upon receipt of interest to participate in the study via email, I responded to each email to discuss consent and obtain consent forms before the interview process. I spoke to participants over the phone to further discuss the options for obtaining consent in person or electronically. I emailed the students the consent forms via their institution-issued email. Additionally, I discussed the participants' age and enrollment status for eligibility. I scheduled the semi-structured, phone interviews, and let participants know that the interviews could last up to 15 minutes, are audio-recorded, and that they can

review their transcripts and make corrections. I discussed face-to-face and web-conference interviews as an alternative option to avoid inconvenience and to obtain a sufficient number of participants for data saturation (Dillman, 2007). However, all interviews were held over the phone.

I privately contacted participants from my home-office, and I requested that the participants engage in a private interview, where no one was around them. Participants responded that there were no other persons in their immediate vicinity. I informed participants when the audio-recording began. Then, I thanked the participant and restated the confidentiality of the study. During the interview, I used an interview protocol script, took brief notes, and audio-recorded the interviews for later transcription (Merriam, 2009). I used probe questions for clarification of the factors that participants reported were supportive and restrictive. When the participant stated that they did not have more details to add, I ceased the interview and recording processes.

Quantitative Sequence

Instrumentation. The NURS model, SPA-R2 posttest, and DDS-P are found in the Nursing Student Retention Toolkit and are available for use by the Springer Publishing Company (Jeffreys, 2012). Permission was obtained from the Springer Publishing Company to use and reprint the NURS model, SPA-R2, and DDS-P of the Nursing Student Retention Toolkit (Appendix B). The DDS-P was modified for use in this study (Appendix F); however, the SPA-R2 was not modified (Appendix G).

The SPA-R2 was developed by Jeffreys (2002, 2004, 2007a, 2007b) to evaluate the level of restrictiveness or supportiveness of factors that influence retention in

nontraditional, undergraduate nursing education. Before the development of the SPA-R2, the SPA was developed in 1993 by Jeffreys and contained 21 items, and later revised to contain 22 items. The SPA-1 pretest reliability ranged from .72 (alpha coefficient) to .77 (split half) and the SPA-2 posttest reliability ranged from .89 (alpha coefficient) to .88 (split half; Jeffreys, 2002; Jeffreys, 2007a; Karsten & DiCicco-Bloom, 2014). The content validity was revised and expanded to form the SPA-R, with 27 items. Two experts in nontraditional associate degree students, retention, and support services established the content validity of the SPA-R. The content index for the SPA-R was 1.0 and the Cronbach's alpha was .82 for all 27 items (Jeffreys, 2007a).

For RQ3, the SPA-R2 posttest was used to collect data at one point in time to understand students' perceptions on restrictiveness or supportiveness of factors that influenced persistence. Environmental factors, institutional interaction and integration factors, personal academic factors, college academic facilities, and friend support were the five subscales measured using the one-page, 27-item SPA-R2 (Jeffreys, 2004, 2007a, 2012). Environmental factors included seven items that pertain to nonacademic aspects, such as finances, family, childcare, employment, living and transportation arrangements. Institutional interaction and integration factors included five items that pertain congruency between students and the social system of college (Tinto, 1975). Faculty support, college counseling, and peer mentoring and tutoring services were methods to enhance such congruency. Personal academic factors included four items that pertain to study skills and hours, attendance, and class schedules. College academic factors included three items on the SPA-R2. General academic services, such as libraries,

nursing skills laboratories, and computer laboratories, were college academic facilities available to enhance personal academic factors. Friend support included two items that involve positive encouragement and the presence of friends outside of school and within the classroom (Jeffreys, 2004, 2007a, 2012).

The responses to the SPA-R2 were based on a 6-point Likert-type scale from 1(*did not apply*) through 6 (*greatly supported*; Jeffreys, 2004, 2012). For the descriptive analysis of RQ3, the sums of item responses were needed to obtain a single variable and to rank the responses by mean. Scores ranging from 5 to 6 indicated that factor items moderately or greatly supported persistence to graduation. Lower scores, ranging from 2 to 3, indicated that factor items severely or moderately restricted persistence to graduation. The total number of responses were used to find the frequency and mean of each factor. However, for the inferential analysis of RQ4, the sums of the responses for each item served as the dependent variable.

The independent variable for RQ4 was derived from seven of the 27 categorical items on the DDS-P, which was also expert-approved (Jeffreys, 2004, 2007a, 2012). The DDS-P (Jeffreys, 2012) is an expanded form of the 11-item DDS (Jeffreys, 2004). The questionnaire is adaptable to data collection of demographic information among prelicensure students, such as generic ASN students. Categorical scales were used to further describe quantities of: (a) age, (b) the number of dependent children in the residence, and (c) the number of hours employed off campus weekly. I organized the responses to the categorical items by frequency and percent. The categorical, demographic data were compared to the summed, continuous data from the SPA-R2.

Differences in the means of SPA-R2 factors across student demographics indicated the influence of student profile characteristics and the ability to persist to graduation.

Data collection process. Anonymous, pre-established, Internet surveys were preferable for reliability and validity, faster and more widespread dissemination to the potential sample, to reduce nonresponses, and to receive valid information (Creswell, 2009; Dillman, 2007; Fowler, 2002, 2009, 2013). Internet surveys promote dynamic interaction between the participants and the questionnaire; and by using a simple design, there is a reduced risk or survey error, a higher response rate, ease of response, and clear and concise instructions (Dillman, 2007; Fowler, 2002, 2009, 2013).

According to the sampling criteria, students received a brief, electronic letter of invitation to participate in the study, an electronic consent form, and the anonymous online survey. A brief electronic invitation was preferable to generate attentive reading. Next, participants were directed to a consent form and survey link in *SurveyMonkey*. Participants selected between *Agree* or *Disagree*. Clicking *Agree* indicated that participants agreed to the consent form terms, were at least 18 years-of-age, and were enrolled in first semester courses for the first time. The agreement led to the online survey; however, clicking *Disagree* led to an exit page.

I designated a semester, up to 16 weeks, for data collection, which was simultaneous with the qualitative sequence. Electronic letters were sent out on the first day of the data collection period. Using the electronic letter, I specified that the survey would be available for a semester; and students were provided with contact information if they had questions or concerns. Similar to a traditional "callback" to reduce the risk of

nonresponse, three follow-up emails were sent one week apart (Dillman, 2007; Fowler, 2002, 2009, 2013; Maxim, 1999). All participants received reminder emails starting one week after the initial email was sent and the survey became available. To attain more participants, I sent two additional reminder emails during the last two weeks of the semester. Therefore, a total of four emails were sent over a 4-week period, but six emails were sent over the span of the entire semester. The data collection period was not extended because 95 surveys were received within one semester, which brought the response rate to 68.84%. Data were cleaned during the collection period and processed with *SurveyMonkey* and Statistical Package for Social Sciences (SPSS) version 21.0 for Macintosh (Creswell, 2012). I used tables and bar graphs to organize raw demographic data and survey responses.

Researcher's Role

Although I was employed part-time with the science department of the online campus in the study setting, I was not employed with the nursing departments and the students in the program were not my current students during and after data collection. The online campus was not located in the same cities as the North, Central, and South campuses; and my students were non-science majors who were not in the ASN program. I sought the aid of the deans of the nursing departments to obtain students' institution-issued email addresses. Afterward, I did not involve the deans in recruiting participants. This study did not conflict with the students' academic records, because the only information I utilized from the rosters were the students' institution-issued email addresses and course enrollment. I did not use either the library or the nursing club

services. I was not a nursing club advisor, nursing club member, county library employee, or a student services representative in the libraries.

As an instructor, it was important that I built a good relationship with faculty and staff to obtain pertinent information, such as ASN program policies and insights into persistence. I disclosed my intention for the study and potential benefits to the deans and IRB members in the study setting. With their permission, I spoke with the respective gatekeeper to inform them of the study and share my contact information. I was considered the instrument as the interviewer in the qualitative approach and participants may have found it easier to interview with me if I built trust (Maxwell, 2005, 2013). Students may have felt positively inclined to participate in the survey if I informed them about the study and introduced myself in the electronic invitations, in addition to reiterating the study's purpose and confidentiality upon data collection.

Data Analysis

Qualitative Sequence

To address RQ1 and RQ2, I analyzed the interviews using the transcription software, *Dragon NaturallySpeaking*®. I conducted transcription, coding, and thematic analysis immediately following data collection, in my home office. I transcribed the interview and then emailed electronic or mailed physical copies to the participants to member check their interviews and my notes. I discussed the options of emailing and physically mailing transcripts and notes for member checking, and carried out the respective participants' requests. I informed participants that I would make necessary changes based on the participants' responses; however, changes were not necessary. In

addition to interview notes, I reflected on the completed interviews in an electronic journal on the day of the interview, and then compared new interview reflections to the existing reflections in the journal.

I used constant comparison coding, editing, data linking, graphic mapping, and thematic analysis to identify, refine, and consolidate patterns in the field notes and transcripts (Flick, 2014; Hoskins & Mariano, 2004). I conducted daily interpretive analyses to maintain the integrity of interview data and inferences. These processes allowed for triangulation of interview responses and determination of alignment between the findings and research questions. I compared coded responses and triangulated the responses with the survey data. I developed corroborating themes from the two databases. I then narrowed the codes down to five to ten themes, because numerous codes and themes may result in reporting on general or redundant information (Creswell, 2012). I used Microsoft Office software to create visual aids and tables for the data. I saved the data on password-protected electronic files.

Quantitative Sequence

To address RQ3, I used descriptive analysis to analyze the first-semester ASN students' perceptions of factors that influence persistence to graduation. Responses were ranked based on the 6-point Likert-type scale: 1 (*did not apply*), 2 (*severely restricted*), 3 (*moderately restricted*), 4 (*did not restrict or support*), 5 (*moderately supported*), and 6 (*greatly supported*). Using the Likert-type scale, the responses to the 27 items were summed and treated as continuous data, and then arranged in an ordering scheme by mean from highest to lowest (Creswell, 2012; Hoskins & Mariano, 2004; Triola, 2012). I

used the total number of responses to find the mean, frequency, and percentage per factor. Higher ranking items were considered as supportive and lower ranking items were considered as restrictive. This analysis revealed meaningful differences among the perceptions of factors that influence persistence to graduation, based on five subscales: (a) environmental factors, (b) institutional interaction and integration factors, (c) personal academic factors, (d) college academic facilities, and (e) friend support. The five subscales were derived from the SPA-R2 and each subscale served as a single, individual variable (Jeffreys, 2004, 2007a, 2012).

To address RQ4, I used inferential analyses to identify statistical significance between categorical independent variables, which were student profile characteristics and one continuous dependent variable, which was the overall summed score of questionnaire items on the SPA-R2 (Creswell, 2012; Fowler, 2002, 2009, 2013; Hoskins & Mariano, 2004; Jeffreys, 2004, 2012). The categorical independent variables on the modified DDS-P were: (a) gender; (b) age; (c) ethnicity; (d) English as a first language; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly (Jeffreys, 2004, 2012). Response choices were continuous, dependent variables based on the questionnaire items from the SPA-R2, which have a 6-point Likert-type scale: 1 (*did not apply*), 2 (*severely restricted*), 3 (*moderately restricted*), 4 (*did not restrict or support*), 5 (*moderately supported*), and 6 (*greatly supported*). I tabulated an overall score for the dependent variable.

A *t*-test was appropriate because there were only two means or categories, such as gender and English as the first language (Pedhazur & Schmelkin, 1991; Polit, 1996,

2010). ANOVA was appropriate for variables comprised of more than two categories, such as age, race and ethnicity, marital status, number of dependents, and number of hours employed weekly (Pedhazur & Schmelkin, 1991; Polit, 1996, 2010). I tabulated the mean, frequency, and percentage of the responses for each of the student profile characteristics. The bivariate analysis allowed for hypothesis testing between the means of the survey responses. Using SPSS, I used the Levene test for homogeneity of the group variances (Polit, 2010). I rejected the null hypothesis if there were significant differences among the first-semester ASN students in their perceptions of factor that influence persistence. Table 2 shows the data analyses by research design, and includes the instrument, participants' semester, research questions, and variables in the qualitative and quantitative approaches.

Table 2

Data Analysis by Research Designs

Research Approach	Instrument	Participants' Semester	Research Questions	Data Analysis	Variables
Qualitative	Interviews	3, 4, and 5	RQ 1	Thematic	
			RQ 2	Thematic	
Quantitative	Surveys	1	RQ 3	Ordering scheme ranked by descriptive statistics (mean and percentage from highest to lowest)	Single variable based on: (a) Environmental factors, (b) Institutional interaction and integration factors, (c) Personal academic factors, (d) College academic facilities, and (e) Friend support
			RQ 4	*t*-test and ANOVA	Dependent variable- overall score of the questionnaire responses Independent variable- student profile characteristics

Systems for Keeping Track of Data

I saved emails exchanged between students, officials in Walden University, officials in the study setting, and myself. Such email correspondences included information about consent forms, electronic invitations, and arrangements to conduct interviews. The email system used by the study setting did not contain actual data from the interviews. For validity, I used member checking via mail or personal email, in which the participants verified the accuracy of their interview transcripts and field notes

to make sure I recorded their input correctly (Creswell, 2012; Maxwell, 2005, 2013). I saved the emails between my Walden University-issued email address and the participants' personal email address, which contained information based on the interview transcripts and my notes.

I used a research journal to perform thematic analysis of transcribed interviews from the qualitative approach. I audio-recorded the interviews and took reflective notes during the interviews. I included the notes from the interviews and member checking process in the research journal. I typed the journal entries and interview notes and saved the data as password-protected, Microsoft Word files. I conducted data analysis daily to maintain the integrity of the interview. I concealed the participants' identities by using aliases and numbers to organize the interview transcripts. Color-coding and labeling the interview transcripts aided in comparing the codes between participants. I conducted coding on the same day as the interview to maintain the integrity of the data collection. I then consolidated, analyzed, and sorted the codes based on similarity. I stored raw, hard copies of data from the interview process in a locked desk in my home office.

Upon completion of quantitative data collection, I stored raw data from the Internet surveys on a USB drive. Electronic devices were password protected and stored in a locked desk in my home office, in which only I had access to. I compared the interview responses to the survey responses and document findings in a research journal. However, as a backup source, I transcribed written notes into electronic files in the form of a qualitative and quantitative, data triangulation chart.

I will maintain the data for five years and then will be permanently delete the data from my MacBook laptop computer. Additionally, I will physically destroy the USB flash drive containing back-up files. I will also restore the MacBook to factory settings. I will shred the hard copies of any information in a secure shredding bin. I will maintain records of when and how the documents are destroyed.

Results

Qualitative Sequence

I organized the qualitative results by listing the themes and by including summaries and quotes of participants' responses. Twelve participants discussed supportive and restrictive factors that influenced persistence to graduation, in addition to advice that they would impart to incoming ASN students. The participants' identities are confidential; therefore, I used randomly selected numbers and letters to organize the participants. This section addresses the following research questions:

RQ1: Using thematic analysis, what are final-year ASN students' perceptions of factors that influence persistence to graduation?

Using thematic analysis of 12 interviews, the emergent factors that influenced persistence were family, peer, and financial support, modification of study habits, and personal motivation. To derive themes from the interview data, I reviewed the transcripts and recordings. Using the transcripts, I highlighted and grouped the commonalities among the transcripts to triangulate the data.

Overall, participants perceived that having supportive family members and peers were two factors that positively influenced persistence to graduation. Participants 1MD,

3CC, 6LM, and 10AW shared the same perception that family was needed for childcare. For example, Participant 10AW shared, "I don't know how I would manage school if my daughter didn't live with my parents." Participants 1MD and 4CJ agreed that peers are similar to supportive family members. In regards to peers, Participant 1MD stated, "They become your family." Participant 4CJ concurred, "You see them more than your own family."

Employment was a factor that generated mixed perceptions. Most participants perceived that there was not enough time to work and study, and overall participants perceived that employment would have negatively influenced persistence to graduation. Although two participants worked during their studies, most participants perceived that financial support from family and financial aid were a necessity. Participant 1MD sternly stated, "There isn't time to work; you can't work." Participant 6LM paused and shared, "I thought about… welfare. I can't work, I'm supporting my husband and mom. I don't make enough as a tutor in school."

Participants perceived that the modification of study habits was aligned with the factor of personal motivation. Participant 4CJ sternly stated, "You know if you're going to make it from the beginning. You have to change how you study, but that is based on your drive." Concerning the influence of motivation on the persistence to graduation, Participant 2SJ repeatedly stated, "It's based on you." Similarly, Participant 7SO expressed, "You have to study; you have to be motivated."

RQ2: Using thematic analysis, what have final-year students experienced in terms of successful persistence strategies in the ASN program?

Theme 1- Family support. Having a supportive family successfully aided in the persistence to graduation, because family members were needed to maintain the household, childcare, and finances. Additionally, participants expressed that certain family members stated that time was consumed by school. However, family members became a support system at times where participants felt overwhelmed with the workload. Certain participants lived with their parents and significant others, many of whom did not have experience in nursing education, but aided with nonacademic factors.

