ACADEMIC SUCCESS AND RETENTION: ASSESSING VARIABLES THAT MAKE A DIFFERENCE IN A BACCALAUREATE NURSING PROGRAM

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Academic Success and Retention: Assessing Variables that Make a Difference in a Baccalaureate Nursing Program

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DOCTOR OF PHILOSOPHY

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ABSTRACT

Attrition rates for both traditional and nontraditional students in nursing programs across the U.S. are of concern in light of the current and projected shortage of nurses. The lack of success advancing through the nursing curriculum affects the nursing student, the nursing program, and the healthcare of the community. As a result, nursing programs have been encouraged to make student success programs a priority; however, there has been a paucity of research that has examined the effect these programs have on student success. Framed by Bandura's theory of self-efficacy, the purpose of this study was to examine the effects of a study skills seminar on self-efficacy and academic performance in BSN students, with an emphasis on nontraditional students.

A true experimental pre-test post-test control group design determined if there was a statistical relationship between a study skills seminar and students' perceived academic self-efficacy, and performance on multiple-choice exams in their nursing courses. Data consisted of results from pre- and post-intervention administrations of a researcher designed self-appraisal tool, demographic information, and exam performance. Data was reviewed using descriptive statistics and factorial between subjects analysis of variance's (ANOVA's).

Significant self-efficacy gain scores (p = .039) were noted for the treatment group compared to the control group. Results also revealed a lower mean gain (non-significant) in total self-efficacy for nontraditional students compared to traditional students. There was no significant relationship between academic performance as measured by mean exam scores for the treatment group compared to the control group, nor was there a significant relationship for the nontraditional student on mean exam scores. An exploratory research section revealed that as

class or educational level in the program increased, both self-efficacy gain and mean exam scores decreased.

This study was a step in the right direction as it confirmed the positive effect a study skills seminar had on academic self-efficacy as well as its potential to influence academic success. Further research related to the effects a study skills seminar and test taking strategies has on academic self-efficacy and academic performance is warranted.

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CHAPTER 1. INTRODUCTION

Statement of the Problem

Increasing the numbers of students graduating from programs of nursing is imperative to battle the current and future nursing workforce shortage in our country. Supplying an adequate nursing workforce is a priority not only for schools of nursing but also for healthcare organizations. Healthcare organizations have a rightful interest in nursing education's attrition, retention, and graduation rates as they affect the needed supply of nurses to fill current and future nurse vacancies. Research has outlined the complexity of, and multiple variables in, the ability of nursing students to achieve academic success. Many students', especially under-represented minorities (URM's), are unaware and underprepared for nursing education's rigor and demand, which can make progressing academically through a nursing program difficult. These rigorous academic standards are in place to prepare nursing students to progress through the curriculum, obtain academic success, and be successful on the National Council Licensure Examination for Registered Nurses (NCLEX- RN). Students who are not adequately prepared or who have yet to develop the skills to be successful, can have difficulty progressing, and subsequently may suffer academic failure. If a student fails to meet the required academic performance level, there is dismissal from the nursing program with the requirement that the student reapply to continue in the program. The resultant attrition ensues with the student either falling back a cohort or falling out of the program completely. Attrition rates in all levels of nursing programs across the United States (U.S.) are of growing concern. The reality of the nursing shortage requires the concept of nursing student attrition and retention be looked at with a new lens. Nursing programs have an obligation to find visionary methods to meet the needs of all students in their programs in achieving academic success, especially those students identified as high-risk (Horkey, 2015).

This quantitative study addressed the scarcity of research available on the effect a study skills seminar had on academic performance and perceived academic self-efficacy of beginning nursing students.

Background

Nurse Shortage

Registered Nurses (RN's) comprise one of the largest categories of the U.S. workforce. They are listed as one of the top occupations with the largest projected number of job openings due to growth and replacement needs (American Association of Colleges of Nursing [AACN], 2017b). The nursing shortage is well documented in both the professional and public literature. The U.S. is expected to experience a shortage of RN's that is forecasted to move to critical levels as Baby Boomers age and the need for health care surges. According to the Department of Labor, Bureau of Labor Statistics' Employment Projections, the RN workforce is projected to increase by 439,300 nurses or 16 percent by 2024. A compounding variable is a need for 649,100 replacement nurses, which brings the total number of projected job openings by 2024 to 1.09 million nurses. This projected growth is due to a combination of factors including an aging American population, changes in the federal healthcare reform allowing more of the population to seek healthcare, and finally, a wave of nurses entering into retirement (AACN 2017b; Bureau of Labor Statistics, 2018). In North Dakota (ND), the shortage of RN's is projected to be 2,585 by the year 2024. Current statewide vacancy rates for RN's is 7.16 percent. Depending on the type and education of the nurse, overall nurse vacancy rates in ND range from 4.97 percent to 13.44 percent. Vacancy rates under 5 percent generally indicate the workforce supply and demand are balanced. A 7.16 percent RN vacancy rate however, indicates an obvious divide between the number of nurses in ND and the statewide need for an RN workforce. As ND's

population is projected to increase, the RN's job growth is also projected to continue to grow through 2026, which would cause the number of nurses needed per year to increase to over 200. It follows then, that there is a clear need to increase the numbers of RN's in ND. Recognizing the impact that the nursing shortage would have in the state of ND, Governor Doug Burgum assembled a group of stakeholders and formed a taskforce to evaluate the causes, issues, and potential solutions of the critical shortage. The ND taskforce identified three major themes creating the barriers and challenges for increasing the nursing workforce in ND: (a) barriers to nursing program entry, (b) challenges to expanding program capacity, (c) low retention of nursing graduates and nursing professionals. The task force then developed goals and activities to focus on maximizing programs of nursing, expanding program sites into the rural communities, and emphasizing retention (Governor's Nursing Workforce Shortage Planning Team, 2017).

Another factor that contributes to the complexity of the nursing shortage is the goal set by the Institute of Medicine (IOM). The IOM, set a national goal of increasing the percentage of Baccalaureate of Science in Nursing (BSN) prepared nurses to 80 percent by 2020 to create a more highly educated workforce to manage the increasing complexity of healthcare in the U.S. (Institute of Medicine [IOM], 2010). The IOM (2010) report adds that BSN-prepared nurses are better equipped to manage this increasing complexity in nursing care. Additionally, in 2013, Blegen, Goode, Park, Vaughn, and Spetz found that hospitals with a higher percentage of RNs with baccalaureate or higher degrees had better nurse-sensitive patient outcomes.

In order to assist this current era of nursing shortage as well as to assist the IOM in meeting their goal, BSN programs are compelled to graduate, not just admit more student nurses. It is important to recognize that increasing admission and enrollment numbers alone will not

provide a solution to the nursing shortage. Often increasing numbers of admitted students can increase numbers of student attrition. Additionally, many nursing education programs have a shortage of nursing education faculty, limited clinical sites, limited classroom space, and a dwindling college budget to accommodate an increased enrollment of nursing students. Nursing programs must examine ways to increase retention and facilitate success from admission to program completion and licensure (Symes, Tart, & Travis, 2005; Carr, 2008).

Underrepresentation of Minorities

In addition to the insufficient number of nurses in the workforce, the diversity of those practicing within the profession is insufficient. The U.S. population will be considerably older and more racially and ethnically diverse in 2060 according to the U.S. Census Bureau (2015). By 2044, the U.S. is projected to become a majority-minority nation for the first time. Minorities in all but the single-race, non-Hispanic white population, are forecasted to comprise 57 percent of the population in 2060 as compared to the current 38 percent (U.S. Census Bureau, 2015). The expected rise in the number of racial and ethnic minority groups in the U.S. will have an impact on the healthcare system by increasing the number of diverse patients seeking health care.

Comparing these statistics to the current workforce of RN's in the U.S., the RN workforce does not match the population it serves. The current RN workforce consists of 83 percent White/Caucasian nurses, and 17 percent from racial and ethnic minority groups. More specifically, 5.4 percent of nurses are African American, 3.6 percent are Hispanic, 5.8 percent are Asian/Native Hawaiian, 0.3 percent are American Indian/Alaska Native, and 1.7 percent of nurses identified as Multiracial nurses (Agency for Healthcare Research and Quality [AHRQ], 2015; AACN, 2017a, 2017b). In taking a closer look at comparing the RN population to the general population, Caucasians and Asians were slightly overrepresented as registered nurses

when compared to their numbers in the general population, however, African-Americans and Hispanics were significantly underrepresented as registered nurses when compared to their general population numbers. It would also be remiss if gender and the nursing workforce were not reviewed. There was a substantial underrepresentation of men in nursing compared to the general population numbers. In fact, only 8 percent of the national RN workforce were male 8 percent (National League of Nursing [NLN], 2016a; AACN, 2017c).

The under-representation of a diverse nursing workforce is associated with the continued problem of disparity and inequality in health care. A report by the IOM (2010) suggested worse health outcomes and higher mortality rates in racial and ethnic minority groups due to the lack of ethnically diverse and culturally competent health care providers. A more representative health care workforce can help reduce health disparities, increase the quality of care, and aid in decreasing the nursing shortage caused by an aging workforce (AACN, 2015; AACN, 2017a; Brooks Carthon, Nguyen, Pancir, & Chittams, 2015; Gardner, 2005a,b,c; Gilchrist & Rector, 2007; IOM, 2010;). Progress toward increasing nursing workforce diversity over the past decade reflect the priority that has been emphasized by national and professional nursing organizations such as the AACN, the NLN, as well as other stakeholders (AACN, 2015, 2017a; NLN, 2016a; HRSA 2013). Despite steady gains in racial, ethnic, and gender underrepresentation in the nursing profession, the current workforce does not mirror the population of patients it cares for.

The NLN (2016a) has reported that it continues to promote its diversity initiatives to address the need for increasing diversity among nursing faculty and students. Steps to increase, retain, and graduate URM nurses continue to be the goal of nursing education and practice. The AACN (2015, 2017a) reported that they continue to support efforts in recruiting, retaining, and graduating nursing students from URM groups; specifically those from African American,

Hispanic, Asian, American Indian, and Alaskan native backgrounds. These commitments are paramount when looking at enrollment statistics of nursing education programs. The mismatched demographics described earlier are also resonated in ND's recent population statistics. ND is comprised of 86 percent Whites/Caucasians, with 14 percent representing racial and ethnic minority groups (US Census Bureau, 2015). Comparing these statistics to the current RN workforce of in North Dakota, Whites/Caucasians represent 93 percent of the workforce and minority groups represent 7 percent. When looking at gender underrepresentation, recent census data indicated that 51 percent of ND's population was male. Again, comparing this statistic to the current workforce in ND, only 7 percent of males made up the RN workforce. (Moulton & Martin, 2016; US Census Bureau, 2015). In a 2017 Policy Brief by the AACN, 30 percent of the students enrolled in baccalaureate and graduate nursing programs in the U.S. were racially and ethnically diverse, compared to 11 percent in ND.

Program Completion: Attrition and Retention

With the anticipation of a nursing shortage in the coming decade, it is imperative for the nursing profession to explore ways to increase the population of nurses to meet the supply-demand concern. One way to address this issue is to explore avenues to decrease the attrition rates that are common in undergraduate nursing programs (Kinser, 2004). Harris, Rosenberg, & Grace O'Rourke (2013), reported that the average attrition rate for baccalaureate nursing students can be up to 50 percent, and for minority students the rates can be even higher. Gilchrist & Rector in 2007 found that students whom English was an additional language (EAL) had attrition rates as high as 85 percent in nursing programs. In 2009, Pryjmachuk, Easton, and Littlewood reported that nursing student attrition rates have ranged from 10 percent to 37 percent in programs of nursing throughout the U.S. The NLN (2006) revealed that 20 percent to 42

percent of nursing students leave their program within the first year. Similarly, in 2010, Williams concluded that nursing program attrition commonly occurs within the first year. Attrition rates in nursing programs are of concern as they reduce the supply of nurses available for professional practice (Beauvais, Stewart, DeNisco, & Beauvais, 2014). According to Gardner (2005b) and Giddens (2008), determining exact figures for attrition rates of nursing students is difficult due to inconsistent or lack of documentation amid nursing programs. Glossop (2001) reported that the variation in attrition rates and the difficulty in comparing attrition rates between programs was due in part to the lack of an agreed-upon definition of attrition, and by the discrepancies among programs in calculating attrition rates. Attrition is often defined in the literature as departure from a nursing program without successful completion of that program. The literature has also defined attrition as students who are delayed in their progress toward program completion. Similarly, in Glossop's 2002 study, attrition related to nursing education was defined as the difference between the number of students beginning each cohort and the number who completed that cohort. Although this definition appears straightforward, the ability of students to enter, leave, and re-enter their nursing programs affect the accuracy of reporting. Jeffreys (2012) stated that student attrition continues to exist in the literature and that attrition and retention in nursing education programs were very complex and multidimensional concepts.

Nursing programs as well as credentialing organizations are measuring and monitoring student retention and graduation rates as a way to address the nursing shortage. By measuring graduation rates, nursing programs can monitor how successful their curriculums are and receive feedback on improving or maintaining strategies that promote student success (Robertson, Canary, Orr, Herberg, & Rutledge, 2010). Attrition and retention are also major performance measures for program accreditation. Nursing programs commonly track progression and

graduation rates of their students as measures of program effectiveness. The Commission on Collegiate Nursing Education (CCNE) in its Standards for Accreditation for Baccalaureate and Graduate Degree Nursing Programs Supplemental Resource in September 2017 requires programs to include completion or graduation rates specifying the entry point, and defining the time to completion as evidence of program effectiveness. The formula used to calculate completion rates must also be described when submitting this data. Programs are expected to have completion rates > 70 percent. CCNE accreditation is one way to ensure the quality and integrity of baccalaureate, graduate, and residency programs in nursing. The NLN, another major accrediting body, recommend 80 percent as an acceptable completion rate for BSN programs (NLN, 2016b).

Upon the request of the ND Governor's task force, the ND Center for Nursing and the College and University Nursing Education Administrators (CUNEA) collaborated to collect completion rates from ND nursing programs from 2013 to 2018. For the BSN traditional program combined with the RN/Licensed Practical Nurse (LPN) to BSN program, the average 100 percent completion rate (completed program on time) was 80 percent over the five-year period. This was the first time program completion rates were collected and analyzed as a group in ND, and as a result, limitations were identified (Governor's Nursing Shortage Taskforce, 2018). Similar to Glossop's (2001, 2002) findings, the ND nursing program results were affected by the differences in the interpretation/calculation of completion variables, movement of students from one cohort to the next, and coding of dismissal and stop outs. Collecting and analyzing ND nursing program completion rates would allow the development of best practices to support students in achieving academic success (Governor's Nursing Shortage Taskforce, 2018). As accrediting agencies and other key stakeholders examine retention in the form of program

completion, it follows then, that the focus of this study will be on academic performance and retention rather than attrition. Retention and academic success will be the main terms used when discussing program completion for this study.

Deficiencies in the Evidence

There is a gap in the discovery of factors and use of preventive strategies influencing the beginning nursing students' academic performance and success. To help achieve the goal of increasing nursing student retention and academic success, many higher education institutions provide first-year experience courses and study skills workshops. These courses and workshops zero in on topics such as time management, notetaking, stress management, motivation, and test-taking strategies. The goal of these preventative interventions is to equip the student with additional tools and resources to promote academic success. Evidence from the research supports the effects of first-year experience courses and study skills workshops on grade point averages (GPA's) and academic achievement. Additionally, evidence from the research supports the role self-efficacy plays as a predictor of achievement, and more specifically academic success. Self-efficacy may be a necessary quality for academic success but self-efficacy alone may not be enough. Despite the evidence supporting the strength of first year experience courses or study skills workshops, as well as the influence academic self-efficacy has on achieving academic success, the effect of a study skills course or workshop on academic self-efficacy is not well documented and warrants further investigation. This study was designed to examine pre- and post-intervention levels of academic self-efficacy, and academic performance in BSN students participating in a nursing specific study skills seminar.

Purpose of the Study

Early identification of at-risk nursing students and implementation of interventions aimed at promoting success and preventing course failure are essential to facilitate student nurse retention and academic success. Nursing students withdraw from nursing programs for a variety of reasons; however, this research focused on the development of the necessary academic skills and behaviors to promote academic success. The purpose of this study was to examine the relationship of a study skills seminar on self-efficacy and academic performance in BSN students, with an emphasis on the nontraditional BSN student.

Significance of the Study

Due to the nursing shortage and the underrepresentation of minorities including men in nursing, a renewed focus on student attrition and retention may provide insight into factors that will increase the likelihood that students enrolled in undergraduate nursing programs will achieve academic success through graduation. An adequate number of nursing graduates is essential to meet societal demands and unfortunately, this is complicated by high attrition rates in nursing education. Additional research is warranted in the area of nursing student retention and graduation, specifically in discovering ways to support nursing students from program admission, to completion, to licensure. Nursing programs have an obligation to increase retention in order to have a positive impact on the nursing shortage. An increase in retention rates can increase successful graduation from nursing school, thereby increasing the population of nurses in the workforce. In the current nursing shortage, the effect of academic- related attrition on the nursing profession cannot be ignored since each course failure represents a delay into professional practice. Additionally, there are significant financial and emotional ramifications related to course failures: Students must pay for additional semesters, they experience a loss of

income related to delay in graduation, not to mention the negative effects a failure has on self-esteem. Studying the variables proposed in this study could contribute significantly to existing research related to factors influencing retention rates and academic success in nursing education.

Researcher's Role in the Organization

As a faculty member and director of a BSN program of nursing at a public university in the upper midwest, this researcher has met and worked with students that have shared their experiences and issues that have affected their ability to achieve academic success. Although attrition rates at this researchers program of nursing are below the national averages reported in the literature, even a small percentage of students failing to achieve academic success negatively contribute to the critical nursing workforce shortage. Multiple reasons for lack of nursing school success have been documented in the literature, but the goal for faculty is to find solutions to increase retention within their own institutions (Jeffreys, 2004). Nursing student retention is vital not only to the school of nursing and its stakeholders, but to the State and Nation. The unified goal to recruit, retain, and graduate a diverse pool of nurses can help solve the shortage of nurses while meeting the needs of an expanding culturally diverse society.

Definition of Terms

Attrition. Attrition, as defined by Jeffreys (2012), is students "dropping out" of the nursing program (p.10).

Academic-related attrition. Academic-related attrition is considered involuntary and defined as attrition related to course failure or course and program dismissal related to academic reasons (Jeffreys, 2012).

Academic Performance. Academic Performance is defined as the grades received for nursing exams during the length of the study.

Academic Success. Academic success is defined as successfully completing and passing a nursing course.

Cohort. Cohort is defined as a specific group of students established for tracking purposes (IPEDS, 2017-2018).

Diverse Student. The diverse student will be defined the same and considered interchangeable with the term non-traditional student, for the purpose of describing students who differ from the pattern of long-established traditional undergraduate nursing students.

English Language Learners (ELL). ELL's are students who are unable to communicate fluently, who often come from non-English speaking homes and backgrounds, and who typically require specialized or modified instruction in both English language and in their academic courses. ELL students may also be students formerly classified as limited English proficient, but now have acquired English-language abilities allowing them to transition in to regular English taught academic courses. (English Language Learner, n.d.).

National Council Licensure Examination (NCLEX- RN). The NCLEX-RN is a nationwide examination for the licensing of Registered Nurses in the United States and Canada.

Non-academic-related attrition. Non-academic-related attrition is considered voluntary and defined as attrition related to personal and non-academic reasons (Jeffreys, 2012).

Non-traditional Student. The nontraditional student in this study is defined as any student who meets one or more of the following criteria: a) 25 years or older; d) male; e) member of an ethnic, or racial minority group; f) speaks English as an additional language; g) has dependent children.

Program. Program is defined as a combination of courses and related activities organized for the attainment of broad educational objectives as described by the institution (IPEDS 2017-2018).

Program Completion. Program completion will be defined as the student successfully completing the program's graduation requirements.

Retention. Retention in this study will be defined as the student successfully completing the required courses, in the specified time period, without withdrawals or failures, and remaining with their starting cohort until graduation.

Self-Efficacy. Self-Efficacy is defined as the belief one has about their capability to perform a certain task or achieve a certain goal. It is the belief that one can attain the learning of specific tasks, despite any hurdles or adversity, and do what is necessary to achieve that task (Bandura, 1986, 1994).

Under-Represented Minorities (URM's). URM's in nursing for the purpose of this study will be defined and will include those nurses whose racial or ethnic makeup is underrepresented in the nursing workforce. This includes African Americans, Hispanics, Asian/Native Hawaiians, American Indian/Alaska Natives, and multiracial nurses.

Withdrawal. Withdrawal is defined as students officially withdrawing or leaving from a college course or courses due to personal and/or academic reasons (Jeffreys, 2012).

Delimitations of this Study

The students represented in this research were from one institution, a distant site at a public university in the upper Midwest. Although the students were diverse and came from multiple geographic areas, they may or may not be representative of students at other institutions' nursing education programs.

CHAPTER 2. REVIEW OF LITERATURE

Attrition

The issue of nursing student attrition is ranked as one of the main concerns nursing programs are facing (Newton & Moore, 2009; Pryjmachuk et al. 2009). The concerns of attrition in nursing education have been displayed in the literature and contribute to the investigation into narrowing the margin between attrition and retention. In programs of nursing, some degree of attrition is unavoidable in order for nursing programs to maintain their high standards within the profession. Additionally, if a student realizes once they get into the program that they made an incorrect career choice, attrition in this instance would be acceptable (Cameron, Roxburgh, Taylor, & Lauder, 2011; Urwin et al. 2010). According to Gardner (2005a) and Giddens (2008), determining exact figures for attrition rates of nursing students is difficult due to inconsistent or lack of documentation amid nursing programs. In 2001, Glossop reported that the variation in attrition rates and the difficulty in comparing attrition rates between programs was due in part to the lack of an agreed-upon definition of attrition and by the discrepancies among programs in calculating attrition rates. These studies relay the importance of clearly defining attrition and the method for calculating rates of attrition so nursing programs can report accurate program attrition figures. Once accurate calculations and causes of attrition are identified, strategies can ensue to increase program retention rates.

Cameron et al. (2011) recommended categorizing and labeling attrition as positive and negative. Positive attrition due to a student realizing it was not the right educational choice, and negative attrition due to a student experiencing academic failure. Factors associated with attrition have been noted in the literature to be complicated and inter-related. Deary, Watson, & Hogston in 2003, noted that students often found it difficult to identify specific causes and reasons for

leaving programs of nursing. Deary et al. (2003), along with Glossop (2002) and MacCallum (2012), concluded that the multifactorial causes for attrition were related to personal problems, financial burden, emotional distress, difficulty coping, academic difficulties, and students prematurely deciding nursing as a major. Additionally, the authors concluded that in some situations, students realized that they were unprepared for the academic rigor of the program after it had started. Wells (2007) found that nursing student departure or attrition was not related to a single stressor. He posited it was alternately a result of a cumulative effect of the students' disillusionment of the program, program practices, the profession, the campus life and environment, the perceived lack of faculty or nursing staff support, and/or external environmental stressors. Wells concluded that a combination of any two or more of the identified stressors was likely to result in program departure (2007).

Traditional Students and Academic Related Attrition

When students admitted into nursing programs are minimally qualified and insufficiently prepared academically for the rigors of the curriculum, attrition can be a common result (Gardner, 2005a,b; Newton, 2008; Newton, Smith, Moore, & Magnan, 2007; Seago & Spetz, 2003). Due to the rigorous nature of a baccalaureate-nursing program, students with strong scholastic and nursing ability have less progression and retention issues than those students who demonstrate weaker aptitudes (Gardner 2005a,b; Newton et al. 2007). As a result, student attrition can be decreased and retention increased in nursing education programs when students with high scholastic and nursing ability are selected for admission (Newton et al. 2007). Newton and Moore completed a study in 2009 to determine if scholastic aptitude predicted BSN student attrition prior to the final semester in the nursing major. The authors concluded that pre-nursing scholastic aptitude was predictive of first-semester nursing success, and subsequently, first-

semester nursing success was positively related to progression and retention into the final semester of the nursing major. Overcoming academic deficiencies is difficult for most students, and students who are academically underprepared for the rigors of a BSN curriculum do not benefit emotionally or financially by being admitted and then failing during the program (Potolsky, Cohen, & Saylor, 2003). Students who are not prepared for college life may not have acquired the study skills that are necessary to meet the demands of the nursing curriculum (Wray, 2011).

