

ABSTRACT

Mary B. Chatman. SELF-EFFICACY IN FRESHMAN AND SOPHOMORE NURSING STUDENTS. (Under the direction of Dr. Elaine Scott) College of Nursing, November, 2012.

Healthcare disparities and inequities have been at the forefront of the health agenda, thus supporting that minority healthcare is of poorer quality than that experienced by the majority population. Compounding this issue is the fact that our nation is growing more diverse. Only modest strides have been made to increase the diversity in the nursing workforce so patient care needs can be better met. Using a 99-item survey, this study evaluates the relationship between personal factors, community factors, and the level of self-efficacy related to nursing as a career in pre-nursing minority students in higher education. The sample consisted of 88 African American and Caucasian freshman and sophomore students. No statistically significant differences were found between the two ethnic groups in nursing academic, clinical self-efficacy, or general self-efficacy. Differences were found between the ethnic groups in the kinds of social support needed by the students. These findings suggest that when minorities have relatively the same personal and community influencing factors as Caucasian students, they achieve comparable levels of self-efficacy. These findings may suggest that other variables and perhaps other theories need to be examined.

SELF-EFFICACY IN FRESHMAN AND SOPHOMORE NURSING STUDENTS

A Dissertation

Presented to

The Faculty of the College of Nursing

East Carolina University

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Nursing

by

Mary B. Chatman

November, 2012

SELF-EFFICACY IN FRESHMAN AND SOPHOMORE NURSING STUDENTS

by

Mary B. Chatman

APPROVED BY:

DIRECTOR OF DISSERTATION: _____
Elaine Scott

COMMITTEE MEMBER: _____
Melvin Swanson

COMMITTEE MEMBER: _____
Martha Engelke

COMMITTEE MEMBER: _____
Carol Winters

DIRECTOR OF THE PhD PROGRAM, COLLEGE OF NURSING:

Marie E. Pokorny

DEAN OF THE GRADUATE SCHOOL:

Paul Gemperline

©Copyright 2012
Mary B. Chatman

TABLE OF CONTENTS

LIST OF FIGURES.....	x
LIST OF TABLES.....	xi
CHAPTER I: INTRODUCTION.....	1
Statement of the Problem.....	3
Background of the Problem.....	3
Transition Conditions of Pre-Nursing Minority Students.....	5
Personal Factors Influencing the Transition of Pre-Nursing Minority Students.....	5
Race/Age.....	5
Socioeconomic Status.....	6
Social Support.....	7
Personal Mastery.....	9
Community Factors Influencing the Transition of Pre-Nursing Minority Students.....	12
Patterns of Response in the Transition of Minority Pre-Nursing Students.....	13
Process Indicator: Developing Confidence and Increasing Self-Efficacy.....	14
Summary.....	14
Purpose of the Study.....	15
Theoretical Perspective.....	15
Transitions Theory.....	16
Self-Efficacy Theory.....	18
Conceptual and Research Model.....	19
Significance of the Study.....	19

Research Questions.....	22
Theoretical and Operational Definition of Terms.....	22
CHAPTER II: REVIEW OF LITERATURE.....	24
Minorities and Health Disparities.....	25
Minority Nursing Shortage.....	28
Nature of the Transition.....	31
Development Dimensions – Adolescent to Young Adult.....	31
Critical Factors Influencing Career Choices in Minority Students.....	33
Personal Factors Affecting the Transition to Enrollment in Nursing.....	38
Race.....	38
Age.....	39
Socioeconomic Status.....	40
Social Support.....	43
School Support.....	43
Parental Support.....	47
Family Support.....	47
Community Factors Affecting the Transition to Nursing School.....	50
Role Models.....	50
Vicarious Experiences.....	51
Patterns of Response During Transition.....	52
Process Indicator – Self-Efficacy Development.....	52
Self-Efficacy – Academic & Clinical Performance.....	55
Summary.....	57

CHAPTER III: RESEARCH METHODOLOGY.....	59
Research Questions.....	59
Aims and Objectives.....	60
Specific aim 1.....	60
Specific aim 2.....	60
Specific aim 3.....	60
Objectives.....	60
Hypothesis.....	60
Methodology.....	60
Population and Sample.....	61
Research Setting/Sample Size.....	61
Protection of Human Subjects.....	62
Instrumentation.....	62
Social Provisions Scale.....	63
Nursing Student Data Survey.....	64
General Self-Efficacy Survey (GSE).....	64
Nursing Academic Self-Efficacy Scale (NASSES).....	65
Nursing Clinical Self-Efficacy Scale (NCSES).....	66
Consent Process.....	66
Data Collection Procedure.....	67
Definition of Variables for Current Study.....	68
Data Analysis.....	68
Descriptive Analysis.....	69

Bivariate Analysis.....	68
CHAPTER IV: FINDINGS.....	73
Sample Selection and Response Rate.....	73
Characteristics of the Study Sample.....	73
Psychometrics of the Self-Efficacy and Social Provision Measures.....	73
Results Related to the Research Questions.....	77
Question 1.....	77
Question 2.....	77
Question 3.....	77
Question 4.....	80
CHAPTER V: DISCUSSION.....	83
Discussion Related to Research Findings.....	84
Question 1.....	84
Question 2.....	85
Question 3.....	85
Personal factors.....	86
Community factors.....	87
Study Limitations.....	91
Implications and Recommendations for Practice and Research.....	92
Conclusions.....	93
REFERENCES.....	95
APPENDIX A: ARMSTRONG IRB.....	114
APPENDIX B: INSTITUTIONAL REVIEW BOARD APPROVAL.....	115

APPENDIX C: STUDY DESCRIPTION/PARTICIPANT INVITE.....	116
APPENDIX D: SOCIAL PROVISIONS SCALE.....	117
APPENDIX E: PERMISSION – SOCIAL PROVISIONS SCALE.....	119
APPENDIX F: NURSING STUDENT DATA SHEET.....	120
APPENDIX G: GENERAL SELF-EFFICACY SCALE.....	123
APPENDIX H: NURSING ACADEMIC SELF-EFFICACY SCALE.....	124
APPENDIX I: NURSING CLINICAL SELF-EFFICACY SCALE.....	127
APPENDIX J: QUALTRICS – STUDENT SELF-EFFICACY SURVEY.....	130

LIST OF TABLES

1. Definitions for Variables.....	69
2. Characteristics of Caucasian and African American Students on Major Study Variables.....	74
3. Psychometric Properties of the Study Scale.....	76
4. Self-Efficacy and Social Provision Comparisons Between Caucasian and African American Students.....	78
5. Correlations of Self-Efficacy With Social Provision Subscales and Total Social Provisions Scale.....	81

LIST OF FIGURES

1. Theoretical model.....	20
2. Research model – Student self-efficacy.....	21

CHAPTER I: INTRODUCTION

The goal of health services is to protect and improve the health of individuals and populations. To that end, healthcare disparities and inequities have been at the forefront of the health agenda in the United States for over two decades; yet, little progress towards resolution has occurred (Agency for Healthcare Research and Quality [AHRQ], 2010). According to the AHRQ (2009), pervasive care differences continue to exist for racial and ethnic minorities. These findings support that minority healthcare is of poorer quality than that experienced by the majority population and is often associated with provider biases, poor patient communication, poor health literacy, and lack of insurance (AHRQ, 2010).

Compounding this issue is the fact that our nation is growing more diverse. Since 2000, minorities have constituted approximately one-third of the U.S. population and will represent an even greater proportion by 2030 (Jimenez-Cook & Kleiner, 2005). The United States Census Bureau (2007) reports that 34% of the U.S. population or 102.5 million persons are minorities. According to Myers and Dreachslin (2007), by 2050, diverse representation will increase 148% for Asians, 139% for Hispanics and 58% for African-Americans, with Non-Hispanic Whites projected to decrease by 4%.

Minority patients rate the care provided by minority caregivers higher than care provided by Caucasians (Campbell, Ramsay, & Green, 2001; Mead & Roland, 2009; Washington et al., 2007). This finding builds a strong case for increasing efforts to diversify the nursing workforce so patient care needs can be better met. This is especially needed in hospitals where only six percent of nurses, nine percent of physicians, and five percent of dentists are African-American, Hispanic, or American Indian background (Sullivan Commission, 2004).

The nursing profession has recognized this need for diversity and calls for action have been issued by many organizations (American Nurses Association, 1998; American Organization of Nurse Executives, 2007; Institute of Medicine [IOM], 2001, 2003; Pew Health Professions Commission, 1998; Sullivan Commission, 2004). Efforts have been made to increase the enrollment of minority nurses as well as retain them once they enter nursing school (Andrews-Beard, Swanson, & Stewart, 1990; Hurst & Koplin-Baucum, 2003; Myers & Dreachslin, 2007).

Despite these strategies, only modest strides in increasing the number of minority nurses have been made. Only 6% of nurses in today's workforce are from African- American, Hispanic, or American Indian background, yet these ethnic groups collectively represent one-quarter of the United States population (Sullivan Commission, 2004). Recent data from the U.S Department of Health and Human Services (2008) preliminary findings of the National Sample Survey of Registered Nurses show some promise. Yet, according to this sample of over 33,000 nurses, only 5.4% were African-Americans (non-Hispanic), in contrast to 12.2% of the U.S. population (U.S. Department of Health and Human Services, 2008). While some efforts focused on increasing minority retention in nursing school have been successful, the lack of acceleration in the number of minority students completing nursing programs suggest that further evaluation of factors affecting their mastery be conducted.

One predictor of student mastery is self-efficacy (Gore, 2006; Harvey & McMurray, 1994; Jackson, 2002; Lewis, 2011; Pajares, 1996; Peters, 2005). Academic, clinical, and general self-efficacy has been identified in the literature as important components of student success (Andrew & Vialle, 1998; Jerusalem & Schwarzwer, 1992; Lewis, 2011). However, there are gaps in knowledge regarding the relationship between these various forms of self efficacy and other factors.

Statement of the Problem

The explosion of the minority population increases nursing's responsibility to match the demographics of those seeking care with an augmented minority nursing workforce. Minority nurses can bring insight into issues related to culture and language, health practices and expectations, and directly impact the quality of care (Dowell, 1996). By increasing racial and cultural identification between patient and nurse, there is possibility of resolving some of the current disparity that exists in healthcare.