Participant 1MD elaborated on how family aided in success to graduation by stating, "My husband drove me to class when I was pregnant, slept in the parking lot while I was in class, and he helps to take care of our kids when I'm not home." Participant 3CC expressed similar views on childcare, "There were days I took the girls to the library, when I had to study in the mock labs... Mainly, my parents and sister help to take care of the girls while I'm in class." Participant 5OG added, "Your little ones will have to grow up faster. Your older ones will have to help out with the little one. Your husband will have to be both mom and dad." Participant 6LM similarly shared, "My mom, husband, and sister help take care of son when I have class." Participant 9DP stated, "As a newlywed, my husband has been my rock. I've known him since middle school; he's been my best friend; so, he has been there since before nursing school even started. His family is also very supportive. It has been hard planning a wedding and going to school, but everyone understood." Participant 10AW stated, "My parents took care of my daughter during the first year. Now, I live with a roommate but my daughter still lives with my parents."

Theme 2- Peer support. Support from peers was a supportive factor in persistence to graduation. Participants expressed that fellow students understood different factors in the persistence to graduation within the nursing program. Fellow students become the ones that the participants interact and study with mostly, forging a mutualistic symbiotic relationship. Participant 1MD stated, "Your classmates become family; you study together and they become your shoulder to cry on." Participant 2SJ added, "We all understand what each other is going through." Participant 4CJ concurred and stated, "The people in your class are the ones you will be hanging out with all of the time. You will eat together, you will study together, they're your support system, and that's really important to have."

Theme 3- Financial support. Financial support, whether through family or employment, aided participants in persistence. Working outside of school was mostly seen as restrictive; and participants expressed that it was necessary to have a decreased off-campus workload. Those who were still employed worked part-time; however, most participants revealed that they used student loans and required aid from their families to persist to graduation. Participant 1MD addressed financial aid and stated, "I'm lucky I didn't need loans; I got scholarships, so that's one thing I didn't have to worry about." Participants cited that there was not enough time to work and go to school, because most time was dedicated to studying. Participant 4CJ stated, "There's literally no time to work, so my family has to help me out." Participant 5OG elaborated on how they would advise students who ask about work. Participant 5OG stated, "I'm not going to tell you

not to work if I'm not putting food on your table. But when you're in nursing, you just don't have the time."

Participants 8MR and 11DH had similar contrary statements concerning working outside of school. Participant 8MR did not find a restrictive issue in working and attending nursing school and enthusiastically stated, "I work part-time in the hospital, so school helps me to understand what's going on at work. It gives me experience so I am not totally lost during clinicals." Participant 11DH stated, "Well, I work at a doctor's office, so I kind of know what is going on in class. I took a semester off and so when I came back, things clicked."

Theme 4- Modification of study habits. All the participants firmly stated that students must adjust their learning and study habits to satisfy the nursing program. Each topic and course may require different study techniques. Additionally, participants were adamant on the view that students must understand how they learn, as an individual. A study-buddy system was suggested by Participant 4CJ, "It's good to have a study buddy because you're in the same classes and learning the same things." Falling behind on reviewing the course material was perceived as a restrictive factor, which was seen as the students' responsibility. Participant 4CJ assertively stated, "As soon as you know you're in the program, you have to read ahead. As soon as you finish a chapter, you have to review your notes, rewrite them, and then keep reading because you cannot fall behind." Participant 6LM concurred with and expanded upon that notion, stating that, "Okay, number one thing is to read ahead. Nursing is about comprehension, not memorization. A lot of times in nursing we wait too long to read and we get stuck, and that's the worst."

Study habits involved other factors, such as study materials and commute time. Participant 2SJ stated, “Although I never had to use public transportation, I don’t think it’s a disadvantage. People I know in the nursing program said that they can study on the bus or train.” Participants 1MD, 4CJ, 5OG, 8MR, and 12SC suggested recording the lectures, investing in notecards and rewriting notes. Participant 6LM added, “By reading ahead, going to class, and hearing the lecture, you connect the dots.” Participant 12SC specifically stated, “Hard copies of the textbooks help me, personally, and playing the recorded lectures while driving.”

Theme 5- Personal motivation. Self-motivation was perceived as supportive, but without the ability to encourage oneself, persisting to graduation seemed unlikely. Participants had similar views on knowing early on if they could persist and pursue nursing as a career. All participants referred to students knowing whether the program was for them, and some participants stated that this realization occurred during the first semester. The tone of the participants was either assertive or somber when stating that students will know immediately if this program is for them. There was also a shared notion that students may not be prepared for a program with high rigor.

Participant 4CJ stated, “You know if this is for you during the first class.” However, Participant 8MR shared that this realization came earlier and stated, “You know if you’re going to make it during the prereqs before you even get in.” There was a shared idea that the first year resulted in many students withdrawing from the program. The participants agreed that nursing is a rigorous degree path and career that not everyone can manage. Specifically addressing the nursing program, participants

expressed that students knew if they had the motivation to study, found the courses interesting despite the rigor, and had the time to dedicate to the program. Participant 2SJ stated, "This is a weed-out process. Like, you'll know if you can handle nursing." Participant 3CC stated, "Nursing school is hard; not everyone can cut it." In regards to the profession, participants expressed that students must understand that the field is demanding. Concerning a career as a nurse, Participant 1MD sternly stated, "You won't have time to go to the bathroom, you won't have time to sleep, you won't have a minute to eat." Participant 7SO concurred and stated, "If students think this is hard, wait until you're a nurse. You have to know everything."

The sacrifices made in the program were reiterated, such as sacrificing family and friend time, sleep, and personal time. Some participants stated that students should manage stress and health issues. Participant 1MD shared, "My hair was falling out. You have to take care of yourself. You have to take care of your health." Participants concurred that those who persist adjust their lives to overcome different obstacles, on top of being motivated to study and dedicate many hours to the program. Participant 6LM shared in a somber tone, "You just have to push yourself, and sometimes you don't have help. Look at me, my mom died, and I had to keep going by myself at times." Similarly, Participant 11DH shared, "I had personal problems- a death in the family- so I fell behind. But once I started studying again, I knew how to study better." Participant 7SO firmly stated, "You just have to do it, you just have to study and get through it. It's hard but it comes down to you." Overall, the perception was that personal motivation was a main driving force in persistence to graduation.

Quantitative Sequence

Descriptive analysis. *RQ3:* As measured by the SPA–R2 survey, what are the first-semester ASN students' perceptions of factors that influence persistence to graduation?

I used descriptive analyses to examine the responses to the SPA-R2, which was based on a 6-point Likert-type scale: 1 (*did not apply*), 2 (*severely restricted*), 3 (*moderately restricted*), 4 (*did not restrict or support*), 5 (*moderately supported*), and 6 (*greatly supported*; Jeffreys, 2004, 2012). Using mean calculations, the scores ranging from 5 to 6 indicate that factor items moderately or greatly support persistence to graduation. Scores ranging from 2 to 3 indicate that factor items severely or moderately restrict persistence to graduation. Out of 138 students, 95 students participated in the study by clicking *Agree,* for a total of 68.84% participation rate. However, only 91 students submitted a completed SPA-R2 survey, with the exception the encouragement by friends within the class item. Descriptive analysis showed that personal study skills, nursing laboratory skills, encouragement by friends within classes, personal study hours, academic performance, encouragement by friends outside of classes, faculty advisement and helpfulness, family emotional support, nursing student peer mentoring and support, and nursing student support services were perceived as supportive. The item responses are ranked by mean (see Table 3).

Table 3

SPA-R2 Responses Ranked by the Order of the Factor Means

	Mean	SD
Personal study skills	5.76	0.52
Nursing skills laboratory	5.70	0.50
Personal study hours	5.66	0.74
Encouragement by friends within classes	5.66	0.72
Academic performance	5.65	0.64
Encouragement by friends outside of classes	5.58	0.88
Faculty advisement and helpfulness	5.51	1.00
Family emotional support	5.49	1.13
Nursing student peer mentoring and support	5.46	1.03
Nursing student support services	5.04	1.41
Family financial support for school	4.95	1.61
Living arrangements	4.71	1.39
Transportation arrangements	4.59	1.56
Financial aid and/ or scholarship	4.43	1.87
Class schedule	4.20	1.44
College library services	4.05	2.10
Financial status	4.05	1.44
College tutoring services	3.67	2.18
College computer laboratory service	3.57	2.21
College counseling services	3.08	2.13
Family responsibilities	3.07	1.53
Membership in nursing club or organization	2.55	1.96
Nursing professional events	2.51	1.78
Child-care arrangements	2.40	1.63
Employment responsibilities	2.19	1.70
Hours of employment	2.03	1.55
Family crisis	2.00	1.11

Note. $N = 91$ for all factors except for encouragement by friends within the classes, where $N = 90$.

Descriptive analysis of frequency and percentage revealed that personal study skills factor received the highest percentage (79.12%). The family crisis factor received one response and the lowest percentage (1.10%) for the perception of greatly supporting persistence to graduation and the highest percentage for severely restricted (26.37%).

Table 4 shows the items ranked by descending percentage based on the participants' perception of the factors using the 6-point Likert-type scale: 1 (*did not apply*), 2 (*severely restricted*), 3 (*moderately restricted*), 4 (*did not restrict or support*), 5 (*moderately supported*), and 6 (*greatly supported*; Jeffreys, 2004, 2012).

Table 4

SPA-R2 Items Ranked by Percentage

Item	1	2	3	4	5	6
Personal study skills	0.00	0.00	1.10	1.10	18.68	79.12
	0	0	1	1	17	72
Personal study hours	0.00	1.10	2.20	3.30	16.48	76.92
	0	1	2	3	15	70
Nursing skills laboratory	0.00	0.00	0.00	2.20	25.27	72.53
	0	0	0	2	23	66
Encouragement by friends within classes	1.11	0.00	0.00	3.33	22.22	73.33
	1	0	0	3	20	66
Encouragement by friends outside of school	2.20	0.00	0.00	4.40	21.98	71.43
	2	0	0	4	20	65
Academic performance	0.00	0.00	2.20	2.20	24.18	71.43
	0	0	2	2	22	65
Family emotional support	4.40	1.10	0.00	1.10		68.42
	4	1	0	1	20	65
Faculty advisement and helpfulness	2.20	1.10	1.10	5.49	19.78	70.33
	2	1	1	5	189	64
Nursing student peer mentoring and support	3.30	0.00	0.00	7.69	21.98	67.03
	3	0	0	7	20	61
Family financial support for school	8.79	1.10	12.09	1.10	18.68	58.24
	8	1	11	1	17	53
Nursing student support services	7.69	0.00	2.20	14.29	21.98	53.85
	7	0	2	13	20	49
Transportation arrangements	4.40	3.30	28.57	1.10	17.58	45.05
	4	3	26	1	16	41
Living arrangements	1.10	4.40	21.98	12.09	15.38	45.05
	1	4	20	11	14	41
College library services	29.67	0.00	0.00	16.48	13.19	40.66
	27	0	0	15	12	37
Financial aid and/ or scholarship	19.78	1.10	4.40	2.20	36.26	36.26
	18	1	4	2	33	33
College tutoring services	37.36	0.00	2.20	13.19	13.19	34.07
	34	0	2	12	12	31
College computer laboratory service	39.56	1.10	1.10	13.19	10.99	34.07
	36	1	1	12	10	31

Table 4 continued

Item	1	2	3	4	5	6
Class schedule	0.00	9.89	37.36	4.40	19.78	28.57
	0	9	34	4	18	26
Financial status	0.00	10.99	42.86	1.10	19.78	25.27
	0	10	39	1	18	23
College counseling services	48.35	0.00	3.30	15.38	9.89	23.08
	44	0	3	14	9	21
Nursing club/organization membership	59.34	0.00	3.30	15.38	9.89	23.08
	54	0	0	19	6	12
Family responsibilities	21.98	10.99	31.87	19.78	4.40	10.99
	20	10	29	18	4	10
Child-care arrangements	48.35	8.79	17.58	13.19	4.40	7.69
	44	8	16	12	4	7
Nursing professional events	56.04	0.00	1.10	30.77	4.40	7.69
	51	0	1	28	4	7
Employment responsibilities	61.54	5.49	6.59	12.09	7.69	6.59
	56	5	6	11	7	6
Hours of employment	63.74	5.49	8.79	12.09	5.49	4.40
	58	5	8	11	5	4
Family crisis	43.96	26.37	17.58	10.99	0.00	1.10
	40	24	16	10	0	1

Note. Analysis based on $N = 91$.

Both tables showed the data that personal study skills ranked highest among the mean, frequency, and percentage of responses as a greatly supportive factor. Similar to previous studies, family, peer, and faculty support and motivation were seen as supportive factors for nursing students (Bergman et al., 2014; Jeffreys, 2002, 2003, 2004, 2007a, 2012; Karsten & DiCicco-Bloom, 2014; Knight et al., 2012; Lewis, 2005; Mckendry et al., 2014; Raman, 2013; Wray et al., 2012). Family crisis, employment responsibilities, child-care arrangements, and hours of employment ranked lower on the ordering scheme in both tables. Nursing professional events and membership in nursing club or organization were perceived as restrictive, although 31.58% and 21.05% of

participants, respectively, perceived that those two factors did not apply. Concurrent with previous studies, family crisis, hours of employment, employment responsibilities, child-care arrangements were perceived as more restrictive (Bergman et al., 2014; Harris et al., 2014; Hinscliff-Smith et al., 2012; Huie et al., 2014; Jeffreys, 2004, 2007a, 2012; Morrison & McNulty, 2012; Schrum, 2012; Shelton, 2012).

RQ4: As measured by the SPA–R2 and modified DDS-P, what are the differences among first-semester ASN students in their perceptions of factors that influence persistence to graduation by: (a) gender; (b) age; (c) ethnicity; (d) English as a first language; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly?

$H_0$4: There is no difference among the first-semester ASN students in their perceptions of factors that influence persistence by: (a) gender; (b) age; (c) ethnicity; (d) English as a first language; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly.

H_a4*:* There is a difference among the first-semester ASN students in their perceptions of factors that influence persistence by: (a) gender; (b) age; (c) ethnicity; (d) English as a first language; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly.

First, I conducted descriptive analysis through *SurveyMonkey*, to organize the responses to the DDS-P items. Although 95 participants selected *Agree*, only 92 participants submitted answers in regards to gender and 94 participants submitted answers to the remaining DDS-P items.

The age categories were: *under 25, 25 to 29, 30 to 34, 35 to 39, 40 to 44, 45 to 49, 50 to 54, 55 to 59,* and *60 and over*. The ethnicity categories were: *American Indian or Alaskan Native, Asian, other Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Pacific Islander, White, Multiracial,* and *Other*. The marital status categories were: *single, single living with partner, married, divorced/separated,* and *widowed*. The number of dependents at home ranged from none to five or more. The number of hours employed off-campus ranged from none to 40 or more.

Most of the participants were women (78.26%). Participants ranging from 30-34 years of age comprised 27.66% of the study. Black or African American participants comprised 30.85% and White participants comprised 25.53% of the study. For 67.02% of the participants, English was their first language. Regarding marital status, 28.72% of participants were single and 45.74% of participants were married. Responses were distributed among the number of dependent children in the household. Of the highest frequency and percentage of responses, 41.49% reported not having dependent children and 22.34% reported having two children in the household. The majority (72.34%) of participants reported not working off-campus. In Table 5, the responses are organized by category, frequency, and percentage.

Table 5

Student Profile Demographics using the DDS-P Questionnaire

Category		Frequency	Percentage
Gender			
	Female	72	78.26
	Male	20	21.74
Age			
	Under 25	7	7.45
	25 to 29	19	20.21
	30 to 34	26	27.66
	35 to 39	21	22.34
	40 to 44	10	10.64
	45 to 49	6	6.38
	50 to 54	3	3.19
	55 to 59	1	1.06
	60 and over	1	1.06
Ethnicity			
	American Indian or Alaskan Native	0	0
	Asian	11	11.70
	Other Asian	1	1.06
	Black or African American	29	30.85
	Hispanic or Latino	19	20.21
	Native Hawaiian or Pacific Islander	1	1.06
	White	24	25.53
	Multiracial	8	8.51
	Other	1	1.06
English as a First Language			
	Yes	63	67.02
	No	31	32.58
Marital Status			
	Single	27	28.72
	Single living with partner	11	11.70
	Married	43	45.74
	Divorced/Separated	11	11.70
	Widowed	2	2.13

Table 5 continued

Category		Frequency	Percentage
Dependent Children at Home			
	None	39	41.43
	1	17	18.09
	2	21	22.34
	3	10	10.54
	4	4	4.26
	5 or more	3	3.16
Employment Hours Off-Campus			
	None	68	72.34
	1 to 10	11	11.70
	11 to 20	7	7.45
	21 to 30	2	2.13
	31 to 40	4	4.26
	40 or more	2	2.13

Note. Analysis is based on $N = 91$.

Inferential analysis via *t*-test. To address the hypotheses from *RQ4*, I used SPSS version 21.0 for inferential analyses. Given $\alpha = 0.05$ (two-sided), the *t*-test was used to analyze gender and English as a first language responses; whereas ANOVA was used to analyze age, ethnicity, marital status, the number of dependent children in the household, and employment hours off-campus responses. Per the NURS model, five subscales were used to organize 27 items on the SPA-R2 survey: environmental factors, institutional interaction and integration factors, personal academic factors, college academic facilities, and friend support (Jeffreys, 2004, 2007a, 2012; Tinto, 1975). Therefore, I conducted five *t*-tests to find any differences among the first-semester ASN student's perceptions of factors that influence persistence and demographics. Of the 27 items, 22 items were found on the original Student Perception Appraisal-2 (SPA-2)-

Posttest (Jeffreys, 2012). I added and analyzed five additional items separately: *family crisis, child-care arrangements, employment responsibilities, hours of employment,* and *membership in a nursing club or organization*. Table 6 illustrates the subscales for the 22-item SPA-2-Posttest (Jeffreys, 2012).