Traditional Students and Non-Academic Related Attrition

According to a report outlining the admission policies and attrition rates in California Community College Nursing Programs, financial issues were the most common reason for attrition in their nursing programs. Students reported having to work to support themselves and/or family members while they were enrolled in the program, thus leaving little time to focus on their studies in order to progress. The next most common reason for nursing student attrition was related to insufficient academic preparation at the start of their nursing program, resulting in difficulty with coursework after admission (California Postsecondary Education Commission [CPEC], 2003). Pryjmachuk et al. (2009) similarly found that high attrition rates correlated with students who struggled financially. Also supporting non-academic factors in the literature related to attrition was Jeffreys. Jeffreys (1998) discovered that environmental variables influenced academic achievement more than academic variables. When looking at pre-admission variables, Newton et al. (2007) reported that pre-nursing GPA and the Test of Essential Academic Skills (TEAS) examination from the Assessment Technology Institutes (ATI) scores were an indicator of early academic achievement in nursing programs. In more recent work, Newton and Moore (2009) examined scholastic aptitude as a predictor of BSN student attrition prior to the final

semester in the nursing program. The authors reported that pre-nursing scholastic aptitude was predictive of first-semester nursing success, and corresponding to that, first-semester nursing success had a positive relationship to progression and retention as the student transitioned to the final semester of the nursing program. Conversely, Jeffreys study (2007a), investigating variables influencing nontraditional students' retention, revealed that pre-nursing GPA did not have a relationship with program attrition or retention.

A qualitative exploratory descriptive study completed by ten Hoeve, Castelein, Jansen, and Roodbol (2017) in the Netherlands evaluated attrition and retention concepts and found that both intrinsic and extrinsic factors were important in program completion. The quality of clinical placements and experiences as well as perceived academic support from mentors were important factors in a student's decision to stay and complete their nursing program (retention), or stop out and leave (attrition). Students who had pleasant and motivating clinical and classroom experiences were more likely to complete the program than students who became disappointed with unmet expectations. Urwin et al. (2010) completed a literature review in the United Kingdom (UK) related to understanding attrition. They confirmed that there were both multiple and complex factors contributing to attrition, and that all of those factors interact with one another. Urwin et al. labeled three levels of contributing factors related to attrition: "Micro or individual factors; meso or institutional factors; and macro or political and professional factors" (pp. 203-206). Urwin et al. asserted that even though this study was completed in the UK, it would be applicable and relevant to nursing education programs in any setting (Urwin et al. 2010). Glossop (2002) collected data on nursing students who discontinued their course of study and the reasons for leaving at the University of Glamorgan in the UK from 1992 through 1997. A total of 105 nursing students discontinued over the study time period with data revealing multiple

reasons an individual student would choose to leave. When leaving reasons were combined, family circumstances (24%) were the most frequently reported reason for leaving and discontinuing their course of study.

Attrition- Non-Traditional Students Including Underrepresented Minorities

As the percentage of nontraditional nursing students entering into programs of nursing increases, it is important that there be a greater understanding of what attrition problems are unique to them. Nontraditional students differ from traditional students and as a result, may require additional academic and nonacademic support. Nontraditional students according to Jeffreys (2012), includes students who are: "a) 25 years or older; b) commuter; c) enrolled part-time; d) male; e) member of an ethnic, racial, religious, national, or other minority group; f) speaks English as an additional language; g) has dependent children; h) completed secondary education via a different route than usual with in the country of nursing program education [e.g., general equivalency diploma/GED]; or i) required remedial classes" (p. 9). Frequently, nontraditional students enter nursing programs as transfer students coming from other academic programs. According to Mooring (2016), it is imperative to assess the students' previous educational experience as any negative experience coupled with the increased rigor of a nursing program may create added difficulty for the nontraditional-transfer student to complete the program.

Attrition rates for nursing students are high in general, but for nontraditional students including URM's, attrition rates can be anywhere from 15 percent to 85 percent (Pryjmachuk et al. 2008). In a report by the AACN (2015, 2017c), URM students admitted to nursing schools had increased to 30.1 percent in 2014, but despite the increase in enrollment, attrition rates remained high among this group of students. These high attrition rates exacerbate the nursing

shortage and stymie the effort to improve diversity in the nursing workforce despite increased URM enrollments (Wells, 2003). Early identification of factors that restrict or support academic achievement and retention is imperative for these students. Jeffreys (2007a) determined that the older nontraditional student typically has multiple stressors, including financial strain, as well as familial responsibilities that place them at higher risk for attrition. Ethnically diverse students are also at an increased risk for attrition due to feelings of isolation, lack of faculty support, academic disadvantages, and language barriers (Gardner 2005a,b,c; Gilchrist & Rector 2007). For URM students, attrition in nursing programs can be due to common barriers that students face such as poor academic preparation, ineffective study skills, inadequate financial support, inadequate family support, family responsibilities, lack of diverse faculty, and poor English language skills (Amaro, Abriam-Yago, & Yoder, 2006; Choi, 2005; Condon et al. 2013; Igbo et al. 2011). Choi (2005) also reported that nursing students who were English Language Learners (ELL) were often more at risk for stress, anxiety, and depression than non- ELL-nursing students due to the high expectations of family, as well as the financial sacrifices made. These factors all influence the high attrition rates seen in this population of students, and have augmented the disparity in the nursing workforce by increasing the attrition rates of URM students in nursing programs to as high as 85 percent (Gardner, 2005a; Giddens, 2008).

Nontraditional Students and Academic Related Attrition

Dismissal due to academic factors in nursing education is an important factor when assessing attrition. However, as Newton and Moore (2009) described, there is a paucity of research that has been discussed in the literature about academic characteristics of nursing students who are dismissed from nursing programs. When a nursing student is unsuccessful in two or more required courses, the student is typically not allowed to progress in the program

(Berkovitz; & O'Quin, 2006). Studying attrition related to academic failure and dismissal is critical especially when looking at increasing the diversity of the nursing workforce. Inadequate academic preparation can be a cause of students not completing their programs of study. Condon et al. (2013) reported that Latino youth attending elementary and secondary schools often have limited academic resources which result in insufficient preparation for the demands of a nursing program. Newton and Moore (2009) reported from their study that ethnic minority BSN students whose dismissals were related to academic reasons typically had both scholastic and nursing aptitudes that were lower than students who experienced academic success. This is an important finding, as admission requirements often focus primarily on pre-nursing grade point average (GPA). Additionally, Jeffreys (2007) found that ethnic and racial minority students have lower pre-nursing and overall GPAs compared to Caucasian students.

Nontraditional Students and Non-Academic Related Attrition

According to Jeffreys (2007, 2012), academic factors are less important than environmental or non-academic factors in explaining college student attrition. Academic factors according to Jeffreys include personal study skills, study hours, attendance, class schedule, and academic services. Environmental or non-academic factors include external factors outside of the academic process such as financial status, family, emotional and financial support, family responsibilities, childcare, employment responsibilities, living arrangements, transportation and encouragement by outside friends. Nontraditional students that are first-generation college students often have inadequate family support and an insufficient understanding of the higher education system, leading to an increased risk of attrition (Williams & Butler, 2010). Another issue that can be identified as a risk factor with the nontraditional student is that these students typically do not live on campus, and therefore are not integrated socially into the university

which can negatively impact attrition rates (Ascend Learning, LLC, 2012). An evenly meaningful non-academic component associated with attrition relates to transfer students. Transfer students are confronted with potential academic struggles and are likely to experience a difficult time with academic adjustment to a BSN program as well as an equally difficult adjustment period to the social and psychological domains. The result most likely will negatively affect the attrition rates of the students transferring from community colleges. This creates special challenges for BSN programs to develop and implement interventions to meet the unique needs of URM students who often transition from the community college system (Newton, 2008). Similarly, in 2010, Williams outlined a new experience described as *transfer shock*, which occurs when students transfer from community colleges to four-year colleges and are faced with a more rigorous academic curriculum and increased requirements. To address the risk of *transfer shock* in community college students, Newton (2008) argued that BSN programs could decrease attrition and increase retention rates through graduation by edifying the community college transfer student. The resultant effect according to Newton would have a twofold positive impact on the nations need for nurses. First, it would increase the presence of BSN prepared nurses, and second, it would increase the much-needed diversity in the professional nursing workforce (Newton, 2008).

Financial problems can be another major stressor for students, especially URM students who often times are first-generation college students. URM students frequently come from low-income households where there are limited financial resources to assist in supporting their education (Condon et al. 2013). For many URM students, English is not their first language. ELL students face several additional barriers including lack of self-confidence, reading, writing, and learning challenges, isolation, and discrimination (Billings & Halstead, 2016). Additionally, a

lack of diverse faculty in nursing education can sustain the culture of insensitivity to the unique needs of URM students, contributing to the high rates of attrition in URM nursing students. Minority students want faculty who can relate and share experiences with them on a personal level, promoting feelings of connectedness and eliminating further barriers (Billings & Halstead, 2016). In a qualitative study completed at a large public university in the U.S. by Diefenbeck, Michalec, and Alexander (2016), the authors studied the lived experiences of 12 traditional age URM BSN students at a predominantly white university. Three barrier categories emerged: Family oriented factors, school-based factors, and sustaining and promotive factors. Academic factors were not considered significant barriers as compared to lack of support, diversity-based training or cultural competence in the curriculum, and lack of diversity among faculty and students. The authors also identified that participants in this study identified a strong determination to succeed or motivation to persist in becoming a professional nurse (Diefenbeck et al. 2016). Robbins et al. (2004) recommended that other factors in combination with grades should be assessed when looking at attrition. Self-esteem, self-efficacy, and stress are all non-academic factors that need to be considered. When looking specifically at self-efficacy as a factor in attrition, Vuong, Brown-Welty, and Tracz (2010) found an association between self-efficacy and program retention, which resulted in decreased attrition rates.

Self-Efficacy-Theoretical Framework

The theoretical framework for this study will be the Self-Efficacy Theory component of Albert Bandura's Social Cognitive Theory. Bandura's Social Cognitive Theory (1977) defined the concept of self-efficacy and the relationship between self-efficacy and individual performance. The Self-Efficacy Theory aspect of Bandura's Social Cognitive Theory has been applied to research in a number of academic domains including academic achievement. Self-

efficacy will be used as the foundation for exploring the mediating effects of a student's background or demographic variables with the affective variable of self-efficacy and the effects of a study skills seminar and its relationship with academic performance in a BSN program.

Perceived self-efficacy according to Bandura is the belief one has about their capability to perform a certain task or achieving a certain goal. It is the belief that one can attain the learning of specific tasks, despite any hurdles or adversity, and do what is necessary to achieve that task (Bandura, 1986, 1994). Bandura (1986) concluded that people's beliefs about their abilities are more predictive of future behavior than their actual skill knowledge, ability, or previous success. Self-efficacy is centered on the student's perceived confidence in accomplishing a task and is among a multitude of factors influencing student attrition and persistence in college. Self-efficacy beliefs affect an individual's cognition, motivation, affective process and conclusively behavior. According to Bandura (1977) self-efficacy, when used as a pedagogical strategy can be strengthened resulting in a student who is engaged, collaborative, and curious. When students are taught specific techniques in learning, when they are encouraged and supported academically, both self-efficacy and academic achievement improve (Bandura, 1977). Perceived self-efficacy can also affect emotional responses of fear and anxiety, which can lead to a decrease of an individual's proficiency in performing academic tasks such as writing assignments and exam performance (Prat-Sala & Redford, 2010). Self-efficacy is domain specific in which a measurement scale is required for the task at hand (Bandura, 2006). Self-efficacy beliefs are developed by four distinct sources of influence: Mastery, social modeling, social persuasion, and perception of emotional and physical reactions (Bandura, 1994).

Mastery of experiences or actual performance according to Jefferys (2012) is the first and most substantial source of self-efficacy. Successful performances build and increase self-efficacy

through perseverance, while unsuccessful performances lower self-efficacy. Some setbacks and obstacles are advantageous to show that success requires commitment and continued effort. Setting graded tasks, providing feedback on successful performance, and lowering students' anxiety and stress about coursework, exams, and presentations are all interventions that can promote mastery experiences positively affecting self-efficacy. Each time a person perseveres; they develop a stronger sense of self-efficacy and can handle increasing challenges that arise in the future.

The second source of self-efficacy is social modeling or vicarious experiences. Observing, or imagining an individual who is successful in their performance can lead to an increase of self-efficacy. By observing an individual succeed through continued efforts increases the observer's belief, they can do the same and have the same capabilities. Self-efficacy will further be enhanced if there are similarities in background and ability as opposed to a situation where the observer is quite different from the individual, resulting in the inability to develop a strong sense of self-efficacy due to a lack of connection between the two individuals.

The third source of self-efficacy is social persuasion. Social persuasion influences self-efficacy via verbal messaging. Social persuasion results when an individual believes they have what it takes to succeed. Positive feedback given by peers, teachers, and family that is honest and appropriate can enhance self-efficacy. When individuals are convinced they have the capability to master or perform a given task, they are more likely to put forth greater effort than if they had self-doubt.

The fourth source of self-efficacy is perception of emotional and physical reactions. Individuals may experience physiological symptoms such as an elevated pulse, sweating, or dry mouth when emotions such as anxiety or fear arise. It is not the intensity of these responses on

the individual, but rather how the individual reacts to or perceives these responses. Those with perceived high self-efficacy will look to the situation as a challenge and a facilitator of performance, while those with lower-self efficacy will view the situation with self-doubt, with the symptoms reflecting weakness. (Bandura, 1994, 1997; Jeffreys, 2012; Rowbotham & Schmitz, 2013).

Self-efficacy beliefs influence how one feels, thinks, behaves and motivates themselves (Bandura, 1977, 1995, 1997). Self-efficacy affects human functioning via four major psychological processes (cognitive, motivational, affective and selection). The first of these are cognitive processes. The higher the perceived self-efficacy the higher the goal challenges the individual sets and the more committed they are to achieving them. Second, is motivational processes. The majority of human motivation is cognitively generated. There are a variety of ways that self-efficacy beliefs add to motivation: Self-efficacy determines the goals people set for themselves, how much effort is dispersed, length of perseverance when confronted with obstacles, and endurance with failures. Individuals who view themselves as highly efficacious connect their failures to the insufficient effort while individuals viewing themselves as inefficacious connect their failures to low ability. Third, is affective processes. An individual's belief in their coping ability can affect the amount of stress and depression experienced in difficult or threatening experiences. Those with high self-efficacy exercise control over stressors and do not call up distressing thought patterns. They are more likely to see difficult situations as a challenge versus a threat. Those with low self-efficacy experience higher amounts of feelings of anxiety and lower levels of functioning. Fourth and final is selection processes. Efficacy beliefs can influence the type of environment and the type of activities an individual chooses to involve themselves with. People usually avoid uncomfortable activities or environments, and

embark on activities and environments they view as being challenging yet comfortable. This can relate to career choices. The higher an individual's self-efficacy, the larger range of career options explored (Bandura, 1993 & 1994; Chemers, Hu, & Garcia, 2001; Zajacova, Lynch, & Espenshade, 2005).

Research suggests that low self-efficacy adversely affects stress, coping, academic expectations, academic performance, and motivation and learning (Bandura, 1993; Chemers et al. 2001). According to Jefferys (2012), having low self-efficacy perceptions can affect retention rates in nursing education both directly and indirectly. Directly if students withdraw by giving up without even trying, and indirectly with resulting poor academic outcomes such as low or failing grades, decreased class attendance, or incomplete assignments as examples. These students with low perceived self-efficacy may become increasingly overwhelmed, focus on failure, and become stressed and/or dissatisfied. Jeffreys (2012) concluded that diagnostic-specific interventions benefited students with low perceived self-efficacy. These interventions could help maximize student success and minimize student weaknesses. To demonstrate this concept, Jeffreys used an example of multiple-choice exams. Students who experienced low self-esteem related to taking multiple choice exams would best benefit from workshops focused on test-taking skills. Another at-risk group of students are those who are over-efficacious. These students miscalculate the task and/or the importance of the task and may exaggerate their knowledge, skills, and abilities. (Jeffreys, 2012). Jeffreys completed a study in 1998, and posited that some students did not have accurate perceptions of their academic abilities. Identifying these at-risk over-efficacious students early and guiding them in realistic self-appraisals, could improve their weaknesses and build on their strengths.

Self-Efficacy in Educational Research

Educational research has shown that self-efficacy is positively linked to academic performance. Chemers et al. (2001) completed a longitudinal study regarding first-year university student adjustment and looked at academic self-efficacy and academic performance and reported that academic self-efficacy was strongly related to student performance and adjustment. Students with higher academic expectations had better academic performance. The authors posited that students who enter college with high self-efficacy levels performed better than those who had lower self-efficacy levels. Additionally, students who had increased beliefs about academic success had increased performance. The authors concluded that academic self-efficacy was a better predictor than other measures such as past performance on academic tasks. In 2001, Silver, Smith, and Green studied the effects of self-regulatory study strategies on self-efficacy with 550 social science students at a community-technical college. The authors utilized a specific Study Skills Self-Efficacy Scale (SSSES) and reported results consistent with Bandura's theoretical framework (1986), supporting the relationship between self-efficacy and achievement. Following research by Silver et al. (2001), Zajacova et al. (2005) investigated the effects of academic self-efficacy on the academic performance of 107 nontraditional college freshman that were mostly immigrant and minority students at a large urban institution. The results of this study concluded that self-efficacy was the single strongest predictor of GPA and that sociodemographic variables had minimal association with the academic outcomes identified. However, it is important to note that this study also revealed that self-efficacy did not have a significant effect on students' persistence in the second year. An explanation for this finding may have been that reasons for dropping out were unrelated to student's belief in their ability to

meet academic demands. The authors also concluded that the variables related to sociodemographics had minimal relationships with academic outcomes in their study.

Choi (2005) studied 230 college students enrolled in general education courses at a university to examine the relationships of self-efficacy and self-concept measured at varying degrees of specificity with academic performance. The most important finding in Choi's study was confirmation and support of Bandura's (1997) social cognitive theory. Here, the matching level of specificity between self-constructs and criterion variables specific to self-efficacy was essential for reliable and valid predictor studies. Self-efficacy focuses on a cognitive component and as a result assessing global self-efficacy levels resulted in a weaker predictor of the performance criterion variable. Of the three self-efficacy variables (general, specific and academic), academic and specific self-efficacy were significant predictors of term grades. Not surprising, general self-efficacy did little to contribute to the degree of variance explained in achievement.

In 2006, Gore had similar findings, although the relationship of academic self-efficacy on college outcomes was dependent upon when in the semester the beliefs were measured. When measured at the beginning of the semester to students with minimal college exposure, results showed a weak prediction of self-efficacy and college performance. However, when measured at the end of the students' first semester in college, once students had gained more college experience, the results found a strong relationship between self-efficacy and college performance. In this study, Gore measured self –efficacy using the college self-efficacy inventory (CSEI). The results by Gore (2006) are consistent with the concepts of Bandura's social cognitive theory.

Bandura (1986) determined that self-efficacy beliefs develop as a result of personal performance, accomplishments, vicarious learning, persuasion, and translation of physiologic states. As noted earlier, the most instrumental of the four sources of self-efficacy beliefs is personal performance accomplishments. In understanding the results of this study related to self-efficacy beliefs, student's beliefs are more likely to be more accurate as the student gains experience in the academic environment. Therefore, self- efficacy belief scores are likely to change as students gain college experience. In another study that looked at the non-traditional student category of first-generation college students (FGS), Majer (2009) completed a longitudinal analysis of self-efficacy for education among students attending a community college. Results indicated a positive relationship between levels of self-efficacy for education and cumulative GPA at the end of an academic year. These findings suggest self-efficacy for education was an important cognitive resource among diverse FGS whose sociodemographic attributes have a critical effect on their educational success.

Continuing to look at non-traditional students, Putwain, Sander, and Larkin (2013) conducted a quantitative study with 206 first year undergraduate psychology students in the United Kingdom. These students represented non-traditional students as they came from low-income families and were also FGS. This study focused on whether academic self-efficacy study skills and behaviors were predictive of academic achievement. Students completed the Academic Behavioral Confidence Scale at the beginning of the semester with results concluding that self-efficacy in study related skills and behaviors predicted better semester one academic performance. Self-efficacy in study related skills was a critical factor in how students viewed challenges and maintaining pleasant emotions, which resulted in better academic performance.

More recently, a systematic review and meta-analysis completed by Richardson, Abraham, and Bond (2012), studied psychological correlates of university students' academic performance, investigating which correlates of GPA had the largest empirical relationship. Their results confirmed previous empirical research with findings that the nonintellective constructs of academic self-efficacy and grade goal showed medium sized correlations with tertiary GPA. Furthermore, a large correlation with performance self-efficacy, which was the strongest correlate out of 50 conceptually distinct correlates, was discovered of tertiary GPA. Richardson et al. (2012) acknowledged that intervening early in students' college experiences may have the best outcome as the strongest correlates identified in their study (performance self-efficacy and grade goals) were more malleable at the early stages of skill development. Richardson et al. (2012) also suggested that interventions directed at cognitive changes such as elevated grade goals, reduced test anxiety, and increased self-efficacy may be more cost-effective as well as more likely to increase students' academic achievement.

Self-Efficacy in Nursing Education Research

In nursing education, studies of self-efficacy and academic achievement and retention of nursing students is meager, however the available studies have demonstrated appreciable findings (Goldenberg, Andrusyszyn, & Iwasiw, 2005; Harvey & McMurray, 1994; McLaughlin, Moutray, & Muldoon, 2008; Peterson-Graziose, Bryer, & Nikolaidou, 2013). Academic self-efficacy relates to a student's confidence in being able to complete tasks in the clinical and classroom arena. Harvey and McMurray (1994) developed two nursing self-efficacy scales; a Nursing Academic Self-Efficacy Scale (NASES), and a Nursing Clinical Self-Efficacy Scale (NCSES) to provide a useful means to identify students at risk student for attrition. The authors reported that academic self-efficacy was predictive of course withdrawal, but clinical self-

efficacy was not. In a descriptive study completed by Goldenberg et al. (2005), the authors used self-efficacy as their conceptual framework and using a nonprobability convenience sample of 22 students conducted a study to evaluate self-efficacy beliefs before and after a health teaching simulation using a paired t-tests method. The authors utilized a self-developed nursing student teaching-learning self-efficacy scale to complete their assessment. The results showed a statistically significant (p=0.001) increase in self-efficacy scores following the simulation, confirming that an educational intervention increases self-efficacy beliefs.

In a longitudinal study completed by McLaughlin et al. (2007), 350 nursing students were studied to assess the relationship between self-efficacy and academic performance. The data was collected from 1999 to 2002. There was a 12 percent attrition rate reported in this study with no statistically significant differences in self-efficacy scores for those who completed the program and those who did not. However, occupational self-efficacy was determined to be a statistically significant (p=0.048*)* predictor of academic achievement in that those with higher self-efficacy beliefs were more likely to achieve better final grades. The author's purpose was to identify predictors of academic performance with no interest in identifying students at risk and no interest in interventions to improve self-efficacy beliefs.

In 2016, Robb studied the relationship between self-regulated learning approaches to learning, self-efficacy, independent study behavior, and GPA. A convenience sample of 65 senior–level pre-licensure BSN students completed the Motivated Strategies for Learning Questionnaire (MSLQ) which had four subscales, one in which self-efficacy was addressed. The results revealed that nursing students used both basic and complex cognitive self-regulated learning approaches to understand nursing theory content. Participants were discovered to have self-efficacy for academic course success and confidence in their ability to accomplish tasks

taught in the course. Greater self-efficacy and GPA were positively associated with the user of select complex, cognitive self-regulated learning strategies. In fact, Pryjmachuk et al. (2008) studied four cohorts of nursing students and determined that personal attributes such as self-efficacy had convincing effects on attrition rates.

In contrast, Jeffreys (1993) utilized an author-developed instrument and completed a descriptive study assessing the relationship of self-efficacy and academic variables on academic achievement and retention in non-traditional students. Non-traditional students as defined by Jeffreys are those students “a) 25 years or older; b) commuter; c) enrolled part-time; d) male; e) member of an ethnic, racial, religious, national, or other minority group; f) speaks English as an additional language; g) has dependent children; h) completed secondary education via a different route than usual with in the country of nursing program education [e.g., general equivalency diploma/GED]; or i) required remedial classes” (p.9). Jeffreys reported that self-efficacy did not have a significant effect on nursing program achievement, and it also was not a significant predictor of academic achievement or retention (Jeffreys 1993). Jeffreys went on to develop a model of nursing undergraduate retention and success in 2004, which considered the complex multidimensional variables that affect academic success and retention. Jeffreys model focused on retention rather than attrition (Jeffreys, 2015). Despite her earlier findings, Jeffreys concluded that self-efficacy was a crucial factor that influenced retention stating, "self-efficacy and motivation can influence persistence and academic performance" (p. 63). In Jeffreys (2013) revised nursing universal retention and success model, self-efficacy is considered an important factor influencing retention among non-traditional students.