While significant research has been conducted on supporting minority nursing students, less is known about factors that influence the students' success. Efforts to diversify the future nursing workforce must begin early on in the minority student's lifespan and continue to be explored throughout their transitions, since personal needs and adverse environments may compromise the potential of many of these individuals. Minority role models may make an important difference in increasing the self-efficacy of minority students considering nursing as a career. Both qualitative and quantitative studies of pre-nursing minority students are needed to investigate the correlation and relationship between self-efficacy, community, personal factors that may influence minority students, who are interested in committing to nursing as a career.

Background of the Problem

Career choices are influenced by a number of personal and community factors including age, race, socioeconomic status, social support, role models and vicarious experiences (Skorikov 2007; Tang, Pan, & Newmeyer, 2008). Self-efficacy, the belief that one can accomplish a goal, is influenced by past performance, vicarious experiences, social persuasion, and physiological status (Bandura, 1997). Thus, career paths are impacted by the direct actions of the students, observed actions of others, judgments voiced by others, and the student's increased knowledge

based on career information received. Because minority students often are members of lower socioeconomic groups and have more compromised educational exposure, they may have unique challenges in developing confidence.

Self-efficacy is consistently used in the nursing literature to examine career identity development (Pajares, 1996; Schunk, 1995). Self-efficacy measures how strong the belief is that one is capable of performing in a certain manner or attaining certain goals (Bandura, 1997). Hence, a pre-nursing student's belief in his or her ability to succeed in becoming a nurse will influence choices of school related tasks, efforts expended on required activities, and perseverance in the face of adversity. A strong sense of self-efficacy in minority students may enhance their personal success in many ways including: (a) changing their approach to difficult tasks, (b) encouraging goal setting, (c) sustaining effort during adversity, (d) quickly recovering from failures or setbacks, (e) attributing failure to problems that can be corrected, and (f) approaching threatening situations with assurance (Bandura, 2010).

Strong self-efficacy about academic competence and career possibility are essential for navigating the journey to becoming a nurse. Many minority students find the field of healthcare, including nursing, overwhelming and complicated. In theory, the transition from pre-nursing, enrollment, graduation, employment and practice should be a standard pathway for all students. Instead, the minority student's forward motion can be substantially impacted at every stage of this journey (Sullivan Commission, 2004).

The transition from high school to college is a major developmental progression, filled with decision-making about the future. This is a time when students choose a career, determine if college is a future alternative, and decide how to achieve major ambitions for adulthood. A

number of factors, both personal and community, affect the student's ambitions in varying degrees.

Transition Conditions of Pre-Nursing Minority Students

Personal Factors Influencing the Transition of Pre-Nursing Minority Students

Personal factors such as race, age, socioeconomic status, social support, and personal mastery may impact adolescent perspectives (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Bong, 1999; Kirkland, 1998; Nota, Ferrari, Solberg, & Soresi, 2007). These may be positive or negative influences on the pre-nursing minority student leading to a variety of patterns of response including the development of self-efficacy and mastery of educational and career transitions (Bandura, 1997). Every student has the capacity to succeed in school and in life. Yet far too many students, especially those from poor and minority families, are placed at risk by their environment, especially young African-Americans.

Race/Age

Race is an issue for African-Americans (Watts, 2003). According to Watts (2003), the Black experience in America is distinctively different from that of other immigrants or refugees specifically in terms of the extended period of the institution of slavery and the issue of skin color as a metaphor for dehumanization of Black persons. Coupled with age, the minority student must navigate the journey, sometimes with minimal support and little knowledge of the course ahead.

According to Mau and Bikos (2000), although considerable progress has been made in examining factors affecting career choice in minority students, less has been cited regarding racial-ethnic factors. As minority students are contemplating their career paths, they are most often entering this transition from an entirely different cultural context. Their environments

often include a labor market in which people of their own racial/ethnic group are concentrated in lower level positions and unskilled occupations, influencing their perception of the opportunities available to them (U.S Bureau of Labor Statistics, 2002). Thus, the external challenges that racial/ethnic minority clients face differ from those faced by racial/ethnic majority clients (Fouad & Byars-Winston, 2005).

Socioeconomic Status

Children of poor families are up to six times more likely to drop out of school than wealthy children (UNICEF, 2005). According to UNICEF (2005), compared to all other nations, the childhood poverty rate in the USA is much higher, at 21.9%. Additionally, socioeconomic realities impact a parent's belief that they can support their child's career aspirations and thus influence the child's self-efficacy (Abbott & Joireman, 2001).

The United States Bureau of the Census measures poverty by comparing household income to the poverty threshold for a household of a given size. The poverty threshold is adjusted each year to take account of changes in the cost-of-living. In 2009, 43.6 million people, 14.3% of the population, were poor according to the government's definition of poverty (U. S. Census Bureau, 2010). African-Americans and women were found to be more likely than Whites to be poor. Although African-Americans represent 13.3% of the general population, they represent 24.2% of the poor population.

Nearly 5 million more women than men were found to be in poverty; families headed by a single adult were found to be four times more likely to be living in poverty. Over 12% of women over age 18 were found to be heads of their household, meaning that they have children or other family members, but no spouse living with them in a house that they own or rent;

African-American were found to represent 29.1% of the single households, in poor neighborhoods (U.S. Department of Health and Human Services, 2006).

The lack of funding in the poor neighborhoods decreases the likelihood of the schools' ability to provide quality teachers who can teach quality education. Urban students are less likely to graduate than suburban counterparts and graduation rates are lower for African-Americans (National Center for Law and Economic Justice, 2011). Many of the schools in urban districts are plagued by disproportionate shares of low-income and at risk students, thus limiting the student's opportunity to associate with more affluent peers. These schools often employ teachers with low qualifications and weak academic credentials to instruct the disadvantaged students (Murnane & Steele, 2007).

The potential lack of quality teachers to facilitate their preparation and knowledge inhibits the student's academic competency. Many high school students in underserved neighborhoods depend on the guidance counselors to assist students with movement from high school to college. Often for minority students the guidance counselors are the only source of information about resources to assist with college, since parents may not have navigated the education journey.

Social Support

Social support is defined as advice, influence or monetary contributions received from family members, friends and or community members. The role of the family, friends, and the community go hand in hand in supporting the development and career choices of minority high school student. Support from family members may come from parents, grandparents, siblings, and extended members.

The most crucial family support is that of parents. The role of the family as a context for understanding variations in children's development is paramount (Harold, Aitken, & Shelton, 2007). A wide variety of family dynamics including inter-parental conflict, violence, separation, divorce, negative parent-child relationships and mental illness may be experienced by minority students. Community support may include highly qualified teachers and guidance counselors at school, involvement in activities at church, and/or participation in youth organizations.

Astin (1984) stated that parents act as 'value socializers,' shaping the children's perceptions of the appropriateness of occupational-related decisions. Children raised in households exposed to acute or chronic economic strain, heightened level of parental psychopathology, inter-parental conflict and violence, negative parent-child relations, parental separation, divorce and remarriage experience a variety of negative outcomes including increased anxiety, depression, aggression, hostility and anti-social behavior (Freedman & Newland, 2002; Harold et al., 2007).

While parents play an important role in influencing minority student career choice, an additional element to increasing self-efficacy is support from the local community. Community support may include churches, youth organizations, and schools. These communities may reap the benefits of the students as health care providers of the same ethnicity, in the future. A somewhat non-traditional part of a community is the guidance counselor located within the rural school system. Counselors are equipped with assisting the student and the parents in understanding and accessing the available resources.

According to the Institute for College Access and Success (2008), knowledge of financial aid varies by race and ethnicity. Based on a survey conducted by Cunningham, Erisman, and Looney (2007), two-thirds of African-American parents say they need more information about

how to pay for college, compared to only 44% of White parents. Strategies to overcome these differences are key in increasing the number of minority students entering college, choosing nursing and mastering the journey.

Personal Mastery

Personal mastery (achievement of a high grade point average) can also be an important factor. According to Bandura there are four determinants of self-efficacy beliefs: vicarious experiences, physiological states, verbal persuasion and mastery experiences. This research will focus mastery experiences, defined as the minority students' earned grade point average.

Mastery experience refers to the person's previous successes at performing a task independently (Bandura, 1991). Wherever students mentally place their emphasis, interest in nursing can be solidified by providing opportunities to try on the role (Hodgman, 1999). Career choice, evidenced by acting on the information indicates a willingness to do just that.

A variety of studies have explored personal mastery (Nibert & Young, 2008; Phillips, Spurling, & Armstrong, 2002; Wessling, 2011). For this proposed research, personal mastery will be defined by grade point average (GPA) and is considered a personal factor influencing self-efficacy. Individuals experiencing mastery are thought to have perceived competence, are able to respond to the demands of a new environment, and possess a sense of adequacy or sufficiency to handle demands of a new situation (Rossen & Knafl, 2003). Though the minority student has minimal chance of experiencing mastery as a nurse, they may have experienced some dimensions of this determinant through high scholastic achievement, parental and family support, or procurement of stable financial support.

Academic confidence developed through mastery of educational content contributes to a student's beliefs about career successes (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001).

The optimal outcome of a successful minority student transition into nursing in this study is enrollment into college and the achievement of academic goals that correlate with admission into nursing, including maintaining a high grade point average.

Many early studies tried to predict the outcomes of minority students by measuring grades and test scores, while more recent studies have examined experiences that positively influence transitions (Buerhaus, Donelan, Norman, & Dittus, 2005; O'Brien, Mooney & Glacken, 2008; Zayas & McGuigan, 2006). Minority students may respond to stressors less effectively than other students as a result of poor academic preparation in underserved schools and communities. According to Bandura (1997), lock-step sequences of instruction frustrate some students who fail to grasp skills and increasingly fall behind their peers. Lack of ability to grasp the basic skills, thus sets minority students up to underperform and have a consistently low grade point average. Most schools of nursing rely on grade point averages of students as lead admission criteria.

In 2002, Phillips, Spurling, and Armstrong conducted a study commissioned by the Center for Student Success which examined predictors of successful completion of a college nursing degree. Data in the study were drawn from the electronic records of course completion and application records. In addition, data on a host of independent variables were collected for each student including ethnicity, gender and age. The study followed students over a 3-year period. The study created considerable publicity because of its longitudinal findings supporting academic measures of success like core biology GPA, overall college GPA, and core science repetitions as accurate predictors of successful completion of a nursing program (Phillips et al., 2002).

In addition to GPA, researchers have sought other means to predict the success rates of students aspiring to become nurses. In 2008, Nibert and Young examined the use of the Health Education Systems, Inc. Exit Exam (E²) in predicting NCLEX success in over 6,000 students. Low scoring E2 students were significantly more likely (P=.001) to fail the licensure examination than high-scoring E2 students.