Table 6

Items and Subscales of Factors

Item	Factor Subscale
	Environmental
Family responsibilities	
Family emotional support	
Family financial support for school	
Financial aid and scholarships	
Financial status	
Transportation arrangements	
Living arrangements	
	Institutional integration
Faculty advisement and helpfulness	
Nursing student peer mentoring and support	
Nursing student support services	
Nursing professional events	
College tutoring services	
College counseling services	
	Personal academic
Personal study skills	
Personal study hours	
Class schedule	
Academic performance	
	College academic
College library services	
Nursing skills laboratory	
College computer laboratory service	
	Friend support
Encouragement by friends outside of school	
Encouragement by friends within classes	

Inferential analysis between factor perception and gender. For the five subscales, I calculated the means of the 22 items within each factor subscale to conduct the *t*-test for differences in factor perception by gender. The number of female participants ($n = 69$) differed for the friend support item ($n = 68$), where an item response was omitted. The results of the independent *t*-test for *RQ4* revealed that there was a statistically significant difference in the means of perception of the environmental factor between female and male participants. The mean of the female participants ($M = 4.3561$, $SD = .78385$) was different than the mean of the male participants ($M = 4.8143$, $SD = .70001$). The mean of the male participants was higher than the mean for the female participants; therefore, the environmental factor was perceived as more supportive by the male participants.

There was a statistically significant difference in the means of perceptions of the personal academic factor and between female and male participants. The mean of the female participants ($M = 5.2319$, $SD = .61733$) was different than the mean of the male participants ($M = 5.5875$, $SD = .52738$). The mean of the male participants was higher than the mean of the female participants; therefore, the male participants perceived the personal academic factor as more supportive than the female participants. Table 7 depicts the different means of factor perception between male and female participants.

Table 7

Difference in Factor Perception by Gender

Factor Subscale	Gender	*n*	Mean	SD
Environmental	Female	69	4.3561	.78385
	Male	20	4.8143	.70001
Institutional integration	Female	69	4.1353	1.06729
	Male	20	4.4917	.87103
Personal academic	Female	69	5.2319	.61733
	Male	20	5.5875	.52738
College academic	Female	69	4.4106	1.29118
	Male	20	4.5667	1.45939
Friend support	Female	68	5.5956	.72923
	Male	20	5.7000	.47016

With the environmental factor, I rejected the null hypothesis because there was a significant difference in the means between the two groups, $t(87) = -2.354$, $p = .021$, $d = .616595$, 95% CI[-.84499, -.07137]. With the personal academic factor, I rejected the null hypothesis because there was a significant difference in the means between both groups, $t(87) = -2.338$, $p = .022$, $d = .619383$, 95%CI[-.65789, -.05334]. Table 8 depicts the significant difference among the environmental and personal academic factors between genders.

Table 8

Independent Samples t-test Results by Gender

Factor Subscale	*t*	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Environ-mental	-2.354	87	.021	-.45818	.19461	-.84499	-.07137
Institutional integration	-1.366	87	.176	-.35640	.26097	-.87511	.16231
Personal academic	-2.338	87	.022	-.35562	.15208	-.65789	-.05334
College academic	-.462	87	.645	-.15604	.33769	-.82724	.51516
Friend support	-.603	86	.548	-.10441	.17311	-.44854	.23972

Inferential analysis between factor perception and English as a first language.

For the five subscales, I calculated the means of the 22 items within each factor subscale to conduct the *t*-test for differences in factor perception by English as a first language. The results of the independent *t*-test for *RQ4* revealed that there was not a statistically significant difference in the means of perception of the five factor subscales between participants who did and did not speak English as a first language (see Table 9).

Table 9

Difference in Factor Perception by English as a First Language

Factor Subscale	English as a first language	*n*	Mean	*SD*
Environmental	Yes	60	4.5595	.79443
	No	31	4.2995	.74080
Institutional integration	Yes	60	4.2889	1.06602
	No	31	4.0591	.93645
Personal academic	Yes	60	5.3083	.65962
	No	31	5.3306	.51796
College academic	Yes	60	4.6333	1.28397
	No	31	4.0753	1.29874
Friend support	Yes	59	5.6864	.63584
	No	31	5.4839	.73580

Table 10 depicts that there was not a significant difference within each subscale; therefore, factor perception did not differ by the demographic of English as a first language.

Table 10

Independent Sample t-test Results by English as a First Language

Factor Subscale	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Environmental	1.513	89	.134	.25998	.17181	-.08140	.60137
Institutional integration	1.014	89	.313	.22975	.22654	-.22038	.67988
Personal academic	-.164	89	.870	-.02231	.13615	-.29283	.24821
College academic	1.957	89	.053	.55806	.28511	-.00844	1.12457
Friend support	1.360	88	.177	.20257	.14898	-.09349	.49863

Data analysis via ANOVA. I conducted a series of one-way between subjects ANOVA to compare age, ethnicity, marital status, number of dependent children in the

household, and number of hours employed demographics to the environmental, institutional interaction and integration, personal academic, college academic facilities, and friend support factor subscales. I used descriptive analysis to compare means and derive what factors were supportive and restrictive by demographics. Participants responses were based on a 6-point Likert-type scale: 1 (*did not apply*), 2 (*severely restricted*), 3 (*moderately restricted*), 4 (*did not restrict or support*), 5 (*moderately supported*), and 6 (*greatly supported*; Jeffreys, 2004, 2012). Then, I used the multivariate general linear model to calculate *df*, *F*, *p*, and η^2.

Descriptive analysis of age and factor subscales. I compared the means of the nine age-group to analyze the perceptions of the five factor subscales. The conditions were: *under 25*, *25 to 29*, *30 to 34*, *35 to 39*, *40 to 44*, *45 to 49*, *50 to 54*, *55 to 59*, and *60 and over*. The appendix depicts the mean score comparison between age groups and the five factor subscales. Within the environmental factor subscale, $M = 5.2143$ for the 45 to 49 age group was greater than $M = 4.1837$ for the under 25 age group and $M = 4.1714$ for the 35 to 39 age group. Therefore, the 45 to 49 age group perceived the environmental factor subscale as more supportive than the under 25 and 45 to 49 age groups.

Within the institutional integration subscale, $M = 4.9167$ for the 45 to 49 age group, which was greater than $M = 3.0000$ for the 60 and over age group. The 60 and over age group one had one participant; however, $M = 3.5475$ for the 25 and under age group and $M = 3.9750$ for the 35 to 39 age group. Therefore, the 45 to 49 age group perceived the institutional integration factor subscale as more supportive than the under 25, 45 to 49, and 60 and over age groups.

Within the personal academic factor, the means of all age groups exceeded 5, indicating that this factor was moderately supportive. Age groups 55 to 59 (M = 5.7500) and 60 and over (M = 5.5000) had high means but only yielded one participant. The 45 to 49 age group (M = 5.6250) found the personal academic factor more supportive than the under 25 (M = 5.0714) and 35 to 39 age groups (M = 5.0875).

Within the college academic factor, age groups 55 to 59 (M = 6.0000) and 60 and over (M = 5.6667) had high means but only yielded one participant. The 45 to 49 age group (M = 5.6250) found the personal academic factor more supportive than the 25 to 29 (M = 4.0185) and 35 to 39 age groups (M = 4.0333). Similarly, within the friend support subscale, age groups 55 to 59 (M = 6.0000) and 60 and over (M = 6.0000) had high means but only yielded one participant. Within the friend support factor, the means of ages 25 through 54 exceeded 5, indicating that this factor was moderately supportive. The 45 to 49 age group (M = 5.8333) found the personal academic factor more supportive than the under 25 (M = 4.9286) age group.

Inferential analysis of age and factor subscales. Using the nine age-groups, I used the p value to determine if there were significant differences among factor perceptions. There was not a significant difference between age and the perception of five factor subscales at the $p < .05$ level for the nine age group conditions. Age did not make a difference in how participants perceived the persistence factors as supportive or restrictive. I failed to reject the null hypothesis (see Table 11).

Table 11

ANOVA Results for Age and Factor Subscales

Factor	*Df*	*F*	Sig.	η^2
Environmental	(8, 82)	1.585	.142	.144
Institutional integration	(8, 82)	1.551	.153	.139
Personal academic	(8, 82)	1.011	.435	.092
College academic	(8, 82)	1.321	.245	.114
Friend support	(8, 81)	1.180	.322	.104

Note. The *df* values indicate between and within groups, respectively.

Descriptive analysis of ethnicity and factor subscales. Second, I compared the nine ethnicity group conditions to the perceptions of the five factor subscales. The nine ethnicity groups were: *American Indian or Alaskan Native, Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai), other Asian, Black or African American, Hispanic or Latino, Native Hawaiian or other Pacific Islander, White, Multiracial,* and *Other*. The appendix depicts the mean score comparison between ethnicity groups and the five factor subscales.

Within the environmental factor, the Other Asian (M = 5.000) and Other (M = 4.8333) group perceptions were greatest among the ethnicity groups. However, the Other Asian and Other ethnicity groups only yielded one participant each. The Black or African American group perception (M = 4.2931) was lower than the White group perception (M = 4.5217). Therefore, the environmental factor was perceived as more supportive among the White ethnicity group than among the Black or African American group.

Within the institutional integration factor, the Other Asian group perception (M = 5.6667) was greatest and the Other group perception (M = 2.5000) was lowest among the ethnicity groups. Like the environmental factor, the Other Asian and Other ethnicity groups only yielded one participant each. The Multiracial group perception (M = 4.5238) was greater than the Hispanic or Latino group perception (M = 3.9167). Therefore, the institutional integration factor was perceived as more supportive among the Multiracial ethnicity group than among the Hispanic or Latino group.

Within the personal academic factor, the Other group perception (M = 5.7500) was highest among the ethnicity groups, but only yielded one participant. The Native Hawaiian or Other Pacific Islander group perception (M = 4.7500) was lowest among the ethnicity groups, but only yielded one participant. The Multiracial group perception (M = 5.5000) was greater than the Black or African American group perception (M = 5.2328). Therefore, the personal academic factor was perceived as more supportive among the Multiracial ethnicity group than among the Black or African American group.

Within the college academic factor, the Other Asian group perception (M = 6.0000) was greatest, but only yielded one participant. The Hispanic or Latino and Other group perceptions were lowest (M = 4.0000), although the Other group one had one participant. Overall, the Multiracial group perception (M = 4.9048) was greater than the Hispanic or Latino group perception; and therefore, the Multiracial group perceived the college academic factor as more supportive.

Within the friend support factor, the Other Asian, Multiracial, and Other groups yielded the highest means (M = 6.0000); however, the Other Asian and Other ethnicity

groups only yielded one participant each. The Native Hawaiian or Other Pacific Islander group perception (M = 4.0000) was lowest among the ethnicity groups, but only yielded one participant. The Multiracial group perception was greater than the Hispanic or Latino group perception (M = 5.5278). Overall, the Multiracial group perceived the friend support factor as more supportive.

Inferential analysis of ethnicity and factor subscales. American Indian or Alaskan Native did not have any responses. Differences in ethnicity groups did not make a difference in how the participants perceived the persistence factors as supportive or restrictive. There was not a significant difference between ethnicity and the perception of five factor subscales at the $p < .05$ level for the nine ethnicity group conditions. Therefore, I failed to reject the null hypothesis (see Table 12).

Table 12

ANOVA Results for Ethnicity and Factor Subscales

Factor	*df*	*F*	Sig.	η^2
Environmental	(7, 83)	.254	.970	.019
Institutional integration	(7, 83)	1.041	.409	.082
Personal academic	(7, 83)	.357	.924	.029
College academic	(7, 83)	.660	.705	.053
Friend support	(7, 82)	1.516	.173	.115

Note. The *df* values indicate between and within groups, respectively. The friend support factor violated the test of homogeneity of variance.

Descriptive analysis of marital status and factor subscales. Next, I compared the five marital status groups to the five factor subscales. The five marital status groups

were: *single, single living with partner, married, divorced or separated*, and *widowed*. The appendix depicts the mean score comparison between marital status groups and the five factor subscales.

The married group (M = 4.4837) perceived the environmental factor as more supportive than the divorced or separated group (M = 3.9091). The married group (M = 4.4309) perceived the institutional integration factor as more supportive than the single group (M = 3.9551). The married group (M = 5.3598) perceived the personal academic factor as more supportive than the widowed group (M = 4.6250). The widowed group (M = 5.0000) perceived the college academic factor as more supportive than the single living with partner group (M = 3.9697). Although each marital status group perceived the friend support factor as supportive, the widowed group (M = 6.0000) perceived the friend support factor as more supportive than the single group (M = 5.5000).

Inferential analysis of marital status and factor subscales. There was not a significant difference between marital status and the perception of five factor subscales at the $p < .05$ level for the five marital status conditions. Differences in marital status did not make a difference in how participants perceived persistence factors as supportive or restrictive; therefore, I failed to reject the null hypothesis (see Table 13).

Table 13

ANOVA Results for Marital Status and Factor Subscales

Factor	df	F	Sig.	η^2
Environmental	(4, 86)	1.162	.341	.054
Institutional integration	(4, 86)	.933	.449	.047
Personal academic	(4, 86)	1.197	.318	.053
College academic	(4, 86)	.828	.511	.037
Friend support	(4, 85)	1.180	.794	.019

Note. The *df* values indicate between and within groups, respectively.

Descriptive analysis of the number of dependent children and factor subscales. Then, I compared the six groups of number of dependent children in the household with the five factor subscales. The six groups were: *none*, *one*, *two*, *three*, *four*, and *five or more*. The appendix depicts the mean score comparison between the number of dependent children in the household and the five factor subscales.

Participants with five or more children in the household (M = 4.8333) perceived that the environmental factor was more supportive than the participants with two (M = 4.0397) or four children (M = 4.0417). Participants with three children (M = 4.6667) perceived that the institutional integration factor was more supportive than the participants with two children (M = 3.8889). The personal academic factor was perceived as supportive throughout each group. Participants who did not have children (M = 5.4671) perceived that personal academic factor as more supportive than the participants with five or more children (M = 5.1250). Participants with five or more children (M = 4.6667) perceived the college academic factor as more supportive than

students with two children (M = 3.9365). The friend support factor was perceived as supportive within each group. The participants with five or more children (M = 6.000) perceived that the friend support factor was more supportive than participants with no children (M = 5.5263).

Inferential analysis of the number of dependent children and factor subscales. There was not a significant difference between the number of dependent children in the household and the perception of five factor subscales at the $p < .05$ level for the six conditions. The number of dependent children in the household did not make a difference in the perception of the persistence factors as supportive or restrictive; therefore, I failed to reject the null hypothesis (see Table 14).

Table 14

ANOVA Results for Number of Dependent Children and Factor Subscale

Factor	*df*	*F*	Sig.	η^2
Environmental	(5, 85)	1.587	.173	.083
Institutional integration	(5, 85)	.928	.467	.065
Personal academic	(5, 85)	.877	.500	.049
College academic	(5, 85)	.887	.494	.050
Friend support	(5, 84)	.551	.737	.032

Note. The *df* values indicate between and within groups, respectively.

Descriptive analysis of the number of hours employed and factor subscales. Lastly, I compared the six groups of the number of hours employed weekly off campus with the five factor subscales. The six groups were: *none, 1 to 10, 11 to 20, 21 to 30, 31*

to 40, and *over 40*. The appendix depicts the mean score comparison between the number of hours employed off campus and the five factor subscales.

Participants who worked one to ten hours (M = 4.5000) perceived that the environmental factor was more supportive than participants who worked 21 to 30 hours (M = 3.5000). Participants who worked one to ten hours (M = 4.5606) perceived that the institutional integration factor was more supportive than participants who worked over 40 hours (M = 2.7500). Participants who worked 31 to 40 hours (M = 5.5000) perceived that the personal academic factor was more supportive than participants who worked over 40 hours (M = 3.1250). Participants who worked 31 to 40 hours (M = 5.1111) perceived that the college academic factor was more supportive than participants who worked 21 to 30 hours (M = 2.8333). Participants who worked one to ten hours (M = 5.8636) perceived that the friend support factor was more supportive than participants who worked 21 to 30 hours (M = 3.7500).

Inferential analysis of the number of hours employed and factor subscales. There was not a significant difference between the number of hours employed weekly off campus and the perception of the environmental factor subscale at the $p < .05$ level. The number of hours employed did not make a difference with the perception of the environmental factor as supportive or restrictive. Therefore, I failed to reject the null hypothesis for the environmental factor. However, there was a significant difference between the number of hours employed and the perception of the institutional integration factor subscale at the $p < .05$ level. I rejected the null hypothesis for the institutional integration factor. Participants who worked one to ten hours perceived the institutional

factor as more supportive than those who worked over 40 hours. The personal academic, college academic, and friend support factors violated the assumption of homogeneity of variance. The significance level may be underestimated, and therefore the null hypothesis may be falsely rejected with such violation. Table 15 depicts the ANOVA results for the hours employed weekly off campus.

Table 15

ANOVA Results for Hours Employed Off Campus and Factor Subscales

Factor	*df*	*F*	Sig.	η^2
Environmental	(5, 85)	.833	.530	.048
Institutional integration	(5, 85)	2.718	.025	.141
Personal academic	(5, 85)	8.914	.000	.345
College academic	(5, 85)	1.610	.166	.086
Friend support	(5, 84)	5.343	.000	.241

Note. The *df* values indicate between and within groups, respectively. $p < .001$ for the personal academic and friend support factors. The personal academic, college academic, and friend support factors violated the assumption of homogeneity of variance.