Havens completed a study (2008) to evaluate academic self-efficacy of 60 at-risk college freshmen to ascertain if there was a relationship between academic self-efficacy and college

persistence. A researcher developed scale was utilized; the Perceived Academic Self-Efficacy Scale (PASES), to complete the study. The results concluded that there was no significant relationship between the two variables of academic self-efficacy and persistence, but the PASES scale was determined to reliably measure perceived academic self-efficacy (Havens, 2008). In another quantitative study, Peterson (2009) looked at predictors of academic success in the first semester BSN students. A descriptive, correlational study was completed with a sample size of 66 nursing students. Peterson found that there was no significant relationship between self-efficacy and academic success, however, previous academic performance was significantly correlated with academic success in the first semester (Peterson, 2009). These findings provide beneficial information when evaluating nursing program admission criteria. Another consideration to look at when observing Peterson's (2009) results is that self-efficacy was measured using the General Self Efficacy Scale. Similar findings were reported in a study completed by Peterson-Graziose et al.(2013). This study set out to determine if there was a relationship between self-efficacy and student attrition in a nursing student's first-semester associate degree program. There were 34 participants who completed the General Self-Efficacy Scale within two weeks of the semester start. End of semester data was collected on academic indicators as well as students who withdrew from the program. In this study, self-efficacy was not found to be significantly related to attrition rates in first-semester nursing students. My view, however, contrary to Peterson-Graziose et al. and Peterson's (2009) findings align with the concepts identified in Bandura's 2006 "Guide for constructing self-efficacy scales". Both of the aforementioned studies utilized general self-efficacy scales which is contradictory to what Bandura recommends. Utilizing a *one measure fits all* (p.307) approach has restricted applicability to the domain being measured. Bandura goes on to assert that "scales of perceived

self-efficacy must be tailored to the particular domain of functioning that is the object of interest" (p. 307-308). When studying variables related to academic success, a self-efficacy scale measuring those specific domains would be essential so no uncertainty exists on the predictive value of the findings (Bandura, 2006). Additionally, Zajacova et al. (2005) and Choi (2005), argued that general self-efficacy measures were not found to be predictive of college outcomes, similar to the findings in the studies reported above. As a result, it is recommended that in academic settings such as in nursing education, academic self-efficacy should be measured over generalized self-efficacy.

Retention-Conceptual Framework

To meet the challenges of the ongoing nursing shortage, and continued high attrition rates in programs of nursing, it is essential to increase the retention of students enrolled in schools of nursing. Nursing student retention and success are desired by all programs of nursing, yet, finding a solution continues to be a challenge. Nursing education programs have the opportunity to decrease increase retention rates, thereby decreasing attrition rates by developing strategies based on best practice that takes into consideration the multifactorial concepts influencing academic success. Student retention is a multifaceted experience that is affected by academic, environmental, and social integration variables (Jeffreys, 2002). Condon et al. (2013) achieved success with increased graduation and NCLEX RN® pass rates when they developed an academic success and retention model encompassing components of pre-entrance preparation, academic and social support as well as faculty development. When looking at non-traditional EAL students, Hansen & Beaver (2012) developed support strategies addressing language improvement, test-taking skills, and provided faculty development regarding commitment and support for nontraditional student EAL students. In the same way that Hanson and Beaver

focused on EAL students, Olson in 2012, completed a summary of article reviews and recommended that when working with EAL nursing student success, four areas needing focus included language, culture, personal, and academic constructs.

As previously defined, retention in this study is a student who successfully completes the required courses, in the specified time-period, without withdrawals or failures, and remains with their starting cohort until graduation. Although there are several models in education that focus on student attrition, for the purpose of this study, the focus will be on the concept of retention. Therefore, both Jeffreys 2013 Nursing Universal Retention and Success (NURS) model, and Shelton's, Model of Nursing Student Retention (2012) will form the proposed researcher developed conceptual model for this study.

The NURS model is a globally organized, comprehensive framework demonstrating that retention decisions are based on the interaction of (a) student profile characteristics, (b) student affective factors, (c) academic factors, (d) environmental factors, (e) professional integration factors, (f) academic outcomes, (g) outside surrounding factors, and (h) psychological outcomes (Jeffreys, 2013). Details of Jeffreys framework are summarized in the following paragraph. The student profile characteristics include those characteristics described before a student begins the nursing program. Characteristics of the student profile component include the student's age, gender, ethnicity, native language, and family's educational background, and enrollment status. The component of student affective factors include the attitudes and beliefs in regard to learning and performing the necessary functions required for course and program success which includes self-efficacy and motivation. Academic factors are those academic skills that include study skills, study hours, class schedule, and attendance, and use of academic services. The component of environmental factors include those aspects that lie outside of the academic environment. The

factors that could affect academic success and retention in this component include financial status, family support and responsibility, dependent concerns, employment status, living arrangements and transportation. Professional integration factors include factors that support the students' interaction within the college social environment dealing with professional and career development. Examples include professional events, memberships to professional organizations, encouragement from friends, mentoring and tutoring from peers, advisement from nursing instructors, and enrichment programs. Academic outcomes include course grades, nursing GPA, and cumulative GPA's. Outside surrounding factors in the model are factors not included in the academic setting or in the students' personal environment that affect retention. These factors include events on all levels; local, national, and world, political and economic issues, the healthcare industry, professional issues related to nursing, and job security. The last component of the model that affects retention decisions are the psychological factors of satisfaction and stress.

According to Jeffreys (2012), the NURS model is applicable to both traditional and nontraditional students; however, it is vital to keep in mind that the method in which the factors affect nursing student retention may vary. The NURS model parallel's the Bean and Metzner's (1985) Conceptual Model of Nontraditional Undergraduate Student Attrition, in that nontraditional students are more affected by the external environment factors than by academic factors (Jeffreys, 2015, 2001, 2002, 2007). Jeffreys has also pointed out in her previous research that for nontraditional nursing student retention, professional integration factors such as peer mentoring and tutoring as well as faculty advisement were influential.

Jeffreys (2012) identifies several beliefs that guide the NURS (2013) model:

> Undergraduate nursing student retention is a priority concern for nurse educators.
> Student retention is a dynamic and multidimensional phenomenon that is influenced by the interaction of multiple variables (factors).
> For undergraduate nursing students, environmental factors and professional integration factors greatly influence retention.
> All students regardless of prior academic performance can benefit from professional socialization and enrichment throughout preprofessional and professional education.
> Psychological outcomes and academic outcomes may interact and influence persistence (p.11).

In the NURS model, self-efficacy is integrated under the student affective factors that look specifically at attitudes, values, and beliefs about learning and the students' ability to learn and perform the necessary tasks required for course and program success (Jeffreys, 2012). The NURS model encourages collaborative relationships with the goal of coming together to optimize student retention and success (Jeffreys, 2015).

The Model of Nursing Student Retention developed by Shelton (2012) is an integration of Bandura's (1997) theory of self-efficacy, and Tinto's (1993) theory of student retention. Bandura describes perceived self-efficacy as the belief one has about their capability to perform a certain task or achieving a certain goal. It is the belief that one can attain the learning of specific tasks, despite any hurdles or adversity, and do what is necessary to achieve that task (Bandura, 1986, 1994). Bandura (1986) concluded that people's beliefs about their abilities are more predictive of future behavior than their actual knowledge, skills, ability, or previous success.

In a nursing program, the self-efficacy of a nursing student is a determining factor in the admission, retention, and graduation decisions of that student. Bandura's theory supports the psychological aspect of student retention. Tinto (1993) described the two categories responsible for student departure. The first is departure related to academic deficiencies, and the second,

which Tinto describes as more common, relates to voluntary departure. Academic deficiencies according to Tinto are often a result of lack of individual ability, but they can also be related to poor study skills. Conversely, voluntary departure according to Tinto, connects to maladjustment to college life and incongruences between the academic institution and the individual student. Tinto's model of institutional departure is rooted in the incorporation of students into the academic institution. Students are integrated into the educational community when they possess and have positive feelings that they belong within the community they are a part of. Integration within the students identified community directly influences whether the student understands the benefits of persisting and remaining in their enrolled academic institution (Tinto, 1993). Tinto surmised that the higher the degree of integration of the individual into the academic institution, the stronger their commitment to that institution, including the goal of completing the degree requirement. Tinto's model also takes into account and incorporates variables from external forces. Tinto (1993) concluded that even though academic dismissal aligns with grade performance, voluntary withdrawal does not. Voluntary withdrawal results from the shortfall in congruency between the student and both the environment of the academic institution as well as the social system within the institution. Thus, voluntary withdrawal decreases when students enter larger institutions that have a plethora of opportunities for both social and intellectual support. Voluntary withdrawal students typically display an increase in grade performance and increased intellectual ability compared to those with average persistence rates. On average, voluntary withdrawal students have roots in higher social status backgrounds compared to the students affected by academic dismissal. Conversely, Tinto (1993) concluded that students affected by academic dismissals, usually are unable to meet the intellectual and social demands with grade performance being the primary predictor of academic dismissal. These students

display lower aptitude, lower levels of intellect, and have lower levels of social status. What Tinto did not conclude is whether his findings were applicable to URM students. However, it was agreed upon that providing satisfactory social interaction for those students from lower social status could positively influence academic performance. As a result, Shelton's model (2012) demonstrates that persistence, choosing to remain in an academic program, successful academic performance, or meeting the academic standards determine student retention. Simply stated, a student who chooses not to persist will voluntarily withdraw from the program and a student not meeting the academic standards will fail.

The variables in Shelton's model include student background information, internal psychological processes, external supports, academic performance, and persistence. Background variables are the situations/factors that have affected the student's academic performance in both the past and present state. Some examples are age, gender, previous coursework, GPA, standardized test scores, financial status, employment, and family responsibilities. The internal psychological processes in Shelton's (2012) model include self-efficacy and goal commitment (both academic and career). If a student feels they are part of the academic institution, they are more likely to achieve academically and persist in the program. Thus, higher academic ability and higher goal commitment equal higher persistence. According to Bandura (1997), strong self-efficacy without positive outcome expectations will likely result in withdrawal. As students gain more academic experience (nursing courses), as in the case of Shelton's 2012 study, performance will be more affected by the current self-efficacy beliefs than by the efficacy beliefs from past performances.

The last variable in Shelton's Model of Nursing Student Retention is external supports. External supports aid with persistence and academic success and include psychological and

functional support. Psychological support includes factors that promote competence and self-worth such as encouragement and caring. Functional support, on the other hand, include those factors that assist the student with tasks to achieve goals. Both of these supports can be internal or external to the academic institution. Internal such as counseling, faculty, financial aid, and external such as family and peers. Shelton determined that the combined effects of the student's background, the internal psychological processes which include academic self-efficacy, and external supports are what influences student retention (Shelton, 2012).

The conceptual model developed by the researcher and presented in Figure 1, does not minimize the importance that all of the other variables listed in established models display. However, it is not reasonable for this study to include the comprehensive list of variables affecting student retention. Rather, retention decisions were based on the interaction of student demographic and background variables with the affective factor of self-efficacy and the intervention of a study skills seminar in determining academic performance. The student demographic and background variables in the model include factors similar to what has been identified in the student profile and environmental factors in Jeffreys model, as well as the student background variables in Shelton's model. These factors include but are not limited to age, gender, ethnic/racial background, language, marital status, children, caregiver status, education, financial status, employment, GPA, healthcare experience, and history of withdrawal. The affective factors in the researcher's conceptual model only assess the concept of self-efficacy with identified categories within the items that cover the most common academic challenges noted in the literature: student supports, academic stressors, academic strategies, exam goals and academic goals. Aligning with Banduras recommendation to develop domain-specific self-efficacy assessments, these academic challenges are not something the general

public or non-nursing students face on a daily basis, rather they are domain/education specific challenges, nursing students face throughout their educational program. Self-efficacy is the only affective factor measured in this studies model, whereas with Jeffreys model, affective factors included self-efficacy and motivation. Additionally, in Shelton's model, self-efficacy and goal commitment were included in the internal psychological variable.

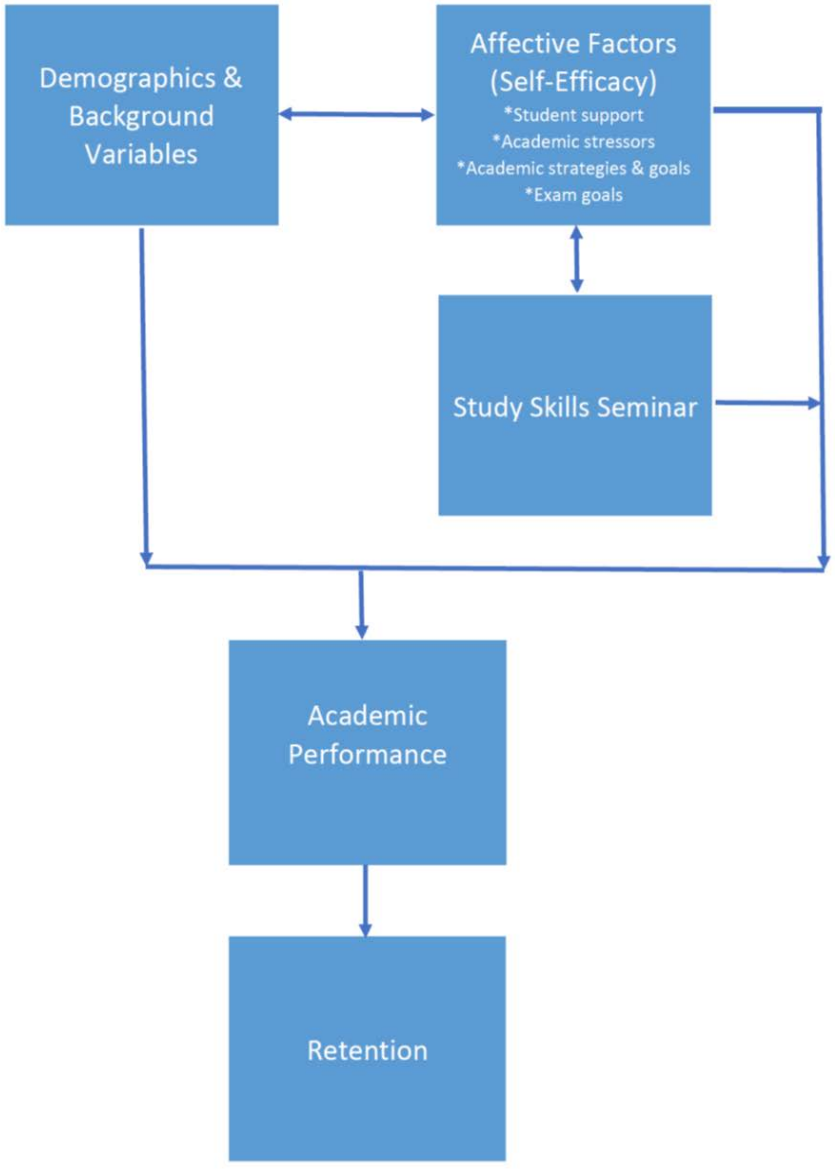

Figure 1. Conceptual model of student retention in nursing

Student Success Programs

According to a report by Selingo (2017), slightly more than half of enrolled college students in 2009 persisted until graduation, with the majority of that figure leaving after the first year. That number increased as reported by the National Student Clearing House Research Center in 2016. The retention rate of all students who started college in the fall of 2014 and returned to that same institution in the fall of 2015 was 60.6 percent. Selingo (2017) reported results from a student survey related to drop out rates revealing students often had difficulty managing their time, developing study skills, and had a limited understanding of what professors expected. Students also reported a lack of deep engagement in college life (The Washington Post, Sept. 2017). The key to increasing retention and academic success in students attending college is identifying and creating opportunities for student success. A study completed by Tuckman (2003) evaluated the effectiveness of teaching students the use of specific learning and motivation strategies to meet both the cognitive and motivational demands of college. Tuckman found a significant effect (p <.001) in that students in the strategy training earned significantly higher (by .48) GPAs for the term in which the training was received compared to the matched students with no strategy training. Tuckman reported that GPA's for the following quarter were also significant for those receiving the training compared to those who did not, concluding that mastery of the strategies being taught through successful application occurred not only within the course itself, but over time with a greater transfer of the strategies (Tuckman, 2003).

Nursing education is not immune to these same retention issues. Katz, Carter, Bishop, and Kravits (2009) revealed that "More than 30 percent of the freshman polled at 683 two and four-year colleges and universities nationwide reported that they frequently felt overwhelmed" (p.99). These feelings often increased as students' progressed in the program due to increased

academic requirements and rigor of nursing programs. Jeffreys (2007a, 2007b) concluded that first semester students are at an increased risk for attrition and poor academic outcomes due to the rigorous demands of the nursing program. However, if students could be successful in their first nursing course(s), Jeffreys predicted that they would be successful in ensuing courses (Jeffreys, 2007a & 2007b). Several factors associated with nursing student success include developing study and test-taking skills, managing time, managing stress, and developing critical thinking skills (Katz et al. 2009). Study skills and test-taking skills are an integral component to nursing student academic success. In 2016, Pruitt-Walker completed a quantitative study using a one group pre-posttest design looking at a success strategies improvement course on retention and self-efficacy. Results revealed that the success strategies improvement course significantly increased students' perceived self-efficacy, decreased stress, and slightly decreased attrition rates. Furthermore, the success strategies improvement course was noted to better prepare students for coursework, and facilitate academic socialization. Academic socialization as a catalyst for student success and retention aligns with the NURS model, Tinto's model of institutional departure, and Shelton's model of nursing student retention (Jeffreys, 2012; Shelton, 2013; Tinto 1993).

Most universities support a number of programs that aim to assist students to adjust to college life and succeed academically in the higher education setting in order to prevent the dropout rates reported by Selingo (2017). A public research University and land grant institution in the upper Midwest offers a variety of student success programs to foster holistic student success. Examples of services offered by student success programs at this upper Midwest University include academic advisors, Academic Collegiate Enhancement (ACE), advising resources center, center for writers, counseling center, disability services center, libraries, office

of multicultural programs, technology learning and media centers, and TRiO student support services. TRiO is not an acronym; it encompasses outreach and support programs targeted to assist (a) low-income students, (b) first generation college students, (c) and students with disabilities. In addition to the programs listed above, the upper Midwest University offers optional study skills workshops located on the main campus with the goal to build skills leading to academic success. Topics covered in this study skills workshop include time management, procrastination, memory and concentration, test techniques and managing test anxiety. First-year experience programs are another example of what some universities employ to positively affect a student' first-year experience. These first-year experience courses may include topics such as campus resources, governance, wellness, stress management, and developing critical thinking skills to name a few (https://www.ndsu.edu/studentsuccess/). Sidle and McReynolds (2009) concluded from a study completed from 1993-1996 at an average sized, predominantly White, public, four-year University, that employing a first-year experience course increased the retention rate of students into their second year. Additionally, students who completed the first-year experience course obtained higher GPA's and completed higher earned credit hour ratios of attempted credit hours than those not enrolled in the first-year experience course. Course evaluations of the first- year experience also confirmed that students felt more comfortable within the campus community, better understood the purpose of university education and had stronger beliefs that they could succeed with their education (Sidle & McReynolds, 2009). Gardner (2005) developed a Minority Retention Project that included interventions designed to improve the integration of minority students into supportive learning environments and to assist them in using the available resources, while helping them feel connected and supported by their peers and faculty. Examples of some of the interventions include family nights, health care

seminars, support groups, use of a retention coordinator, peer language partners and RN mentors. There was a 100 percent retention rate for minority students participating in this project at the end of the first year. Increasing the retention and graduation rates of minority students in programs of nursing, thus increasing minority nurses in the workforce, is congruent with the continued and concentrated effort to provide culturally sensitive health care.

The University in which this researcher conducted research was a University located in the upper Midwest. This University offers UNIV 189 skills for academic success, which is a first-year experience course that some programs of studies use. This course was designed to ease the transition for new students at the University. Students learn skills and techniques used by successful college students. In addition to introducing students to campus resources and governance, topics include study techniques, time management, test taking, note taking, goal setting, wellness, stress management, and career orientation. The College of Health Professions (CHP) 190 critical thinking and academic success, is a first-year experience course offered at the University, which provides students with opportunities to develop proficient critical thinking skills as they are used in the health professions, including pre-nursing students. The CHP 190 course immerses students in reasoning-related activities that facilitate academic success, teamwork, and a demonstrated commitment to the roles and responsibilities required of all healthcare providers.

These two courses (UNIV 189 and CHP 190) are offered to first-year students enrolled on the main University campus. The School of Nursing at the University has one nursing program offered at two individual sites. There is one mission, vision, and philosophy, one curriculum and one set of program outcomes shared by the two sites. One program site is on the main campus and the other site is a distant site approximately 200 miles to the west of the main

campus. This distant site does not have a campus and leases a building to house the School of Nursing. Therefore, the majority of students admitted to the distant site are transfer students coming from other universities or community colleges. Even though students at the distant site are considered University students, there are some services that are only available to the main campus students. One example is the wellness center on the main campus. Even though distant site students pay the student fee for this, they do not have access to the main campus wellness center, unless they drive 200 miles to the campus. Two other examples include the UNIV 189 or CHP 190 critical thinking and academic success courses and the study skills workshops offered to University students. These are not online course offerings and are only offered on the main campus. Subsequently, there are many students admitted to this distant site program that may not have had a first-year experience course or attended study skills workshops at the start of their college experience.

Study skills seminar

Students progressing from pre-nursing to pre-licensure/BSN professional programs frequently need guidance and support as the transition can often times be difficult. Beginning pre-licensure/ BSN students can benefit from either an introduction or a review of study skills in relation to the professional nursing program requirements. The study skills seminar was the intervention used in this study. The seminar was broken into two sessions. The first session related specifically to study skills and presented techniques to improve college-level reading, note taking, self-management, learning and thinking strategies, as well as test preparation. The second session presented specific test-taking techniques for nursing exams with the goal for the learner to build test-taking ability while developing critical thinking skills for nursing school exams. The aim of this seminar was to educate and inform BSN students about the skills and

techniques necessary to meet the demands and academic rigor of a nursing education program. The Andragogy in Practice Model as outlined in Knowles, Holton, and Swanson (2011), was used to develop and deliver this seminar to ensure the learning needs of both traditional and nontraditional students typically enrolled in nursing programs were met. Knowles et al. depicted that goals and purposes for learning, individual and situational differences, and core adult learning principles combine to form the three rings of the Andragogy in Practice Model. The three rings interact to allow for an understanding that adult learning is a multifactorial process that recognizes the unique differences in adult learners. Adult learning depicted in this model supports the discussion regarding nursing student progression and retention for nontraditional students in that there are complex and multidimensional variables in these adult nursing student learners that affect academic success and retention. Andragogy in Practice by Knowles et al. was used as the framework to guide the development of the study skills seminar using the six core adult learning principles The principles or assumptions identified by Knowles et al. in 2011 include:

(a) Learners Need to Know: why, what, and how.
(b) Self-Concept of the Learner: autonomous, and self-directing.
(c) Prior Experience of the Learner: resource, and mental models.
(d) Readiness to Learn: life-related, and developmental task
(e) Orientation to Learning: problem centered, and contextual.
(f) Motivation to Learn: intrinsic value, and personal payoff (p.147).

Based on these six assumptions, the seminar incorporated mini-lectures, assigned readings, group work and discussion, and "hands-on" practice on topics such as note-taking, time management, test-taking strategies, stress management, and memory and concentration strategies.

Research has demonstrated the effect study skills seminars have on academic success, as well as the evidence supporting the influence self-efficacy has on academic success. However, there is a dearth of evidence on the relationship between study skills seminars and student levels

of academic self- efficacy. This study examined the relationship of a study skills seminar on self-efficacy and academic performance in a baccalaureate nursing program with an emphasis on nontraditional students.

Summary

The reality of the nursing shortage requires that the concept of nursing student attrition and retention be looked at with a new lens. Nursing programs have an obligation to find visionary methods to meet the needs of all students in their programs, especially those identified as high-risk (Horkey, 2015). Nursing student attrition has been divided into non-academic and academic reasons. Nonacademic factors affecting attrition rates include the psychological aspects such as stress, motivation, self-efficacy, lack of support external to school, work responsibilities, and personal demands that take time away from studies. Academic factors typically are related to academic performance and an inability to keep up with coursework (Peterson, 2009). The goal of student success in higher educational institutions cannot be realized if the curriculum does not build in strategies such as a study skills seminar that can assist students in developing self-efficacy or self-confidence and academic success (King, 2007).

This study seeks to add information to the body of literature that may increase the much-needed retention in programs of nursing, by using a domain- specific measure (the Academic Requirements Self-Appraisal for Nursing Students {ARSANS}) based upon the works of Bandura (1997). As simply put by Bandura in 1997 “Self-belief does not necessarily ensure success, but self-disbelief assuredly spawns failure” (p. 77). As increasing numbers of students from non-traditional sources enter nursing education programs, retention of this diverse population has become critical to nursing programs’ mission and vision. Nursing’s quest for a diverse workforce is achievable, but the effort has just begun. Nursing programs must recruit,

retain, and graduate both traditional and nontraditional student nurses to help meet the needs of an expanding culturally diverse society while improving the nursing workforce shortage.