In a study led by Klomegah (2007), the goal-efficacy model was used to examine (a) the extent to which index scores of student self-efficacy, self-set goals, assigned goals, and ability predicted academic performance of university students; and (b) the best predictor of academic performance. Three other variables, including GPA, hours worked weekly and environmental restructuring, were also included. The study sample of 103 students from a university in North Carolina completed self-administered questionnaires. The instrument included a revised version of Motivated Strategies for Learning Questionnaire (MSLQ) and the Self-Efficacy for Self-Regulated Learning (SESRL) questionnaire. Of the variables studied, self-efficacy had the strongest predictive power. High school GPA was found to be a better predictor of student academic performance than goal-efficacy.

In a retrospective correlational study, Timer and Clauson examined the predictive utility of an admissions process for nursing students' "in-program" success. The sample consisted of all 249 students admitted to a Canadian accelerated baccalaureate nursing program over a 4 year period (Timer & Clauson, 2011). The students' arithmetic mean grade for six nursing courses (both theoretical and clinical) and their grade point average (GPA) at graduation were the outcome measures of success. The predictor variables included the applicants' demographic characteristics (e.g., age, gender, ethnic minority status, and previous educational attainment), their supplemental application materials and interview scores (assessing non-academic criteria),

and their admission GPA. Linear regression was conducted on the outcome measures to determine whether the tools selected added information over that obtained through the use of admission GPA in predicting success. Although admission GPAs were consistently predictive of students' success, neither the supplemental application nor the interview scores had predictive utility. The variables consistently predictive of student success were age, ethnic minority status, and admission GPA, accounting for 26% of the variance in the selected nursing grades and 36% of the variance in GPA at graduation. The results provided little evidence to justify using selective admissions tools, but rather, support the view that GPA should be used as a primary predictor.

Community Factors Influencing the Transition of Pre-Nursing Minority Students

Community factors, such as exposure to positive role models and vicarious experiences in healthcare also contribute to the development of self-efficacy in students. Role modeling uses images and demonstration of behaviors and skills to influence another. In 1994, Wisemen conducted an extensive review of the literature and developed a list of items that can be learned through role modeling techniques. These include developing listening skills, asking questions, reporting clinical data, using therapeutic communication, and interacting with physicians and patients. Other behaviors that can be learned were professional appearance, caring behaviors, confidentiality, organizational skills, respect for others, and problem solving skills (Wisemen, 1994).

For minority students, exposure to role models of the same race, socio-economic status and gender in health care may be limited since minorities constitute so little of the current healthcare workforce. The lack of role models to guide and support self-efficacy development in

minority pre-nursing students impacts not only the choice of nursing as a career but also the oversight and mentoring of this vulnerable cohort in higher education.

The earlier the students are exposed to role models who are willing to provide mentoring, the higher the probability of success. A number of literature sources support this as a positive strategy to encourage the potential student to enroll in a college of nursing (Thomka, 2007; Wroten & Waite, 2009; Zirkel, 2002). Perceptions about nursing by minority students, parents, and community are an important factor in choosing nursing as a career. Role modeling is a traditionally accepted method of teaching professional attitudes and behaviors and is a process through which a person takes on the values and behaviors of another through identification (Bidwell & Brasler, 1989). One form of identification is called vicarious experiences.

Vicarious experience is the observation or participation in behaviors, experiences, or situations associated with the nursing profession. In this study, vicarious experiences may include caring for an ill family member, role as a nursing assistant, participation in a health career course, or volunteering in a health care setting where nurse are employed. Vicarious experiences give students an opportunity to learn without having to be subjected to the sometimes extended trial and error process. These experiences also give students a realistic preview of what nursing is and does and can solidify interest by providing an opportunity for the minority student to mentally try on the role (Hodgman 1999). Pre-nursing minority students exposed to vicarious experiences may develop higher self-efficacy related to the role of nurse.

Patterns of Response in the Transition of Minority Pre-Nursing Students

According to Meleis (2010), there are patterns of responses to transitions that are demonstrated through both process and outcome indicators. Process indicators such as developing self-confidence and increasing self-efficacy lead to mastery outcomes that include

achieving the goals of the transition experience. Factors representing positive and successful transition include a sense of well-being, positive relationships, and mastery of goals.

Process Indicator: Developing Confidence and Increasing Self-Efficacy

Self-efficacy development is a major process indicator during transitions. Higher self-efficacy indicates a positive transition is occurring. Bandura (1997) describes self-efficacy as an important set of proximal determinants of human motivation, affect, and action. It is a judgment of a person's capabilities to organize and execute courses of action to obtain designated types of performances (Bandura, 1986). Each person's beliefs about their capabilities to perform during events that affect their lives may vary. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. The stronger the perceived self-efficacy, the higher the goal challenges people set for themselves and the firmer the commitment to them (Bandura, 1991).

Minority students are dependent on their personal and community factors to influence their level of confidence and self-efficacy. Each of the factors may interact differently with each student. Understanding the interplay of factors such as race, age, socioeconomic status, social support, and personal mastery is key in supporting the minority student.

Summary

Increasing the minority nursing pipeline is critical for nursing and holds potential for achieving optimal health in the growing diverse population. The nursing literature includes research on specific interventions to increase the number of minority nurse, but very few are focused at the pre-nursing college student. Examining the correlation between personal factors, community factors and the self-efficacy of these students may help inform strategies to increase the number of minority nurses.

Purpose of the Study

Research that explores positive influences on minority students' interest in and pursuit of nursing as a career are needed to increase diversity in the profession. This study evaluates the relationship between personal factors (race, age, socioeconomic status, social support, and personal mastery), community factors (previous exposure to role models and vicarious experiences in nursing) and the level of self-efficacy related to nursing as a career in pre-nursing minority students in higher education.

Theoretical Perspective

This research uses a theoretical framework derived from Social Cognitive and Transitions Theory to examine associations between personal factors, community factors and self-efficacy in nursing as a career choice by minority students. Meleis' Transition Theory serves as the nursing theoretical framework and organizes the broader dimensions of interest in examining pre-nursing minority students in higher education. Meleis' (2010) analysis of transitions includes defining types and patterns of transitions, properties of transition experiences, transition conditions, process and outcome indicators, as well as nursing therapeutics useful in supporting transition. Meleis and Trangenstein (1994) suggest that facilitating transitions is a focus for the discipline of nursing. While nursing interventions are most often used to influence the transition of patients; this model can also be applied to the developmental transition of minority students as they move from high school into college as pre-nursing students.

Bandura's Social Cognitive Theory works synergistically with Meleis' model by postulating what facilitates successful accomplishment of goals and ambitions. According to Bandura (1997), role modeling involves four complex and interrelated sub-processes that must be present for learning to occur: (1) attention to the modeled behaviors, (2) retention of the

observed inputs, (3) production of a motor response, and (4) incentive and motivational processes that selectively control modeled behaviors. Successful transition into nursing as a career choice serves as the goal in this research model. A healthy transition is characterized by both process and outcome indicators (Meleis, 2010). Successful transition is expressed as feeling connected, interacting, and being situated or oriented to the events occurring. Other positive indicators include the development of confidence and effective coping mechanisms. Meleis notes that one process indicator of successful transition is the development of confidence; Bandura (1997) defines this development of self-confidence as self-efficacy.

Transitions Theory

In 1980, Bridges described transitions as letting go of an old situation, experiencing the confusion in a new situation, and becoming comfortable with the emerging situation. Meleis and Trangenstein (1994) built upon this work and deduced that “nursing is concerned with the process and experience of human beings undergoing transitions” (p. 255). The nature and conditions surrounding the transition influence individual patterns of response; hence, two persons may have very different outcomes during a transition. In general, the structure of a transition consists of three phases, entry, passage, and exit (Meleis, 2010).

Chick and Meleis (1986) have identified three types of transitions relevant to nursing: health-illness, situational, and developmental. Health and illness transitions of individuals and families have been explored for a number of different illnesses such as myocardial infarction, post-operative recovery, HIV infection, spinal cord injury, advanced cancer, chronic illness, hospitalization, outpatient care and home health (Meleis, 2010). Situational transitions have mostly been studied in relation to various educational and professional roles. In the nursing profession, the transition to staff nurse at the completion of an educational program, changes in

clinical practice roles or settings, and changes from clinician to leadership are most prevalent in the literature (Meleis, 2010).

The final type of transition, developmental, has received the least amount of focus by nursing. According to Meleis (2010), the developmental transition of becoming a parent has received the most attention. Though receiving less attention, other stages in the life cycle that have been explored include the transition (1) from childhood to adolescence; and (2) from adulthood to old age, accompanied by gerontologic problems relating to identity, retirement, and chronic illness (Im, 1997; Sawyer, 1999; Messias, 1997; Messias, Gilliss, Sparacino, Tong, & Foote, 1995; Schumacher, 1994).

The transition from high school adolescent to pre-nursing college student is a form of developmental transition and will be the focus of this study. The nature of the transition for minority pre-nursing students is developmental as the student moves from high school to college. During this natural maturation process minority students make career decisions, continuing education choices, and optimally move from the family home to independence. The transition journey for many pre-nursing minority students is filled with a multitude of complications and adversities.

Transition conditions include both facilitators and inhibitors. In other words, there may be forces that help to make the transition goals possible as well as those that may make it more difficult or even impossible. Understanding the experiences embedded in transitions requires uncovering the individual experiences within the context of significant others, family members, friends, or coworkers who may act as role models (Meleis, 2010). It also requires exploring personal life realities and how these impact the transition.

Patterns of response to the life realities, including the degree to which a minority student feels confident about nursing as a career choice are strongly influenced by personal factors such as race, age, socioeconomic status, personal mastery, and social support in the family and community. In 1984, Dunkelberger and Aadland replicated a previous study related to recruitment of adolescents into the nursing profession. Only 34% of those who planned to become nurses did. Those who were successful were more often minorities who reportedly faced inhibitors such as low socio-economic backgrounds and lower aptitudes. These findings of this early study emphasize the need for further research on the association of these factors in minority students.

Successful transitions are promoted by positive personal conditions, as well as social support from family, friends and the communities. One form of social support is *persuasion*. Persuasion includes positive verbal support that influences a person's belief in their abilities and through that increase the effort they take to accomplish tasks. Persuasion is a key element of all human interaction, from politics to marketing to every day dealings with friends, family, and colleagues (Jones & Motluk, 2011). From a healthcare perspective, persuasion of minority high school students to choose nursing as a career can be accomplished through formal programs or simple 'pep talks'.