Limitations

Limitations arose from time constraints, recruitment, and non-responsiveness. After seeking approval from Walden University's IRB, I sought approval from the IRB in the local college before data collection. There was a brief delay in IRB approval from Walden University, because the study setting sought a rewritten letter of approval from Walden University. Precise participant numbers were unknown without permission from the local college's IRB. Prior to data collection, current demographics of the nursing student body were unknown. The study setting's IRB holds meetings once a month

during the academic year; however, approval of my proposal was classified as exempt from monthly meetings and the approval process was expedited.

Collaboration with the deans of the nursing program was needed to obtain students' institution-issued, email addresses. To avoid undue influence, I asked the deans and faculty not to influence students to undergo this study. I informed students about the study and that grades and any academic progress will not be affected by participation or non-participation. At the time of study, the nursing club was not in session and the RN-BSN members did not affiliate with those in the ASN program. Flyers were used once at the beginning of the data collection process; however, the primary mean of recruiting study participants was through electronic invitations.

Sampling from two different sets of participants may yield unexpected results (Creswell, 2011). The perceptions of supportive and restrictive factors and persistence mechanisms may change from the current time to the time of the data collection. The qualitative results may not be generalizable or objective and the statistics may not be credible; however, the perceptions of the ASN can be used to specifically address the local problem (Brinkman, 2013; Fowler, 2002, 2009, 2013).

There was a potential weakness in sampling methods in regards to the classification of the participants' enrollment status. The ASN program schedule (Appendix C) was used to guide participant selection. Students in the ASN program included those who are in the LPN program and those who repeated courses or omitted semesters; however, the rosters reflected said students in specially designated courses, and they were not emailed (Community College, 2011b, 2015). I determined the

appropriate means of data collection based on the courses students were taking at the time of study. Online nursing courses are not offered for recruitment from those courses. Additionally, according to the study site's course catalog, part-time enrollment was not offered because the program requires full-time enrollment. These factors further limited the sample size.

There was risk of nonresponses to the online survey, which could have potentially threatened the internal validity of the study (Creswell, 2011; Dillman, 2007). Response rates were limited, and therefore, two more invitations to participate in the survey were used. Students did not opt out of receiving electronic invitations or weekly reminder emails. There were failures in delivery of survey invitations among three students. I sought a 70% response rate; however, there was a 68.84% response rate, because 95 out of 138 students participated in the survey. However, 91 surveys were fully completed; and there were omissions in gender and friend support items. The friend support factor violated the test of homogeneity of variance, when conducting ANOVA among the ethnicity groups. When I conducted the ANOVA among the number of hours employed off campus, the personal academic, college academic, and friend support factors violated the assumption of homogeneity of variance.

There were no delays or non-responses to the request of member checking interview transcripts and notes from the session. However, I did have to follow up with students who wished to participate and expressed initial interest, but then I was not able to confirm an interview schedule. A desirable range of interviews was 10 to 15;

however, it took until the last week of the study to obtain 12 interviews. I did not extend the 16-week or semester period by an additional semester.

Conclusion

In this section, I discussed the benefit of using a mixed-method design to obtain the most comprehensive data. Within the domains of the NURS model, external factors may influence persistence to graduation. In the study setting, the ASN program is under-researched and results from this study will be used to better understand the factors that students experience about persistence to graduation. Persistence is at risk at the beginning of the ASN program, but persistence improves in the more advanced courses and students can progress to graduation (Community College, 2011a, 2011b, 2015). Therefore, it was important to study persistence in the ASN program from both ends of the spectrum, the beginning and end of the program, and with consideration for various influencing factors.

The purpose of this study was to understand final-year ASN students' persistence strategies and to understand first-semester ASN students' perceptions of factors influencing persistence to graduation in a local Florida college. Data collection and descriptive and inferential analyses are related to the same object, persistence to graduation in the ASN program. I obtained interview data from the students in the last year of study to potentially expand upon the survey data from students in the first year of study. Interview data analysis among 12 students in the last year of study revealed that family, peer, financial support, modification of study habits, and personal motivation were five key themes or aspects in persistence to graduation. The most supportive factors

among survey participants in the first year of study were: *personal study skills*, *nursing skills laboratory*, *personal study hours*, *encouragement by friends within the classes*, *academic performance*, *encouragement by friends outside of the classes*, *faculty advisement and helpfulness*, *family emotional support*, *nursing student peer mentorship and support*, and *nursing student support services*.

I also obtained survey data to identify differences among student profile demographics and perceptions of supportive or restrictive factors. There were significant differences between perception of the environmental and personal academic factors and gender of the first-semester students. There were no statistically significant differences between ethnicity, marital status, the number of dependent children in the household, or the number of hours employed weekly off campus and perception of factors. However, the descriptive analysis showed that the 45 to 49 age group perceived all the factors were more supportive than the other age groups.

The results suggest a need for an intervention or early support system that supplements the existing orientation into the ASN program. The orientation introduces the program and expectations of the students, whereas student-derived input gives the incoming students insight into how other students persisted to graduation. An accessible intervention or support system would be an online, supplemental series of modules aimed at delivering accessible support derived from nursing student experiences. Understanding fellow students' perceptions of supportive and restrictive factors can aid students' decisions in persistence to graduation, by means of having another support system based on the NURS model and coupled with the orientation into the program

(Salamonson et al., 2014). Online modules are implemented through the readily accessible and online learning management systems (LMSs). Initially, findings will be presented electronically to deans and administrators due to the emphasis on enrollment, retention, and completion of degrees in the study setting. Based on approval from the administrative bodies, I will disseminate the online modules to the appropriate faculty and staff in the study setting. Upon further approval, students will be able to access a support system based on their peers. Understanding the perceptions of restrictive and supportive factors can provide important information, from the students' perspective, in an under-researched setting. This information can then be used in the enrollment, retention, and completion endeavors of the setting and its administrative bodies.

Section 3: The Project

Introduction

The purpose of this study was to understand final-year ASN students' persistence strategies and first-semester ASN students' perceptions of factors influencing persistence to graduation. One goal was to provide formal inquiry based on students in the generic ASN program, and another goal was to understand the perceptions of restrictive and supportive factors in the persistence to graduation. I collected data from students in the first and last years of the ASN program. Concurrent with the study setting's data depicting low persistence rates, there were factors that influenced persistence to graduation, seen among the first-semester students, and there were persistence strategies, expressed by the final-year students (Cochran et al., 2014; Community College, 2011b, 2015; Hunter et al., 2014; Jeffreys, 2003, 2004, 2007a, 2012; Karsten & DiCicco-Bloom, 2014; Knight et al., 2012; Raman, 2013). Different approaches can be developed to improve persistence and support students through the program, by learning from students' experiences with nonacademic factors.

According to analysis of the data in this study, interview participants emphasized family, peer, financial support, modification of study habits, and personal motivation as persistence strategies. Among survey participants, statistically significant differences were seen between gender and environmental and personal academic factors. Also among survey participants, a statistically significant difference was seen between the number of dependent children in the household and the institutional integration factor subscale. Using both qualitative and quantitative measures, respectively, interview data

presented an in-depth look into how to persist to graduation, while survey data provided information on nonacademic factors versus demographics. I constructed a curriculum plan as an online, supplemental, ASN orientation course to present the findings to incoming students and administer activities based on the findings.

An online course is easily accessible for students throughout the nursing program, and different modules will focus on different strategies and nonacademic factors involved in persistence. The purpose of having different modules on restrictive and supportive factors is to help students relate their experiences to the NURS model and other nursing students. This can then help students detail their own perceptions of factors that influence persistence and develop planning tools to navigate through those factors. The online course will be introduced during the new student and first-semester orientation; therefore, students will be on the novice nursing student level. The curriculum plan will go through the advice imparted by final-year students and the perceptions of restrictive and supportive factors of the first- and final-year students. Throughout the module, students will be asked to reflect on their own perceptions of factors that influence persistence, and they can interact with other students via the discussion board. Students will then be prompted to give feedback on the course. Overall, the course will last nine weeks, but availability on the LMS can exceed that time limit. Understanding students' experiences and collecting advice for incoming students can help to connect the NURS model with a tangible support system, which may help facilitate the study setting's goal of increasing enrollment, retention, and completion.

Rationale

The study setting's ASN program has lower graduation and retention rates than national and statewide levels, where 33 to 35% of students persist to graduation (Community College, 2011b; NLN, 2016a, 2016b, 2016c). Nonacademic factors may influence low graduation and retention rates in this specific community college setting (Community College, 2015; Jeffreys, 2004, 2012; Lewis, 2005, Morrison & McNulty, 2012; Raman, 2015). However, there is a gap in formal inquiry in this specific community college, pertaining to factors that influence persistence to graduation from the ASN program. I chose a curriculum plan project based on the perceptions of supportive and restrictive factors, student demographics, and the success strategies for persistence.

An online supplemental course was developed as a support system for incoming students based on ASN students in the study setting. First, the advice from final-year students is detailed to discuss how to persist through the ASN program. The goal is to provide insight from students who have already made progress through the first semester, when most students withdraw (Community College, 2011b; 2015). This serves as an immediate view into coping mechanisms. Next, abridged data tables detail first-semester student perceptions of factors that influence persistence. The NURS model is displayed for students to understand that research has been done on persistence factors. Students are directed to modules, where final-year students' perceptions of supportive and restrictive factors are discussed. The goal is to show progression through the ASN program, while acknowledging the nonacademic factors and how to cope with said factors.

The curriculum plan is an online course can be introduced at each of the three orientations given throughout the school year, and be made available at any time via the study setting's LMS. Availability at the beginning of the program may serve as a sort of early intervention and exposure to the persistence factors that other students have faced. An online program affords the opportunity for students to refer to the course's modules whenever support is needed based on their own experiences. Because the course is administered via the study setting's LMS, once the student is no longer enrolled, they will not have access to the course. A review of the literature was conducted to identify the best practices of creating a student-based project to promote persistence to graduation.

Review of the Literature

The development of this project was guided by a comprehensive review of the literature based on online learning and student support for ASN students. The following databases were used: Dissertations & Theses at Walden University, Education Research Information Center (ERIC), Google Scholar, ProQuest Nursing & Allied Health Source, ScienceDirect, and UMI ProQuest Digital Dissertation. The following keywords were applied to the database search: *online ADN program*, *online nursing course*, *online student support*, *nursing student support*, *nursing student diversity*, *nursing student success*, and *online nursing student orientation*.

Online Learning

There has been a sizeable growth in online course offerings in community colleges nationwide (Shea & Bidjerano, 2014). Traditional, face-to-face, didactic courses are offered with augmented or simultaneous online or voice-over lectures and Internet

discussions (Plante & Asseline, 2014). Online courses appeal to students due to convenience and flexibility (Croxton, 2014; Jaggars, 2014). Kuo, Walker, Schroder, and Belland (2014) found that convenient and easy access to organized content were predictors to student satisfaction of online learning. Persistence to graduation is assisted by active and social engagement, learning communities, and interaction (Croxton, 2014).

Hansen (2016) surveyed nursing students who perceived that online material aided in a greater understanding of face-to-face lectures, and therefore can facilitate learning beyond the classroom. Specifically, Moule, Pollard, Armoogum, and Messer (2015) found that nursing students felt more prepared and knowledgeable about certain cancer treatments, with the usage of virtual patient online resources. Pence (2013) used the flipped classroom model with online resources, and obtained positive feedback from ADN students who felt better prepared for class. Similarly, Gilboy, Heinerichs, and Pazzaglia (2014) found that undergraduate nutrition and dietetics favored online learning and the flipped classroom model because they could work at their own pace, learned the material more effectively online than in-person, and felt more engaged with the instructor. McGowan, Balmer, and Chappell (2014) developed a blended learning model, which utilized self-directed e-learning modules for nursing education. Similar to Gilboy et al. (2014), the learners felt more engaged with faculty when the online resources were used as prework tools (McGowan et al., 2014). Edwards and Faulkner (2013) also found that where students in an 18-month healthcare program were usually unprepared for the rigorous curriculum, but a virtual pre-course preparation program had a positive impact on attrition and enhanced student satisfaction.

Contrary to data that supported online learning tools, other studies contained data which showed that traditional teaching methods were preferred, the flipped classroom model and online instruction needed improvement and structure, and student motivation drove learning regardless of teaching method. Interview data results indicated that community college students preferred to take more difficult courses in person, and that colleges would need to build better instructor presence and guidance online (Jaggars, 2014; Morley, 2014). Bloomfield and Jones (2013) showed that even though pre-registration nursing students did not want to relinquish traditional learning, they preferred a combination of e-learning and conventional learning methods. Similarly, Gagnon, Gagnon, Desmartis, and Njoya (2013) showed that blended teaching methods are comparable to traditional teaching methods for introductory nursing students. Additionally, Harrington, Bosch, Schoofs, Beel-Bates, and Anderson (2015) did not find statistically significant differences between the performance of nursing students in the flipped classroom setting or the traditional classroom.

Green and Schlariet (2017) studied undergraduate nursing students in the southeastern United States; using a phenomenological approach, data analysis revealed that online, flipped classroom techniques allowed for pre-learning and autonomous learning. However, the flipped classroom model may be unfamiliar to students who are more accustomed to the traditional lecture format, which leads to inconsistencies in student satisfaction (Green & Schlariet, 2017). In the study by Missildine et al. (2013), nursing students were less satisfied with the flipped classroom model; however, students were more engaged in clinical reasoning, application, and reflection of research findings.

Although undergraduate nutrition and dietetics students were engaged in online learning, there were concerns about student boredom with online content, the length of online lectures, and holding students accountable for the completion of online activities (Gilboy et al., 2014). After administering flipped classroom activities twice to nursing students, Critz and Knight (2013) found that online delivery had to be refined, recorded lectured had to be shortened, reading material had to be reduced, and more illustrations were needed. Overall, student satisfaction may vary with online, flipped classroom resources, but learning may improve with blended teaching technologies (Missildine et al., 2013).

Although 25% to 33% of community college students were enrolled in at least one online course, analysis from data collected by the Nation Center for Education Statistics (NCES) showed that distance learners may be less academically prepared or less likely to graduate than face-to-face students (Allen & Seaman, 2013; Shea & Bidjerano, 2014). According to Jokinen and Mikkoken (2013), the integration of online learning supports student motivation through the relevance to the students' own experiences. Motivated students performed well in an online and traditional setting, whereas less motivated students may benefit from e-learning (Gagnon et al., 2013). From the instructors' perspectives, technology-mediated learning activities are versatile but must be relevant and engaging to a heterogeneous group of students (Jokinen & Mikkonen, 2013).

A posttest two-group survey design in an ADN program in the northeastern United States showed that supplementary online modules allow for flexibility and promote active participation and learning (Ochs, 2017). Due to the high level of

interactivity in an online classroom, there may be higher levels of motivation; and because cognition is not an individual process, knowledge is formed by interaction (Bandura, 2001; Croxton, 2014). Additionally, student feedback, after using games, lectures, and videos in a nursing course, indicated that teamwork and analyses of students' contributions helped form and reinforce content knowledge (Boctor, 2013). An online environment may not be successful without interaction, relevance to the program, and support (Jokinen & Mikkonen, 2013). Students describe feeling isolated or disconnected in an online environment, therefore, fostering a social presence can encompass a caring social environment (Plante & Asseline, 2014). Moule et al. (2015) found that students perceived online resources as supportive for practitioner learning, but the online learning process lacked the opportunity for peer learning and was an isolating process.

When students created and shared online videos, fellow students found the information useful for developing interpersonal and curricular competencies (Pereira, Echeazarra, Sanz-Santamaria, & Gutierrez, 2014). Mann (2014) illustrated that caring in an online classroom involved students discussing nonacademic factors, feedback from students and instructors, as well as podcasts and videos clarifying the course content. From both the instructor and student perspectives, a caring environment can be fostered and conveyed online and face-to-face through attention, awareness, and courteousness (Sitzman, 2016). Overall, there is a common theme among face-to-face and online learning methods where interactivity aids with student performance and satisfaction.

Student Support

Student support is not limited to academic factors, but include nonacademic factors like stress management and anxiety. Nursing students experience anxiety throughout the program, which can interfere with academic progress (Hutchinson & Goodin, 2013). Chen and Lo (2015) found that ASN students, within 56 ASN programs from 31 states, were more satisfied with the nursing programs if they experienced positive psychosocial interactions. Creating caring transactions and interventions can potentially reduce anxiety and enhance learning outcomes and critical thinking (Hutchinson & Goodin, 2013). Undergraduate nursing students expressed that a stress management and mindfulness program aided in stress reduction and the enhanced ability to tend to self and others in their personal and professional lives (van der Riet, Rossiter, Kirby, Dluzewska, & Harmon, 2015). Based on a mindfulness-based stress reduction program, Song and Lindquist (2015) suggest that when students learn mindfulness early in nursing education, this may lead to coping skills and enhanced retention. However, Fontain (2014) did not find one specific or combination of programs to aid in retention.

ADN students were able to collaborate with peers and observe a model of success and understand thinking skills, personal growth, a sense of belonging, and self-confidence (Fontain, 2014). Gerrard and Billington (2014) also found that peer interaction provided a sense of belonging, personal growth, and motivation to persist through the pre-registration nursing program; however, the peer interaction was among students in extra-curricular groups. Even though Lea and Cruickshank (2015) studied

newly graduated nurses, they noted that nurses expressed a lack of belonging and peer interaction that added to the stress of the inexperience with the workload in the field.