CHAPTER 3. METHODS

Attrition rates for both traditional and nontraditional students in nursing programs across the U.S. are a concern in light of the current and projected shortage of nurses. The lack of success in advancing through the nursing curriculum affects the nursing student, the nursing program, and the healthcare of the community. Jeffreys (2007) strongly encouraged nursing programs to make student success programs a priority. Yet, there is a paucity of research examining the relationship of both academic self-efficacy and academic performance with student success programs in nursing. The purpose of this study was to examine the effects of a study skills seminar on self-efficacy and academic performance in BSN students, with an emphasis on nontraditional BSN students.

Research Questions

To achieve the intended purpose, two major research questions guided this study.

RQ1. What is the relationship between academic self-efficacy levels for BSN students in a public university in the upper Midwest who completed a study skills seminar compared to those BSN students who did not complete a study skills seminar?

a. Does this relationship vary when controlling for the nontraditional student?

$H_0$1. There is no relationship between academic self-efficacy levels for BSN students in a public university in the upper Midwest who completed a study skills seminar compared to those BSN students who did not complete a study skills seminar.

a. There is no variance in the relationship when controlling for the nontraditional student.

RQ2. What is the relationship between academic performance for BSN students in a public university in the upper Midwest who completed a study skills seminar compared to those BSN students who did not complete a study skills seminar?

a. Does this relationship vary when controlling for the nontraditional student?

$H_0$2. There is no relationship between academic performance for BSN students in a public university in the upper Midwest who completed the study skills seminar compared to those BSN students who did not complete the study skills seminar?

a. There is no variance in the relationship when controlling for the nontraditional student.

Research Design

To examine the independent variable of participating in a study skills seminar to the dependent variables of self-efficacy and academic performance, a quantitative approach was employed. According to Gay & Airasian (2000), a quantitative or positivist perspective continues to be the dominant approach in educational research, as it holds the view that the world and laws that govern it are for the most part stable and predictable.

In order to answer the research questions, the research design was illustrated as a true experimental pre-test post-test control group design. According to Cohen, Manion, and Morrison (2011), a true experiment has several decisive features:

> One or more control groups; one or more experimental groups; random allocation to control and experimental groups; pre-test of the groups to ensure parity; post-test of the groups to see the effects on the dependent variable; one or more interventions to the experimental group(s); isolation, control and manipulation of independent variables; non-contamination between the control and experimental groups (p.316).

The randomization element of assigning students to control and experimental groups in experimental research allows the researcher to attribute any variations in outcomes between the two groups to the effects of the intervention on the experimental group (Cohen, Manion, &

Morrison, 2011). Experimental research has been coined the gold standard because it is the only type of research that can draw conclusions about causality. In true experimental research, one can determine whether an association exists between the independent and dependent variables because two or more groups differ in terms of their value on the independent variable The characteristic that differentiates experimental research from other types of research is the manipulation of the independent variable (Gay & Airasian, 2000).

The objective of this study was to determine if there was a statistical relationship between one independent variable: a study skills seminar and two dependent variables: students' perceived academic self-efficacy, and performance on multiple-choice exams in their nursing courses. The quantitative data consisted of results from pre- and post-intervention administrations of the ARSANS, background or demographic information, and the participants' self-reported performance on multiple-choice exams administered in their nursing courses during the period of the study. The statistical analysis examined individual, cohort, and research group correlations and differences in the participants' responses to the ARSANS. The analysis also explored combined quantitative data from the demographic or background information and multiple-choice exam grades with respect to receiving or not receiving the study skills seminar intervention. Experimental and control groups were assigned using a random sampling technique with strata delineators, which were fixed constants (Cohen, Manion, & Morrison 2011).

Sampling Plan

Target Population

To examine the relationship of a study skills seminar on self-efficacy and academic performance with an emphasis on the nontraditional undergraduate nursing student, the target population was undergraduate Bachelor of Science in Nursing (BSN) students. However, the

accessible population was undergraduate BSN students at a public university's school of nursing located in the upper Midwest. Both the element or observational unit and the sampling unit were all nursing students admitted into the undergraduate nursing program at the specified program site. The defining characteristics were any first or second-semester sophomore and any first-semester junior nursing students enrolled at the specified program site. The total number of potential participants in the accessible population when controlling for the defining characteristics was 104. Even though this was a new exploratory study, there was interest to conduct a priori power analysis to determine sample size to reject the null hypotheses 80 percent of the time. Utilizing the G*Power computer program for a 2 x 2 ANOVA, the power was set at .80, the effect size (large) was set at F= 0.5, the alpha at .05, and 3 degrees of freedom was set for the interaction effect , with the number of groups at 4. The power analysis indicated a total sample size of 48 participants. For the main effect, the settings remained the same except for the degrees of freedom changed to one. The power analysis indicated a total sample size of 34 participants.

Sampling Frame

To reach the accessible population of 104 students, the researcher who was also associated with the research site, attended 20 minutes of one course for the accessible student groups to explain the research study. All students consenting to participate in the study completed the pre-survey questionnaire at that time. Obtaining proper coverage was not difficult since the researcher had access to all of the identified students. However, some potential coverage problems were anticipated such as under-coverage or non-coverage if students were absent the days of the consent, survey, and seminar, or students did not consent to participate. The researcher attempted to prevent under-coverage by having a clear purpose and explanation

of why the study was important to the profession of nursing. The survey was also online in the event a student needed to complete it at an alternate time. Another potential coverage problem was duplicates within the sampling frame. There were students who may be repeating a course due to academic failure, which would cause those students to show up as a student in the semester of the repeat course, as well as show up in the semester of the non-repeat courses. The researcher addressed this by having a question on the demographic or background questionnaire that asked if the student has ever had to repeat a course. The researcher also had each student identify on the demographic or background questionnaire which graduating cohort he or she was in. That way, if there was a repeat student and they identified that they were in the graduating cohort of December of 2020, they would fall into the correct cohort even though they may be taking classes with both semester cohorts.

Sampling Procedures

For this research, a random stratified sampling design was used to select an experimental or treatment group and a control group from each of the defined subgroups (Cohen, Manion, and Morrison, 2011). According to Gay and Airasian (2000), stratified random sampling can be used to select equal-sized samples from each of the defined subgroups if the comparison of performance or achievement of subgroups is desired. Additionally, stratifying in advance guarantees each class will have the same proportion as the population (Floyd & Fowler, 2014). The strata delineators for this study for three sub-groups were defined as: Cohort 1- first semester sophomores, graduating in the spring of 2021. Cohort 2-second semester sophomores, graduating in the fall of 2020. Cohort 3-first semester juniors, graduating in the spring of 2020. Since the researcher was associated with the school of nursing in this study, this group was naturally occurring and easily accessible. The researcher was aware of the risk of biased results

because the nursing students at this site may not have been representative of all nursing students due to environmental, cultural, or socio-economic factors that are specific to this school of nursing site.

In order to carry out the sampling method, the researcher obtained permission from the course instructors associated with this research study to come to the last 20 minutes of their class during the first week of the semester. The instructor for the course informed the students to bring their laptop computers to class or check a laptop out from student services on the day the researcher was scheduled. The course instructor also was able to provide the researcher a list of students with e-mail addresses. The names and e-mail addresses were then built into the survey panel and deployed to the students while the researcher was explaining the research study. See Appendices B and C for the Oral Recruitment Script and the Information Sheet. Students choosing to participate in the study clicked on the e-mailed link and completed the pre-survey. All students completing the pre-survey became participants in the study allowing them to be randomly assigned with stratification delineators to treatment and control groups by the researcher using Microsoft Excel software. The first section of the pre-survey asked for confirmation of the participants e-mail address. Confirming the email address on the pre-survey allowed the researcher to notify the participants whether or not they were in the treatment or control group and the dates and times of the seminar. The research participants were informed that their e-mail addresses were not linked or could not be connected to the their survey responses. The next section of the pre-survey asked the participant to develop a subject-generated identification code (SGIC). The SGIF design was used to track research participants and match their pre and post-survey responses. Yurek, Vasey, and Sullivan Havens (2008) acknowledged SGIF's have proven to be beneficial in research by demonstrating a decrease in

the difficulty of tracking research participants, and lessoning the difficulty of upholding privacy and confidentiality. They noted this was especially true when working with vulnerable populations. The research participants created their codes at the beginning of the pre-survey by answering a set of researcher-developed questions based on personal information. Utilizing this type of question format allowed the participants to establish their own unique identifier (alias). The number of students available in the accessible population was 104, the number of students becoming participants by completing the pre-survey was 89. However, due to factors such as attrition from the program, not being available to participate in the study skills seminar(s), or an initial decision not to participate in the research study, the study sample size was *N=80*. The pre-survey treatment group had an *n*=36 after accounting for attendance at both study skills seminars, and the control group had an *n*= 44. Table 1 contains the distribution information for the total sample size of *N*=80 after collection of the post-surveys.

Table 1

Distribution of Total Sample

Accessible Population	First-Semester Sophomore	Second-Semester Sophomore	First-Semester Junior	Total
Students agreeing to participate with completion of pre-survey	20/30 (67%)	31/36 (86%)	38/38 (100%)	89/104 (86%)
Treatment/Control group participants	10/10	15/16	19/19	44/45
Treatment participants attending both Seminars	6/10 (60%)	13/15 (87%)	17/19 (89%)	36/44 (82%)
All participants completing post-surveys	15	29	36	80

Notes: Treatment (*n=36).* Control Group *(n=44).* Total *(N=80).*

Obtaining the e-mail address in the pre-survey also allowed the researcher to send the participants a link to the post survey. During the post survey, the participants answered the exact same set of researcher-developed questions so that their unique identifier or alias allowed the researcher to match their pre and post-surveys (Yurek et al. 2008). Examples of two of the questions used for generating students' unique codes include, first letter of your mother's first name, and number representing the month you were born.

Instrumentation

By combining and modifying items from established self-efficacy scales in addition to the development of eight researcher developed items, the ARSANS was developed and used as the tool to complete this research study. (See Appendix E for approval to adopt or modify established self-efficacy scales).

Summary of Subject-Matter Expert Consultation

The first self-efficacy scale referenced and modified was the Student Self-Efficacy Scale (SSE) by Rowbotham and Schmitz (2013). This ten-item scale was developed by modifying The Teacher Self-Efficacy Scale (TSE), by Schmitz and Schwarzer in 2000, to reflect the student's role and skills necessary to be successful in the classroom. The Student Self-Efficacy Scale covers four components of student academic challenges: academic performance, skill and knowledge development, social interaction with faculty, and coping with academic stress. The ten item-scale uses a four-point response format with scores ranging from 10-40. Expert educators and authors of the instrument confirmed the face and content validity of the SSE scale by determining the items were reflective of the student role, skills needed in the classroom, and perceived self-efficacy. The General Self-Efficacy Scale (GSE) was used for comparison to confirm the criterion-related validity of the SSE. The GSE is the most frequently used and

validated scale to assess self-efficacy worldwide, with construct validity well documented. Psychometric properties of the ten items in the SSE scale revealed high correlations with the scale, an internal consistency of α=0.84, and high item means. The second self-efficacy scale that was used was the Perceived Academic Self-Efficacy Scale (PASES; Havens, 2008). This was a 22-item questionnaire that asks students to rate their confidence in tasks that have been identified as important for academic success. The 22-item questionnaire asks the student to rate their confidence in tasks identified as important for academic success. Scores range from 0-100. "I cannot do at all to I am certain I can do". Reliability statistics were reported by Havens in 2008 using coefficient alpha .90 and split-half coefficient .96 indicating that this is a reliable measure of academic self-efficacy.

New Item Development

The eight researcher developed academic self-efficacy questionnaire items were developed and added to the appraisal based on the identified purpose statement and research questions in this study. Expert nurse educators within the researchers School of Nursing confirmed the face and content validity of the new items by reviewing and determining the items represented the constructs of interest in this study. Following the review process, a pilot study with 33 current first-semester junior students who were not part of the population of this research study was conducted to verify reliability, to avoid redundancy, and to improve the clarity of items on the self-appraisal. Psychometric properties of the eight researcher developed items in the appraisal revealed high correlations, an internal consistency of α = .86 and high item means. As a result, it was concluded that the eight researcher developed items had internal consistency or reliability within the scale and were in fact, measuring the underlying construct of academic self-efficacy along with the other two established and adopted scales. The reliability for this pilot

study was calculated in Stata using Cronbach's alpha. According to Cohen, Manion, and Morrison (2011), The Cronbach's alpha or alpha coefficient of reliability, is a measure of the internal consistency among items in multi-item scales. Coefficients of .80-.90 are considered to be highly reliable. Appendix F contains information on the development, adoption, or adaptation of items within the ARSANS.

The structure of the ARSANS, similar to the Student Self-Efficacy Scale (SSE) by Rowbotham and Schmitz (2013), covered various components of student academic challenges. Unlike the SSE scale, the ARSANS's covered five rather than four main academic dimensions that challenge nursing students: Student support, academic stress, academic strategies, exam goals, and academic goals. By identifying academic dimensions within the ARSANS, a more individualized approach could be utilized when assessing and developing interventions specific to each dimension. When assessing academic self-efficacy levels, the mean statistic was used on the full ARSANS to determine overall or total academic self-efficacy levels. Additionally, the ARSANS could then be broken down into the five academic dimensions by question type, offering dimension specific academic self-efficacy level scores according to the types of challenges students face. (See Appendix F for academic challenge dimensions by question type on the full ARSANS instrument). Self-efficacy questions according to the five main academic dimensions include:

1. Student Supports-questions 1-6.
2. Academic Stressors- questions 7-14.
3. Academic Strategies- questions 15-17, 21-25.
4. Exam Goals- questions 18, 19, 26, 27
5. Academic Goals- questions 20, 28-31.

Along with this instrument, the pre-survey contained a section for participant demographic data or history, while the post survey contained an area to self-report exam performance (See Appendix D for the complete Instrument and Coding Legend).

Data Collection

Mode of Collection

The mode of data collection was the use of an online survey utilizing Qualtrics software.

Data Collection Procedures

In carrying out the data collection procedure, the survey instrument was an online pre-post- survey questionnaire design utilizing Qualtrics software. The pre-survey consisted of two parts. The first part of the pre-survey collected demographic and background information with the second part of the pre-survey containing the ARSANS. The post-survey also consisted of two parts. The first part of the post-survey contained the ARSANS and the second part of the post-survey encompassed exam performance. Research participants were asked to self-report their performance on their nursing exams for the current semester in each of their courses. The post survey was deployed at midterm of the semester for both the treatment and control groups. Deploying the post-survey at midterm provided the research participants in the treatment group an opportunity to apply strategies learned from the study skills seminars presented during the beginning of the semester.

Nonresponse

Potential nonresponse issues related to the unit include those participants that were unwilling to complete the survey and those that were unavailable during the seminars. Strategies to address those potential students unwilling to participate included: 1. Making sure participants were aware as the first week of the semester of when the seminar and survey were being

administered. 2. Assuring the student of confidentiality, as they may have perceived the survey to have some sensitive information within it. 3. Explaining that those chosen for the control group would also receive the intervention if desired, after data collection was complete. 4. Explaining the rigor of the obtained IRB approval. 4. Giving a clear explanation of why the survey was being completed and what the benefits of obtaining the data were. 5. Making sure the survey was not too lengthy or complex in nature. Strategies to address those participants who were unavailable due to classroom absence on the day of the survey or unavailable for the seminars due to work or other conflicts consisted of recording the first four-hour study skills seminar utilizing the application of Tegrity integrated within the Blackboard course management system. Multiple sessions of the one-hour test taking strategy seminar were also offered. The researcher made the recorded seminar link along with the survey link available for participants to complete at an alternate date and time with the researcher.

Potential item nonresponses included participants not completing the survey in its entirety, such as missing questions, or sections. Strategies to address item nonresponse dealt with prevention. The researcher informed the participants of the importance that all items in the survey needed to be complete. The researcher made sure the design was not too complex or that the sections were not too lengthy. Additionally, the questions were written in easily understood language with appropriate readability levels and that question items were free from any cultural or linguistic bias. As a result, all surveys were complete with no empty responses.

Data Analysis

Once data was exported to Excel from the pre-test and post-test surveys, the data was uploaded into Stata to compute the statistical analysis. Data was reviewed using descriptive statistics and parametric inferential statistics. Factorial between subjects analysis of variance's

(ANOVA) were performed to test the differences in the means of two independent variables (i.e., study skills seminar and nontraditional students) on the gain scores of the dependent variable of perceived self-efficacy and then again for the dependent variable of exam performance (Cohen, Manion, & Morrison, 2011). When assessing the dependent variable of academic self-efficacy levels, the improvement (gain) from pretest to posttest was computed for each participant by subtracting each participant's pretest score from their posttest score. A positive gain score would indicate that the posttest score was greater than the pretest score. A negative gain score would indicate that the posttest score was less than the pretest score. For this study the dependent variable of perceived self-efficacy would lead to a positive gain score if perceived self-efficacy improved or increased from the time period from pre-test to post-test.

Descriptive statistics of the demographic or background data determined the characteristics of individuals, cohorts and research groups. Parametric statistics for questions one and two utilized factorial between subjects ANOVA's.

1. What is the relationship between academic self-efficacy levels for BSN students in a public university in the upper Midwest who completed the study skills seminar compared to those BSN students who did not complete the study skills seminar?
    a. Does this relationship vary when controlling for the nontraditional student?
2. What is the relationship between academic performance for BSN students in a public university in the upper Midwest who completed the study skills seminar compared to those BSN students who did not complete the study skills seminar?
    a. Does this relationship vary when controlling for the nontraditional student?

Validity

To decrease the threat to the validity of this study careful attention was directed toward maximizing both the internal and external validity components of this quantitative research study. Internal validity according to Cohen, Manion, and Morrison (2011) concerns itself with the question of whether the intervention made a difference to the participant. The potential threat of maturation cannot be fully controlled as participants can change between any two observations independent of the research however; this threat was not concerning due to the narrow time frame of this study. Instrumentation was not a threat because the instrument or scale was tested for validity and reliability and did not change from pre-test to post-test. Selection threats due to the bias introduced during the selection of subjects was controlled by the design of the research as a true experimental study with randomization of control and experimental groups. Other potential biases were minimized by keeping contact between the researcher and participants at a minimum. During the pre and post-surveys, the researcher distanced herself from the participants completing the surveys. Experimental mortality threats with the loss of subjects through dropout were minimized as much as possible by announcing the days and times of the seminars along with the time commitment of the study the first week of classes. Seminars were also recorded with multiple opportunities for participants to participate. Due to conflicting work schedules, three participants in the experimental or treatment group took advantage of the first study skills seminar recording. Those participants scheduled a time more convenient with their schedule to watch the seminar in a conference room in the school office. Additionally, the intervention or treatment of both seminars were offered to the participants in the control group after the completion of the study, which occurred at mid-term of the semester. A total of 12 control group participants requested the link to watch the recorded study skills seminar, while a

total of 20 control group participants participated in the test taking strategy seminar offered by the researcher after the study was completed. Since the researcher did not have access to the gradebook for any of the courses, self-report was the method used to obtain the participant's exam scores, and thus a potential threat to the validity of this research study. A review of literature and meta-analysis by Kuncel, Crede, and Thomas (2005), and research study results by Cole and Gonyea (2010), determined that self-reported grades should be used with circumspection in research and applied settings. Cole and Gonyea in 2010 confirmed results similar to the findings in Kuncel et al.'s 2005 meta-analysis in which a moderating effect of school performance and cognitive ability was found on self-reported grade validity. Students who were high achievers were more accurate in reporting their scores where low achieving students were more likely to be inaccurate with their reports by exaggerating their scores.

External validity according to Cohen, Manion, and Morrison (2011) refers to the extent of how generalizable the results are to the wider population. The threat to generalize the findings of this study were minimized by the design of this study. The randomization element of assigning students to control and experimental groups in this experimental research study allowed the researcher to attribute any of the variations in outcomes between groups to the effects of the intervention hence, determine if an association existed between the independent and dependent variables. Prior to participants consenting to the study, the researcher provided a clear purpose and procedure of the research along with risks and benefits. The goal was to minimize the threat of the Hawthorne effect with participants altering or changing their behavior by their knowledge of participating in the study. The researcher also explained that responses to the survey questionnaires could not be connected to individual participants. Furthermore, the researcher had minimal contact with the participants while completing the survey questionnaires.

Conclusion

This study adds to the body of knowledge on self-efficacy and academic performance in students who participate in a study skills seminar intervention. By providing a study skills seminar, nursing educators promote supportive environments that assist students, both traditional and nontraditional students in the ability to accomplish success in their nursing program. Retention and graduation of both traditional and nontraditional nursing students especially those qualifying as at-risk students are critical in developing a diverse nursing workforce that mirrors the population it serves. A more representative health care workforce can help reduce health disparities, increase the quality of care, and aid in decreasing the nursing shortage caused by an aging workforce.

CHAPTER 4. RESULTS

Introduction

This quantitative study utilized a true experimental pre-test post-test control group design to examine the relationship of a study skills seminar on self-efficacy and academic performance in BSN students, with an emphasis on the nontraditional BSN student. Results from the researcher developed ARSANS (Appendix D) were used to explore the relationship between BSN students' perceived levels of academic self-efficacy and their academic performance as measured by course exam scores. The two major research questions that guided this study were:

1. What is the relationship between academic self-efficacy levels for BSN students in a public university in the upper Midwest who completed a study skills seminar compared to those BSN students who did not complete a study skills seminar?
    a. Does this relationship vary when controlling for the nontraditional student?
2. What is the relationship between academic performance for BSN students in a public university in the upper Midwest who completed a study skills seminar compared to those BSN students who did not complete a study skills seminar?
    a. Does this relationship vary when controlling for the nontraditional student?

Preliminary Data Analysis

According to Cohen, Manion, and Morrison (2011), Cronbach's alpha provides a coefficient of inter-item correlations to measure internal consistency amongst the items for multi-item scales. The alpha coefficient is considered reliable at .70. The ARSANS instrument revealed Cronbach's alpha to be very highly reliable at .945 for all scale items. When looking at the ARSANS items separated by academic dimensions, the student support dimension revealed Cronbach's alpha to be .747 (reliable), academic stress .929 (very highly reliable), academic

strategies .852 (highly reliable), exam goals .813 (highly reliable), and academic goals at .848 (highly reliable).

Demographic Characteristics

All undergraduate BSN nursing students in the first and second sophomore and first semester junior cohorts were invited to participate in the research study; an accessible population of 104 students. Eighty-nine out of the 104 students became participants by consenting with completion of the pre-survey. However, the participant size decreased to 80 due to factors such as attrition from the program, not being available to participate in the study skills seminar due to work conflict, and not completing the post-survey. Additionally, five participant responses were flagged due to set or non-differentiation responses noted on their pre-survey, post-survey or both pre and post surveys. These non-differentiations in ratings, often referred to as flat lining or straight lining (answer responses form a straight line on a Likert scale), can usually happen when participants quickly complete a survey or do not read or answer the question appropriately (Vannette, 2018). Participants choose the same response every time or they click the same place on a rating scale for each question asked. Overly positive participants frequently select top box answers like “strongly agree” and overly negative participants choose bottom answers like “strongly disagree (Vannette, 2018). Since these types of responses pose a serious threat to the quality of data, the participants whose surveys reflected these non-differentiation ratings were removed, leaving a final study sample size of N=75. Refer to Tables 2 and 3, which illustrate important demographic characteristics of the final study participants.

Table 2

Demographic Characteristics of Participants

	Control		Treatment		Total	
Characteristic	*n*	%	*n*	%	*N*	%
Age						
25 ≥	8	19	7	21	15	20
19-24	34	81	26	79	60	80
Gender						
Male	3	7	8	24	11	15
Female	39	93	25	76	64	85
Dependent child	2	5	7	21	9	12
Ethnicity/Race						
White/Caucasian	36	86	26	79	62	83
Other	6	14	7	21	13	17
ELL	3	7	3	9	6	8
Cohort						
First soph.	8	19	6	18	14	19
Second soph.	15	36	11	33	26	35
First junior.	19	45	16	48	35	47

Note. Control group (*n* = 42). Treatment group (*n* = 33). Total group (*N* = 75). Other = Hispanic or Latino, American Indian or Alaska Native, Asian, and Native Hawaiian or other Pacific Islander

Table 3

Classification of Participants

	Control		Treatment		Total	
Characteristic	*n*	%	*n*	%	*N*	%
Traditional	27	64	17	52	44	59
Nontraditional	15	36	16	48	31	41

Note. Nontraditional student=student meeting one or more criteria: 25 years or older, male, member of an ethnic, or racial minority group, speaks English as an additional language, has dependent children. Control group (*n* = 44). Treatment group (*n* = 35). Total group (*N* = 75).