Self-Efficacy Theory

In addition to personal factors affecting pre-nursing minority students' self-efficacy, community factors such as the presence or absence of role models and the degree of vicarious experiences are also important. According to Bandura (1997), role modeling involves four complex and interrelated sub-processes that must be present for learning to occur: (1) attention to the modeled behaviors, (2) retention of the observed inputs, (3) production of a motor

response, and (4) incentive and motivational processes that selectively control modeled behaviors. Role modeling is described as a process through which a person takes on the values and behaviors of another through identification and is a common form of social modeling (Bidwell & Brasler, 1989). In this research role models are those individuals influencing the students to take on the values and behaviors through identification.

Conceptual and Research Model

While self-efficacy and transition theories provide a framework for studying the transition of minority pre-nursing student from high school to college, a more specific conceptual model and a specific research model are needed to guide the research. Figure 1 displays the proposed conceptual model and Figure 2 displays the proposed research model.

Personal factors acting as inhibitors or facilitators include age, race, socioeconomic status, social support and personal mastery. Community factors include role models and vicarious experiences in nursing that may impact the minority students' response patterns. An examination of the students' response patterns will be determined using an assessment of both process and outcome indicators. Self-efficacy as it relates to nursing as a career will measure the process indicator of successful transition while college grade point average will serve as an outcome indicator of personal mastery.

Significance of the Study

This study has the potential to promote diversity in nursing by examining methods to successfully influence and support minority student's career choice of nursing as a profession. The study will also expand understanding of interventions the nursing profession can undertake to improve the self-efficacy of minority students.

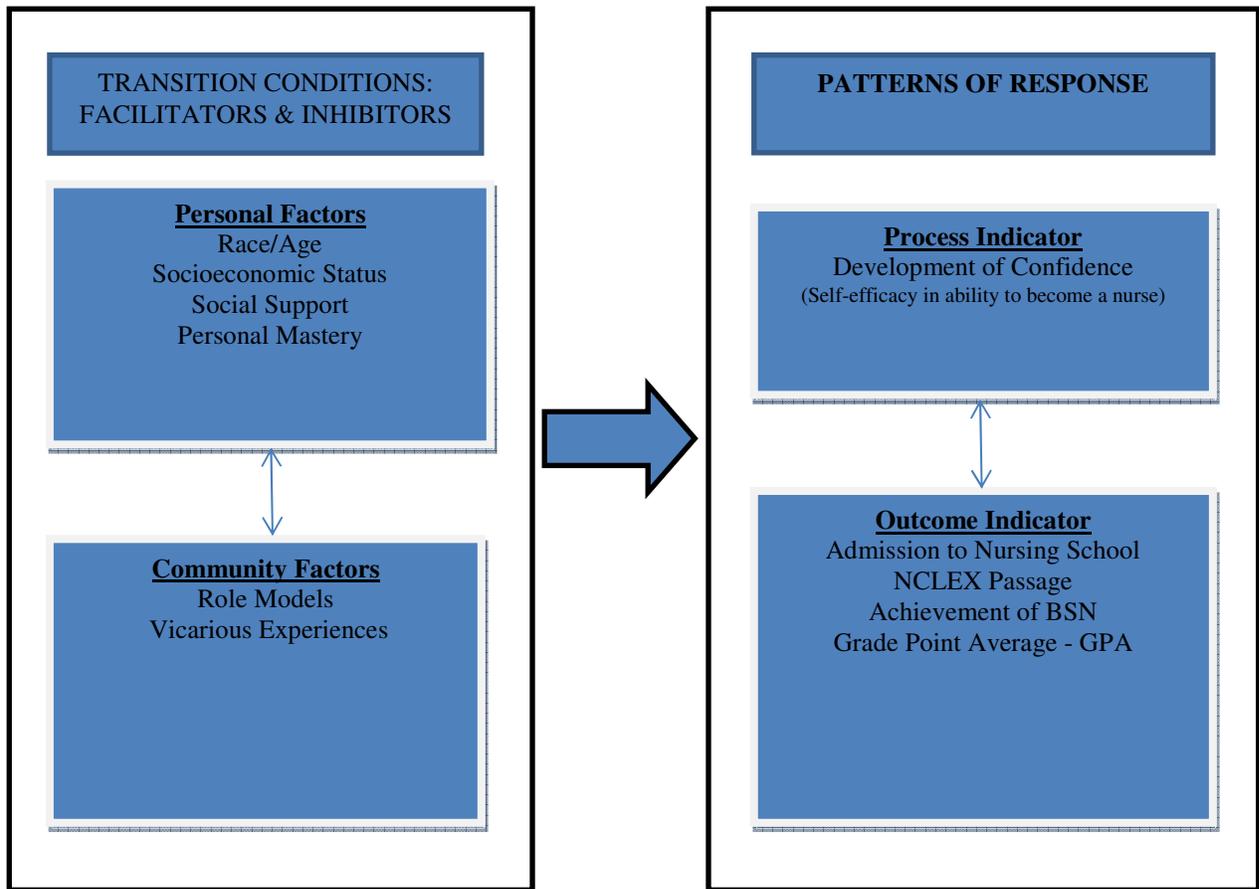


Figure 1. Theoretical model.

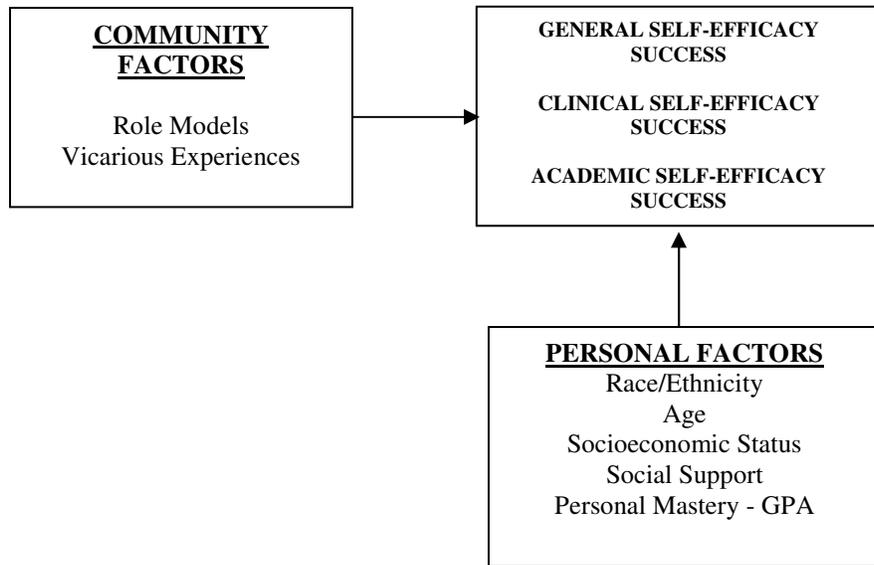


Figure 2. Research model – Student self-efficacy.

Research Questions

This study evaluates the relationship between personal factors (age, race, gender, marital status, socioeconomic status, social support, and personal mastery), community factors (previous exposure to nursing role models and vicarious experiences, and mastery experiences in education) and the level of self-efficacy in pre-nursing minority students in higher education.

1. What are the relationships between nursing academic self-efficacy, nursing clinical self-efficacy, and general self-efficacy in White and Black pre-nursing students?
2. Is there a difference in nursing academic self-efficacy, nursing clinical self-efficacy, and general self-efficacy between Black and White pre-nursing students?
3. Is there a difference in the personal and community factors between White and Black pre-nursing students?
4. What are the relationships between nursing academic self-efficacy, nursing clinical self-efficacy, and general self-efficacy and the personal and community factors in the Black and White pre-nursing students?

Theoretical and Operational Definition of Terms

Grade Point Average - will be a student's academic achievement at a college or university; calculated by dividing the total number of grade points received by the total number attempted. In this study the GPA calculated by the university where the student attends will be used.

Minority - A sociological group that does not make up the dominant population. In this study, a minority is an African-American.

Personal Mastery - Individual or personal accomplishment. In this study personal mastery is considered a personal factor.

Pre-Nursing Major - A first year (freshman) or second year (sophomore) student actively enrolled in a 4-year college with intent to declare nursing as their major, after completion of pre-requisite courses.

Role Models - Someone a student knows or read about that they admire and would like to be like.

Self-Efficacy - Belief in one's ability to perform a task or accomplish goals. In this study, self-efficacy will be measured using the NASES, NCSES, and GSE surveys.

Social Support - In this study, social support is defined as advice, influence or monetary contributions received from family members, friends and or community members.

Socioeconomic Status - A combination of variables, including occupation, education, income, wealth, and place of residence. In this study socio-economic status is indicated by income of mother, father and/or primary provider, whether student has a full or part-time job, hours worked, and/or presence of financial aid.

Transition - The act of passing from one state, phase, or place to the next. In this study, transition is considered the journey from high school to college as a freshman or sophomore student.

Vicarious Experience - The observation or participation in behaviors, experiences, or situations associated with the nursing profession. In this study vicarious experiences include caring for an ill family member, role as a nursing assistant, participation in a health career course, or volunteering in a health care setting where nurses are employed.

White American - Having origins in any of the original peoples of Europe, the Middle East, or North Africa. In this study, a White American will include people of Europe, the Middle East, or North Africa.

CHAPTER II: REVIEW OF LITERATURE

The chapter begins with research on the current state of health among minorities. Shifts in health care needs and the disparities in health care for African-Americans are described, along with past and current efforts to reduce these disparities, including increasing the number of minority nurses.

The second section of the literature review describes past and current efforts to increase the number of minority nurses. Efforts focusing on attracting minorities early in their transition to adulthood are emphasized. Literature on personal and community factors that contribute to career choice and educational success is reviewed. Particular emphasis is given to research on minority youth experiences with nursing career achievement.

Factors examined include race, age, socioeconomic status, social support and personal mastery. Socioeconomic status includes income of mother, father and/or primary provider, student employment full or part-time, hours worked, and/or presence of financial aid. Social support focuses on input from parents, family, friends and the community through verbal encouragement and sharing. Community factors such as exposure to role models and vicarious experiences are examined in relation to the development of confidence and personal mastery. The examination of role models focuses on the students taking on the values and behaviors of another through identification. Examination of vicarious experiences focuses on participation in behaviors, experiences, or situations associated with the nursing profession such as caring for an ill family member, role as a nursing assistant, participation in a health career course, or volunteering in a health care setting where nurses are employed.