Mentoring can play an important role in facilitating nursing education, where the mentor possesses skills to communicate the course content, model teaching techniques, and provide feedback (Rand & Pajarillo, 2015). Concurrent with findings by ten Hoeve, Castelein, Jansen, and Roodbol (2017), supportive faculty and mentors seemed of paramount importance for nursing student retention. In a mixed-method study, Morley (2014) found that online mentor and support groups reinforced clinical learning and peer support. Online mentors offered guidance and support when there were time and physical distance constraints; and they offered open communication and a positive attitude (Rand & Pajarillo, 2015).

Like online mentors and academic support groups, Schwartz (2014) found that strong students can serve as peer instructors because they expressed their thoughts and understanding in ways that their classmates were able to comprehend. A mixed-method, prospective cohort study by Holland et al. (2013) showed that although nursing students were concerned about proper instruction by peers, students learned by example and saw their peers as role models. Beyond aiding with course content material comprehension, mentorship was seen as beneficial with the students' transition from the nursing program to practice. Kaihlanen, Lakanmaa, and Salminen (2013) found that the mentors helped nursing students transition into practice by giving feedback and experience-based advice to enhance the clinical competence of the students. Rooke (2014) also found that nursing

mentors were perceived as helpful in conveying what is expected of nursing students in the field and mentors helped to ensure students were fit for practice.

Although mentorship has been perceived as a helpful tool by healthcare students, negative perceptions arose when mentors were expected to teach students, but there were time constraints (Hamshire, Barrett, Langan, Harris, & Wibberley, 2017). McCallum, Lamont, and Kerr (2016) obtained feedback from first-year undergraduate nursing students; and although mentors would aid with practice learning environments, students felt that more time was needed with the mentors. McIntosh, Gidman, and Smith (2014) and Rooke (2014) also found that mentors were aware of their roles and responsibilities, but expressed that there were time constraints, which impacted preparation for mentorship students. McCallum et al. (2016) found that students perceived that the mentors were not fully prepared to help nursing students in a practice learning environment. Jokelainen, Jamookeeah, Tossavainen, and Turunen (2013) also found that mentorship may not be effective if mentors lack effective communication and evaluation skills; therefore, mandatory mentor preparation programs should be utilized.

Various student support service tools were helpful, however, the promotion of autonomous and self-regulated learning aided academic performance as well. Bronson (2016) found that when faculty mentored nursing students, engagement and academic performance improved with the promotion of autonomous motivation. Kaihlanen et al. (2013) found that students responded positively to mentors that guided them toward independent learning and clinical work. Salamonson et al. (2016) did not find sociodemographic differences pertaining to nursing students' sense of coherence;

however, those with a higher sense of coherence demonstrated more self-regulated learning. Concurrent with perceptions about online and flipped classroom resources, the students' own motivation plays a role in academic performance.

Similar to face-to-face support, online networking helped students to articulate knowledge, develop critical thinking skills, exchange feedback, and enhance self-efficacy (Tower, Latimer, & Hewitt, 2014). In a mixed-method design among first-year undergraduate nursing students, a virtual course yielded high levels of student satisfaction, self-efficacy, and achievement (Sowan & Idhail, 2014). Ryan and Davies (2016) also found that an online support tool helped pre-registration nursing students in terms of tutoring, resolving personal and financial issues, and study skills. Miller, Forehand, and McBride (2016) ran a quasi-experimental pilot study to implement confidence training as an intervention for first semester nursing student; and there was a 5.8-point difference between pre- and post-intervention anxiety testing.

Different interventions may impact stress, mood, and cognition, which in turn impact academic success. Along the lines of online student support, Spadaro and Hunter (2016) offered an online stress reduction intervention program to nursing students, via the university's LMS. Similar to the use of games and teamwork as an intervention by Boctor (2013), Spadaro and Hunter (2016) saw that the stress reduction intervention program resulted in changes in students' mood and cognition. Using another form of intervention, Hewitt, Tower, and Latimer (2015) used digital recordings and discussion points with second and third year nursing students. The students perceived the educational intervention method as an effective problem-based learning tool related to

medicine administration (Hewitt et al., 2015). A different form of intervention was employed by Boath et al. (2016) to support nursing students, encourage student retention, and improve attrition rates. Undergraduate first-year nursing students were contacted by phone in regards to how they were settling in and if they needed tutoring. Overall, students felt a sense of belonging and encouragement to persist through the nursing program when interventions were employed (Boath et al., 2016).

With diversity growing in the United States, classroom opportunities to learn about cross-cultural interaction may encourage self-reflection and provide students the chance to share their experiences (Mareno & Hart, 2014). In addition to communication and collaboration, Mareno and Hart (2014) found that there needs to be more support of nursing students from diverse populations. There is a societal demand for more professional nurses, including those from diverse backgrounds; however, those students are at a greater risk for attrition (Harris, Rosenburg, & Grace O'Rourke, 2014). The results from the qualitative study by Kukkonen, Suhonen, and Salminen (2016) showed that because the nursing student population is diverse, their career intentions, learning methods, and coping abilities vary.

Differences in nursing student demographics include cultural diversity. Among minority ASN students, in a multipronged study, positive feedback was collected concerning weekly group meetings and mentorship (Harris et al., 2014). Survey data showed that culturally diverse and minority students benefited from support from fellow students and expressed a moderate comfort level with the nursing program (Cantwell, Napierkowski, Gundersen, & Naqvi, 2015). Interview data showed that support groups

helped minority students feel a sense of belonging in science-based programs (Smith, Cech, Metz, Huntoon, & Moyer, 2014). Similarly, Slatyer, Cramer, Pugh, and Twigg (2016) found that peer cohesion was an important method of student support through minority students' personal and academic issues. Peer support helped students manage study demands, boost self-confidence, and become informed about course structure and evaluation (Slatyer et al., 2016).

In addition to cultural diversity, there are student differences pertaining to age, socioeconomic backgrounds, and family responsibilities. Advisors to nursing students found that the nature of difficulties facing recent students were based on age, financial difficulties, and family commitments (Banks, Kane, Rae, & Atkinson, 2012). Banks et al. (2012) found that students viewed advisor support on non-academic factors as beneficial, and would have withdrawn from the nursing program without such support. Hamshire, Wilgross, and Wibberley (2013) also found that students contemplate leaving healthcare programs due to family commitments. However, when students felt that staff members were too busy to lend support, which factored into the complex interactions that lead to attrition (Hamshire et al., 2013). Concurrent to previous studies, Kukkonen et al. (2016) found that students withdrew from the nursing program due to family and financial commitments and crises that made it difficult to cope with school and personal issues. Hamshire et al. (2017) found that students perceived academic inventions by tutors and staff as supportive; however, findings suggested that various interventions may be needed to address the experiences of the diverse student population.

Compared to the results in Section 2, participants concurred that having supportive peers in the ASN program aided in persistence to graduation. Stress management and anxiety were factors in which having self-motivation and supportive family and friends helped students cope, similar to the findings of Hutchinson and Goodin (2013), Song and Lindquist (2015), and van der Riet (2015). Interview participants referred to a varied number of coping mechanisms and success strategies, which aligned with Fontain (2014). Although student demographics were collected from the survey participants, diversity was not discussed among the interviewees, therefore the data could not be compared to the findings of Cantwell et al. (2015) or Slatyer et al. (2016).

Unlike previous studies, I did not discuss virtual courses or interventions with survey and interview participants. However, the curriculum plan project was designed to serve as an online support tool and intervention method, which would be implemented at the beginning of the ASN program. Concurrent with Kukkomen et al. (2016), it would be beneficial to have a tool that supports different background factors of the students' nonacademic lives; and the project study was based on exploring nonacademic factor perception. The curriculum plan project is similar to the development of an online, interactive tool for pre-registration nursing students, by Ryan and Davies (2016), because the goal is to provide students with accessible, online support based on nonacademic factor perception. The review of the literature contained sources in which online learning tools and student support were related; therefore, the curriculum plan is intended to serve as both an online and support tool.

Project Description

To improve persistence to graduation from the ASN program, a curriculum plan as an online project was developed for ASN students in the study setting. The project serves as a supplemental course to the new ASN student orientation. However, the course will be available throughout the duration of each student's enrollment in the ASN program. The goal is to deliver the results of the project study as a course created for students by students. The course is not for credit, rather it is meant as an accessible means of student support.

Existing support for the program includes the institution's choice of LMS. An online support staff member will need to upload the course and a faculty member will be needed to review the course before it is made available for students. A potential barrier can be a time constraint if the course must be reviewed and redesigned, which may take a semester to complete. If new research is conducted, then the course may need to be updated to reflect the perceptions of subsequent students. After implementation, another barrier may be that the course is only available for up to two semesters. Resources for updating the course and its availability will come from the study setting, and therefore a budget will need to be considered for compensation to online faculty and staff.

The course contains nine module units, and each unit will be available and unlocked weekly. This brings the entire curriculum plan to a total of nine weeks. Online access is granted during the new student orientation, which will unlock and make available the orientation and welcome unit module. First, the welcome and syllabus are displayed with course description and objectives, and faculty contact, help desk, and

disabilities support information. The course briefly describes the NURS model, SPA-R2, DDS-P, and research questions. The research data are displayed as module units, where the final-year and first-semester student perspectives are presented separately. Per subsequent week, a separate unit module will open. Students will first receive information on success strategies employed by final-year ASN students. Next, survey data will be displayed as tables with explanations of the results and student demographics. Then, interview data will be displayed with quotations from the participants, without any identifying information. The modules ask students to reflect on their own experiences and compare them to the participants' perceptions. The last unit module will ask for feedback on the course.

The role of the students will be to actively participate in the course, completing discussion posts, planning tools, listing and reflecting on factors they perceive as supportive or restrictive. The role of the facilitator is to interact with the students in a supportive role, imparting advice on any student services that the institution offers to aid in persistence to graduation, and to communicate with students. Online faculty and staff would be responsible for reviewing and uploading the program onto the institution's LMS, and performing necessary revisions to the program. One of the goals of the program is to have the content available for the duration of the ASN students' years of study.

Project Evaluation Plan

To evaluate the project, I will use the summative, qualitative method. The key stakeholders will be asked to evaluate the online course as students enrolled in the course.

The ninth unit module was formulated as a non-graded, short-answer quiz. Students will be asked to explain how they relate to the relate participants, if they will implement the final-year students' advice, and to detail any suggestions they have for course improvement. The course facilitator will receive the responses for review. The goal of using a summative, qualitative method is to obtain insight into how students perceived the program, what did they learn, what did they like and dislike, and overall the feedback will be used to improve the program.

Other stakeholders will be faculty and staff who will review and redesign the program. As new research is found, the program may need to be updated to reflect any new findings on factor perception or success strategies. Although ASN students are the primary source of evaluation, ASN faculty can access the course. They can provide feedback as a Subject Matter Expert (SME) during the first month of the semester. Evaluation can also be performed by the deans of the nursing department, as they have access to departmental courses in the LMS. Because the institution's choice of LMS can be used for dissemination of the course, and changes to the layout and unit modules can be performed online as a master shell course. Overall, the evaluations performed by students will be taken into consideration by faculty and staff who disseminate and edit the curriculum plan.

Project Implications

Study Setting

This project study was designed to provide support to incoming ASN students, derived from students enrolled in the program. Extensive research has been done on

academic and nonacademic factors that influence persistence to graduation in ADN programs (Cochran et al., 2014; Dumais et al., 2013; Harris et al., 2014; Jeffreys, 2004, 2007b, 2012; Lewis, 2005; Morrison & McNulty, 2012; Raman, 2013; Salamonson et al., 2014; Starkey, 2015; Tinto, 1975, 1993; Wray et al., 2012). In the study setting, there are statistics on the retention and graduation rates of ASN students. However, there is a lack of formal research on the perceptions of factors that influence persistence to graduation, from the students' perspectives.

Students were at risk for low persistence rates during the first semester of study, but improved in the last semesters of study (Community College, 2011a, 2011b; Community College Dean of Nursing, personal communication, January 30, 2015). However, approximately 33% to 35% of the starting cohort persisted to graduation (Community College, 2011b; former Community College Dean of Nursing, personal communication, June 11, 2015). The goal of the project study was to generate data on the perceptions of supportive and restrictive factors during the first year of study and advice on how to persist through the last year of study. Rather than stating that students performed better as their studies progressed, the goal was to find out why, directly from students who have experienced the rigors of the ASN program. Insights from students may help novice nursing students navigate through courses and complete the program. Increased persistence to graduation of nursing students in the study setting will hopefully allow more students to apply to study at that institution, boost morale, and help the institution achieve student enrollment, completion, and retention goals.

Larger Setting

In the larger community and far-reaching settings, as the demographics of the United States diversify, the nursing student body diversifies. Within the broad aspect of AS degrees, 47% of overall AS students do not persist to graduation, and 15% to 85% of minority students do not persist to graduation (Harris et al., 2014). Age, employment, gender, language, and coping mechanisms are a few factors that impart on persistence to graduation (Jeffreys, 2004, 2012; Harris et al., 2014; Karsten & DiCicco-Bloom, 2014; Raman, 2013; Salamonson et al., 2014). The project could be used among different institutions to provide data on the nursing students based on their own experiences and perceptions. Also, based on the advice given by nursing students, the project could be used as a supportive tool for persistence to graduation. An accessible tool, such as one administered via an LMS, can be used throughout students' studies to aid in enhancing graduation rates and formal inquiry.

Conclusion

In section 3, I discussed the development, description, evaluation, and implication of a student-based project. I conducted a literature review based on student support and online courses for nursing students. The overall goal of the project is to impart support onto novice nursing students, based on the input of nursing students at the start and end of the program. This may help improve the rate of students who persist to graduation. The implementation and continuation of the project, on a larger scale, may help stakeholders understand further about diverse students' perspectives of factors that

influence persistence to graduation. In section 4, I will detail personal reflections and suggestions for the study.

Section 4: Reflections and Conclusions

Introduction

This project was designed to support ASN students as they progress through the nursing program. The overall goal is to help students persist to graduation, based on the experiences and input from ASN students during the first and last year of study. For data collection and analyses, in Section 2, I inquired as to how students perceived factors that influenced persistence to graduation, how those perceptions differed by student demographics, and what advice final-year students would impart to incoming students. Based on the participants, stakeholders, and results, I chose a curriculum plan as the best method of dissemination, which was detailed in Section 3. In this section, I describe the strengths, limitations, recommendations, and implications for future research. Additionally, I present my reflection on the significance of the project and perspectives on scholarship, curriculum plan development and evaluation, leadership, and change.

Project Strengths

The purpose of this study was to understand final-year ASN students' persistence strategies and first-semester ASN students' perceptions of factors influencing persistence to graduation. This study was used to examine two ends of the ASN program to overall provide details on how to persist to graduation from the ASN program and how students perceive factors that influence graduation. The data collected from final-year students showed similar perspectives on supportive and restrictive factors and advice for incoming students from which I developed five common themes. Survey data collection and analyses showed which factors first-semester students found as supportive or restrictive,

in addition to differences in factor perception based on demographics. Additionally, the curriculum plan contains abridged data tables based on factor perception and demographics. The unit modules also contain quotations to reinforce advice on success strategies for persistence. Therefore, I developed separate unit modules that highlighted what factors perceived as restrictive versus supportive, and prompted users to develop plans to address factors that applied to their lives. ASN students may experience different factors that impact persistence at different points in the program. However, by administering the curriculum plan at the beginning of the program, students can access the online program as another source of support. As an online curriculum program, students can access the unit modules at any time, thus potentially avoiding conflicts with time constraints, and family, employment, and school responsibilities.

Project Limitations and Recommendations for Alternative Approaches

A limitation of the project may be the time given for the curriculum plan. I developed the program to be presented over the course of nine weeks, including discussion posts and planning tools. Although the activities can be completed online over the course of each week, there may be a time constraint on the availability of the course beyond the first semester through the LMS. An alternative to the online course would be a short session, during the welcome orientation, to present the findings. Physical handouts of the modules could be distributed, containing the NURS model, planning tools, data tables, and the contact information of faculty and staff who may aid in support services. This method would allow students to have a physical copy of the results and contact information without losing online access to the program.

Scholarship, Project Development and Evaluation, and Leadership and Change

As an educator and student, I realized that the student demographics in local colleges were varied. As a student in a larger university, I observed that my classmates were not career students, and many were nontraditional. As an educator in local colleges, I wanted to relate to the students and understand how they perceived factors that influenced persistence to graduation. Therefore, I embarked on the journey of receiving a formal education in College Teaching and Learning, and I anticipate contributing further to local colleges and nontraditional students. Along the way, I did face setbacks that were not directly tied to academia and consumed time that should have been dedicated to writing. I did revisit how to write and lessons that I learned as an undergraduate. The scholarship of teaching and learning did indeed involve relearning how to compose research papers, but also involved learning how to properly conduct formal research. From composing a proposal to considering reviews from university officials, scholarship was not limited to education in a traditional classroom. Being college ready for independent learning made this journey unlike previous educational pursuits.

Understanding how to construct a certain type of project suitable for this study was simple, based on prior experience with developing curriculum plans. However, understanding how to condense the data was a challenge. I had to understand the students' perspective and consider their time, to present the results clearly and concisely. I also had to consider that novice students may want input from other ASN students; therefore, discussion posts and quotations from the study were used for a relatable experience.