Data Analysis

Research Question 1

The null hypothesis for research question one stated that there was no relationship between academic self-efficacy levels for BSN students in a public university in the upper Midwest who completed the study skills seminar compared to those BSN students who did not complete the study skills seminar. The secondary null hypothesis stated there was no variance in that relationship when controlling for the nontraditional student. To address this question a factorial between subjects ANOVA was completed. This analysis was designed to test the effects of both group (treatment and control) and type of student (traditional or nontraditional) on academic self-efficacy and on the five associated academic self-efficacy dimensions. The analysis consisted of a 2 x 2 between subjects design, with the dependent variable being the self-efficacy gain score computed from the pre-ARSANS's and post-ARSAN's survey. Table 4 gives the descriptive statistics for the dependent variable organized by group and type of student on self-efficacy gain scores. All model assumptions (independence, normality, and homogeneity of variances) were met. With the assumption of independence, each participants observed value for self-efficacy was not influenced by any other participant. For the assumption of normality, each group had a sample of > 12 participants, and the homogeneity of variances (HOV) assumption was confirmed with the Brown-Forsythe (W_{50}) test. The null hypotheses failed to be rejected, supporting that the groups had been sampled from populations having equal variances (Lomax, & Hahs-Vaughn, D, 2012).

Table 4

Descriptive Statistics for Self-Efficacy by Traditional and Nontraditional Students in the Treatment and Control Groups

	Traditional			Nontraditional		
	M	*SD*	*n*	*M*	*SD*	*n*
Total self-efficacy gain						
Treatment	.83	.906	17	.69	1.36	16
Control	.32	1.01	27	.06	1.34	15
Student support gain						
Treatment	1.11	1.01	17	.74	1.81	16
Control	.19	1.56	27	-.18	1.36	15
Academic stress gain						
Treatment	.96	1.61	17	.73	1.65	16
Control	.44	1.35	27	.35	2.05	15
Academic strategies gain						
Treatment	.83	.859	17	.69	1.31	16
Control	.34	1.05	27	.39	1.59	15
Exam goals gain						
Treatment	1.13	1.44	17	.70	1.44	16
Control	.37	1.24	27	-.30	1.92	15
Academic goals gain						
Treatment	.01	.923	17	.58	1.57	16
Control	.23	1.11	27	-.37	1.60	15

The results for the factorial between subjects ANOVA are presented in Tables 5 and 6. This analysis tested the effects of both group (treatment and control) and type of student (traditional or nontraditional) on total academic self-efficacy gain scores (Table 5), as well as testing the five dimensions associated with academic self-efficacy (Table 6), including effect sizes. According to Cohen, Manion, and Morrison (2011), determining effect size is a way of quantifying the difference between groups, or in other words, how big or strong the effect was.

Reference values for effect size include small = .01, medium = .06, and large = .14. For this study, omega-squared (ω^2) was used to measure the strength of the association to describe the effectiveness of the treatment.

Table 5

Two-Way Analysis of Variance for Measures of Total Self-Efficacy by Group and Student Type

Source	*Partial SS*	*df*	*MS*	*F*	*p*	ω^2
Total self-efficacy gain						
Group	5.76	1	5.76	4.42	.039	.045
Student Type	.698	1	.698	0.54	.466	0
Group x Student Type	.078	1	.078	0.06	.807	0
Error	92.43	71	1.30			
Total	98.50	74	1.33			

Note. Group = Treatment and control. Student Type = Traditional and nontraditional student.

In analyzing the results in Table 5, a significant main effect was found for the independent variable of group on total self-efficacy gain scores F (1,71) = 4.42, p = .039, ω^2 = .045. The independent variable of type of student had no significant main effect on total self-efficacy gain scores F (1,71) = 0.54, p = .466, ω^2 = 0, nor was there a significant interaction effect for group and type of student on total self-efficacy gain scores F (1,71) = 0.06, p = .807, ω^2 = 0. The results for total self-efficacy indicate those participants who attended the study skills seminar had significantly higher (p = .039) mean gain scores than those not attending the study skills seminar. Figure 2 displays the mean gain for the treatment and control groups on total self-efficacy.

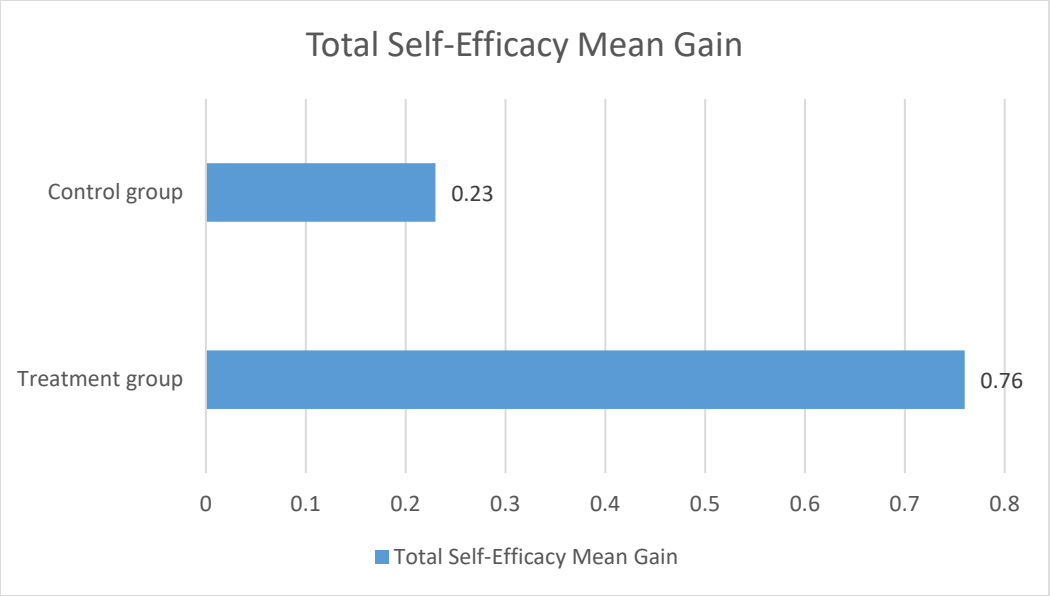

Figure 2. Total self-efficacy mean gain. Data includes both traditional and nontraditional students.

Table 6 displays the two-way ANOVA's for measures of the self-efficacy dimensions by group and type of student. Two of the five self-efficacy dimensions showed significant main effects for the independent variable of group on self-efficacy gain scores: Student support gain F (1,71) = 6.90, p = .011 ω^2 = .075, and exam goals gain F (1,71) = 6.31, p = .014 ω^2 = .068. Figure 3 displays the mean gain for the treatment and control groups on the self-efficacy dimensions of student support and exam goals. The independent variable of type of student (traditional or nontraditional) had no significant main effects on any of the five dimensions of self-efficacy gain scores, nor was there a significant interaction effect for group and type of student on any of the five dimensions of self-efficacy gain scores.

Table 6

Two-Way Analysis of Variance for Measures of the Self-Efficacy Dimensions by Group and Student Type

Source	*Partial SS*	*df*	*MS*	*F*	*p*	ω^2
Student support gain						
Group	15.05	1	15.05	6.90	.011	.075
Student Type	2.38	1	2.38	1.09	.300	.001
Group x Student Type	.000	1	.000	0.00	.994	0
Error	154.71	71	2.18			
Total	171.20	74	2.31			
Academic stress gain						
Group	3.62	1	3.62	1.36	.247	.005
Student Type	.465	1	.465	.17	.677	0
Group x Student Type	.080	1	.080	.03	.863	0
Error	188.72	71	2.66			
Total	192.85	74	2.61			
Academic strategies gain						
Group	2.75	1	2.75	1.94	.168	.013
Student Type	.036	1	.036	.03	.875	0
Group x Student Type	.173	1	.173	.12	.729	0
Error	101.36	71	1.43			
Total	104.58	74	1.41			
Exam goals gain						
Group	13.85	1	13.85	6.31	.014	.068
Student Type	5.37	1	5.37	2.45	.122	.030
Group x Student Type	.258	1	.258	.12	.733	0
Error	155.86	71	2.20			
Total	173.35	74	2.34			
Academic goals gain						
Group	2.37	1	2.37	1.42	.237	.006
Student Type	.007	1	.007	0.00	.948	0
Group x Student Type	6.04	1	6.04	3.63	.061	.035
Error	118.23	71	1.67			
Total	125.71	74	1.70			

Note. Group = Treatment and control. Student Type = Traditional and nontraditional.

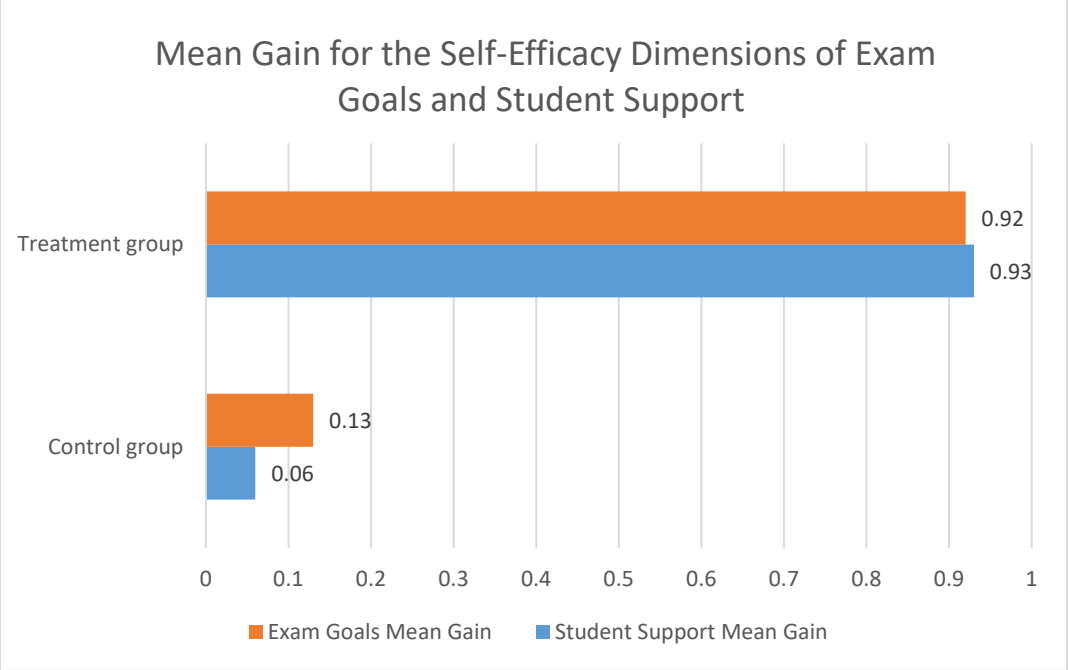

Figure 3. Mean gain for exam goals and student support. Data includes both traditional and nontraditional students.

Summary of Results for Research Question 1

It was hypothesized that there was no relationship between academic self-efficacy levels for BSN students in a public university in the upper Midwest who completed the study skills seminar compared to those BSN students who did not complete the study skills seminar. The results of this study revealed that the null hypothesis was rejected. There was in fact a relationship between academic self-efficacy levels for those who completed the study skills seminar compared to those who did not compete the study skills seminar. Significant self-efficacy gain scores were noted for those participants who attended the study skills seminar compared to those participants not attending the study skills seminar. The two-way ANOVA's for measures of self-efficacy by group and type of student revealed a statistically significant main effect for group on total self-efficacy gain (p = .039) and group on the dimensions of student support gain and exam goals gain (p =.01, p = .014). The magnitude of omega-squared

on total self-efficacy, student support and exam goals gains (ω^2 =.045, ω^2 =.075, and ω^2 = .068) were borderline medium to medium in establishing the strength of the relationship between attending the study skills seminar and self-efficacy gain scores.

The secondary null hypothesis indicating there was no variance in the relationship when controlling for the nontraditional student failed to be rejected. Although nontraditional students had a lower mean gain in total self-efficacy than traditional students, it failed to reach significance. Additionally, in four of the five self-efficacy dimensions, nontraditional student self-efficacy gains were lower than traditional student self-efficacy gains with some dimensions even having negative gain scores that were exclusive to the nontraditional student. The only dimension for nontraditional students that was not lower than traditional students was the academic strategy mean gain in which there was only a .01 difference in the total mean gain score for that dimension.

Exploratory Analysis for Research Question 1

Since research by Jeffreys (2012) and Bandura (1986) indicated that course level for nursing students was statistically significant in influencing self-efficacy perceptions and that student beliefs are more likely to be more accurate as experience increases in the academic environment, this researcher found value in further exploring their findings. A factorial between subjects ANOVA was completed to test the effects of both group (treatment and control) and class (first and second semester sophomores and first semester juniors) on academic self-efficacy and on the five associated academic self-efficacy dimensions. The analysis consisted of a 2 x 2 between subjects design, with the dependent variable being the self-efficacy gain score computed from the pre-ARSANS's and post-ARSAN's survey model with two between subjects effects (Group and Class) to determine the effect of level in the program or class level on self-efficacy.

Table 7 gives the descriptive statistics for the dependent variable organized by group and class on self-efficacy gain scores. All model assumptions (independence, normality, and homogeneity of variances) were met.

Table 7

Descriptive Statistics for Self-Efficacy by Class in the Treatment and Control Groups

	Sophomores			Juniors		
	M	*SD*	*N*	*M*	*SD*	*N*
Total self-efficacy gain						
Treatment	1.20	1.18	17	.29	.887	16
Control	.18	.961	23	.29	1.33	19
Student support gain						
Treatment	1.08	1.47	17	.77	1.44	16
Control	.09	1.57	23	.02	1.42	19
Academic stress gain						
Treatment	1.46	1.79	17	.21	1.11	16
Control	.50	1.55	23	.30	1.73	19
Academic strategies gain						
Treatment	1.29	1.02	17	.20	.875	16
Control	.14	1.06	23	.62	1.43	19
Exam goals gain						
Treatment	1.46	1.59	17	.36	1.01	16
Control	-.09	1.29	23	.39	1.78	19
Academic goals gain						
Treatment	.61	1.37	17	-.06	1.13	16
Control	.04	.822	23	-.02	1.77	19

Note. Sophomores = First and second semester sophomores. Juniors = First semester juniors.

The results for the factorial between subjects ANOVA are presented in Tables 8 and 9. This analysis tested the effects of both group (treatment and control) and class (first and second semester sophomore and first semester junior) on total academic self-efficacy gain scores (Table

8) and on the five dimensions associated with academic self-efficacy (Table 9) including effect sizes.

Table 8

Two-Way Analysis of Variance for Measures of Total Self-Efficacy by Group and Class

Source	*Partial SS*	*df*	*MS*	*F*	*p*	ω^2
Group	4.87	1	4.87	4.00	.049	.040
Class	2.94	1	2.94	2.42	.124	.019
Group x Class	4.80	1	4.80	3.95	.051	.040
Error	86.28	71	1.23			
Total	98.50	74	1.33			

Note. Group = Treatment and control. Class = first and second semester sophomores and first semester juniors.

In analyzing the results in Table 8, specifically focusing on the main effects of the independent variable of class or level in the program on total self-efficacy gain and the interaction effect for group and class or level in the program on total self-efficacy gain, there were no significant main effects for class F (1,71) = 2.42, p = .124, ω^2 = .019. However, there was a significant interaction effect for group and class F (1,71) = 3.95, p = .051, ω^2 = .040. Despite this significant interaction, the strength of the relationship was small. See Figure 4 for the means plot that displays this interaction effect. Sophomore participant's gain scores were larger for those in the treatment group compared to those in the control group. Additionally the gain scores for sophomores in the treatment group were higher than the gain scores for the juniors in the treatment group.

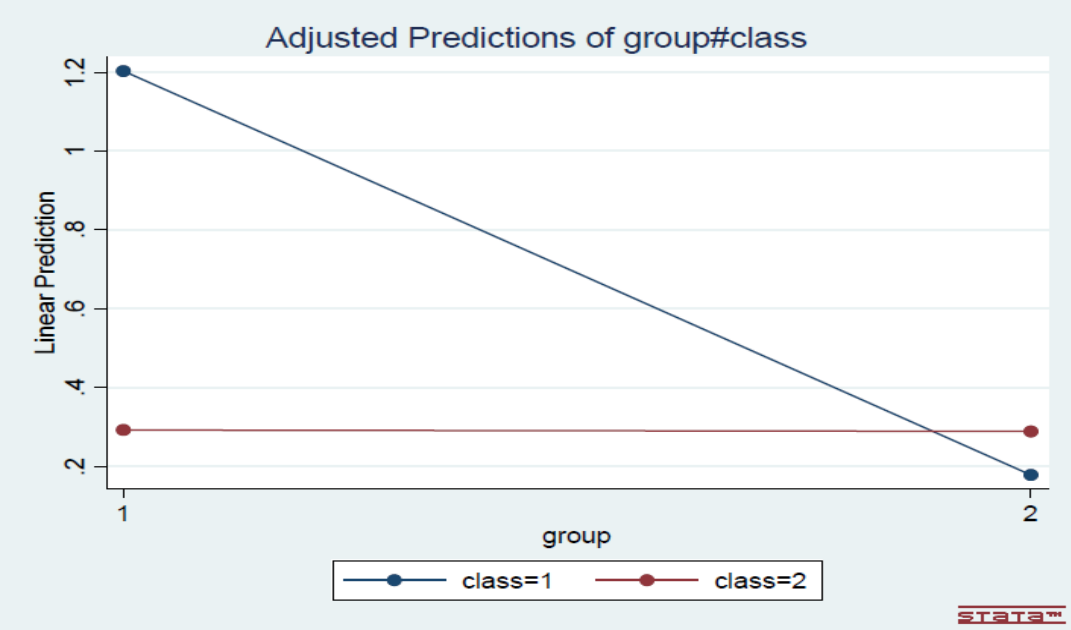

Figure 4. Means plot for the total self-efficacy gain by group and class. Group 1 = Treatment group, group 2 = Control group. Class 1 = Sophomores, class 2 = juniors.

Table 9 depicts the two-way ANOVA's for measures of the self-efficacy dimensions by group and class. In analyzing self-efficacy into its corresponding dimensions again specifically focusing on the main effects of the independent variable of class or level in the program and the interaction effect for group and class or level in the program, student support had no significant main effects for class F (1, 71) = .30, p = .588, ω^2 = 0. Additionally, there was not a significant interaction effect for group and class F (1,71) = .12, p = .732, ω^2 = 0.

Table 9

Two-Way Analysis of Variance for Measures of the Self-Efficacy Dimensions by Group and Class

Source	*Partial SS*	*df*	*MS*	*F*	*p*	ω^2
			Student support gain			
Group	14.00	1	14.00	6.36	.014	.068
Class	.654	1	.654	.30	.588	0
Group x Class	.261	1	.261	.12	.734	0
Error	156.26	71	2.20			
Total	171.20	74	2.31			
			Academic stress gain			
Group	3.43	1	3.43	1.39	.243	.005
Class	9.57	1	9.57	3.86	.053	.038
Group x Class	5.05	1	5.05	2.04	.158	.014
Error	176.06	71	2.48			
Total	192.85	74	2.61			
			Academic strategies gain			
Group	2.45	1	2.45	1.94	.168	.013
Class	1.69	1	1.69	1.34	.251	.005
Group x Class	11.20	1	11.20	8.89	.004	.097
Error	89.51	71	89.51			
Total	104.58	74	1.41			
			Exam goals gain			
Group	10.45	1	10.45	4.97	.029	.052
Class	1.74	1	1.74	0.83	.366	0
Group x Class	11.46	1	11.46	5.44	.023	.057
Error	149.39	71	2.10			
Total	173.35	74	2.34			
			Academic goals gain			
Group	1.28	1	1.28	.075	.389	0
Class	2.51	1	2.51	1.48	.228	.007
Group x Class	1.71	1	1.71	1.01	.319	.000
Error	120.56	71	1.70			
Total	125.71	74	1.70			

Note. Group = Treatment and control. Class = first and second semester sophomores and first semester juniors.

Academic stress had a significant main effect for class F (1,71) = 3.86, p = .053, ω^2 = .038, with a non-significant interaction effect for group and class F (1,71) = 2.04, p = .158, ω^2 = .014. See Figure 5, which displays the significant differences in mean academic stress gain scores by class. Junior class participants had significantly lower academic stress self-efficacy gains than sophomore participants. Academic strategies had no significant main effects for class F (1,71) = 1.34, p = .251, ω^2 = .005, however, there was a significant interaction effect for group and class F (1,71) = 8.89, p = .004, ω^2 = .097. The strength of this interaction was moderately strong. See Figure 6 for the means plot that displays this interaction effect. Sophomore participants gain scores were larger for those in the treatment group compared to those in the control group. Additionally the gain scores for sophomores in the treatment group were higher than the gain scores for the juniors in the treatment group. Exam goals had no significant main effects for class F (1,71) = .83, p = .366, ω^2 = 0, with a significant interaction effect for group and class F (1,71) = 5.44, p = .023, ω^2 = .057. The strength of this interaction was also moderate. See Figure 7 for the means plot that displays this interaction effect. Sophomore participants had much higher gain scores in the treatment group than junior participants. Additionally, sophomore participants in the control group had a negative gain, compared to a positive gain for junior participants in the control group. Academic goals had no significant main effect for class F (1,71) = 1.48, p = .223, ω^2 = .007, nor was there a significant interaction effect for group and class F (1,71) = 1.01, p = .320, ω^2 = .000.

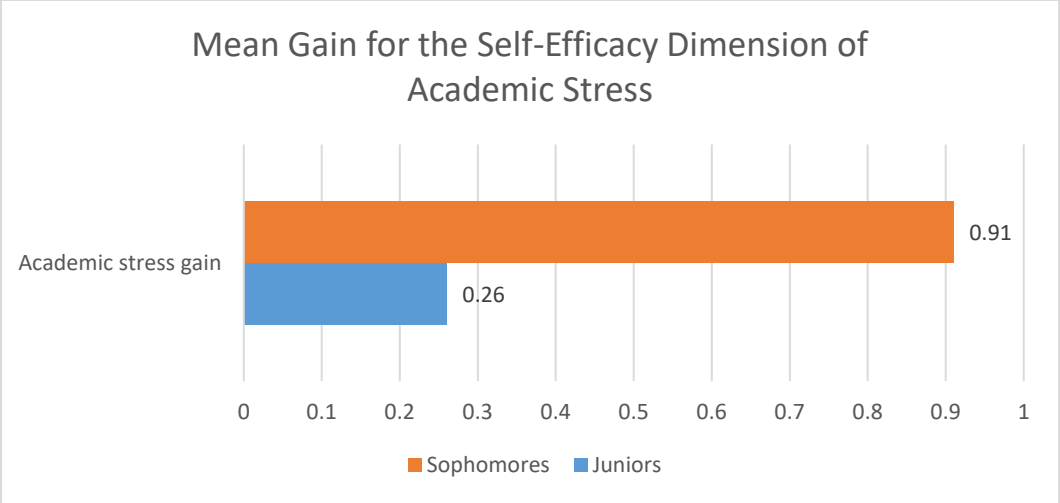

Figure 5. Mean academic stress gain for sophomore and junior participants.

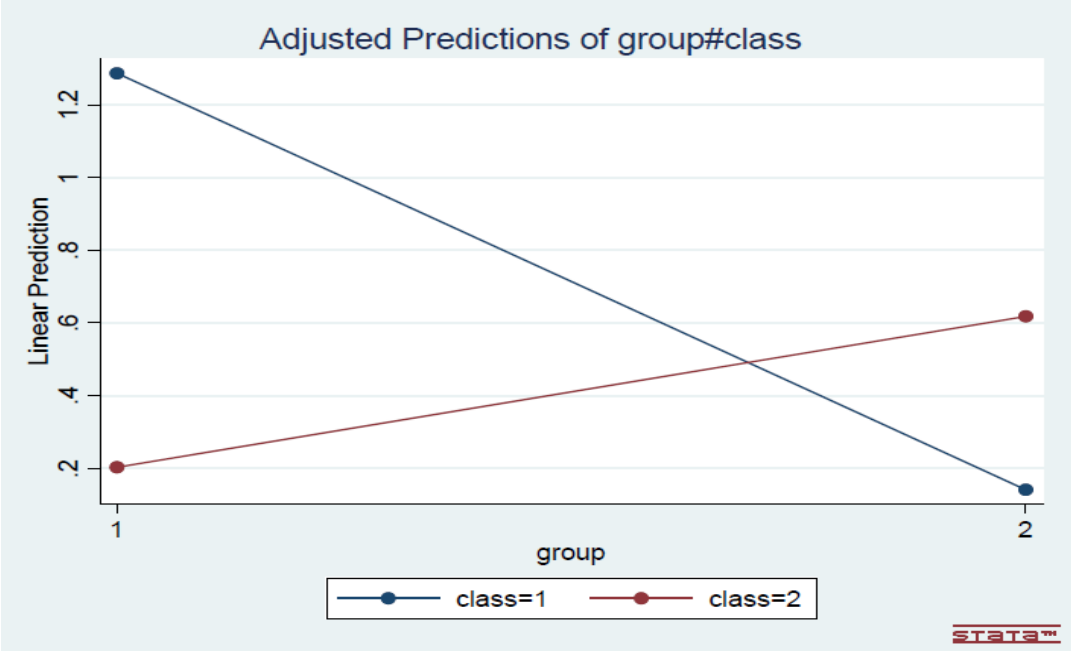

Figure 6. Means plot for academic strategies gain by group and class. Group 1 = Treatment group, group 2 = Control group. Class 1 = Sophomores, class 2 = juniors.