Finally, patterns of response in the transition of minority pre-nursing students are examined including the development of self-confidence and self-efficacy (process indicators) and the achievement of personal mastery such as a good GPA (outcome indicator).

Minorities and Health Disparities

While some disagreements exist in regard to the definition and use of the term “health disparity”, as compared to “inequality” or “inequity” (Carter-Pokras & Baquet, 2002), health disparities are defined by the Centers for Disease Control and Prevention (CDC) (2011) as preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations. In January 2000, an overarching goal to eliminate health disparities was set by the Department of Health and Human Services (DHHS). The goals were then revised as the Healthy People 2010 initiative, with two objectives: increasing quality and years of healthy life and eliminating health disparities. Six focus areas were identified, including infant mortality, deficits in breast and cervical cancer screening and management, cardiovascular diseases, diabetes, HIV infections/AIDS, and child/adult immunizations.

African-Americans live throughout the country, but the greatest concentrations are in the Southeast and mid-Atlantic regions, especially Louisiana, Mississippi, Alabama, Georgia, North Carolina, South Carolina, and Maryland. The health disparities between African-Americans and other racial groups are striking, and are apparent in life expectancy, infant mortality, and other measures of health status. In 2004, African-Americans had the highest age-adjusted all-cause death rate of all races/ethnicities. In addition, African-Americans had the highest age-adjusted death rates for heart disease, cancer, diabetes, and HIV/AIDS. The literature has documented disparities for minority populations in regards to environmental factors, utilization patterns,

provider to patient relationships, and access to quality of health care resources, as compared to other races (Gaskins, Arbelaez, Brown, Petras, Cooper, & Wagner, 2007; LaVeist, Nickerson, & Bowie, 2000; Levine, Neidecker, Kiefe, Karve, Williams, & Allison, 2010; Roberts, Johnson, Brems, & Warner, 2007).

Olden and White (2005), while acknowledging that race makes it more difficult to escape poverty, also examined the health disparities of minorities from the perspective of genetic predisposition, disproportionate exposure to environmental toxicants and behavioral risk factors. Their findings strongly suggest tying the environment and genetics together in health disparity research. “Genetics loads the gun, but the environment pulls the trigger”; that is, “one can inherit the genetic disposition to develop a disease, but will do so only if or when exposed to the environment trigger” (Olden & White, 2005, p. 724). The environment includes many predictors including available resources, support, and services.

Gaskins et al. (2007), using the 2001 Commonwealth Fund’s Health Care Quality Survey data examined why minorities were less likely to use private doctors’ offices for their usual source of care. The survey covered several domains, including usual source of care, healthcare utilization, unmet medical needs, satisfaction, health status, socioeconomic status, demographic information, views of the value of medical care, and perceptions about the presence of racial/ethnic bias in medical treatment. The authors sought to determine whether disparities were due to racial and ethnic differences in attitudes toward health and healthcare, and perceptions of racial and ethnic discrimination in healthcare. With a greater than 50% response rate, the survey showed that race and ethnic disparities are the usual source of care persisted even after controlling for individuals’ attitudes toward health and healthcare and their perceptions about racial and ethnic discrimination in healthcare. Whites were most likely to use a private

doctor's office as a usual source of care (81%) and African-Americans were least likely (13%). These results suggest that in addition to focusing on provider-patient relationships, future research should focus on system-level factors to increase minority use of care in private physicians' offices.

In 2002, Collins, Hughs, Doty, Ives, Edwards, and Tenney examined the quality of care for minority Americans. Princeton Survey Research Associates surveyed via telephone, 6,722 White and ethnic minorities (African-Americans, Hispanics, and Asian Americans) on several aspects of health care, with a 72% response rate. The results showed inequality in health care in four major categories: patient-physician communication, cultural competence in health care services, quality of clinical care, and access to care. Further, in comparison to their White counterparts, minority groups were less likely to consider themselves to be in excellent or very good health.

Health care disparities are well documented for people living in rural areas and for minorities. Roberts et al. (2007) sought to determine whether providers reported greater difficulty in providing care for rural than urban residents and for ethnic minorities than patients/clients in general in four practice areas: attaining treatment adherence, assuring confidentiality, establishing a therapeutic alliance, and engaging in informed consent processes. Survey responses of over 1,500 multidisciplinary medical and behavioral providers were analyzed. Providers reported some difficulty in performing ethical practices for all types of patients, but they did not report more difficulty when caring for minority than other ethnic groups. However, they did report more frequent difficulties with minority patients than with others in regards to treatment adherence, a therapeutic alliance, informed consent, and confidentiality.

The results of the study suggest that deviations from care recommendation by minorities and their difficulties in adhering to treatment may be due to lack of trust of their non-minority care providers. Further, minority healthcare providers are more likely to serve minority populations, thus addressing healthcare disparities in a culturally competent manner (Johnson, Brems, & Warner, 2007; Sullivan, 2004). Thus, nursing and other health care programs need to increase minority care providers is supported.

Minority Nursing Shortage

According to Hodgman (1999), minority nurses are not underrepresented for lack of interest among public high school students, as evidenced by students' ability to express a positive understanding of nursing at a young age. Minority high school students are not hearing a consistent message from teachers, parents, guidance counselors, and peers that nursing may be a good career choice for them (Villarruel, Canales, & Torres, 2001). Hodgman urged that minority students need to be identified and targeted early and aggressively, with continuous personal attention and counseling to keep the students on track. There is a need to attract minorities in high school when they are making career plans and determine what factors contribute to both the career choice of nursing as a career and educational success in nursing undergraduate programs. Nationally, baccalaureate nursing programs struggle with both recruitment and retention of minority students. Increasing diversity in these programs does not have to be expensive, but it does have to be intentional (Barton & Swider, 2009).

Barton and Swider (2009) conducted a project to increase the number of racial and ethnic minority students who were successfully recruited and admitted to a nursing program in Michigan. The project involved identification of perceived barriers to minority participation in nursing at the college, a review of the literature to identify evidence-based interventions, and

implementation of selected interventions to overcome the identified barriers. Interventions recommended to increase recruitment included: (1) sending letters in the language spoken at home directly to parents to tell them about the need for minority nurses in their area, the nursing program, and resources to obtain more information about nursing, (2) organizing career fairs in minority-rich feeder schools in which the varied roles of nurses and the educational requirements for nursing were highlighted, (3) working with high-school guidance counselors and parents to identify minority students who might be interested in nursing, and to encourage those students to consider a four-year baccalaureate degree, (4) working with the Boys and Girls Club and/or elementary schools which have a high percentage of minority students on a health-related community service project so that children could interact with nurses and nursing students while they are jointly serving another group, (5) arranging for nursing professors to teach modules in high-school science classes where they incorporated a question-and-answer session about nursing, (6) hosting nursing 'open houses' in locations where minority families gathered, such as community centers and churches, (7) involving nursing faculty in summer research opportunities that linked minority high-school students with undergraduate summer research teams for a paid internship to foster interest in the sciences and to build confidence and research skills, (8) ensuring that there was a nurse recruiter (not necessarily a faculty member or a member of a minority group) at recruiting events with high participation by members of minority groups, and ensuring follow-up contact and mentoring to interested prospective students by college recruiters and members of the nursing department, and finally, (9) reviewing and regularly updating recruitment and application materials to highlight diversity and assure a welcoming tone.

Strategies delineated by the AACN (1997) to expand the number of students actually admitted included working with prospective students to assure the competitiveness of their

application, focusing recruitment on qualified minority students who were well prepared for the challenging nursing curriculum, and adding an interview component to the application process since an interview facilitates admission of minority students who might not seem as qualified on paper as in person. The researchers implemented, in varying degrees, a wide range of the recommended interventions. Implementation and evaluation are still on-going but the interventions are showing early success.

Admission to nursing programs is competitive, and is generally based on college grade point average, an essay, and references. Most often, acceptance into the pipeline for the nursing program is based on these criteria, regardless of applicants' race or ethnicity. In addition, admission to the nursing major occurs after completion of the first full year of college.

But filling the pipeline accomplishes little if the pipeline then narrows so drastically that the feed of minority pre-nurses is reduced to a mere trickle. Innovative strategies are necessary to make sure that there are enough professionally trained nurses to meet future staffing needs and provide the best possible patient care. Because the Department of Veterans Affairs has a much higher level of racial and ethnic diversity than the private sector—both in terms of workforce and patient population—it has long been an employer of choice for nurses of color (Williams, 2009).

According to Williams (2009), in 2007 the U.S. Department of Veteran's Affairs Nursing Academy (VANA) launched a five-year, \$59 million project to provide a pipeline of highly educated nurses to serve the health care needs of the nation's veterans. VANA involved partnerships between selected schools of nursing and VA medical facilities throughout the country. In these unique collaborations, nursing school faculty provided education and other services at the VA facility, qualified VA nurses served as faculty members at the nursing school, and the VA hospital provided enhanced clinical experiences for students.

The VANA had four main goals: (1) expanding faculty and professional development at nursing schools and VA facilities, (2) increasing nursing student enrollment, (3) providing opportunities for educational and practice innovations, and (4) increasing recruitment and retention of VA nurses as a result of enhanced nursing education. In the first year of the VANA program, the VA facility recorded a 92.3% retention rate; 36 of 39 new graduate nurses hired at the hospital were still employed there after one year. Previously, median turnover rates for graduate nurses in general during their first year of employment had ranged from 35% to 61%, depending on location. Programs such as this, which focus on identifying potential nurses early on in their maturation journey, enable students to have support during their transition from adolescents to young adults and from young adult to young nurse. However, many factors affect the success of this transition for minority adolescents, including developmental dimensions and factor influencing career choice.

Nature of the Transition

Developmental Dimensions – Adolescent to Young Adult

According to Meleis, transitions involve a change in role relationships, expectations, or abilities and include developmental, situational, and health-illness aspects. In the normal growth and development process, students move from childhood to adolescence. Super (1990) described five stages of development: growth (childhood), exploration (adolescence), establishment (young adulthood), maintenance, and withdrawal. Adolescence is defined as the ages between 13 and 19, is viewed as the transition between childhood and adulthood, and is considered to involve the onset of puberty (with its accompanying physical and emotional changes), to a less easily defined end (Marcia, 1983). Minority students in the first two years of college fall within this transition period.