The pursuit of a doctorate led to a position of leadership among the science faculty. I am considered a subject matter expert and am looked to for advice on online learning. I also pursued online courses with other colleges while teaching online courses. Currently, I am working with staff and students to create workshops based on advice from science-major students on how to persist to graduation. My current department is working to create seminars on transitioning from associate-degree programs to universities and how to cope with nonacademic issues that may arise.

The journey toward a doctorate in education and working with nontraditional students showed me that there is a need for more student support, based on advice from those that have been through similar life experiences. I have learned that students may not receive input on becoming a nursing student and the restrictive factors that accompany such pursuit. More so, students may not know how to cope with such factors. Beyond this project study, I hope to continue working with and advising students who are in science and health science programs. I also hope to guide students of all majors because the overall term of being "nontraditional" is broad and many students may fit into that category. I aspire to become an agent for change through helping students navigate through nonacademic factors that influence persistence to graduation.

Reflection on Importance of the Work

As a student, I wanted to learn more about what impacts diverse students. I did not know what to anticipate as far as the workload of a doctoral student. As a scholar, I learned to revisit lessons that I learned as a student, such as the basics of writing. However, I learned to conduct formal research and synthesize knowledge. As a

practitioner, I learned how to engage my students more by discussing the nonacademic factors that may influence their persistence in my course and to graduation. I encouraged my colleagues to ask students how they learn and how do they demonstrate what they have learned. Additionally, I engage in conversations with students on planning tools for degree completion and an education beyond an associate's degree. As a practitioner, I engage in discussions with faculty and staff in other disciplines and colleges about how to equip students for nursing school programs. As a project developer, I learned how to solely create a curriculum plan in its entirety. I learned how to create a tool for students that exceeded the basic in-class presentation. Developing the project required me to ask for student evaluations and create an interactive course, rather than solely displaying data tables.

I referred to my education in Scientific Communication to present my research to a broad audience of novice students. Nursing is an in-demand field, and students have returned to school due to economic factors and the pursuit of a different career path. Without students persisting to graduation and local employment, there are nursing shortages and funding complications for local colleges. Student support is needed to decrease attrition and aid in retention and graduation. The project study presented an opportunity to learn about the students' experiences to better help other students. Having formal research leads to having data to disseminate to stakeholders, like students, to aid in the transition from the classroom to a career. The importance of the project study was not only growth as a student and educator, but as an effective communicator and mentor.

Implications, Applications, and Directions for Future Research

Implications for future research may surround fostering student support for nursing students in local colleges. In the study setting, there are currently orientation programs delivered each semester. The online curriculum plan can be administered during each orientation, with student access for the duration of the semester or program via the college's LMS. Nursing faculty and staff would have to be available to facilitate and update the program, and therefore subject matter experts and training would be necessary to uphold the curriculum plan. The overall goal is to have a running program where students can access online support, therefore future research would be needed to gather new perspectives on factors that influence persistence to graduation. Perceptions may change over time, and new research may be needed to relate to future students.

The study had limitations in that 95 surveys were submitted, but 91 surveys were fully completed; and 12 interviews were gathered. Due to different demographics in different regions of the country, the study is not generalizable for the state of Florida and nationwide. Studies among different colleges may yield different results. Future research should involve a larger sample size and a larger number of nursing programs through the state and nation. This study only focused on ASN students, not students who were LPNs or in the BSN program. Advanced nursing students may have different perceptions of factors that influence persistence. Additionally, advanced or post-licensure students may have different input on success strategies.

Conclusion

The section concludes the project study and curriculum plan development. I detailed the strengths, limitations, and recommendations for the project. I discussed personal reflections as a scholar, practitioner, and project developer. Additionally, I discussed project implications and recommendations for future research. Data collection and analyses indicated significant differences in the perceptions of supportive and restrictive factors that influence persistence to graduation, where different demographics displayed different perceptions. Also, last year nursing students gave insight into how to persist to graduation by discussing their personal success strategies. The results of the study provided an opportunity to disseminate results in the form of an online course curriculum plan. However, the results may provide an opportunity for future research in different colleges nationwide and among nursing students in different programs. Highlighting the nontraditional students and nonacademic factors, in combination with new student orientation, may help by providing students with another means of support. Due to concerns about attrition, retention, and nursing employment, an accessible program geared toward nursing students, via nursing student input, could help students persist to graduation.

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Appendix A: The Project

NURS XXXX

The Associate of Science Degree in Nursing (ASN) Supplemental Orientation

Course Syllabus

Semester: TBA

Course Designer and Facilitator: Shivanie Saith, MS

Office and Office Hours: Online via email (please email ssaith@xxxxxxxx.edu using your institution-issued email address). Emails will be addressed within 24 hours.

Course Credit Hours: Non-credit course

Course Prerequisites:

- Basic Internet and computer skills
- Admittance and enrollment in the first semester of the ASN program

Course Description:

The NURS XXXX ASN Supplemental Orientation Course is an online interactive course aimed to support student persistence to graduation. The course is built on research from first-semester and final-year ASN students. Exploring student perceptions of supportive and restrictive factors that influence persistence to graduation and gathering input on success strategies for persistence led to the development of an accessible, online, supplemental course. The course does not require any materials and does not count toward credit hours. The objective of the course is to deliver a support system derived by our students for our students.

Course Objectives:

Upon completion of this course, students will be able to:

- Navigate through the learning management system (LMS) to access the different units
- Reflect on and discuss their own supportive and restrictive factors that influence persistence
- Communicate with the facilitator and other students within the course

Instruction:

The course is administered online and will be accessible for the duration of individual enrollment.

Course Material:
Textbooks are not required, rather the following modules will be provided within the LMS:

- Unit I: Orientation and Welcome
- Unit II: Success Strategies
- Unit III: Supportive Factors and the First-semester Student
- Unit IV: Restrictive Factors and the First-semester Student
- Unit V: Factor Perception and Student Demographics
- Unit VI: Supportive Factors and the Final-year Student
- Unit VII: Restrictive Factors and the Final-year Student
- Unit VIII: Reflection
- Unit IX: Your Feedback

Disability Accommodations:
If you need accommodations for any disability, please contact the Office of Students with Disabilities. Upon provision of proper documentation, the course facilitator will receive a letter of accommodation.

Help and Technical Information
If you do not feel comfortable or if you have questions or concerns about the online course, please contact the course facilitator.

If you need technical help, please contact our institution's Help Desk via Help@xxxxxxx.edu. Help is available 24/7.

Unit I: Orientation and Welcome

Welcome to the NURS XXXX ASN Supplemental Orientation Course. This unit introduces you to the online supplemental course. This course is aimed to providing support for ASN students. There are several pages of information divided into unit modules. The course is not graded and does not count toward credit hours; however, the goal is to provide support to you through the experiences of other nursing students.

Students are expected to access the course as an additional support tool. The course is based on research input from nursing students. You may relate to the experiences of other nursing students. Do reflect on what factors you perceive as supportive or restrictive on your degree journey. Success strategies are also provided, which may aid in your persistence to graduation.

Let your course facilitator know if you have questions or concerns using the Inbox tool. To protect your privacy, please use the institution-issued email system, rather than your personal email.

Learning Objectives:
Upon completion of this unit, students will be able to navigate through the unit modules and post an introductory discussion.

Modular Tasks:

- Read the contents of the orientation and welcome
- Participate in the Introductory Discussion by clicking on the Assessment tab and then select Discussion.
    - Post your name, motivation for pursuing the ASN program, and any concerns you have embarking on this journey.

To access the following modules, simply click the Next button.

Unit II: Success Strategies

Background:

What does it mean to **persist** to graduation? For you specifically, persistence embodies continuing or progressing toward completion of your ASN program.

Final-year ASN students were asked to detail successful persistence strategies that enabled them to progress to graduation. Five themes emerged, along with points to consider.

1. Family Support
    - Child care
    - Aid during pregnancy
    - Help with transportation
2. Peer Support
    - Classmates become family
    - Classmates are shoulders to cry on
    - Study buddy
    - Understand each other
    - Many hours are spent among peers in and out of the classroom
3. Financial Support
    - Loans, scholarships, and grants
    - Family and spousal/partner-based financial support
    - May not be able to work outside of school
4. Modified Study Habits
    - Study buddy
    - Read ahead, even during the semester before admission
    - May have to change study tactics per lesson
    - Record lectures and listen to lectures during commute
    - Take and retake notes
5. Personal Motivation
    - Is this field for me?
    - Many withdrawals occur during the first year
    - How did you handle the prerequisite courses?
    - Do you have time for the program?
    - Take care of your health/self
    - Personal issues may impact school
    - May sacrifice family time, sleep, and a social life

What strategies will you implement to persist to graduation?
Do you relate to the input from the final-year students? Why or why not?

Unit III: Supportive Factors and the First-semester Student

Background: The conceptual framework that guided the research study on our nursing students was Marianne R. Jeffreys' nursing undergraduate retention and success (NURS) model. As you can see below, Figure 1 shows that there are many academic and nonacademic factors that impact persistence to graduation.

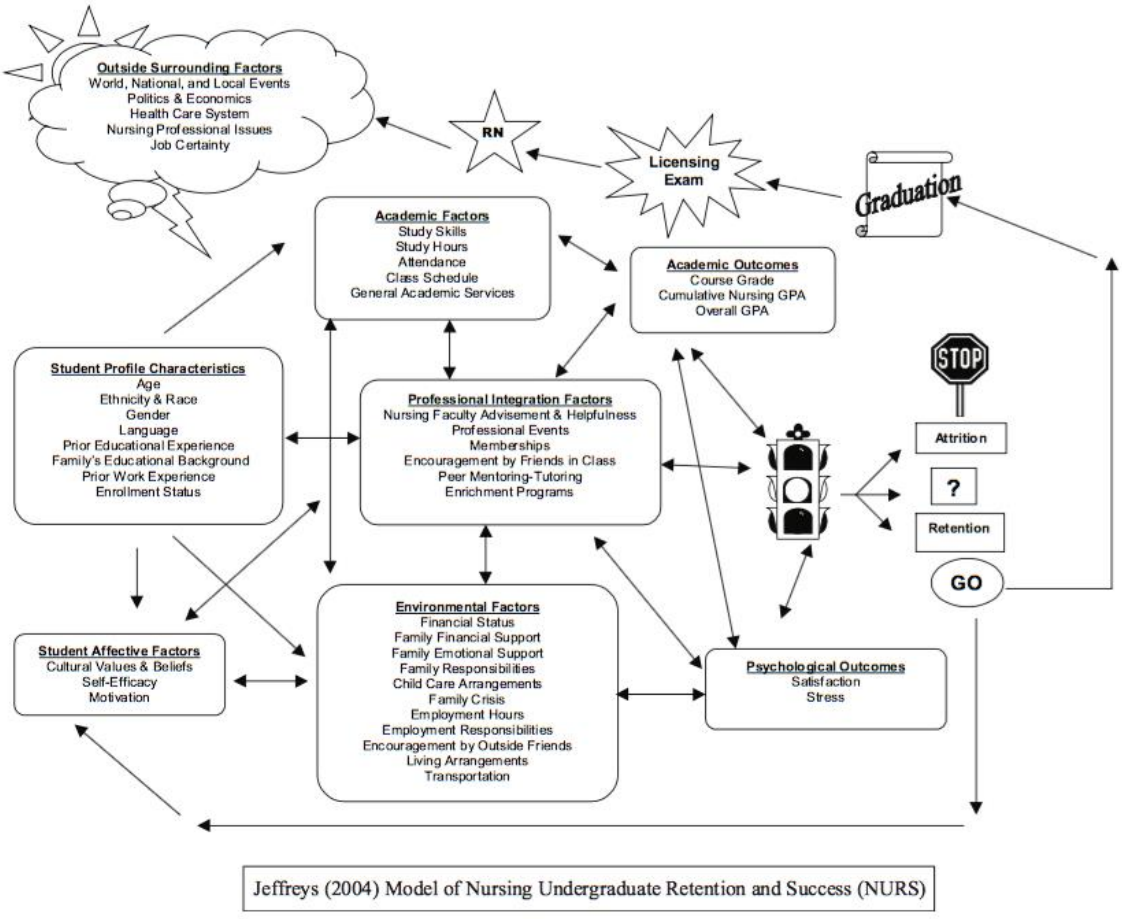


Figure 1. Model of nursing undergraduate retention and success (NURS). Reprinted from ancillary for *Nursing student retention: Understanding the process and making a difference* (p. 32) by M. Jeffreys, 2012, New York, NY: Springer Publishing. Reprinted with permission.

Students in the first year of study completed a survey designed by Jeffreys called the Student Perception Appraisal– Revised-2 (SPA-R2) survey. There were 27 factors on the survey. The responses to the SPA-R2 were based on a 6-point scale: **1 (*did not apply*), 2 (*severely restricted*), 3 (*moderately restricted*), 4 (*did not restrict or support*), 5 (*moderately supported*), and 6 (*greatly supported*)**. Factors with means, or averages, ranging from 5 to 6 indicated that factor items moderately or greatly support persistence to graduation.

Here are the results from 91 students:

Supportive Factors based on the SPA-R2

	Mean
Personal study skills	5.76
Nursing skills laboratory	5.70
Personal study hours	5.66
Encouragement by friends within classes	5.66
Academic performance	5.65
Encouragement by friends outside of classes	5.58
Faculty advisement and helpfulness	5.51
Family emotional support	5.49
Nursing student peer mentoring and support	5.46
Nursing student support services	5.04

- Do you relate to the students' responses? Why or why not?
- Take this opportunity to list factors you view as supportive on your ASN journey.

  Use the NURS model for inspiration.

Unit IV: Restrictive Factors and the First-semester Student

Background: Let's build on the previous unit module. Here we will look at the factors that were perceived as restrictive, using the SPA-R2. Lower mean scores, ranging from 2 to 3, indicated that factor items were perceived as severely or moderately restricting persistence to graduation.

Here are the results from 91 students:

Restrictive Factors based on the SPA-R2

	Mean
College counseling services	3.08
Family responsibilities	3.07
Membership in nursing club or organization	2.55
Nursing professional events	2.51
Child-care arrangements	2.40
Employment responsibilities	2.19
Hours of employment	2.03
Family crisis	2.00

- Do you relate to the students' responses? Why or why not?
- Take this opportunity to list factors you view as restrictive on your ASN journey.

  Use the NURS model for inspiration.

Unit V: Factor Perception and Student Demographics

Background: Let's combine student demographics with the SPA-R2 survey. First-semester students completed the Demographic Data Sheet-Prelicensure (DDS-P). The 6-point scale was used and the mean scores were analyzed.

1) 22 factors were organized into groups or subscales. Family crisis, child-care arrangements, employment responsibilities, hours of employment, and membership in a nursing club or organization were analyzed separately. These factors were not in Jeffreys' original SPA survey.

22 Factors and their Respective Subscales/Groups

Factor	Factor Subscale
	Environmental
Family responsibilities	
Family emotional support	
Family financial support for school	
Financial aid and scholarships	
Financial status	
Transportation arrangements	
Living arrangements	
	Institutional integration
Faculty advisement and helpfulness	
Nursing student peer mentoring and support	
Nursing student support services	
Nursing professional events	
College tutoring services	
College counseling services	
	Personal academic
Personal study skills	
Personal study hours	
Class schedule	
Academic performance	
	College academic
College library services	
Nursing skills laboratory	
College computer laboratory service	
	Friend support
Encouragement by friends outside of school	
Encouragement by friends within classes	

2) To compare student demographics to survey responses, the following question was asked:

What are the differences among first-semester ASN students in their perceptions of factors that influence persistence to graduation by: (a) gender; (b) English as a first language; (c) age; (d) ethnicity; (e) marital status; (f) number of dependent children in the residence; and (g) the number of hours employed off campus weekly?

Here are the results based on 91 responses:

A) Gender

   a. 78.26% female participants, 21.74% male participants

   b. There were statistically significant differences in the environmental and personal academic factors.

      i. Environmental- female mean= 4.3561, male mean = 4.8143

      ii. Personal academic- female mean= 5.2319, male mean= 5.5875

B) English as a 1st Language

   a. 67.02% yes, 32.58% no

   b. There was not a statistically significant difference seen between any factor subscale and English as a 1st language

C) Age

a. Based on 91 participants, the following table was compiled:

Student Demographics by Age Group

Age Group	Percentage
Under 25	7.45
25 to 29	20.21
30 to 34	27.66
35 to 39	22.34
40 to 44	10.64
45 to 49	6.38
50 to 54	3.19
55 to 59	1.06
60 and over	1.06

b. Mean age scores were compared. Four age groups stood out and results are as followed:

Analysis of Age and Factor Subscales

Factor Subscale	Higher Mean	Lower Mean
Environmental	45- 49 = 5.2143	Under 25 = 4.1837
		35- 39 = 4.1714
Institutional integration	45- 49 = 4.9167	Under 25 = 3.5475
		35- 39 = 3.9750
Personal academic	45- 49 = 5.6250	Under 25 = 5.0714
		35- 39 = 5.0875
College academic	45- 49 = 4.9444	25- 29 = 4.0185
		35- 39 = 4.0333
Friend support	45- 49 = 5.8333	Under 25 = 4.9286

c. Analyses showed that there was not a significant difference between age and factor perception. However, the 45 to 49 age group found each factor supportive.