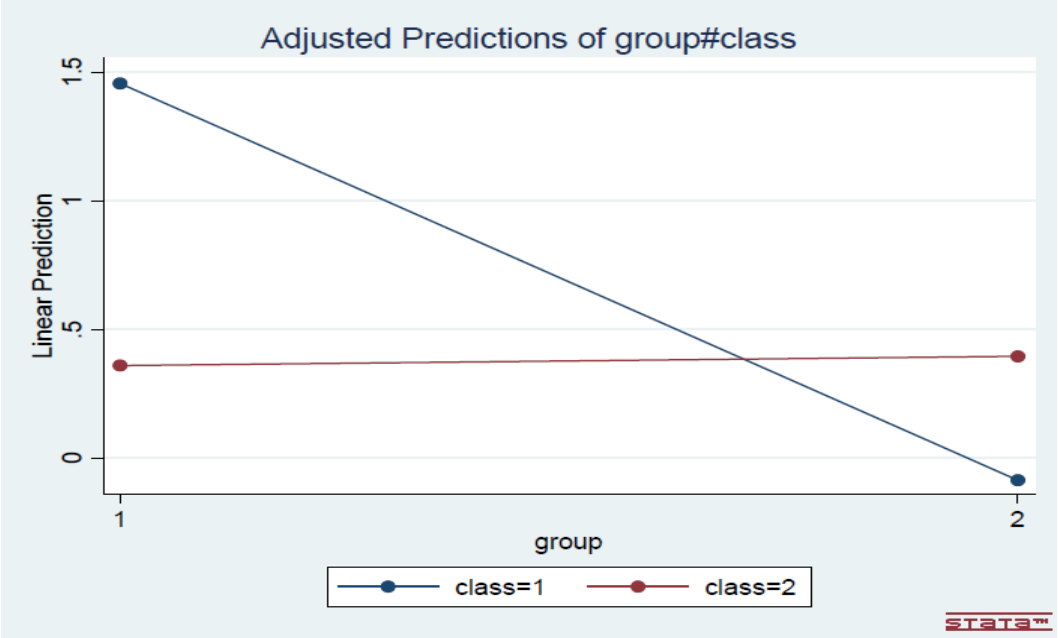

Figure 7. Means plot for exam goals gain by group and class. Group 1 = Treatment group, group 2 = Control group. Class 1 = Sophomores, class 2 = juniors.

Summary of Exploratory Research Results for Research Question 1

The two-way ANOVA's for measures of total self-efficacy by group and class revealed no significant effects for class. However, there was a significant interaction effect for group and class F (1,71) = 3.95, p = .051, ω^2 = .040. Despite this significant interaction, the magnitude of omega-squared on total self-efficacy (ω^2 =.40) was small. Student support had no significant main effects for class nor did student support have a significant interaction effect for group and class. Academic stress had a significant main effect for class F (1,71) = 3.86, p = .053, ω^2 = .038, with a non-significant interaction effect for group and class. The magnitude of omega-squared on the dimension of class and academic stress was small (ω^2 =.038). Academic strategies had no significant main effects for class however, there was a significant interaction effect for group and class F (1,71) = 8.89, p = .004, ω^2 = .097. The magnitude of omega-squared was moderately strong (ω^2 =.097) in establishing the strength of the relationship between group and class on the dimension of academic strategies. Exam goals had no significant main effects for class, with a

significant interaction effect for group and class F (1,71) = 5.44, p = .023, ω^2 = .057. The magnitude of omega-squared was moderate (ω^2 =.057) in establishing the strength of the relationship between group and class on the dimension of exam goals. Academic goals had no significant main effect for class nor was there a significant interaction effect for group and class.

An important overall discovery worth noting in this exploratory research section was that as level in the program increased, self-efficacy decreased. Mean gain scores for total self-efficacy were much higher for sophomore participants .61 (*SD* = 1.16) than for junior participants .29 (*SD* = 1.13). Additionally, when breaking class down by group, the class of sophomore participants in the treatment group had a significantly higher total self-efficacy mean gain 1.20 (*SD* = 1.19) than the mean gain .29 (*SD* = .887) of junior participants in the treatment group. This finding was consistent for all five of the self-efficacy dimensions.

Research Question 2

The null hypothesis for research question two stated that there was not a relationship between academic performance for BSN students in a public university in the upper Midwest who completed the study skills seminar compared to those BSN students who did not complete the study skills seminar. The secondary null hypothesis stated there was no variance in that relationship when controlling for the nontraditional student. To address this research question, a factorial between subjects ANOVA was completed. This analysis was designed to test the effects of both group (treatment and control) and type of student (traditional or nontraditional) on academic performance (mean exam scores). The analysis consisted of a 2 x 2 between subjects design, with the dependent variable being exam performance. Participants self-reported their current semester exam scores for each course as indicated on the post-ARSAN's survey. Table 10 gives the descriptive statistics for the dependent variable organized by group and type of

student for mean exam scores. The model assumptions of independence and normality were met. The exam scores for each participant were not influenced by any other participant for the assumption of independence, and each group had a sample of > 12 participants for the assumption of normality. When evaluating the Brown-Forsythe (W_{50}) test for the assumption of HOV, the result was .04. However, since the smallest group in this analysis did not have the greatest variance, the ANOVA was considered robust to this violation. Therefore, the analysis was completed and the assumption was considered met.

Table 10

Mean Exam Scores for Traditional/Nontraditional Students in the Treatment and Control Groups

	Traditional			Nontraditional		
Group	*M*	*SD*	*n*	*M*	*SD*	*n*
Treatment	85.13	5.29	17	83.19	7.33	16
Control	84.71	6.54	27	85.28	3.58	15

The results for the factorial between subjects ANOVA are presented in Table 11. This analysis tested the effects of both group (treatment and control) and type of student (traditional or nontraditional) on exam performance using mean exam scores.

Table 11

Two-Way Analysis of Variance for Measures of Exam Mean by Group and Student Type

Source	*Partial SS*	*df*	*MS*	*F*	*p*	ω^2
Group	12.42	1	12.42	.35	.558	0
Student Type	8.40	1	8.40	.23	.630	0
Group x Student Type	27.80	1	27.80	.78	.381	0
Error	2543.61	71	35.83			
Total	2587.35	74	34.96			

Note. Group = Treatment and control. Student Type = Traditional and nontraditional student.

In analyzing the results in Table 11, there was not a significant main effect for the independent variable of group on exam performance F (1,71) = .35, p = .558, ω^2 = 0. The main effect for the independent variable of type of student on exam performance was also not significant F (1,71) = .23, p = .630, ω^2 = 0, nor was the interaction effect for group and type of student on exam performance significant F (1,71) = .78, p = .381, ω^2 = 0. The results for exam performance indicate those participants (both traditional and nontraditional) who attended the study skills seminar did not have higher mean gain scores than those not attending the study skills seminar, in fact they were slightly lower. Figure 7 displays the mean exam scores for the treatment and control groups.

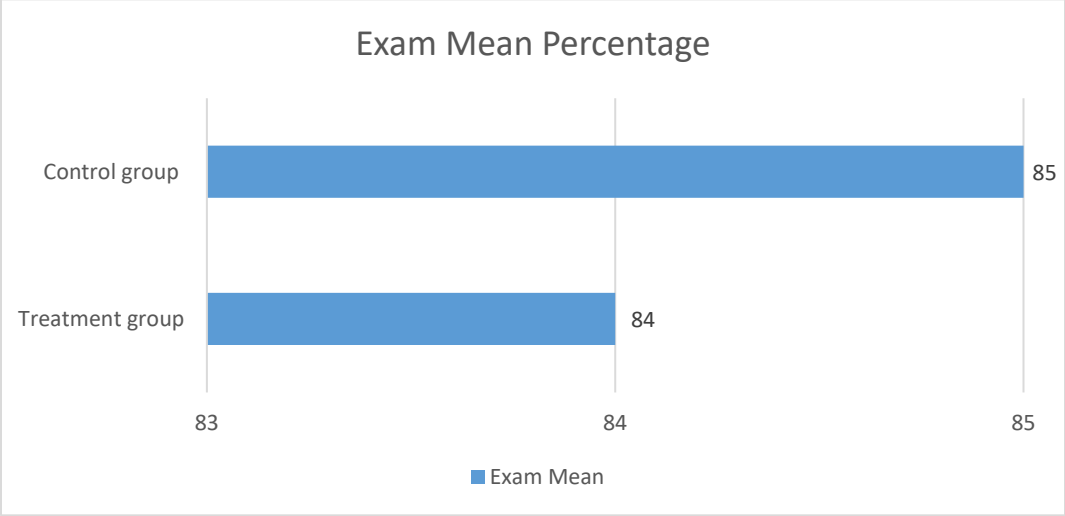

Figure 8. Exam mean percentage by group. Data includes both traditional and nontraditional students.

Summary of Results for Research Question 2

It was hypothesized that there was no relationship between academic performance for BSN students in a public university in the upper Midwest who completed the study skills seminar compared to those BSN students who did not complete the study skills seminar. The results of this study revealed that the null hypothesis failed to be rejected. There was no significant relationship between academic performance as measured by mean exam scores for

those who completed the study skills seminar compared to those who did not compete the study skills seminar. The secondary null hypothesis indicating there was no variance in the relationship when controlling for the nontraditional student also failed to be rejected. Nontraditional students in the treatment group had lower mean exam scores than traditional students in the treatment group however; in the control group, the results were opposite. Traditional students had lower mean exam scores than nontraditional students. Neither of these findings reached statistical significance.

Exploratory Analysis for Research Question 2

Despite the fact that research question two did not specifically address changes in academic performance by class or level in the program, this researcher found value in conducting a factorial between subjects ANOVA to test the effects of both group (treatment and control) and class (sophomores and juniors) on academic performance (mean exam scores). Similar to the exploratory analysis in research question 1, this analysis consisted of a 2 x 2 between subjects design, with the dependent variable being the exam performance. Participants self-reported their current semester exam scores for each course as indicated on the post-ARSAN's survey. Table 12 gives the descriptive statistics for the dependent variable organized by group and class for academic performance (mean exam scores). All model assumptions (independence, normality, and homogeneity of variances) were met.

Table 12

Mean Exam Scores for Sophomore/Junior Students in the Treatment and Control Groups

	Sophomores			Juniors		
Group	*M*	*SD*	*n*	*M*	*SD*	*n*
Treatment	86.89	5.85	17	81.32	5.66	16
Control	86.38	5.82	23	83.14	4.94	19

The results for the factorial between subjects ANOVA are presented in Table 13. This analysis tested the effects of both group (treatment and control) and class (first and second semester sophomore and first semester junior) on exam performance using mean exam scores.

Table 13

Two-Way Analysis of Variance for Measures of Exam Mean by Group and Class

Source	*Partial SS*	*df*	*MS*	*F*	*p*	ω^2
Group	7.91	1	7.91	.25	.616	0
Class	356.77	1	356.77	11.45	.001	.125
Group x Class	24.82	1	24.82	.80	.375	0
Error	2212.94	71	31.17			
Total	2587.35	74	34.96			

Note. Group = Treatment and control. Class = first and second semester sophomores and first semester juniors.

In analyzing the results in Table 13, specifically focusing on the main effects of the independent variable of class or level in the program on exam mean and the interaction effect for group and class or level in the program on exam mean, there was a significant main effect for class F (1,71) = 11.45, p = .001, ω^2 = .125. The interaction effect for group and class F (1,71) = .80, p = .375, ω^2 = 0 however, was not significant. See Figure 9 for a display of the significant differences in mean exam scores for sophomore and junior participants in the treatment group and the control group. In the treatment group, sophomore participants had much larger exam

mean scores than junior participants did. The same holds true for the control group, although not as large of a margin. In addition, in looking at the treatment group, junior participant's exam means were less than the exam means in the control group.

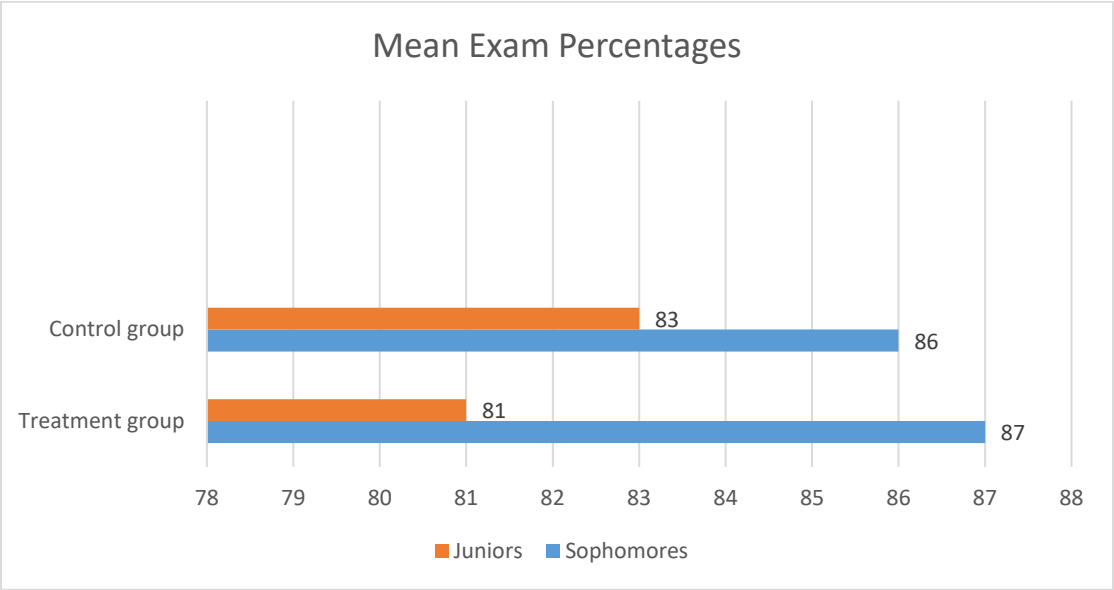

Figure 9. Exam mean percentage by class. Data includes both traditional and nontraditional students.

Summary of Exploratory Research Results for Research Question 2

The two-way ANOVA's for measures of academic performance by group and class revealed a significant main effect for class F (1,71) = 11.45, p = .001, ω^2 = .125. The magnitude of omega-squared on exam mean (ω^2 =.124) was moderate to large in establishing the strength of the relationship between class on academic performance.

An important discovery worth noting with this exploratory research was that as level in the program increased, exam mean scores decreased. Mean exam scores for all participants in both the treatment and control groups were higher for sophomore participants 87 (SD = 5.76) compared to junior participants 82 (SD = 5.28). This mirrors the results in the exploratory research section for group and class on self-efficacy measurements; as class or educational level in the program increased, self-efficacy decreased.

CHAPTER 5. DISCUSSION

Introduction

Due to the nursing shortage and the underrepresentation of minorities including men in nursing, a renewed focus on student attrition and retention may provide insight into factors that will increase the likelihood that students enrolled in undergraduate nursing programs will achieve academic success through graduation. An adequate number of nursing graduates is essential to meet societal demands and unfortunately, this is complicated by high attrition rates in nursing education. Nursing programs have an obligation to increase retention in order to have a positive impact on the nursing shortage. An increase in retention rates can increase successful graduation from nursing school, thereby increasing the population of nurses in the workforce. In the current nursing shortage, the effect of academic- related attrition on the nursing profession cannot be ignored since each course failure represents a delay into professional practice.

To help achieve the goal of increasing nursing student retention and academic success, many higher education institutions provide first-year experience courses and study skills workshops. These courses and workshops zero in on topics such as time management, notetaking, stress management, motivation, and test-taking strategies. The goal of these preventative interventions is to equip the student with additional tools and resources to promote academic success. Evidence from the research supports the effect of first-year experience courses and study skills workshops on grade point averages (GPA's) and academic achievement. Additionally, evidence from the research supports the role self-efficacy plays as a predictor of achievement, and more specifically academic success. Self-efficacy may be a necessary quality for academic success but self-efficacy alone may not be enough. Early identification of at-risk nursing students and implementation of interventions aimed at promoting success and preventing

course failure are essential to facilitate student nurse retention and academic success. Nursing students withdraw from nursing programs for a variety of reasons; however, this research study focused on the development of the necessary academic skills and behaviors to promote academic success. Therefore, the purpose of this study was to examine the relationship of a study skills seminar on self-efficacy and academic performance in BSN students, with an emphasis on the nontraditional BSN student.

To achieve the intended purpose, two major research questions guided this study.

RQ1. What is the relationship between academic self-efficacy levels for BSN students in a public university in the upper Midwest who completed a study skills seminar compared to those BSN students who did not complete a study skills seminar?

a. Does this relationship vary when controlling for the nontraditional student?

RQ2. What is the relationship between academic performance for BSN students in a public university in the upper Midwest who completed a study skills seminar compared to those BSN students who did not complete a study skills seminar?

a. Does this relationship vary when controlling for the nontraditional student?

In order to answer the research questions, the research design was illustrated as a true experimental pre-test post-test control group design. The objective of this study was to determine if there was a statistical relationship between a study skills seminar and students' perceived academic self-efficacy and performance on nursing exams in their nursing courses. The quantitative data consisted of results from pre- and post-intervention administrations of the ARSANS, background or demographic information, and the participants' self-report on their performance on nursing exams administered in their nursing courses during the period of the study. The statistical analysis examined individual, cohort, and research group correlations and differences in the participants' responses to the ARSANS. The analysis also explored combined

quantitative data from the demographic or background information and self-reported nursing exam scores with respect to receiving or not receiving the study skills seminar intervention. Treatment and control groups were assigned using a random sampling technique with strata delineators, which were fixed constants (Cohen, Manion, & Morrison 2011).

Summary of Findings

Research Question 1

It was hypothesized in question one that there was no relationship between academic self-efficacy levels for BSN students in a public university in the upper Midwest who completed the study skills seminar compared to those BSN students who did not complete the study skills seminar. To address this question a factorial between subjects ANOVA was completed. This analysis tested the effects of both group (treatment and control) and type of student (traditional or nontraditional) on academic self-efficacy and on the five associated academic self-efficacy dimensions. The analysis consisted of a 2 x 2 between subjects design, with the dependent variable being the self-efficacy gain score computed from the pre-ARSANS's and post-ARSAN's survey. Results confirmed that there were statistically significant differences between the treatment group and the control group when looking at total self-efficacy gain scores F (1,71) = 4.42, p = .039, ω^2 = .045. When analyzing the dimensions of total self-efficacy, two of the five academic self-efficacy dimensions showed statistical difference, student support F (1,71) = 6.90, p = .010, ω^2 = .075, and exam goals F (1,71) = 6.31, p = .014, ω^2 = .068. Four out of the five academic self-efficacy dimensions displayed higher mean gain scores within the treatment group, however, only two out of the five self-efficacy dimensions reached statistical significance as noted above. The academic self-efficacy dimension in the treatment group that had the lower gain score than the control group was the dimension of academic goals. These factorial between

subjects ANOVA results are consistent with the research results of Goldenberg et al.(2005), which showed a statistically significant (p=0.001) increase in self-efficacy scores following a simulation, confirming that an educational intervention increased self-efficacy beliefs. Additionally, the results from this study mirror Pruitt-Walker's (2016) study, in that a success strategies improvement course significantly increased students' perceived self-efficacy.

The secondary null hypothesis indicated that there was no variance in the relationship when controlling for the nontraditional student. A factorial between subjects ANOVA was completed. This analysis was designed to test the effects of both group (treatment and control) and type of student (traditional or nontraditional) on academic self-efficacy and on the five associated academic self-efficacy dimensions. This test evaluated if self-efficacy gain scores varied when controlling for the nontraditional student. Despite the fact that the self-efficacy gain scores for nontraditional students were lower than the traditional students gain scores, the independent variable of type of student (traditional or nontraditional) had no significant main effects on total self-efficacy or any of the five dimensions of self-efficacy gain scores. Additionally, there was no significant interaction effect for group and type of student on total self-efficacy or any of the five dimensions of self-efficacy examined in this study.

Exploratory Research- Question 1

The effect of class or level in the program on self-efficacy was also evaluated. The analysis consisted of a 2 x 2 between subjects design, with the dependent variable being the self-efficacy gain score computed from the pre-ARSANS's and post-ARSAN's survey model with two between subjects effects (Group and Class) to determine the effect of level in the program or class level on total self-efficacy and on the five associated self-efficacy dimensions. Overall findings and a point of interest for this exploratory research revealed that as level in the program

increased, self-efficacy decreased. Mean gain scores for total self-efficacy were higher for sophomore participants than for junior participants. Additionally, when breaking class down by group, the class of sophomore participants in the treatment group had higher total self-efficacy mean gains than the mean gains of junior participants in the treatment group. This finding was consistent for all five of the self-efficacy dimensions. These results could be attributed to the fact that as the didactic and clinical competency level and expectations increase, students may start to feel overwhelmed and their belief in individual capability to succeed may decrease. Katz et al. (2009) discovered through survey data that more than 30 percent of freshman reported feeling frequently overwhelmed. These feelings increased as they progressed in the program or as their level of education increased. The findings by Katz et al. are comparable to the results found in this study where academic self-efficacy decreased as students progressed in the program. Contrary to Katz et al., Jeffreys (2012) concluded that course level for nursing students was statistically significant in influencing perceptions. Novice students had lower self-efficacy and experienced students had higher self-efficacy. Additionally, Bandura (1986) posited that student's beliefs are more likely to be more accurate as the student gains experience in the academic environment. Therefore, self- efficacy belief scores are likely to change as students gain college experience. However, some beginning nursing students according to Jeffreys (2012) may be unaware of the academic demand and may not understand the expectations of a nursing program, leading these students to feel overly confident, thus rating themselves initially as supremely efficacious. After exposure in the program and further appraisal (post-survey results in this study), these students may show more realistic appraisals of their perceived capability, consequently showing a decrease, but a more accurate perceived self-efficacy appraisal (such as the junior participants in this study). This confidence skill disconnect, also coined as the

Dunning-Kruger effect (a cognitive bias where incompetent people are unable to realize their own incompetence), may have been a factor in this study, and could help explain why junior participant's self-efficacy gain scores were lower than sophomore participant gain scores. Research completed by Ehrlinger, Johnson, Banner, Dunning, & Kruger (2008), and Kruger & Dunning (1999), revealed that people are exceedingly confident when evaluating their own performances. This was especially true for lower performing individuals. The poor performers' lack of knowledge prevents them from being able to recognize their shortcomings. Essentially, these individuals don't know what they don't know; their incompetence interferes with their insight. As a result, they tend to overestimate or exaggerate their response because they believe they are doing or can do considerably well. On the other hand, higher performing individuals have been shown to underestimate their performance or ability. These individuals find their performance or ability as simple or easy, and inaccurately assume their peers feel the same, thus they tend to down play their own performance or ability (Ehrlinge et al. 2008; Kruger & Dunning, 1999).

It is imperative to evaluate self-efficacy at critical points in the nursing program and carefully review self-appraisal survey data to identify inefficacious and/or supremely efficacious students. This would allow for early intervention in supporting a more realistic self-appraisal of individual strengths and weaknesses in the achievement of academic success.