Researchers have defined the period of late adolescence as one of multiple transitions, involving education, training, employment and unemployment, as well as transitions from one living circumstance to another (Coleman & Roker, 1998). Numerous studies have examined the transition to young adulthood in atypical groups such as non-minority groups and the various influences (Alliman-Brisset, Turner, & Skovholt, 2004; Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, & MacIver, 1993; Freedman & Newland, 2002; Graber & Brooks-Gunn, 1996; Jones, Dominguez, & Durodoye, 2011; Rojewski, Wicklein, & Schell, 1995). These studies have noted the impact of social influences such as parental support, school support, and intervention programs and on academic achievement and career maturity.

The adolescent matures with each experience, depending on the impact of personal and social influences. In adolescence, a multitude of opportunities and adversities are introduced and must be navigated. The capacity of individuals to navigate the transition from adolescence to adulthood and from career aspiration to career attainment depends on past experiences and current circumstances (Cicchetti & Rogosch, 2002). Pathways to adulthood are strongly linked with social class, and with the resources and support of one's family of origin (Cohen, Kasen, Chen, Hartmark, & Gordon, 2003). For example, poverty and family disruption may require young people to move away from home and support themselves at an early age, interrupting their education and restricting their future options with respect to career and family formation (Goldscheider & Goldscheider, 1998).

Graber and Brooks-Gunn (1996) have examined the adolescent transition using the framework of 'turning points' in development, describing the period as a process in which there is the potential to alter behavior, affect, cognition, and context, all of which can result in lifelong changes. These developmental transitions provide opportunities for minority students to develop

new behaviors, discontinue old behaviors, alter behaviors, or even re-pattern existing behaviors. According to Brooks-Gunn, Petersen, and Eichorn (1985), the timing of developmental transitions may influence behavioral outcomes through biological, psychological, or social processes.

In a 1993 study, Eccles, Midgley, Wigfield, Buchanan, and et al. hypothesized that some of the negative psychological changes associated with adolescent development result from a mismatch between the needs of developing adolescents and the opportunities afforded them by social environments. These researchers argued that during a time when adolescents have a heightened concern about their status in relation to their peers, educational systems increase ability grouping, and comparative evaluations, making the adolescents more anxious about their status (Eccles et al., 1993).

In 1994, Seidman, Allen, Aber, Mitchell, and Feinman explored the effects of school transition during adolescence in poor urban youth. The cohort of 580 students who attended public school in three urban cities, of whom 27% were African-American, showed declines in self-esteem, class preparation, and grade-point average, providing further evidence that adolescents respond to environmental influences. Seidman et al. (1994) suggested the creation of small communities for learning (schools-within-schools) where stable, close, mutually respectful relationships with adults and peers would provide support for growth and development. Clearly, there is a need to minimize disruption in the lives of adolescents during this developmental transition.

Critical Factors Influencing Career Choices in Minority Students

Career choices are most often made in late adolescence, a time of identity exploration and transition (Arnett, 2000). Critical points and events in the transition experience of adolescents

influence their career choices and decisions. It is often assumed that career maturity increases automatically as students advance from one grade to the next (Powell & Luzzo, 1998).

However, career perspectives develop across the transition from child to adult. Indeed, early adulthood has been characterized as a period of volitional identity exploration that involves “trying out various life possibilities and gradually moving toward making enduring decisions” (Arnett, 2000, p. 473). Since students differ in race, ethnicity, social environment, and personal life experiences, the nature of the transition for each student varies.

The difficulty in making career and educational decisions should not be underestimated; these difficulties can be classified in three major clusters: (a) lack of readiness, which occurs before the decision-making, (b) lack of information, which occurs during decision making, and (c) inconsistent information, which also occurs during the decision making process (Mau, 2004). Lack of readiness includes lack of motivation to engage in career decision making, general indecisiveness about all types of decisions and dysfunctional beliefs such as irrational expectations. Lack of information includes inadequate knowledge about the steps involved in decision making, limited reflection about self, poor career previews, and insufficient understanding of how to obtain needed resources and information. Finally, inconsistent information includes unreliable information, internal conflicts, and external conflicts (Mau, 2004). Information is vital in redirecting adolescents to other career interests or generating interest in health care roles. Early exposure to career options is important and should begin even as early as kindergarten (Bandura et al., 2001).

According to Porter, Edwards, and Granger (2009), although most studies addressing high school student perception of nursing were published over a decade ago, the study outcomes show that little has changed regarding the perceptions of high school students, even in the midst

of a troubled economy. A number of high school based programs have targeted students to increase interest in nursing (Andrews-Beard et al., 1990; Carline & Patterson, 2003; Larsen, 1994; Paterson, 2002; Stewart & Cleveland, 2003; Zayas & McGuigan, 2006).

Carline and Patterson (2003), with funding from the Robert Wood Johnson Foundation and the W. K. Kellogg Foundation, examined the characteristics of successful partnerships of health professions schools, public schools, and community-based organizations designed to increase the number of underrepresented minority students entering health professions. Visits were conducted at ten sites and staff were interviewed using semi-structured interviews. Successful partnerships included professional schools that were committed to community service, professional and visionary leaders, attitudes of respect and listening, support of innovation, convergence and a feeling of ‘we did it together’ (Carline & Patterson, 2003). During this stage, minority students need to feel a part of something, rather than feeling alienated or isolated.

Erwin, Blumenthal, Chapel, and Allwood (2004) evaluated a collaborative program of academic and community partners to recruit African-American youth into healthcare professions. Eleven entities partnered in creating a health career pipeline focusing on African-American students. The partners included six institutions of higher education, an urban school system, two community organizations, and two private enterprises. The programs included early intervention, hands-on educational activities, science curriculum supplementation, role modeling, mentoring and career guidance.

The literature contains many examples of high schools that have attempted to promote minority student interest in nursing careers through programs that introduce nursing prior to graduation from the twelfth grade (Andrews-Beard et al., 1990; Katz, Smart, & Paul, 2010;

Patterson & Carline, 2006; Porter et al., 2009; Robinson, Miller, McGinnis, & Matthews, 1992; Stearns & Marchione, 1989; Stewart & Cleveland, 2003). Stearns and Marchione (1989) conducted a pre-nursing club in that focused on elementary school students. The goals of the program were to (1) encourage minority students to consider nursing as a possible career, (2) help build positive self-concept, (3) provide information on the preparation needed to attend college and nursing school, (4) provide information about nursing as a career, (5) provide a sense of purpose for study at elementary grade levels to prepare for a career, and (6) develop a relationship with the parents of selected students, determine their interests and needs, and seek their input in relation to the program. Participants were required to participate in 30-minute sessions on Friday mornings before school began. The sessions included discussions of nursing, self-esteem, and personal experiences related to health care. The roles and activities of nurses, settings in which nurses practice, salaries nurses earn, and requirements for going to college and studying to be a nurse were also discussed. Practices sessions enabled students to practice basic nursing skills on dolls. During one session, students were challenged to explore their values and beliefs and those of their families and to share this information in class.

A personal visit to a college of nursing, accompanied by the student's parent(s) was also arranged. While at the college, students were given an opportunity to perform a number of basic skills such as checking someone's eyes, temperature, and blood pressure. This opportunity to role play gave the students an early opportunity to test reality and opt in or out of a nursing career. A survey conducted to assess the self-concept and self-esteem of participants found high self-esteem among the participating students, who identified family, church, school, and friends as contributors to their self-esteem. However, students were not followed to determine whether their interest in nursing as a career led the students to enroll in a college.

A more recent study by Katz et al. (2010), focused on American Indian and Alaskan Native high school students. Using pre- and post-surveys, the investigator looked at differences in pre- and post-test responses of students attending a weeklong residency program. The program was designed to provide information and role models to motivate students to pursue a career in nursing. The study found that students changed their view of nursing after participating in the program. Though not focusing on African-Americans, this study demonstrated that preconceptions of minority students can change after they are exposed to role models who are currently employed in nursing.

Zayas and McGuigan (2006) examined experiences influencing healthcare career interest among high-school students participating in health professions introductory programs in underserved communities. Seven focus groups were conducted in one rural and two largely minority urban communities in New York State. Consistent with results of other studies, participants expressed a more positive image of nursing after the program (Zayas & McGuigan, 2006). Zayas and McGuigan (2006) also examined students' experiences and perceptions that encouraged or discouraged their choice of a healthcare field. Positive experiences included family members, personal experiences, role models, mentors, work experience, peers, and academic strengths. Negative perceptions included cost, lack of faculty support, racism and discrimination, inadequate information about diversity, and limited social support. Additionally, negative experiences in healthcare settings, negative media portrayal of healthcare workers, geographic isolation, and inadequate information about diversity in the field also decrease interest in health care roles (Zayas & McGuigan, 2006).

A study led by Buerhaus et al. (2005), assessed students' perceptions of a career in nursing. One thousand students were randomly selected from a national sample of 4,000 and

496 of the students volunteered to participate in the study. The majority of the students responding to the survey were White, limiting transferability to other ethnic groups. Nevertheless, the findings suggested that though most students believed nursing is physically challenging and there is inadequate respect and recognition of nurses, most agreed that nursing is a good career for students with academic ability. Information from currently practicing nurses was deemed most influential in the students' perceptions of nursing. Friends, guidance counselors, television, information from career and job fairs, parents and other role models were also identified as influential.

Personal Factors Affecting the Transition to Enrollment in Nursing

In theory, the transition from high school to enrolling in a nursing program should be similar for all students. Instead, personal factors and influences such as socioeconomic status, academic achievement, character traits and habits, and access to support systems often substantially influence the transition from adolescent to young adulthood career (Caprara, Vecchione, Alessandri, Gerbino, & Barbaranelli, 2010; Freedman & Newland, 2002; Graber & Brooks-Grunn, 1996; Matutina, Newman, & Jenkins, 2010; Muldoon & Reilly, 2003). The impact of these factors varies for minority students. Exploring the impact of these factors can add to our knowledge of the transition of minority students.

Race

In 2003, Wong, Eccles, and Sameroff conducted a study designed to determine whether experiences with racial discrimination at school predict African-American adolescents' academic and psychological functioning and whether African-American ethnic identity buffers the effects of discrimination. Data were collected from a diverse sample of African-American adolescents living in and near an East Coast metropolitan area. Data were collected at the beginning of 7th

and end of 8th grade. Experiences of racial discrimination from teachers and peers at school predicted declines in grades, academic ability, self-concept, academic task values, and self-efficacy.