D) Ethnicity

a. Based on 91 participants, the following table was compiled:

Student Demographics by Ethnicity

Ethnicity	Percentage
American Indian or Alaskan Native	0
Asian	11.70
Other Asian	1.06
Black or African American	30.85
Hispanic or Latino	20.21
Native Hawaiian or Pacific Islander	1.06
White	25.53
Multiracial	8.51
Other	1.06

b. Mean ethnicity scores were compared. The results are as followed:

Analysis of Ethnicity and Factor Subscales

Factor Subscale	Higher Mean	Lower Mean
Environmental	White = 4.5217	Black or African American = 4.2931
Institutional integration	Multiracial = 4.5238	Hispanic or Latino = 3.9167
Personal academic	Multiracial = 5.5000	Black or African American = 5.2328
College academic	Multiracial = 4.9048	Hispanic or Latino = 4.0000
Friend support	Multiracial = 6.0000	Hispanic or Latino = 5.5278

c. Analyses showed that there was not a significant difference between ethnicity and factor perception.

E) Marital status

a. Based on 91 participants, the following table was compiled:

Student Demographics by Marital Status

Marital Status	Percentage
Single	28.72
Single living with partner	11.70
Married	45.74
Divorced/Separated	11.70
Widowed	2.13

b. Mean marital status scores were compared. The results are as followed:

Analysis of Marital Status and Factor Subscales

Factor Subscale	Higher Mean	Lower Mean
Environmental	Married = 4.4837	Divorced or separated = 3.9091
Institutional integration	Married = 4.4309	Single = 3.9557
Personal academic	Married = 5.3598	Widowed = 4.6250
College academic	Widowed = 4.9048	Single living with partner = 3.9697
Friend support	Widowed = 6.0000	Single = 5.5000

c. Analyses showed that there was not a significant difference between marital status and factor perception.

F) Number of Dependent Children in the Household

a. Based on 91 participants, the following table was compiled:

Student Demographics by Dependent Children

Number of Dependent Children at Home	Percentage
None	41.43
1	18.09
2	22.34
3	10.54
4	4.26
5 or more	3.16

b. Mean scores of the number of children were compared. The results are as followed:

Analysis of Dependent Children and Factor Subscales

Factor Subscale	Higher Mean	Lower Mean
Environmental	5 or more children = 4.8333	2 children = 4.0397 4 children = 4.0417
Institutional integration	3 children = 4.6667	2 children = 3.8889
Personal academic	No children = 5.4671	Five or more children = 5.1250
College academic	5 or more children = 4.6667	2 children = 3.9365
Friend support	5 or more children = 6.0000	No children = 5.5263

c. Analyses showed that there was not a significant difference between the number of children in the household and factor perception.

G) Hours Employed Off-Campus

a. Based on 91 participants, the following table was compiled:

Student Demographics by Employment Hours

Employment Hours Off-Campus	Percentage
None	72.34
1 to 10	11.70
11 to 20	7.45
21 to 30	2.13
31 to 40	4.26
40 or more	2.13

b. Mean employment hour scores were compared. The results are as followed:

Analysis of Employment Hours and Factor Subscales

Factor Subscale	Higher Mean	Lower Mean
Environmental	1 to 10 hours = 4.5000	21 to 30 hours = 3.5000
Institutional integration	1 to 10 hours = 4.5606	Over 40 hours = 2.7500
Personal academic	31 to 40 hours = 5.5000	Over 40 hours = 3.1250
College academic	21 to 30 hours = 5.1111	21 to 30 hours = 2.8333
Friend support	1 to 10 hours = 5.8636	21 to 30 hours = 3.7500

c. There was a significant difference between the number of hours employed and the perception of the institutional integration factor subscale.

Take away message:

- After viewing the data, how do your own demographics compare with the other students' factor perceptions?
- What factors concern you pertaining to your demographics?
- How will you address factors that apply to you? Let's make a plan:

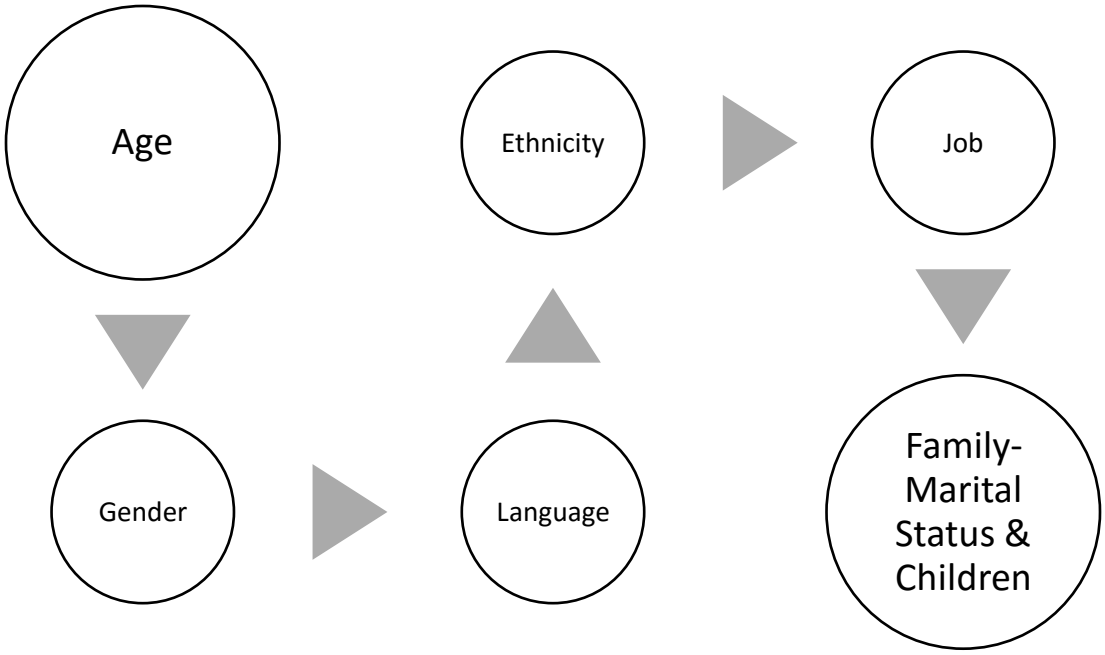
Factor Perception and Student Demographics Planning Tool

First, enter your demographics.

Second, what is your concern about each demographic? What issues do you anticipate for each demographic?

Third, let's come up with solutions.

For example, do you have childcare arrangements? If you are employed, will you continue working, and will you work part-time instead of full-time?



Unit VI: Supportive Factors and the Final-year Student

Background: Students in their last year of study in the ASN program were asked to detail supportive factors that helped them to persist to graduation.

Twelve interviews were analyzed.

Supportive family members and peers stood out as positive factors.

Here are some quotes from the participants:

- "I don't know how I would manage school if my daughter didn't live with my parents."
- "[Classmates] become your family."
- "You see [your classmates] more than your own family."
- "Your little ones will have to grow up faster. Your older ones will have to help out with the little one. Your husband will have to be both mom and dad."

Modification of study habits and motivation were also seen as supportive factors.

Here are some quotes:

- "It's based on you."
- "You have to study; you have to be motivated."
- "You know if you're going to make it from the beginning. You have to change how you study, but that is based on your drive."

Reflect on the supportive factors you experience as you are starting the ASN program.

Take this time to list what factors will you need to start in order to improve your persistence:

_____

_____

_____

Unit VII: Restrictive Factors and the Final-year Student

Background: Students in their last year of study in the ASN program were asked to detail restrictive factors that helped them to persist to graduation.

As in the previous unit module, the same twelve interviews were analyzed based on restrictive factors.

Employment generated mixed responses. Although working in the health science or nursing fields aided in understanding of the ASN content, most interviewees did not favor working while in the program.

Here are some quotes:

- "There isn't time to work; you can't work."
- "I thought about… welfare. I can't work, I'm supporting my husband and mom. I don't make enough as a tutor in school."

Reflect on the restrictive factors you experience as you are starting the ASN program.

Take this time to list the negative factors that you believe may hinder your persistence to graduation.

_____

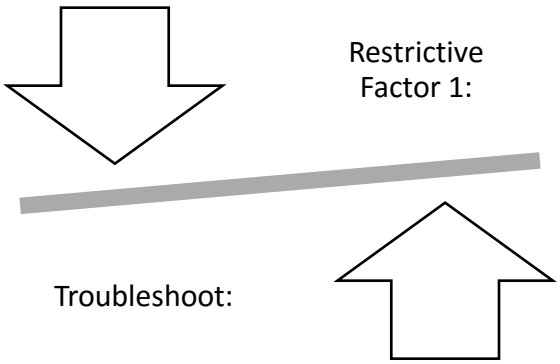
_____

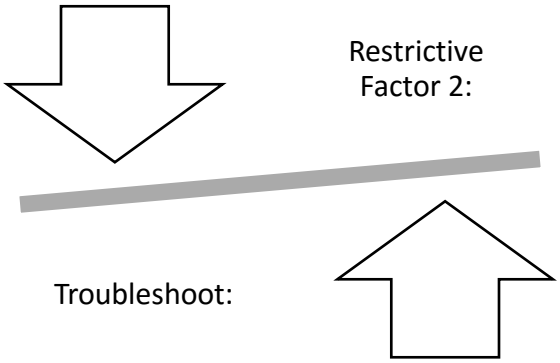
_____

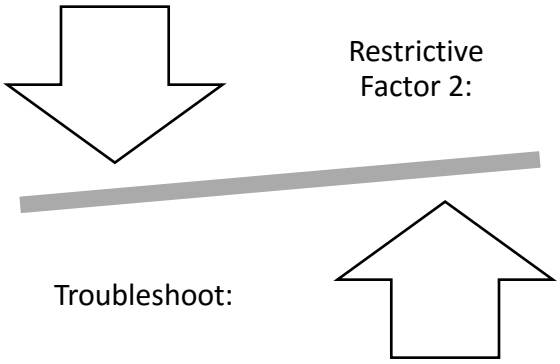
How will you address these factors in your life? Let's make a plan.

Restrictive Factors and the Final-year Student Planning Tool

What are some negative factors that you think may hinder your performance? How will you cope? Note your answers using the diagram below:







Unit VIII: Reflection

Congratulations! You've completed the NURS XXXX ASN Supplemental Orientation Course. You may access this course throughout your ASN enrollment in our college.

Take this time to reflect on what factors you view as supportive and restrictive, how your demographics relate to those factors, and what coping mechanisms you can employ.

You may interact with students on the Discussion page under the Student Lounge discussion thread.

Feel free to communicate with other students on supportive and restrictive factors and strategies for success.

The goal is to provide you with support for students by students, so that you persist to graduation and earn your degree.

We hope you enjoyed the course and students' input. We will continue to be available to you as you persist to graduation.

Please proceed to Unit IX. You will be directed to a non-graded quiz that simply asks for your feedback on this course. Your feedback is valuable and needed to make any improvements to this course. Thank you for your time and participation.

Unit IX: Your Feedback

Please complete the following quiz/questionnaire:

Was this course helpful to you? Why or why not?

What unit/module did you relate to the most? Please explain.

What unit/module did you relate to the least? Please explain.

In what ways do you relate to the first-semester students?

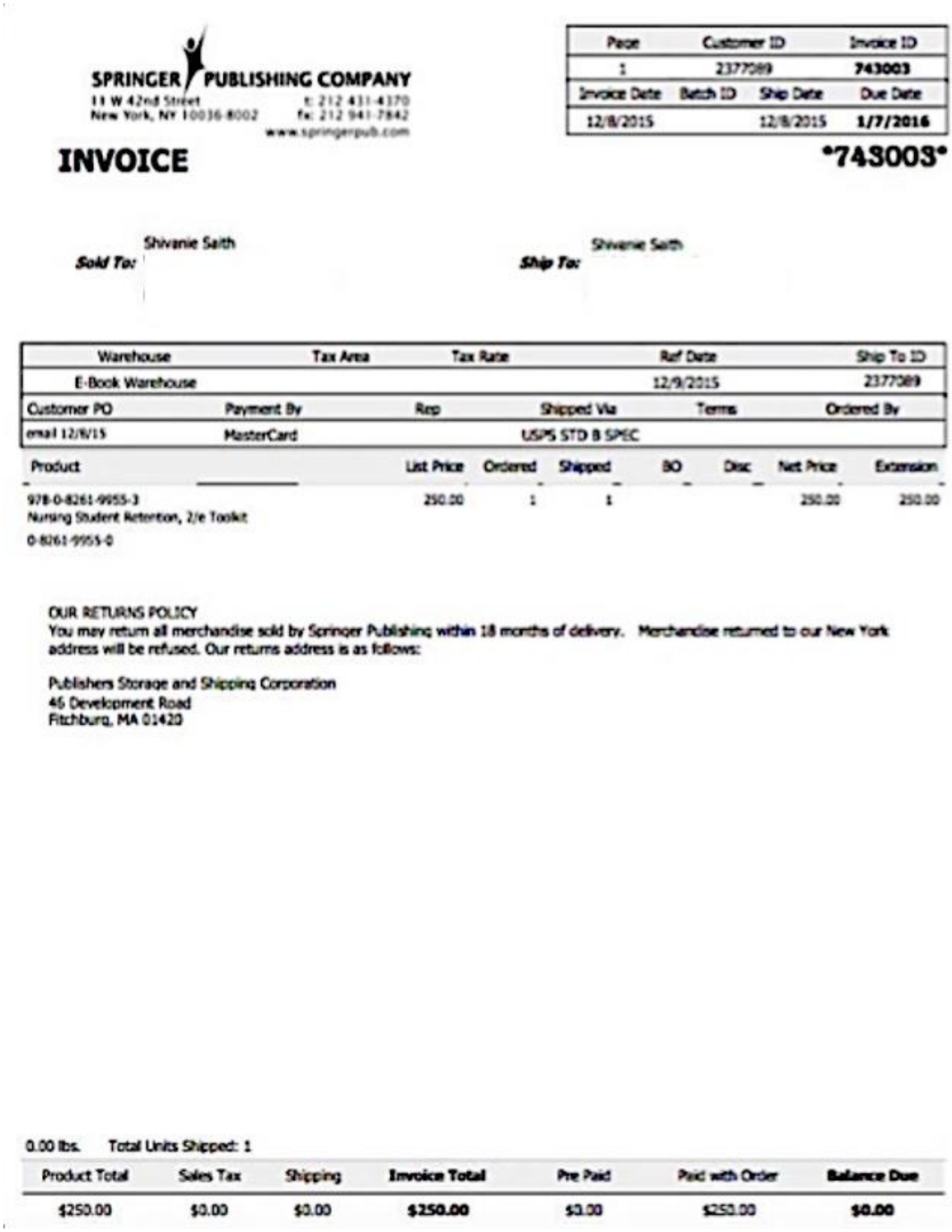
In what ways do you relate to the final-year students?

Are you likely to implement the final-year students' advice for incoming nursing students? Why or why not?

Are you likely to revisit this course as you progress through the ASN program? Why or why not?

Please list any questions, concerns, or suggestions you have for this course.

Appendix B: Permission to Use Nursing Student Retention Toolkit



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Appendix C: Sample of the Generic ADN Schedule

Associate of Science in Nursing
Program Code 2127 (RN)

General Education Credit Hours		**16**
ENC1101	English Composition I	3
BSC2085	Human Anatomy & Physiology I	3
BSC2085L	Human Anatomy & Physiology Lab	1
Mathematics*		3
Humanities		3
Social/Behavioral Science		3
Core Requirements Credit Hours		**11**
BSC2086	Human Anatomy & Physiology II	3
BSC2086L	Human Anatomy & Physiology II Lab	1
MCB2010	Microbiology*	3
MCB2010L	Microbiology Lab	1
HSC1149	Pharmacology	2
MTB1370	Math Topics for Health Related Professions	1
Program Specific Credit Hours		**45**
Session 1		
NUR1020	Nursing Process I	3
NUR1020L	Nursing Process Clinical Lab	2
Session 2		
NUR1210	Nursing Process II	3
NUR1210L	Nursing Process II Clinical Lab	2
Session 3		
NUR1220	Health Alterations I	3
NUR1220L	Health Alterations I Clinical Lab	2
Session 4		
NUR1421	Health Care of Women	3
NUR1421L	Health Care of Women Clinical Lab	2
Session 5		
NUR1520	Nursing Care of the Psychiatric Patient	3
NUR1520L	Nursing Care of the Psychiatric Patient Clinical Lab	2
Session 6		
NUR1310	Pediatric Nursing	3
NUR1310L	Pediatric Nursing Clinical Lab	2
Session 7		
NUR2221	Health Alterations II	3
NUR2221L	Health Alterations II Clinical Lab	2
Session 8		
NUR2222	Health Alterations III	3
NUR2222L	Health Alterations III Clinical Lab	2
Session 9		
NUR2811	Trends, Practices and Roles	3
NUR2811L	Trends, Practices and Roles Clinical Lab	2
Total Program Credit Hours		**72**

Note: Many courses have specific pre-requisite and co-requisite requirements that must be followed. Students are encouraged to consult the Course Information Table for a detailed list of all requisite requirements.

The General Education Mathematics course may have a required prerequisite of MAT1033/STA1001. MCB2010 also has a required prerequisite of CHM1032. The Math prerequisite ofMAT1033/STA1001 and the CHM1032 are not included in the overall program credit hours and therefore students may not be eligible for Federal Financial Aid for this specific pre-requisite courses.

Appendix D: Certificate of NIH Training Course Completion

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Shivanie Saith** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 02/02/2015

Certification Number: 1671354

Appendix E: Interview Protocol

Project:
Date:
Time:
Location:

Interviewer: Ms. Shivanie Saith
Interviewee alias:
Consent form signed? Circle Yes or No

To the interviewee:
Thank you for participating in this study; your input is valuable to the understanding of our educational fields.