Research Question 2

It was hypothesized in research question two that there was no relationship between academic performance levels for BSN students in a public university in the upper Midwest who completed the study skills seminar compared to those BSN students who did not complete the study skills seminar. A factorial between subjects ANOVA was completed. This analysis was

designed to test the effects of both group (treatment and control) and type of student (traditional or nontraditional) on academic performance (mean exam scores). The analysis consisted of a 2 x 2 between subjects design, with the dependent variable being the exam performance. There was no significant relationship between academic performance as measured by mean exam scores for those who completed the study skills seminar compared to those who did not compete the study skills seminar. The findings for this research question are not consistent with previous research. Research supports the effects of first-year experience courses and study skills workshops on GPA's and academic achievement. One specific example is from Tuckman (2003) who evaluated the effectiveness of teaching students the use of specific learning and motivation strategies to meet both the cognitive and motivational demands of college. Tuckman found a significant effect (p <.001) in that students in the strategy training earned significantly higher (by .48) GPAs for the term in which the training was received compared to the matched students with no strategy training. Another example is from Pruitt-Walker (2016) who completed a quantitative study using a one group pre-posttest design looking at a success strategies improvement course on retention and self-efficacy. Results revealed that the success strategies improvement course better prepared students for coursework, and facilitated academic socialization. Due to the narrow time-frame of the study (7 weeks), it was not surprising to see inconsistent results. Students that participated in the study skills seminar may not have had adequate time to understand and implement the acquired test taking strategies, and may not have had enough exams to apply the strategies to demonstrate increased academic performance. What was surprising and unexpected was the fact that the group that had a large decrease was the study skills seminar group. This finding is difficult to discern, as this group was the intervention group that received the specific test taking strategies intervention to improve academic success. The

results again may be attributed to the lack of time in the study period for the treatment group to fully understand and feel confident in applying the strategies learned. Furthermore, these findings could possibly be due to the process of randomizing the control and treatment groups. Randomization of groups does not guarantee that the groups are matched or equivalent. Groups may still differ on preexisting attributes due to chance. It is a possibility that more students with higher academic ability and stronger GPA's were placed in the control group versus the treatment group thereby allowing those control group participants to adapt more readily to the increasing difficulty of exams as educational level increased. Another factor to consider that may help explain the decrease in exam scores for the treatment group, also discussed in the limitation section, is the design of this study. The post-survey contained a section in which participants used a sliding scale to self-report their exam score percentage. Research by Cole and Gonyea (2010), and Kuncel et al. (2005), discovered that self-reported grades for the most part are good reflections of actual grades for higher-level students with strong GPA's. However, lower achieving students are more likely to be inaccurate when self-reporting grades by exaggerating their scores. That said- it is quite possible that participants in the control group who did not benefit from the test taking strategies and who were lower achievers or overall weaker students, did not accurately self-report their exam scores. This could possibly have raised the exam mean in the control group resulting in scores that were not a true reflection of the actual earned grade.

The secondary null hypothesis indicated that there was no variance in the relationship when controlling for the nontraditional student. The two-way between subjects group (study skills seminar and no study skills seminar) and type of student (traditional or nontraditional) ANOVA revealed that the independent variable of type of student (traditional or nontraditional) had no significant main effects on exam mean scores, nor was there a significant interaction

effect for group and type of student exam mean scores. Zajacova et al. (2005) investigated the effects of academic self-efficacy on academic performance and concluded that sociodemographic variables had minimal association with the academic outcome variables of self-efficacy and academic performance. One could surmise that the findings related to the nontraditional student in this study for both research question one and two, are explained and supported by Zajacova et al.(2005), and Jeffreys (2012). Jeffreys purported that-nontraditional students are affected more by external environmental factors such as family support, employment status and living arrangements than by academic factors such as study skills and academic services. Bean and Metzner (1985) also reported that academic factors such as study hours and study skills are secondary to environmental factors when it comes to the influencing student retention, thus, supporting the results of this study.

Exploratory Research- Question 2

The effect of class or level in the program on exam performance was also evaluated. The analysis consisted of a 2 x 2 between subjects design, with the dependent variable being the exam performance. Participants self-reported their current semester exam scores for each course as indicated on the post-ARSAN's survey. An overall discovery worth noting with this exploratory research section was that as level in the program increased, exam mean scores decreased. Mean exam scores were higher for sophomore participants 87 (SD = 5.76) compared to junior participants 82 (SD = 5.28). These findings mirror the results in the exploratory research section for research question one; as class or educational level in the program increased, self-efficacy decreased.

The fact that exam mean scores decreased was not surprising as the nursing curriculum and associated exams increase in difficulty in preparation for NCLEX. Questions are written at a

higher level (applying and analyzing) utilizing Blooms taxonomy as students advance in the program; whereas in the non-nursing intensive courses at the beginning of the program, questions are written at a lower level (remembering and understanding) utilizing Blooms taxonomy. As exams get more difficult, students may take longer to adapt to the increase in exam difficulty, resulting in exam scores that reflect this challenge, thus supporting the need for some type of early intervention such as a test taking strategies class to arm students for success.

Limitations

The study period for this research study was very narrow (7 weeks). Participants completed the pre-survey the first week of the semester; the first study skills seminar was offered the second week of the semester; and the second seminar which included the test taking strategies for nursing exams was offered the second, and third weeks of the semester. To complete the study, the post survey was competed at midterm of the semester, so depending on when participants attended the seminar, there would have been only 5-6 weeks to understand and implement the acquired test taking and study skill strategies. The student participants also may not have had enough exams in which to apply the strategies, depending on the level of cohort they were in. Some participants only had one exam in each of their courses for the study period, which also was a factored limitation. Additionally, there were 79 out of 104 students (76%) agreeing to participate in this study with 75 actual results analyzed. Even though samples exceeded the priori power analyses, and they were large enough to observe some statistical significance, larger populations would give greater power to detect differences. Furthermore, there was an especially low percent of participation in the first semester sophomore cohort (50%) and a possible limitation to the study findings. Reviewing the andragogical assumptions of learning may help elucidate this concern. According to Knowles et al. (2011), adults become

ready to learn when they experience in their life situations, a need to know in order to perform more effectively. Adults must also see a need for training before learning will take place. The significance of this assumption is the timing of training. Hence, one would not want to force learners into training activities before they perceived a need for them. Adults again must see a need for training before learning will take place. It is quite possible that as first semester sophomore students registered for only two non-intensive nursing courses, they did not perceive the need to participate in a study skills seminar for nursing students. Essentially, this group of students had no previous experience in a professional nursing program and as a result, they did not know what they did not know. They may have felt there was no perceived need to attend the training, and so they did not make it a priority to participate.

Another potential limitation was in the design of this study. Participants were asked to self-report their exam scores. By self-reporting, the researcher relied on the honesty of the participant's response. Even though participants were informed that if they did not remember their exam score they could look it up in Blackboard on their phones or computers, they may have chosen to rely on memory instead. Self-reported variables such as exam performance in this study should be used with prudence due to the unknown amount of error with the scores that were self-reported. As reported by Cole and Gonyea (2010), and Kuncel et al.(2005), high achieving students tend to be more accurate in self-reporting grades, however lower level achievers have been shown to be less reliable in self-reporting by inflating or exaggerating their grades. This limitation consequently may have been a factor in the variable examined.

Implications for Theory

According to Bandura's social learning theory, self-efficacy is a person's belief of their own performance capabilities that lead to influence on events surrounding their own lives

(Bandura, 1977). The individual who possesses high self-efficacy believes that when they act, they will achieve positive outcomes and therefore, approach situations with confidence. If unsuccessful, an individual with high self-efficacy will seek ways to improve. The individual with low self-efficacy tends to focus on personal belief systems in which they are weak and will avoid difficult situations. Bandura (1986) determined that self-efficacy beliefs develop as a result of personal performance (mastery), vicarious learning (social modeling), persuasion, and perception of physiologic states. As noted earlier, the most instrumental of the four sources of self-efficacy beliefs is personal performance accomplishments or mastery. In understanding the results of this study related to self-efficacy beliefs, student's beliefs are more likely to be more accurate as the student gains experience in the academic environment. Therefore, self- efficacy belief scores are likely to change and become more accurate as the student gains college experience. Kruger and Dunning (1999) determined that the more skilled an individual is, the better judgment in their performance they will have. If one can surmise that accuracy in predicating ability increases as course level increases, then appropriate and timely placement of self-efficacy appraisals becomes essential. Completing an assessment for perceived academic self-efficacy at the beginning of a nursing program, and at the beginning of the semester, may not give nursing educators the most accurate data to base interventions on. Future research should take into consideration the findings from this study and from supporting literature demonstrating that greater college experience and increased skill level lead to better judgment, thus more accurate self-appraisals.

Early introduction to the rigor and demands required in a nursing program as well as a timely study skills seminar, a timely test-taking strategy seminar, and continued support throughout the curriculum may increase confidence for nursing students in a highly demanding

and rigorous curriculum. Providing these opportunities may give the student a realistic perception that success is not out of their control. Self-efficacy, when used as a pedagogical strategy can be strengthened, resulting in a student who is engaged, collaborative, and curious. When students are taught specific techniques in learning, and are encouraged and supported academically, both self-efficacy and academic achievement improve Bandura (1977).

Implications for Research

Because students newly admitted into nursing programs may not know what to expect, they may need a special amount of guidance and adequate opportunity for self-appraisal. This would allow ample opportunity for a realistic understanding of perceived self-efficacy enabling the student to obtain assistance from nurse educators to improve weaknesses and build on strengths. This research affords this and other programs of nursing with baseline data, which can be beneficial for continued research into the concepts of self-efficacy and academic performance.

This well designed research study supported the findings that a study skills seminar increased the academic self-efficacy levels of BSN students in a public university in the upper Midwest. However, with the brevity of the study period, this study failed to demonstrate significance for the influence self-efficacy had on academic success. Therefore, a recommendation would be to replicate this study using the identical measures and sample population type, but extend the timeline to include one full semester in order to study the effects of interventions such as a study skills seminar on self-efficacy and academic success. This study relied on the accurate self-report of exam grades. As addressed in the limitations, research has shown that lower academic achievers tend to be less accurate in self-reporting data compared to high academic achievers. To preclude errors in data, the study design would change to allow the researcher to access the student's grades in each of their courses to ensure the recording of

accurate exam scores. Another suggestion would be to address the limitations noted with the small sample size and replicate this study with the same measures, but in different BSN nursing populations with a larger sample size. This would also increase the population of nontraditional students, giving greater power to detect differences with this important variable.

Discovering strategies to promote academic success in nursing education are critical if nurse educators are serious about examining ways to increase retention and facilitate success from admission to program completion and licensure. Additionally, literature supports the difference in nontraditional students from traditional students, and as a result, nontraditional students may require additional academic and nonacademic support. Attrition rates for nursing students are high in general, but for nontraditional students including URM's, attrition rates can be anywhere from 15 percent to 85 percent (Pryjmachuk et al. 2008). Continued research is imperative in identifying factors both academic and nonacademic that restrict or support academic achievement for these students. The goal for future research in these areas would be to recruit, retain, and graduate a diverse pool of nurses to help solve the nursing shortage crisis while meeting the needs of an expanding culturally diverse society.

Implications for Practice

Although many studies examining self-efficacy and academic performance in nursing students have been conducted, the vast majority focused on the associations between stress and anxiety and poor academic performance, or remediation strategies once failure occurred. This study was conducted to understand the impact or the effect of a study skills seminar on students' self-efficacy and academic performance. Results confirmed the importance in making sure all students were equipped with the necessary academic skills to meet the academic rigor of nursing education and studied the most influential time this would be in their education. Because the

study results indicate that student participants exhibited higher levels of self-efficacy after the study skills seminar, this researcher would recommend the study skills seminar become part of the curriculum. The first part of the seminar, which included information on mindset/motivation, procrastination, time management, memory and concentration, and test anxiety, would be best offered at the beginning of the program once the student is admitted to the nursing program. Included in this seminar could be an overview of what is required to be a successful student in a fast paced demanding nursing education program. Reinforcement of topics and resources for support should then occur throughout the education program. The second part of the seminar dealing with test-taking strategies for nursing exams, would be better offered at midpoint of the second semester sophomore year or at the start of the first semester junior year correlating with more nursing intense courses and higher levels of Bloom's taxonomy exam questions within nursing exams. This strategy is supported through the results of this study revealing that as nursing students' educational level increased, exam scores decreased. With reinforcement of the topics presented in the study skills seminar, offering resources for support in the beginning as well as throughout the students' education, and offering timely self-appraisals, a more accurate self-efficacy appraisal may occur. This would allow nursing educators to develop an individualized approach to facilitate student success. As Katz et al. (2009) indicated, developing study and test taking skills, managing time, managing stress, and developing critical thinking skills facilitate nursing student success.

Another associated concern addressed in the limitations was the low participation rate of first semester sophomore students (50%). It is quite possible that as first semester sophomore students registered for only two non-intensive nursing courses, they did not perceive the need to participate in a study skills seminar for nursing students. Knowles et al. (2011) recommended

training be as close to the time it is needed as possible, and to avoid telling learners they need to know the information for future use, again supporting the separation and placement of the study skills seminar, and test taking strategies seminar.

Lastly, it is the expectation that in their professional role, nurse educator's advocate for policy and policy formation related to the delivery of nursing education for professional practice. Curriculum development in nursing education is a scholarly and creative process intended to produce an evidence based, informed, and relevant curriculum. When research supports interventions designed to improve retention rates and graduate a diverse a group of nurses, it is the responsibility of nurse educators to be active influencers of policy for curriculum development. This can start at the nursing education program level, moving to the state level such as state regulatory boards of nursing, and finally to the national level such as the Commission on Collegiate Nursing Education (CCNE).

Conclusion

Enrollment trends and retention rates declare the need to prioritize the retention of both traditional and nontraditional students. Nurse educators are in a key position to influence retention by designing evidence based retention strategies targeting specific populations. Previous research has proposed that domain specific self-efficacy is a significant predictor of success. Although study skills offerings have been linked to success in improving student study skills, grades, and retention, their relationship to domain specific academic self-efficacy has not been thoroughly examined. In light of the critical nursing shortage, the concept of nursing student retention requires evaluation with a new lens. The goal of student success in nursing education programs cannot be realized if further research is not conducted on the development of tools and resources that assist students in increasing their academic self-efficacy thus academic

success. This study was a step in the right direction as it confirmed the positive effect a study skills seminar had on academic self-efficacy as well as its potential to influence academic success. Nursing's quest for a diverse workforce is achievable; however, momentum must be sustained through evidence based assessment and interventions!

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APPENDIX A. IRB APPROVAL

NDSU NORTH DAKOTA STATE UNIVERSITY

July 3, 2018

Dr. Claudette Peterson
School of Education

Re: IRB Determination of Exempt Human Subjects Research:
Protocol #HE18271, "Academic Success and Retention: Assessing Variables that Make a Difference in a Baccalaureate Nursing Program"

Co-investigator(s) and research team: Wendy Kopp, Brent Hill
Date of Exempt Determination: 7/3/2018 Expiration Date: 7/2/2021
Study site(s): NDSU
Sponsor: n/a

The above referenced human subjects research project has been certified as exempt (category #1, 2b) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, Protection of Human Subjects). This determination is based on the original protocol submission (received 6/18/2018) and revised consent language (received 6/20/2018).

Please also note the following:
• If you wish to continue the research after the expiration, submit a request for recertification several weeks prior to the expiration.
• The study must be conducted as described in the approved protocol. Changes to this protocol must be approved prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.
• Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.
• Report any significant new findings that may affect the risks and benefits to the participants and the IRB.

Research records may be subject to a random or directed audit at any time to verify compliance with IRB standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.
Sincerely,

Kristy Shirley

Kristy Shirley, CIP, Research Compliance Administrator

For more information regarding IRB Office submissions and guidelines, please consult http://www.ndsu.edu/research/integrity_compliance/irb/. This Institution has an approved FederalWide Assurance with the Department of Health and Human Services: FWA00002439.

INSTITUTIONAL REVIEW BOARD
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | ndsu.edu/irb
Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo ND 58102

APPENDIX B. RECRUITMENT SCRIPT FOR NURSING STUDENTS AT NDSU NURSING AT SANFORD, BISMARCK

North Dakota State University
Department of Education
PO Box 6050
Fargo, ND 58108-6050

Dear NDSU Nursing at Sanford, Bismarck Students,

My name is Wendy Kopp, and in addition to my current role here at NDSU Nursing at Sanford Health, I am completing my Ph.D. in Education at North Dakota State University. To complete my degree, I am conducting research that will help me, along with faculty, students, administration, and credentialing organizations, better understand what contributes to academic success and retention in programs of nursing. I am requesting your assistance by participating in this study.

A consent form will be given to you which also explains what this study is about. Please read it carefully. Completing the pre-survey implies consent to participate.

Purpose: The purpose of this study is to examine the relationship of a study skills seminar on self-efficacy and academic performance in BSN students, with an emphasis on the nontraditional BSN student.

Procedures: If you agree to be in this study, you will be asked to:

1. Complete an online two-part pre-survey which has demographic and background information in the first part, and an academic requirements self-appraisal for the second part. This survey should take no longer than 15 minutes to complete.
2. If randomly selected for the Treatment group, participate in a study skills seminar on two separate occasions at the beginning of the semester for a total of 6 hours.

3. Complete an online two- part post-survey which contains the academic requirements self-appraisal in the first part, and a section asking for exam percentages in each of your current nursing classes for the second part. This survey should take no longer than 15 minutes.
4. Refrain from sharing information or asking questions about topics in the study skills seminar, between groups until the study is over and data collection complete.

As with all research, your participation is voluntary, and you may choose to not participate or you may choose to discontinue participating in the study or survey at any time. Additionally, your participation in this research is confidential, and no personal identification information will be obtained. Your rights under FERPA will be respected at all times.

If you have any questions about this study, please contact me (Wendy Kopp) at wendy.kopp@ndsu.edu, 701-224-3803 or my advisor, Dr. Claudette Peterson at claudette.peterson@ndsu.edu, 701-231-7085.

Thank you for helping me complete this important research,

Wendy Kopp

APPENDIX C. INFORMED CONSENT

North Dakota State University
Department of Education
PO Box 6050
Fargo, ND 58108-6050

Academic Success and Retention: Assessing Variables that Make a Difference in a Baccalaureate Nursing Program.

Dear NDSU Nursing at Sanford, Bismarck Students,

My name is Wendy Kopp, and in addition to my current role here at NDSU Nursing at Sanford Health, I am completing my Ph.D. in Education at North Dakota State University. To complete my degree, I am conducting research that will help me, along with faculty, students, administration, and credentialing organizations, better understand what contributes to academic success and retention in programs of nursing. I am requesting your assistance by participating in this study.

Purpose: The purpose of this research is to Examine the Relationship of a Study Skills Seminar on Self-Efficacy and Academic Achievement in a Baccalaureate Nursing Program.

Because you are in your beginning semesters of your nursing education, you are invited to participate in this research project. Your participation is entirely our choice, and you may change your mind or quit participating at any time, with no penalty to you.

Risks and Benefits: It is not possible to identify all potential risks in research procedures, but we have taken reasonable safeguards to minimize any known risk, and have determined there are no known risks identified by participating in this study. By taking part in this research, you may benefit by improving your study skills and performance.

Procedures: If you agree to be in this study, you will commit to the following procedures:

1. Complete a two-part pre-survey after reading through the consent followed by a two-part survey at the end of the study. The study will be conducted during the first half of the fall 2018 semester. You will instructed on how to create your own unique identification code for your survey responses so your two surveys can be grouped together while maintaining your confidentiality. This code is referred to as a Subject-Generated Identification Code (SGIC).
2. Become a member of either the control group or the experimental group. Students participating in this research will randomly be assigned to an experimental or control group. The drawing will place first semester sophomores, second semester sophomores, and first semester juniors in the groups as equally as possible. Every participant has an equal chance of being chosen for the experimental or control group.
3. Agree to abide by the research design for your group, either the experimental group or the control group. Mixing the experiences for the two groups by sharing intervention details can compromise the results of the research.
4. Students randomly assigned to participate in the experimental group will receive the intervention of a two-part study skills seminar. They will meet as a group during the second week of classes for one four- hour session and then again, five weeks later for a two-hour session. Topics include: Mindset and Motivation, Procrastination, Time Management, Memory and Concentration, Test Anxiety and Test Taking Strategies for Nursing Exams.
    a) If in the experimental group, talking to faculty or students in the control group about the intervention details is restricted. Students randomly assigned to

participate in the control group will have their regular educational experience this semester, not including the study skills seminar. If in the control group, talking to faculty or students in the experimental group about intervention details is restricted. When data collection is complete (before October 15th), students in the control group will have the opportunity to receive the study skills seminar.

Duration/Time: The pre-and post-surveys should take no longer than 15 minutes to complete and the study skills seminar will be no longer than 6 total hours divided between two sessions.

Statement of Confidentiality: Your participation in this research is confidential, and your rights under FERPA will be respected. By creating a Subject-Generated Identification Code(SGIC) or alias for the pre and post-surveys, there will be no personal identification information obtained.

Right to Ask Questions: Please contact me, Wendy Kopp, at wendy.kopp@ndsu.edu with questions or concerns about this study. You can also contact my advisor, Dr. Claudette Peterson, at claudette.peterson@ndsu.edu.

Rights as a Research Participant: You have rights as a research participant. If you have questions about your rights or complaints about this research you may talk to the researcher or contact the NDSU Human Research Protection Program at 701.231.8995, toll free at 1-855-800-6717, by email at ndsu.irb@ndsu.edu, or by mail at: NDSU HRPP Office, NDSU Dept. 4000, P.O. Box 6050, Fargo, ND 58108-6050

Voluntary Participation: Your decision to participate in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer.

APPENDIX D. INSTRUMENT WITH CODING LEGEND

Pre-Survey

Hello and thank you for participating in this research study! Please enter your e-mail address in the box below. Entering your e-mail address and completing the survey implies consent to participate in this study. In addition, the e-mail address allows the researcher to email you the information to attend the study skills seminar and to send you a follow up survey. Entering your email address DOES NOT connect you to your survey responses. Your survey responses will remain separate.

E-mail address: [ ]

Q1 In order to track your pre and post surveys while maintaining your confidentiality, a subject generated identification code design technique will be used. You will be asked to answer the same four questions based on your own personal information at the start of both the pre and post-surveys. By answering these same four questions, you will have developed your own unique code or alias for both surveys allowing the researcher to match both your pre and post-surveys. For your convenience, an example has been provided.

Q2

M	First letter of Mother's first name?
0	Number of older brothers (living and deceased)?
5	Number representing the month you were born?
A	First letter of middle name (if none, use X)
M05A	**Subject Identification Code**

Q3 Please answer the questions below and fill in the blanks to develop your own unique code in the bottom box.

First Letter of Mothers first name?	
Number of older brothers (living and deceased)?	
Number representing the month you were born?	
First letter of middle name (If none use X)	
Subject Identification Code	

Q4 **Pre-Survey Part I of II**
Student Demographics/Background Information

Q5 How old are you?

Q6 What is your Gender?

Male (1)
Female (2)

Q7 What is the cohort you are graduating with?

Spring of 2021 (First semester sophomore) (1)
Fall of 2020 (Second semester sophomore) (2)
Spring of 2020 (First semester junior) (3)

Q8 What is your marital status?

Never married (1)
Separated (2)
Divorced (3)
Widowed (4)
Married (5)

Q9 Do you have dependent children living in your home?

Yes (2)
No (1)

Q10 Are you the primary caregiver or responsible person for anyone other than your children (ex. Parent, grandparent, grandchild)?

Yes (2)
No (1)

Q11 Ethnic/Racial Background

Caucasian (White) (1)
Hispanic or Latino (2)
Black or African American (3)
American Indian or Alaska Native (4)
Asian (5)
Native Hawaiian or other Pacific Islander (6)
Multi-Ethnic background (7)

Q12 Home Country?

Q13 Is English your native language?

Yes (2)
No (1)

Q14 How many years have you studied English (ESL) in the United States? (only enter a numerical value)

Q15 How may years of school (Kindergarten to 12th grade) did you attend in the United States? (only enter a numerical value)

Q16 Are you a first generation college student?

Yes (2)
No (1)

Q17 How would you describe your financial resources in meeting basic needs?

Much less than adequate (1)
Less than adequate (2)
Adequate (3)
More than adequate (4)
Much more than adequate (5)

Q18 How many hours a week are you employed?

Not employed (1)
Less than 10 (2)
10 to 19 (3)
20 to 29 (4)
30 or more (5)

Q19 What is the highest level of education you have completed prior to entering NDSU Nursing?

High school diploma (1)
Associate degree (2)
Baccalaureate degree (3)
Master's degree (4)

Q20 What is the highest level of education that you expect to complete?

Associate degree (1)
Baccalaureate degree (2)
Master's degree (3)
Doctoral degree (4)

Q21 What was the highest level of education completed by your mother?

Did not complete high school (1)
High school diploma (2)
Post high school certificate (3)
Associate degree (4)
Baccalaureate degree (5)
Master's degree or higher (6)
Do not know (0)

Q22 What was the highest level of education completed by your father?

Did not complete high school (1)
High school diploma (2)
Post high school certificate (3)
Associate degree (4)
Baccalaureate degree (5)
Master's degree or higher (6)
Do not know (0)

Q23 Which of the following is closest to your high school grade point average? (A=4.0, B=3.0, C=2.0, D=1.0)

3.6 to 4.0 (6)
3.1 to 3.5 (5)
2.6 to 3.0 (4)
2.1 to 2.5 (3)
1.6 to 2.0 (2)
1.5 or less (1)

Q24 What was the average grade you received for nursing courses you took last semester?