Both cross-race and same-race mentoring relationships provide career support; however, for minorities same-race relationships have been found to provide more psychological support in terms of trust and attachment (Hill & Grant, 2000). In an early discussion of the issue for African-American adolescents, Fordham and Ogbu (1986) argued that because African-Americans have had limited opportunities in America, they develop an opposition culture that equates doing well in school with 'acting White' or 'selling out', that these individual characteristics, school characteristics, or the combination of the both may contribute to a minority student's academic success.

Age

Abbot, Hart, Lybrand, and Nouri (2009) conducted a longitudinal study of young adolescents to examine the relationship of their occupational choices to their educational attainment and the occupations of their parents to their own occupations when they reached their early 20s. Results indicated that the young people in the survey were occupationally ambitious; many more aspired to professional, managerial and technical jobs than were likely to find such jobs. In general, ambitions and educational attainment and intentions were well aligned, but there were also many instances of misalignment; either people wanted jobs which their educational attainments and intentions would not prepare them for, or people had with less ambitious aspirations than their educational performance would justify. Children from more occupationally advantaged families were found to be more ambitious and better prepared educationally and to have better occupational outcomes than other children. However, when

young people were both ambitious and educationally successful, the occupational outcomes were as good for those from disadvantaged as from advantaged families. In contrast, when young people were neither ambitious nor educationally successful, the outcomes for those from disadvantaged homes were much poorer than for those from advantaged families (Abbot et al., 2009). The results of this study suggest that while disadvantaged adolescents have options they are limited for many.

Socioeconomic Status

Research on the impact of the socioeconomic status of students and their families on career choice date back to at least the 1960s (Coleman, 1961). Socioeconomic status can be considered a primary driver of educational preparedness, exposure to varied work opportunities, and to family responsibilities and time. Because of limited resources students often have a substandard education in rural schools, limiting their exposure to programs to enhance their academic achievement and increase self-efficacy.

A study by Abbot and Joireman explored the continuing difficulties experienced by school students of different ethnic and socio-economic backgrounds, and looked at the relationships among ethnicity, low income and achievement. Ethnicity explained between 0 and 6% of the variance in academic achievement, when the contribution of low income was statistically controlled. Low income, by contrast, explained between 12 and 29% of the variance in academic achievement. Ethnicity explained approximately 32.7% of the variance in income, suggesting that the relationship between ethnicity and academic achievement is mostly indirect: ethnicity is related to low income, and low income in turn is related to academic achievement (Abbot & Joireman, 2001).

In 2003, Hochschild looked at socioeconomic class differences in schooling outcomes and the causes for those differences. She noted that those causes include ‘nested inequalities’ in states, school districts, schools within a district, classes within a school, and within a class. She also noted the ways in which class biases are closely entwined with racial and ethnic inequalities. She concluded that far too many minority adolescents are poorly taught, and the largest percentages of these students are African-Americans in rural settings. Having lived in poverty, with minimal access to resources for academic achievement, parents and community members may lack the ability to serve as role models who can encourage positive personal characteristics in aspiring minority students.

Research has similar findings, although a number of new variables have been included. In a 2001 study, Caldas and Bankston examined the relationship between the socioeconomic status of peers and individual academic achievement. The researcher hypothesized that: (a) individuals’ poverty status, as indicated by participation in the federal free and reduced-price lunch program, would be negatively related to individual academic achievement, (b) individuals’ family social status, as indicated by parents’ education and occupational levels, would be positively related to academic achievement, (c) the poverty status of the peer population, as indicated by the percentage of schoolmates participating in the federal free and reduced-price lunch program, would be negatively related to academic achievement, controlling for the individual’s own poverty status, and (d) the family social status of the peer population, as indicated by mean parental education and occupation levels for the school, would be positively related to individual academic achievement controlling for individual family social status. The correlation between the poverty status of one’s own family and individual academic achievement was small; however, going to school with classmates from relatively high family social status

made a strong and significant contribution to academic achievement. Research in the U.S. South found that the percentage of ethnic minority children and the percentage of children receiving free lunches were both significantly correlated with achievement (Abbott et al., 2009).

Given on the poverty level of many minority students' families, they must search for part-time jobs to assist with family finances. With a troubled economy, difficulties in finding a job adds more stress to minority adolescents' efforts to gain academic competence and confidence. Wright, Cullen, and Williams (2002), however, suggest that participation of school-aged youth in the labor market, especially when it entails spending many hours each week at work, rather than in school or at home, results in increased delinquency. According to these authors, as adolescents move into adulthood, those who have had an early history of work and delinquency may not have accumulated the human and social capital needed to secure the kinds of occupational positions that embed people in a conformist life trajectory.

A sense of limited career options may grow out of economic realities, a lack of economic vitality and fewer meaningful employment options than are often found in urban areas (Rojewski et al., 1995). After a life of poverty, the transition to opportunities may seem impossible to the adolescent. In the largest known prospective study of youth in poverty, Keller, Cusick, and Courtney looked at the ability of adolescents on the verge of emancipation from the child welfare system to navigate the transition to adulthood. The longitudinal study tracked a cohort of youth from three Midwestern states: Illinois, Iowa, and Wisconsin (Keller, Cusick, & Courtney, 2007).

Because there is variability in the pathways leading to adulthood and these pathways are influenced by past experiences and current circumstances, the study looked at seven indicators of individual status. These indicators included employment, grade retention, parenthood, problem behavior, placement type, placement stability, and runaway history. The findings demonstrated

that the success or failure of the adolescent was based on exposure to these indicators and possibly to variation in caregiver encouragement to pursue education and obtain work experience. These findings point to the importance of efforts to match adolescents' need to their transition journey, and their economic status.

Social Support

Nursing is often overlooked as a viable career choice entirely by families, and communities, and thus, by students (Williams & Calvillo, 2002). Minority high school students are not hearing a consistent message from teachers, parents, guidance counselors, and peers that nursing may be a good career choice for them (Villarruel et al., 2001). Aligning the various support systems and understanding how they affect recruitment and career choices of minority students are key to the future of nursing and quality patient care.

School Support

In addition to the personal factors that affect minority high school students' academic success, schools that serve these students introduce risk factors by failing to provide a supportive school climate, institutionalizing low academic expectations or delivering inadequate educational resources. To determine how schools may affect student success, Borman and Rachuba (2001) formulated and tested four distinct models: (a) the effective schools model, (b) the peer-group composition model, (c) the school resources model, and (d) the supportive school community model. The supportive school community model proved to be most effective. In this model, the school characteristics found important included caring and supportive teachers, a safe and orderly school environment, positive expectations for all children, opportunities for students to become meaningfully and productively involved and engaged with the school, and efforts to improve partnerships between the home and school (Borman & Rachuba, 2001). An

international study by Hirschi, Niles, and Akos investigated predictors and outcomes of active engagement in career preparation among 349 Swiss adolescents from the beginning to the end of eighth grade. The results revealed that engagement in self- and environmental-exploration and active career planning was related positively to increases in career decidedness and choice congruence (Hirschi, Niles, & Akos, 2011).

Supportive counselors in schools and colleges not only assist students with career choice issues, but a focus on issues that affect ethnically diverse students. Jones et al. (2011) recommended that counselors (1) examine their own cultural values, beliefs, and behaviors with a focus on how these areas may impact the counseling relationship, (2) understand how 'isms' (e.g., racism, classism, etc.), and within and between group cultural diversity affect some groups and how these issues can adversely affect the career development of some students, (3) assist students to deal with feelings and expressions of cultural identity conflicts while in the process of making career decisions, (4) assist students to deal with possible feelings of alienation from aspects of their school culture, (5) use theoretical frameworks and assessment instruments that are culturally appropriate for students, and (6) expose students to occupational areas that they might not have considered possible. One career which may not be included in students' consideration early on is nursing.

School and college counselors can assist parents in learning how to improve emotional support by helping them understand the emotions that adolescents experience when faced with difficult educational and vocational challenges, helping parents talk to their adolescents about what fun their future job could be, and by encouraging parents to share their own excitement when considering their own occupations (Alliman-Brissett et al., 2004).

Counselors can also take a lead role in assisting adolescents throughout their developmental transition. Counselors are becoming more aware of the environmentally imposed restrictions that affect acquisitions of work experiences for ethnic minority students, and they are assisting students to identify barriers and facilitators of career success with regard to their families, peers, schools, communities, and the larger society, and participate in collaborative and consultative efforts with teachers as a source of guidance. Counselors are also involving parents and community, when possible, in career-related pursuits, and providing mentoring, job shadowing, and internship opportunities by building partnerships with community elders and leaders (Jones et al., 2011).

Minority students may experience social support from a number of different sources including advice, influence or monetary contributions from family members, friends, schools and community members. Alienation and isolation in the minority student's experience may begin early in high school and linger on throughout the transition to adulthood. A study by France, Fields, and Garth (2004), who explored the lived experience of the minority student, found three emerging themes: (1) 'being shoved to the corner', (2) 'striving to do your best', and (3) 'just maintaining'. These study results point to the need for, teachers and faculty to create caring groups to foster cultural sensitivity and consciousness.

In a review of the literature, Ferguson (2008) explored a wide range of family involvement programs, challenges, needs, strategies, and contexts including ways to get out of the box and increase school-family connections. The studies represented wide varied geographic settings, and included school-based and non-school-based programs; varied cultural and ethnic populations; and a range of institutional levels; and school grades: preschool, elementary, middle, high school, and postsecondary levels. The studies covered a wide range of initiatives,

from homegrown efforts to nationwide efforts. Study participants reflected a wide array of demographics and a variety of grade and school combinations, as well as rural, urban, suburban, and metropolitan areas.

While the 31 studies reviewed examined a wide array of issues, there were some central themes identified: (1) a sense of welcome - creating a welcoming environment that fosters family-school relationships and transcends context, culture, and language; (2) misconceptions among stakeholders - identifying misconceptions that teachers and families hold about the motivation, practices, or beliefs of each other that lead to mistrust; (3) use of and issues related to resources - directing resources and programmatic efforts to help families adopt effective strategies to support student learning; (4) home context and student performance--understanding the effect of home context on student performance, home culture, parenting practices, home crises, and significant events, (5) program structures - creating structures—policy, leadership, procedures, processes, and aligned resources that encourage family involvement; (6) the roles of those involved in school-family connections- understanding the effects of beliefs, self-efficacy, knowledge, perceived abilities, and previous experience on the roles that families create and act on to support their children’s education and understanding factors that bridge home to school and enhance family member self-efficacy (Ferguson, 2008).