Purpose:
The purpose of this study is to understand graduating Associate of Science in Nursing (ASN) students' persistence strategies in a local Florida college.

This study will attempt to answer the following questions:

1. What did final-year ASN students perceive or experience as restrictive factors during the ASN program?
2. What did final-year ASN students perceive or experience as supportive factors during the ASN program?
3. What successful coping strategies did final-year students use to persist through the ASN program?

Interview Questions:

1. Recall your experiences in the ASN program; can you explain what you personally experienced as supportive factors that enabled you to persist to this point in the curriculum?
   Response:

   Reflection:

2. Can you explain what you personally experienced as restrictive factors throughout the ASN program?
   Response:

   Reflection:

3. If you had to advise novice ASN students, what are helpful strategies or tips that you can give them to persist through the program?
   Response:

   Reflection:

4. What else would you like to add about your personal experiences as an ASN student?
   Response:

   Reflection:

   Closing statement:
   Your identity will remain confidential. I can email or mail you the transcribed interview within 3 days for you to review and correct for accuracy.

   If you consent to receive your transcribed interview via your personal email, may I please have the best email address to reach you?

   If you consent to receiving your transcribed interview via mail, may I please have the best address to reach you?

   Please check your inbox or mailbox and reply as soon as possible. Thank you for your participation and please contact me if you have further questions. Is there any additional information you'd like to add?

Appendix F: Demographic Data Sheet- Prelicensure

Item 9—Demographic Data Sheet—Prelicensure (DDS-P)

1. Gender:
□ Female
□ Male

2. Age:
□ Under 25
□ 25 to 29
□ 30 to 34
□ 35 to 39
□ 40 to 44
□ 45 to 49
□ 50 to 54
□ 55 to 59
□ 60 and over

3. Which of the categories best describes you?
□ American Indian or Alaskan Native
□ Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai)
□ Other Asian
□ Black or African American
□ Hispanic or Latino
□ Native Hawaiian or Other Pacific Islander
□ White
□ Multiracial
□ Other

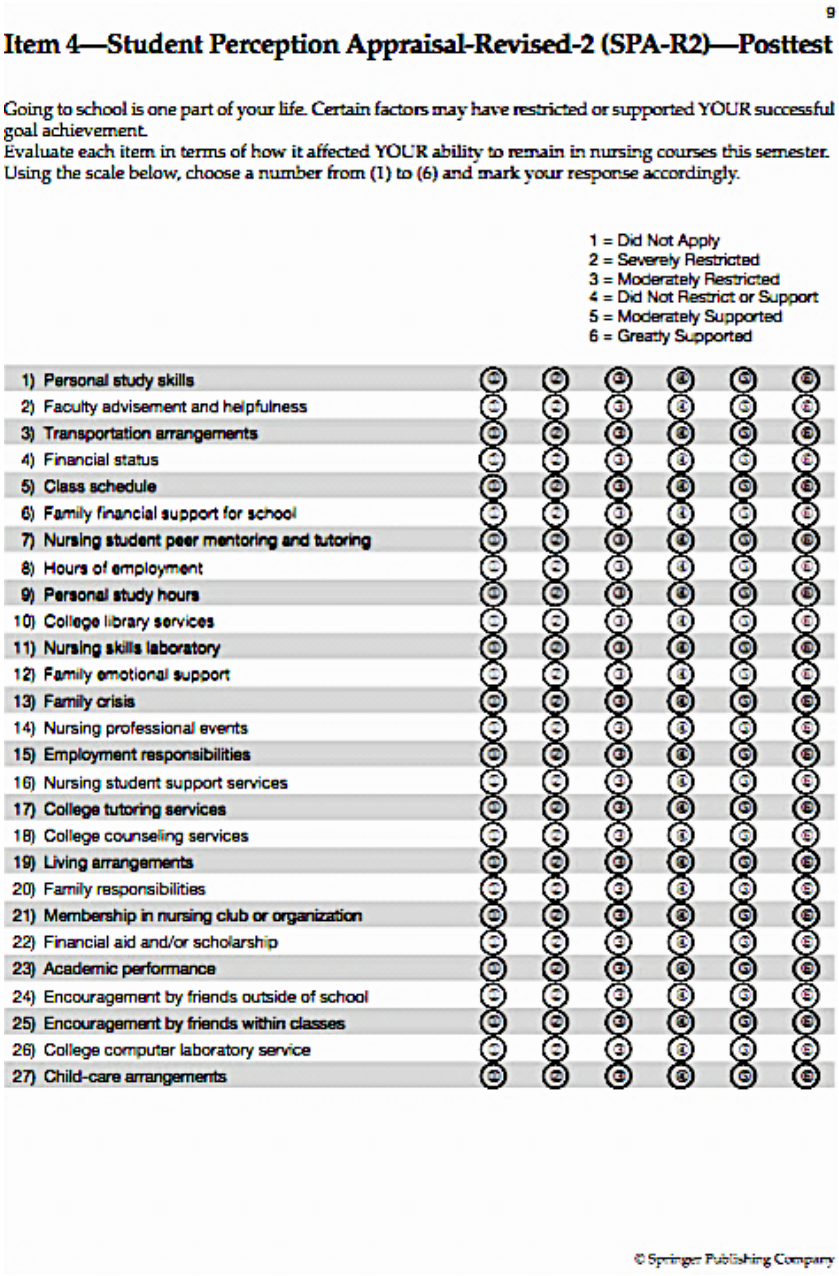
4. Is English your first language?
□ Yes
□ No

5. Marital status:
□ Single
□ Single living with partner
□ Married
□ Divorced/ Separated
□ Widowed

6. Number of dependent children living with you:
□ None
□ 1
□ 2
□ 3
□ 4
□ 5 or more

7. Number of hours weekly you are employed OFF CAMPUS:
□ None
□ 1 to 10
□ 11 to 20
□ 21 to 30
□ 31 to 40
□ over 40

Appendix G: Student Perception Appraisal- Revised 2



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Item 4—Student Perception Appraisal-Revised-2 (SPA-R2)—Posttest

Going to school is one part of your life. Certain factors may have restricted or supported YOUR successful goal achievement.
Evaluate each item in terms of how it affected YOUR ability to remain in nursing courses this semester. Using the scale below, choose a number from (1) to (6) and mark your response accordingly.

1 = Did Not Apply
2 = Severely Restricted
3 = Moderately Restricted
4 = Did Not Restrict or Support
5 = Moderately Supported
6 = Greatly Supported

1) Personal study skills	1	2	3	4	5	6
2) Faculty advisement and helpfulness	1	2	3	4	5	6
3) Transportation arrangements	1	2	3	4	5	6
4) Financial status	1	2	3	4	5	6
5) Class schedule	1	2	3	4	5	6
6) Family financial support for school	1	2	3	4	5	6
7) Nursing student peer mentoring and tutoring	1	2	3	4	5	6
8) Hours of employment	1	2	3	4	5	6
9) Personal study hours	1	2	3	4	5	6
10) College library services	1	2	3	4	5	6
11) Nursing skills laboratory	1	2	3	4	5	6
12) Family emotional support	1	2	3	4	5	6
13) Family crisis	1	2	3	4	5	6
14) Nursing professional events	1	2	3	4	5	6
15) Employment responsibilities	1	2	3	4	5	6
16) Nursing student support services	1	2	3	4	5	6
17) College tutoring services	1	2	3	4	5	6
18) College counseling services	1	2	3	4	5	6
19) Living arrangements	1	2	3	4	5	6
20) Family responsibilities	1	2	3	4	5	6
21) Membership in nursing club or organization	1	2	3	4	5	6
22) Financial aid and/or scholarship	1	2	3	4	5	6
23) Academic performance	1	2	3	4	5	6
24) Encouragement by friends outside of school	1	2	3	4	5	6
25) Encouragement by friends within classes	1	2	3	4	5	6
26) College computer laboratory service	1	2	3	4	5	6
27) Child-care arrangements	1	2	3	4	5	6

Student perception appraisal- revised 2. Reprinted from ancillary for *Nursing student retention: Understanding the process and making a difference* (p. 32) by M. Jeffreys, 2012, New York, NY: Springer Publishing. Reprinted with permission.

Appendix: Mean Score Comparison between Age Groups and Factor Subscales

Factor Subscale	Category	*n*	Mean	*SD*
Environmental	Under 25	7	4.1837	.92108
	25 to 29	18	4.3571	.71555
	30 to 34	25	4.5886	.78930
	35 to 39	20	4.1714	.75251
	40 to 44	10	4.7429	.60534
	45 to 49	6	5.2143	.91585
	50 to 54	3	4.2381	.59476
	55 to 59	1	4.8571	.
	60 and over	1	4.7143	.
	Total	91	4.4710	.78231
Institutional integration	Under 25	7	3.5476	.98936
	25 to 29	18	4.0000	.84791
	30 to 34	25	4.5133	1.17745
	35 to 39	20	3.9750	.84859
	40 to 44	10	4.4667	1.11333
	45 to 49	6	4.9167	.96465
	50 to 54	3	4.1667	.76376
	55 to 59	1	4.3333	.
	60 and over	1	3.0000	.
	Total	91	4.2106	1.02434
Personal academic	Under 25	7	5.0714	.73193
	25 to 29	18	5.4444	.53930
	30 to 34	25	5.2800	.74764
	35 to 39	20	5.0875	.61385
	40 to 44	10	5.5000	.33333
	45 to 49	6	5.6250	.34460
	50 to 54	3	5.5000	.43301
	55 to 59	1	5.7500	.
	60 and over	1	5.5000	.
	Total	91	5.3159	.61219
College academic	Under 25	7	4.4286	1.35693
	25 to 29	18	4.0185	1.24969
	30 to 34	25	4.9067	1.10353
	35 to 39	20	4.0333	1.33727
	40 to 44	10	4.3000	1.39177
	45 to 49	6	4.9444	1.49691
	50 to 54	3	4.4444	1.89541
	55 to 59	1	6.0000	.
	60 and over	1	5.6667	.
	Total	91	4.4432	1.30909

Appendix: Mean Score Comparison between Age Groups and Factor Subscales continued

Factor Subscale	Category	*n*	Mean	*SD*
Friend Support	Under 25	7	4.9286	.97590
	25 to 29	18	5.5556	.85559
	30 to 34	25	5.7000	.61237
	35 to 39	20	5.6750	.54471
	40 to 44	9	5.6667	.50000
	45 to 49	6	5.8333	.40825
	50 to 54	3	5.6667	.57735
	55 to 59	1	6.0000	.
	60 and over	1	6.0000	.
	Total	90	5.6167	.67479

Appendix: Mean Score Comparison between Ethnicity and Factor Subscales

Factor Subscale	Category	*n*	Mean	*SD*
Environmental	Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai)	11	4.4091	.53418
	Other Asian	1	5.0000	-
	Black or African American	29	4.2931	.87588
	Hispanic or Latino	18	4.3426	.82540
	Native Hawaiian or Other Pacific Islander	1	4.3333	-
	White	23	4.5217	.95254
	Multiracial	7	4.3333	.94281
	Other	1	4.8333	-
	Total	91	4.3919	.83347
Institution integration	Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai)	11	4.2424	1.08619
	Other Asian	1	5.6667	-
	Black or African American	29	4.2241	1.07485
	Hispanic or Latino	18	3.9167	.83676
	Native Hawaiian or Other Pacific Islander	1	4.5000	-
	White	23	4.3116	1.09210
	Multiracial	7	4.5238	.86831
	Other	1	2.5000	-
	Total	91	4.2106	1.02434
Personal academic	Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai)	11	5.3409	.92380
	Other Asian	1	5.2500	-
	Black or African American	29	5.2328	.67126
	Hispanic or Latino	18	5.3333	.47743
	Native Hawaiian or Other Pacific Islander	1	4.7500	-
	White	23	5.3478	.55257
	Multiracial	7	5.5000	.40825
	Other	1	5.7500	-
	Total	91	5.3159	.61219

Appendix: Mean Score Comparison between Ethnicity and Factor Subscales continued

Factor Subscale	Category	*N*	Mean	*SD*
College academic	Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai)	11	4.6061	1.46680
	Other Asian	1	6.0000	-
	Black or African American	29	4.4368	1.25705
	Hispanic or Latino	18	4.0000	1.27315
	Native Hawaiian or Other Pacific Islander	1	4.6667	-
	White	23	4.5217	1.48673
	Multiracial	7	4.9048	.83254
	Other	1	4.0000	-
	Total	91	4.4432	1.30909
Friend support	Asian (Chinese, Filipino, Japanese, Korean, Asian Indian, or Thai)	11	5.8182	.40452
	Other Asian	1	6.0000	-
	Black or African American	28	5.5714	.61935
	Hispanic or Latino	18	5.5278	.52782
	Native Hawaiian or Other Pacific Islander	1	4.0000	-
	White	23	5.5652	.93303
	Multiracial	7	6.0000	0.00000
	Other	1	6.0000	-
	Total	90	5.6167	.67479

Appendix: Mean Score Comparison between Marital Status and Factor Subscales

Factor Subscale	Category	*n*	Mean	*SD*
Environmental	Single	26	4.4808	.83043
	Single living with partner	11	4.3333	.74536
	Married	41	4.4837	.84968
	Divorced/ Separated	11	3.9091	.84775
	Widowed	2	4.3333	.70711
	Total	91	4.3919	.83347
Institution integration	Single	26	3.9551	1.09601
	Single living with partner	11	4.1061	.75378
	Married	41	4.4309	1.00276
	Divorced/ Separated	11	4.1212	1.10577
	Widowed	2	4.0833	1.53206
	Total	91	4.2106	1.02434
Personal academic	Single	26	5.4135	.68170
	Single living with partner	11	5.1136	.90391
	Married	41	5.3598	.39548
	Divorced/ Separated	11	5.2500	.75000
	Widowed	2	4.6250	.53033
	Total	91	5.3159	.61219
College academic	Single	26	4.5769	1.27387
	Single living with partner	11	3.9697	1.17808
	Married	41	4.3496	1.36005
	Divorced/ Separated	11	4.8485	1.34465
	Widowed	2	5.0000	1.41421
	Total	91	4.4432	1.30909
Friend support	Single	26	5.5000	.84853
	Single living with partner	11	5.6818	.56003
	Married	40	5.6625	.57051
	Divorced/ Separated	11	5.5909	.76871
	Widowed	2	6.0000	0.00000
	Total	90	5.6167	.67479

Appendix: Mean Score Comparison between the Number of Dependent Children in the Household and the Factor Subscales

Factor Subscale	Number of Children	*n*	Mean	*SD*
Environmental	None	38	4.5351	.74046
	1	17	4.6176	.78565
	2	21	4.0397	.89893
	3	9	4.2407	.78666
	4	4	4.0417	1.14160
	5 or more	2	4.8333	1.41421
	Total	91	4.3919	.83347
Institutional integration	None	38	4.1754	1.04260
	1	17	4.4020	.92620
	2	21	3.8889	1.01288
	3	9	4.6667	1.04083
	4	4	4.4167	1.10972
	5 or more	2	4.1667	1.64992
	Total	91	4.2106	1.02434
Personal academic	None	38	5.4671	.61008
	1	17	5.1618	.74969
	2	21	5.2143	.58248
	3	9	5.2222	.49124
	4	4	5.3750	.43301
	5 or more	2	5.1250	.17678
	Total	91	5.3159	.61219
College academic	None	38	4.6579	1.22900
	1	17	4.5882	1.12132
	2	21	3.9365	1.43612
	3	9	4.4444	1.35401
	4	4	4.3333	1.92450
	5 or more	2	4.6667	1.88562
	Total	91	4.4432	1.30909
Friend support	None	38	5.5263	.80495
	1	17	5.7647	.53379
	2	21	5.5714	.65738
	3	8	5.6250	.51755
	4	4	5.8750	.25000
	5 or more	2	6.0000	0.00000
	Total	90	5.6167	.67479

Appendix: Mean Score Comparison between Hours Employed and the Factor Subscales

Factor Subscale	Hours Employed	*n*	Mean	*SD*
Environmental	None	66	4.4293	.80758
	1 to 10	11	4.5000	.93095
	11 to 20	7	4.3095	1.01575
	21 to 30	2	3.5000	.94281
	31 to 40	3	4.4444	.19245
	over 40	2	3.6667	1.17851
	Total	91	4.3919	.83347
Institution integration	None	66	4.3030	.94277
	1 to 10	11	4.5606	.88278
	11 to 20	7	3.7619	1.40059
	21 to 30	2	2.5833	.11785
	31 to 40	3	4.0000	1.30171
	over 40	2	2.7500	.82496
	Total	91	4.2106	1.02434
Personal academic	None	66	5.3977	.43185
	1 to 10	11	5.3864	.63604
	11 to 20	7	5.2143	.94017
	21 to 30	2	4.5000	.70711
	31 to 40	3	5.5000	.25000
	over 40	2	3.1250	.17678
	Total	91	5.3159	.61219
College academic	None	66	4.3838	1.36531
	1 to 10	11	4.9091	1.03377
	11 to 20	7	4.8095	1.15241
	21 to 30	2	2.8333	.70711
	31 to 40	3	5.1111	.50918
	over 40	2	3.1667	.23570
	Total	91	4.4432	1.30909
Friend support	None	65	5.6846	.60318
	1 to 10	11	5.8636	.32333
	11 to 20	7	5.5000	.50000
	21 to 30	2	3.7500	1.06066
	31 to 40	3	5.3333	.57735
	over 40	2	4.7500	1.76777
	Total	90	5.6167	.67479