A (6)
B (5)
C (4)
D (3)
F (2)
Did not have nursing courses last semester (1)

Q25 Do you have previous experience working in healthcare?

Yes (2)
No (1)

Q26 Have you withdrawn from your nursing program at any time since your original entry?

Yes (2)
No (1)

Q27 At what point in the program did the withdrawal occur?

1st semester sophomore (1)
2nd semester sophomore (2)
1st semester junior (3)
2nd semester junior (4)
1st semester senior (5)
2nd semester senior (6)

Q28 When you withdrew from the nursing program was it:

Your choice (1)
Not your choice (2)

Q29 What was the primary reason for your withdrawal? (Choose the reason that was MOST significant in leading to the withdrawal.)

Academic difficulty (1)
Financial reasons (2)
Family responsibilities (3)
Health problems (4)
Too difficult to manage work and school (5)
Other (please specify) (6)

Q30 **Pre-Survey Part II of II**

Academic Requirements Self-Appraisal for Nursing Students (ARSANS):
Rate YOUR CURRENT degree of confidence in performing each academic related task for YOUR nursing courses this semester. Using the scale below, choose a number from (1) no confidence to (10) high confidence and mark your response appropriately.

I am CONFIDENT that I:	1 = No confidence, cannot do it	2 3 4	5 = Semi confident that I can do it	6 7 8 9	10 = High confidence, definitely can do it
30.1.Can receive help from my professors if I am unsure about an assignment	o	o o o	o	o o o o	o

30.2Can receive help from my professors if I am having social problems	o		o	o	o		o		o	o	o	o	o		o
30.3Can receive help from another classmate if I am unsure about an assignment	o		o	o	o		o		o	o	o	o	o		o
30.4Can receive help from another classmate if I am having social problems	o		o	o	o		o		o	o	o	o	o		o
30.5Can seek out the help of a tutor when needed	o		o	o	o		o		o	o	o	o	o		o
30.6Can seek out the help of a mentor when needed	o		o	o	o		o		o	o	o	o	o		o
30.7Can keep focused on my goals even if I struggle academically at first	o		o	o	o		o		o	o	o	o	o		o
30.8Can stay determined even if I fail on an assignment or exam	o		o	o	o		o		o	o	o	o	o		o
30.9Can successfully learn all relevant subject content in my nursing courses even if it is difficult		o		o	o	o		o		o	o	o	o		o
30.10Can maintain a positive attitude toward my nursing courses even when tensions arise		o		o	o	o		o		o	o	o	o		o
30.11Can continue to learn well, even if I get distracted in my nursing courses		o		o	o	o		o		o	o	o	o		o

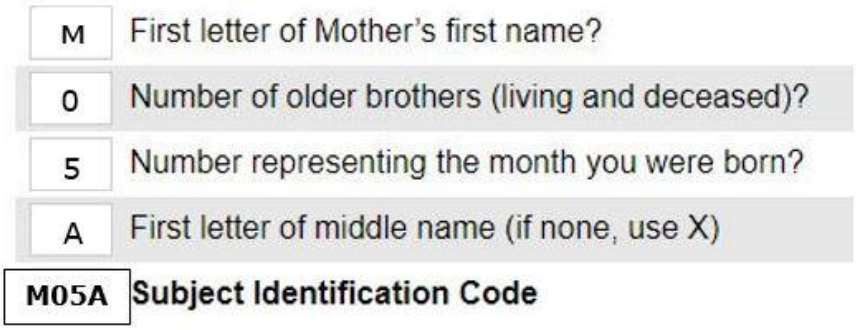
30.12Can still learn, even if I am having a bad day	0	0 0 0	0	0 0 0 0	0
30.13Can develop effective ways to cope with stress that may occur with nursing course requirements	0	0 0 0	0	0 0 0 0	0
30.14Can develop effective ways to cope with stress that may occur with nursing exams	0	0 0 0	0	0 0 0 0	0
30.15Can learn even the most difficult content when I try really hard	0	0 0 0	0	0 0 0 0	0
30.16Can become more and more capable of learning in my nursing courses as time goes by	0	0 0 0	0	0 0 0 0	0
30.17Can increase my learning through remediation of assignments and exams	0	0 0 0	0	0 0 0 0	0
30.18Can learn effective test taking techniques for nursing exams	0	0 0 0	0	0 0 0 0	0
30.19Can increase my test taking skills in my nursing courses as time goes by	0	0 0 0	0	0 0 0 0	0
30.20Can stay motivated to participate in nursing courses	0	0 0 0	0	0 0 0 0	0
30.21Can actively participate in class discussions	0	0 0 0	0	0 0 0 0	0

30.22Can successfully extract key nursing concepts from the assigned readings	0	0	0	0	0	0	0	0	0
30.23Can accurately remember concepts presented in class	0	0	0	0	0	0	0	0	0
30.24Can find a place to study to minimize distractions	0	0	0	0	0	0	0	0	0
30.25Can review material and study in small segments throughout the week instead of cramming	0	0	0	0	0	0	0	0	0
30.26Can master NCLEX style questions when taking exams	0	0	0	0	0	0	0	0	0
30.27Can maintain a 75% or higher on my exam average in my nursing courses	0	0	0	0	0	0	0	0	0
30.28Can get involved in a student organization	0	0	0	0	0	0	0	0	0
30.29Can obtain the academic goals I desire if I try hard enough	0	0	0	0	0	0	0	0	0
30.30Can finish the course requirements even when others think I cannot	0	0	0	0	0	0	0	0	0
30.31Can earn the grade I want in my nursing courses, even when others think I cannot	0	0	0	0	0	0	0	0	0

Post Survey
Hello and thank you for participating in this research study!

Q1 In order to track your pre and post surveys while maintaining your confidentiality, a subject generated identification code design technique will be used. You will be asked to answer the same four questions based on your own personal information at the start of both the pre and post-surveys. By answering these same four questions, you will have developed your own unique code or alias for both surveys allowing the researcher to match both your pre and post-surveys. For your convenience, an example has been provided.

Q2



Q3 Please answer the questions below and fill in the blanks to develop your own unique code in the bottom box.

First Letter of Mothers first name?	
Number of older brothers (living and deceased)?	
Number representing the month you were born?	
First letter of middle name (If none use X)	
Subject Identification Code	

Q4 **Post-Survey Part I of II**

Academic Requirements Self-Appraisal for Nursing Students (ARSANS):
Rate YOUR CURRENT degree of confidence in performing each academic related task for YOUR nursing courses this semester. Using the scale below, choose a number from (1) no confidence to (10) high confidence and mark your response appropriately.

I am CONFIDENT that I:	1 = No confidence, cannot do it	2	3	4	5 = Semi confident that I can do it	6	7	8	9	10 = High confidence, definitely can do it
4.1Can receive help from my professors if I am unsure about an assignment	o	o	o	o	o	o	o	o	o	o
4.2Can receive help from my professors if I am having social problems	o	o	o	o	o	o	o	o	o	o
4.3Can receive help from another classmate if I am unsure about an assignment	o	o	o	o	o	o	o	o	o	o
4.4Can receive help from another classmate if I am having social problems	o	o	o	o	o	o	o	o	o	o
4.5Can seek out the help of a tutor when needed	o	o	o	o	o	o	o	o	o	o
4.6Can seek out the help of a mentor when needed	o	o	o	o	o	o	o	o	o	o
4.7Can keep focused on my goals even if I struggle academically at first	o	o	o	o	o	o	o	o	o	o
4.8Can stay determined even if I fail on an assignment or exam	o	o	o	o	o	o	o	o	o	o
4.9Can successfully learn all relevant subject content in my nursing courses even if it is difficult	o	o	o	o	o	o	o	o	o	o

4.10Can maintain a positive attitude toward my nursing courses even when tensions arise	o	o	o	o	o	o	o	o	o
4.11Can continue to learn well, even if I get distracted in my nursing courses	o	o	o	o	o	o	o	o	o
4.12Can still learn, even if I am having a bad day	o	o	o	o	o	o	o	o	o
4.13Can develop effective ways to cope with stress that may occur with nursing course requirements	o	o	o	o	o	o	o	o	o
4.14Can develop effective ways to cope with stress that may occur with nursing exams	o	o	o	o	o	o	o	o	o
4.15Can learn even the most difficult content when I try really hard	o	o	o	o	o	o	o	o	o
4.16Can become more and more capable of learning in my nursing courses as time goes by	o	o	o	o	o	o	o	o	o
4.17Can increase my learning through remediation of assignments and exams	o	o	o	o	o	o	o	o	o
4.18Can learn effective test taking techniques for nursing exams	o	o	o	o	o	o	o	o	o
4.19Can increase my test taking skills in my nursing courses as time goes by	o	o	o	o	o	o	o	o	o

4.20Can stay motivated to participate in nursing courses	0	0 0 0	0	0 0 0 0	0
4.21Can actively participate in class discussions	0	0 0 0	0	0 0 0 0	0
4.22Can successfully extract key nursing concepts from the assigned readings	0	0 0 0	0	0 0 0 0	0
4.23Can accurately remember concepts presented in class	0	0 0 0	0	0 0 0 0	0
4.24Can find a place to study to minimize distractions	0	0 0 0	0	0 0 0 0	0
4.25Can review material and study in small segments throughout the week instead of cramming	0	0 0 0	0	0 0 0 0	0
4.26Can master NCLEX style questions when taking exams	0	0 0 0	0	0 0 0 0	0
4.27Can maintain a 75% or higher on my exam average in my nursing courses	0	0 0 0	0	0 0 0 0	0
4.28Can get involved in a student organization	0	0 0 0	0	0 0 0 0	0
4.29Can obtain the academic goals I desire if I try hard enough	0	0 0 0	0	0 0 0 0	0
4.30Can finish the course requirements, even when others think I cannot	0	0 0 0	0	0 0 0 0	0

4.31Can earn the grade I want in my nursing courses, even when others think I cannot	o o o o o o o o o o

Post Survey Part II of II

Q5.Please identify what level you currently are at NDSU Nursing at Sanford:

First semester sophomore (graduation spring of 2021) (1)
Second semester sophomore(graduation fall of 2020) (2)
Advanced second semester sophomore (click this circle if you are taking both first and second semester sophomore classes/graduation fall of 2020) (3)
First semester junior(graduation spring 2020) (4)

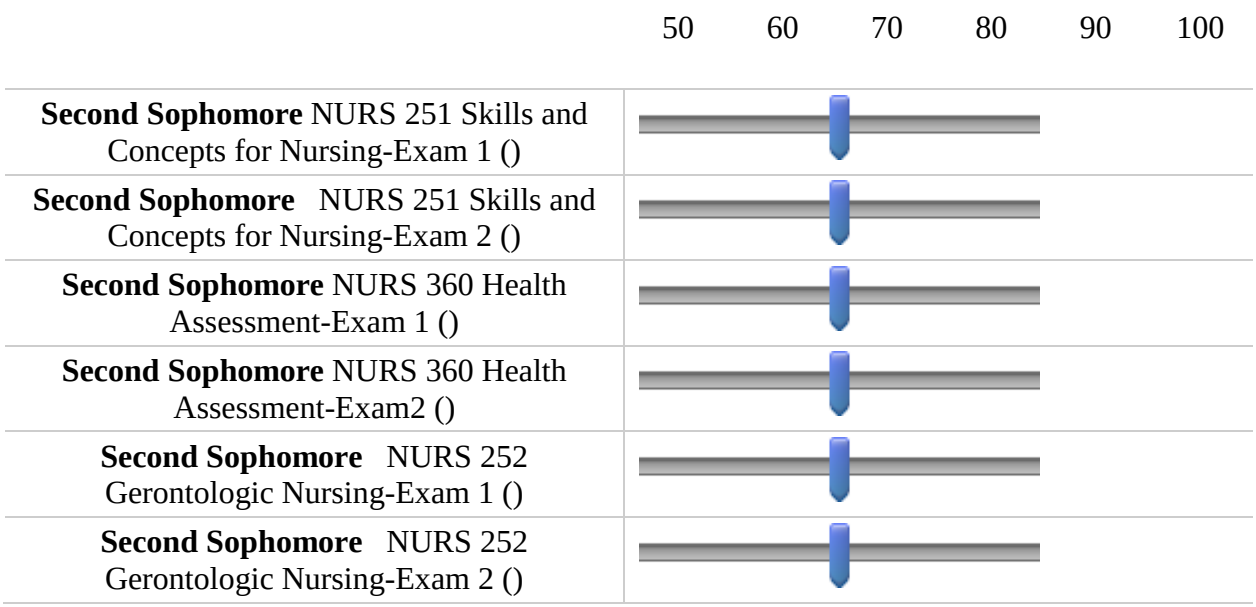
Exam Performance

Q6. Exam scores play a critical role in assessing whether a relationship exists between the independent variable of a study skills seminar and the dependent variables of self-efficacy and exam performance. The final portion of this survey is about your exam scores.

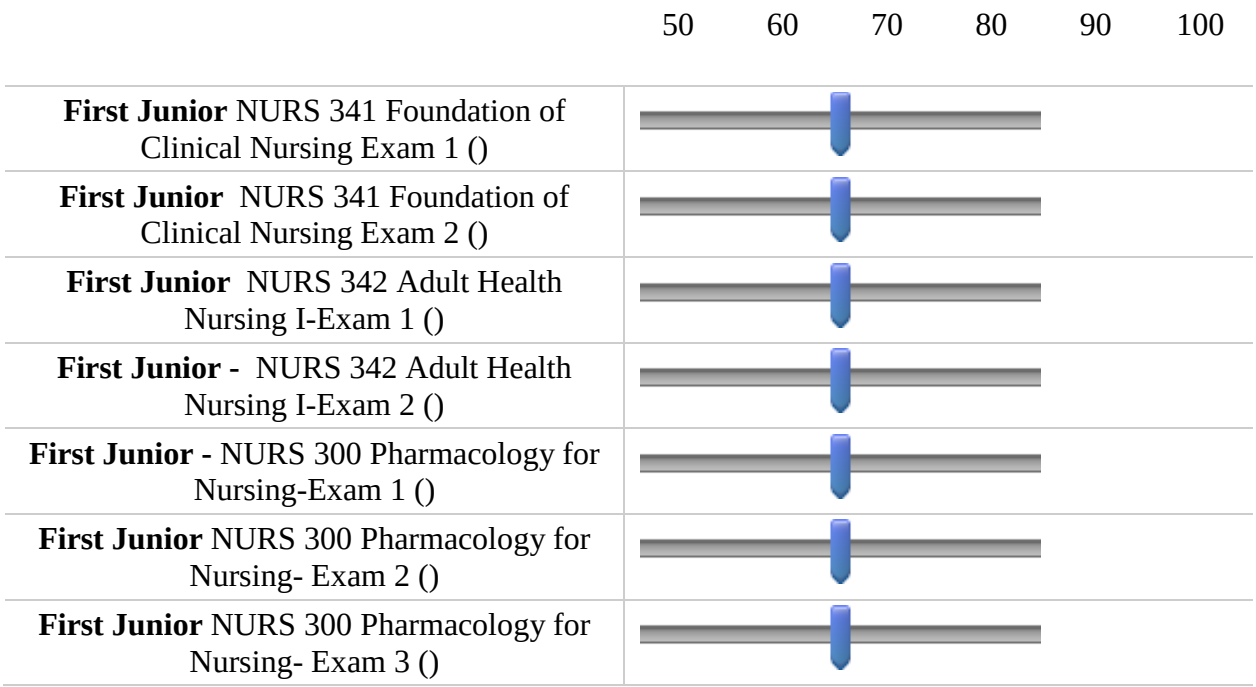
Q7 **First Semester Sophomore** - Please move the slider to the percentage you earned on each exam. You may open up Blackboard in a new browser and look in your courses to view your current exam percentages. Please click the N/A box if exam 2 has not been administered.

	50 60 70 80 90 100
First Sophomore - NURS 210 Orientation To Research & Evidence-Based Practice-Exam 1 ()	
First Sophomore - NURS 210 Orientation To Research & Evidence-Based Practice-Exam 2 ()	
First Sophomore - - NURS 250 Health Promotion- Exam 1 ()	
First Sophomore - NURS 250 Health Promotion-Exam 2 ()	

Q8 **Second Semester Sophomore** Please move the slider to the percentage you earned on each exam. You may open up Blackboard in a new browser and look in your courses to view your current exam percentages. Please click the N/A box if exam 2 has not been administered.



Q9 **First Semester Junior** Please move the slider to the percentage you earned on each exam. You may open up Blackboard in a new browser and look in your courses to view your current exam percentages. Please click the N/A box if exam 2 has not been administered.



APPENDIX E. PERMISSION TO ADOPT OR MODIFY ESTABLISHED ACADEMIC SELF-EFFICACY SCALES

Dr. Kopp,

Yes you may, and I would be very interested in what you are doing as I am starting a similar study in the fall. Do you mind sharing what you are doing for your study session and what your other measures are? I am doing an immersion for the first semester sophomores. (2, 3 hour session in the evening of the first week of school) Maybe we could work together.

Melodie

Melodie Rowbotham, PhD, RN, CNE
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Director SIUE Regional Program
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SIUE School of Nursing Fully Accredited since 1970

From: Kopp, Wendy <wendy.kopp@ndsu.edu>
Sent: Thursday, April 5, 2018 4:19:57 PM
To: Rowbotham, Melodie
Subject: Student self-efficacy scale-permission

Good afternoon Dr. Rowbothan,

I am conducting research on the effects of a study skills seminar on self-efficacy and academic success in nursing students enrolled in a BSN program. I am developing a 31 item instrument on perceived self-efficacy and would love permission to utilize some items and adapt or slightly modify the language in other items in your 10 question Student Self-Efficacy Scale.
Thank you for your consideration,
Wendy

Wendy Kopp MSN RN-BC
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Absolutely! Please feel free to use and edit as needed. Would love to see the results of your research when ready.

In the spirit of Ut Prosim,

Luisa

Luisa M Havens Gerardo, Ph.D.

Vice Provost Enrollment Management

VIRGINIA TECH

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Suite 3500 (MC 0392)
Blacksburg, VA 24061
Phone: (540) 231-4623

From: Kopp, Wendy <wendy.kopp@ndsu.edu>
Sent: Thursday, April 05, 2018 5:28 PM
To: Havens Gerardo, Luisa <lmhavens@vt.edu>
Subject: permission for the PASES
Importance: High

Good afternoon Dr. Havens,

I am conducting research on the effects of a study skills seminar on self-efficacy and academic success in nursing students enrolled in a BSN program. I am developing a 31 item instrument on perceived self-efficacy and would love permission to utilize some items and adapt or slightly modify the language in other items in your 22 item Perceived Academic Self-Efficacy Scale.

Thank you for your consideration,
Wendy

Wendy Kopp MSN RN-BC
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APPENDIX F. INSTRUMENT ITEM DEVELOPMENT

Survey Question-ARSANS	Question Developed or Modified From:
Can receive help from my professors if I am unsure about an assignment *Student Support	PASES, Havens 2008. Can get professors to help me if I am stuck on an assignment.
Can receive help from my professors if I am having social problems *Student Support	PASES, Havens 2008. Can get professors to help me if I have social problems.
Can receive help from another classmate if I am unsure about an assignment *Student Support	PASES, Havens 2008. Can get another student to help me if I get stuck on an assignment.
Can receive help from another classmate if I am having social problems *Student Support	PASES, Havens 2008. Can get another student to help me if I have social problems
Can seek out the help of a tutor when needed *Student Support	PASES, Havens 2008. Can seek the help of a tutor when I need it.
Can seek out the help of a mentor when needed *Student Support	PASES, Havens 2008. Can seek the help of a mentor when I need it.
Can keep focused on my goals even if I struggle academically at first *Student Support	PASES, Havens 2008. Can keep focused on my goals even if I stumble academically at first.
Can stay determined even if I fail on an assignment or exam *Academic Stressors	PASES, Havens 2008. Can remain positive and confident even if I fail on a school assignment or test.
Can successfully learn all relevant subject content in my nursing courses even if it is difficult *Academic Stressors	Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). I am convinced that I am able to successfully learn all relevant subject content even if it is difficult.
Can maintain a positive attitude toward my nursing courses even when tensions arise *Academic Stressors	Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). I know that I can maintain a positive attitude toward this course even when tensions arise.
Can continue to learn well, even if I get distracted in my nursing courses *Academic Stressors	Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). Even if I get distracted in class, I am confident that I can continue to learn well.

Survey Question-ARSANS	Question Developed or Modified From:
Can still learn, even if I am having a bad day *Academic Stressors	Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). I am confident in my ability to learn, even if I am having a bad day.
Can develop effective ways to cope with stress that may occur with nursing course requirements *Academic Stressors	Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). I am convinced that I can develop creative ways to cope with the stress that may occur while taking this course.
Can develop effective ways to cope with stress that may occur with nursing exams *Academic Stressors	Researcher developed
Can learn even the most difficult content when I try really hard *Academic Strategies	Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). When I try really hard, I am able to learn even the most difficult content.
Can become more and more capable of learning in my nursing courses as time goes by *Academic Strategies	Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). I am convinced that, as time goes by, I will continue to become more and more capable of learning the content of this course.
Can increase my learning through remediation of assignments and exams *Academic Strategies	Researcher developed
Can learn effective test-taking techniques for nursing exams *Exam Goals	Researcher developed
Can increase my test taking skills in my nursing courses as time goes by *Exam Goals	Researcher developed
Can stay motivated to participate in nursing courses *Academic Goals.	Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). I know that I can stay motivated to participate in the course.
Can actively participate in class discussions *Academic Strategies	PASES, Havens 2008. Can participate actively in class discussion.
Can successfully extract key nursing concepts from the assigned readings *Academic Strategies	Researcher developed

Survey Question-ARSANS	Question Developed or Modified From:
Can accurately remember concepts presented in class *Academic Strategies	PASES, Havens 2008. Can accurately remember information presented in class.
Can find a place to study to minimize distractions *Academic Strategies	PASES, Havens 2008. Can find a place to study that minimizes distractions
Can review material and study in small segments throughout the week instead of cramming *Academic Strategies	Researcher developed
Can master NCLEX style questions when taking exams *Exam Goals	Researcher developed
Can maintain a 75% or higher on my exam average in my nursing courses *Exam Goals	Researcher developed
Can get involved in a student organization *Academic Goals	PASES, Havens 2008. Can get involved in a student organization related to my major.
Can obtain the academic goals I desire if I try hard enough *Academic Goals	PASES, Havens 2008/Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). Can achieve the academic goals I set for myself/ If I try hard enough, I can obtain the academic goals I desire.
Can finish the course requirements even when others think I cannot *Academic Goals	Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). I know that I can finish the assigned projects and earn the grade I want, even when others think I cannot.
Can earn the grade I want in my nursing courses, even when others think I cannot *Academic Goals	Student Self-Efficacy Scale, Rowbotham and Schmitz (2013). I know that I can finish the assigned projects and earn the grade I want, even when others think I cannot

APPENDIX G. STUDY SKILLS SEMINAR OUTLINE

Study Skills Seminar

Session I: Monday, August 27th from 1-5pm

This seminar is a skills –based course where students learn a variety of skills and techniques that are designed to enable academic success in programs of nursing. Through a combination of lecture, assigned reading, in-class activities and hands-on practice students will learn concrete ways to improve college-level reading, note taking, self-management, learning and thinking strategies, as well as test preparation and test-taking skills. Sessions are designed to be both informative and interactive.

Presenter: Betsy Carter, ACE Learning Services Coordinator, Student Success Programs, NDSU.

Mindset and Motivation: Learn the characteristics of both fixed and growth mindsets. Learn ways to help yourself develop a growth mindset. Strategies for increasing motivation and preparing your brain to learn will also be discussed.

Procrastination: Learn about common types of procrastination, and the type(s) that may fit you, and how to combat them.

Time Management: Learn specific time management and organizational skills to map out your semester. Set your priorities, and create effective study plans and timelines.

Memory and Concentration: Learn about what practices lead to poor concentration and discover new ways to boost your memory and increase your ability to concentrate.

Test Anxiety: Learn the different techniques to manage the stress and anxiety that are often associated with studying and test taking.

Session II: Multiple Sessions Offered

Presenter: Wendy Kopp, Associate Professor of Practice and Director of NDSU Nursing at Sanford Health, Bismarck

Test Taking Techniques for Nursing Exams: Learn how to build your test taking ability and how to wear a critical thinking cap during nursing school exams. Several strategies will be presented with practice on how to problem-solve your way to the correct answer on your exams. Examples include: (a) understanding Bloom's revised taxonomy in building a multiple choice question, (b) understanding the anatomy of a multiple choice question, (c) fundamental rules for success, (d) identifying the correct answer with application or higher level multiple choice questions (nursing process, maslow's hierarchy, airway, breathing, and circulation (ABC's), and (e) deconstructing select all that apply questions.