The authors of this review concluded that school-family partnerships are viable and important strategies to address minority students’ academic, emotional, physical, and social needs. If the system of education is to be successful, every aspect of the system must function in tandem with all the other parts. When any one of the system’s parts is missing or out of sync, the entire system falters; when educational systems are able to coalesce all the elements that affect

student outcomes, including families, they provide greater support to all students (Ferguson, 2008).

Parental Support

Parents who arrange for varied mastery experiences develop more efficacious youngsters than do parents who arrange fewer opportunities (Bandura, 1997). Yet, according to Phillips, Kwon, and Klein (1998), only 56% of African-Americans graduate from high school, compared to an overall graduation rate of 71% in the United States. In 2004, Ceballo, McLoyd, and Toyokawa investigated the relationships between neighborhood conditions and adolescents' educational values and school efforts. In their sample of 262 poor - single mothers and their young adolescents, the authors demonstrated a link between the percentage of middle-class neighbors and self-perceived academic abilities, adolescent educational values and school efforts.

According to Israelsen-Hartley (2011), the decline in traditional family structures is a growing concern across the globe, as scientists, researchers, and experts from Korea to Kansas point to the damaging effects of splitting families, slipping family values and mounting economic pressures on everyone, from the youngest to the oldest. In the absence of strong role models, this may lead some adolescents to turn to peer-groups for emotional support or to alternative cultures to find acceptance. Further, the life circumstances of many young people may severely limit their range of options or compel them, out of necessity, to adopt adult roles at an early age.

Family Support

In an effort to disentangle developmental from contextual effects, Freedman and Newland (2002) explored how family transitions affected parenting practices in a sample of

7,000 ethnically diverse students in the ninth, tenth, and eleventh grades in public high schools in Wisconsin and California. The adolescents were assessed in three groups: (1) adolescents moving into mother-custody households following a marital separation or divorce, (2) adolescents from stable never-divorced households, and (3) adolescents from stable mother-custody households. Both pre- and post-transition data were examined. African-American adolescents reported the highest levels of parental control. The study included adolescents from four different ethnic groups: African-American, Asian American, European American, and Hispanics. However, the cohorts varied in size and socioeconomic composition. They were from lower-class, middle-class, and upper-class families, possibly making it more difficult to generalize the results specifically for African-Americans.

The literature suggests that in order to participate in a more intentional and self-directed way in their career development process, adolescents need both the support of their parents and involvement in a comprehensive school-based guidance program that develops confidence in career planning and occupation exploration (Turner & Lapan, 2002). Research shows that parents' support of African-American adolescents' educational and career development is directly correlated to their academic performance (Linnehan, 2001), their persistence in pursuing educational and career related goals (Harold, Aitken, & Shelton, 2007; and their mastery of career development competencies to facilitate career decision making (Otto, 2000).

A recent study by Nota et al. (2007), of 253 Italian youth found that amongst male adolescents attending a university-preparation high school, career search self-efficacy partially mediated the relationship between family support and career decision making. For female adolescents there was no direct relationship between family support and career decision making;

however, family support was directly associated with career search self-efficacy; and career search self-efficacy was associated with career decision making.

According to Wright and Perrone (2010), students learn about careers early in their lives through family relationships. Family members such as parents or siblings can act to shape the appropriateness of behaviors as students witness these behaviors in action. For example, when a parent of a minority pre-nursing student attends college during the student's adolescent years, the student witnesses the time sacrifices of attending class, completing homework assignments, studying for tests, and making high grades on exams. This behavior becomes the 'norm' for the observing young adolescent.

In a longitudinal study conducted in 2007, Harold et al. looked at the impact of inter-parental conflict on children's academic attainment among a sample of 230 school children age 11-13. The children lived in homes where both male and female guardians were resident and a least one of these adults was the child's biological parent. Children living with both biological parents comprised 91.3% of the sample; 67% of mothers or fathers had completed secondary or high-school education; 90% of the students were White; and less than 1% were African-American. This study found that children living in households marked by high levels of inter-parental conflict and hostility were also at risk for low academic attainment.

Though the cohort included a minimal number of African-Americans, the significance of this finding emphasizes the importance of family support and school based intervention programs aimed at minimizing the effects of adversities. Adversities are far more likely in minority pre-nursing students than in non-Hispanic or White students. However, the sample size in the study did not allow subgroup multi-cultural or gender comparisons.

In 2004, Alliman-Brisset et al. examined African-American adolescents' perceived parent support for the sources of self-efficacy hypothesized by Bandura in four areas: career planning and exploration, knowledge of self and others, career decision-making, and school-to-career transitions. Participants were 81 African-American girls and boys who attended one Metropolitan public school. Approximately 50% of the students lived at or below poverty; less than 50% of the students were expected to graduate from high school. Results indicated that the primary predictor of girls' self-efficacy was their parents' emotional support and the primary predictor of boys' self-efficacy was their parents' career-related modeling.

Community Factors Affecting the Transition to Nursing School

Role Models

Exposure to role models of the same race, socio-economic status and gender is limited for minority adolescents interested in nursing. The lack of role models to guide students and increase their belief in their ability to become a nurse makes minority pre-nurses a vulnerable cohort. There is thus a great need for minority nursing professionals who can 'tell the story' of their journey and foster a passion in other students that they too can succeed. A number of studies in the literature have focused on storytelling as a method of vicarious experience (Koskinen & Vartia, 2006; Swap, Leonard, Shields, & Abrams, 2001). In the business literature, Nair (2002) describes stories as "food for the epistemic hunger of species; just as we cannot be ever satisfied with a single meal, or even multiple ones, even if they are absolute gourmet delights, but have to keep eating at regular intervals all our lives, we cannot ever be fulfilled by binges of narrative activity" (p. 259). Practicing minority nurses and nurse leaders are key in leading such activity.

Minority pre-nursing students want to see others who are living or have lived the journey.

Those students living the journey can be large groups with whom students associate. Cairns, Cairns, and Neckerman (1989) call this peer persuasion or peer networks. Over time, network members began to notice more and more similarities between one another. Discussions between friends influence the choices of activities and even the careers of young students.

Cleary and Zimmerman (2004) described a training program called the Self-Regulation Empowerment Program (SREP) which was developed based on social cognitive theory and research aimed at empowering adolescent students to engage in more positive, self-motivating cycles of learning. Students were taught how to set goals, select and monitor strategy effectiveness, make strategic attributions, and adjust their goals and strategies. The potential effectiveness of this model is based not only on self-regulatory processes but also on its message for establishing 'hope' and 'empowerment' in students and their parents and teachers (Cleary & Zimmerman, 2004).

Vicarious Experiences

According to Bandura (1997), people learn not only from their own experiences but by observing the behaviors of others, called vicarious experiences. One form of vicarious experience for minority students is participation in behaviors, experiences, or situations associated with the nursing profession. Through such experiences, perceptions of the role of the nurse are developed. Vicarious experiences include caring for an ill family member, taking a role as a nursing assistant, participating in a health career course, or volunteering in a health care setting where nurses are employed.

According to the University of Utah Health Care, the hospitals nurses are searching for are right inside the hospital walls; they are making beds in patient rooms, drawing blood in the phlebotomy lab, or wheeling patients to radiology. This health system created a unique program,

utilizing vicarious experiences of potential future nursing students, housekeepers, phlebotomists, transporters, and nursing assistants. The program was called FUUN – Future University of Utah Nurses and required an investment of about \$12,000 per student. The group met to discuss nursing application strategies, hear from admissions counselors at local schools, and help each other through the application process. Within a year of the program, all but one FUNN participant had been accepted to a nursing school. The program has trained and hired 83 nurses; 60 more are in the queue and zero dollars have been spent to recruit viable candidates. With a guaranteed pipeline of new nurses, savings have been reported at hundreds of thousands of dollars in recruiting costs, and new nurses had opportunities to gain competence, confidence, and self-efficacy (Nursing Innovations, 2011).

Patterns of Response During Transition

Process Indicator – Self-Efficacy Development

High school students transitioning into careers and further educational pursuits have a variety of patterns of response. Some students graduate and find jobs in local areas. Other students attend the community college, and some leave the area to go to college or find a job somewhere else. A great deal of research has been done to determine how and why students choose an occupation (Degazon & Shaw, 2007; Price, 2008). There is a strong correlation between students' belief that they can accomplish an educational or career goal and their movement in that direction. "The higher people's perceived efficacy to fulfill educational requirements and occupational roles, the wider the career options they seriously consider pursuing, the better they prepare themselves educationally and the greater their staying power in challenging career pursuits" (Bandura et al., 2001, p. 188).

Caprara et al. (2010) have studied the relationship between academic self-efficacy and achievement of junior and senior high school students. Findings from their work suggest that interventions aimed at increasing minority student academic self-efficacy could increase the capacity and interest of minority students in the profession of nursing. Pintrich and Schunk (1996) found that self-efficacy beliefs may decline as students advance through school due to greater competition, more norm-referenced grading, less teacher attention to individual student progress, and the stresses associated with school transitions. A positive change in self-efficacy may increase adolescents' belief that they can enroll in nursing school. Many individuals, either because of family obligations or lack of monetary resources, choose associate degree registered nurse (ADN) programs, licensed practical or vocational nurse (LPN, LVN) programs, or certified nursing assistants programs (Jimenez-Cook & Kleiner, 2005). According to results of the National Sample Survey of Registered Nurses, the primary avenue through which minority nurses enter practice is the community college associate degree programs (U.S. Department of Health and Human Services, 2008).

According to Gushe, Scanlan, Pantzer and Clarke (2006), little research on the influence of self-efficacy on the career decisions of African-American high school students has been conducted. They examined the influence of two potential sources of strength (ethnic identity and parent/teacher support) on career decision self-efficacy and outcome expectations in a sample of 104 African-American ninth-grade students. The results indicated that parental support was positively related to career decision self-efficacy and teacher support was positively related to career decision self-efficacy and career outcome expectations. No relationship was found between ethnic identity and either self-efficacy or outcome expectations. The findings of this

study confirm the need to actively follow the minority adolescent through the developmental transition to mastery.

An international study by Peterson and Whiteman (2007) explored the interrelationship of self-assessed intelligence, self-concept, intellect, and self-efficacy. Participants were asked to complete an anonymous questionnaire exploring the concepts and they were encouraged to 'think I can'. Though some differences were found, self-belief was found to be a common component. The art of transitioning self-belief into action is the next step in the transition process, and programs should be available to enable the student nurses to maintain their growing interest.

Britner and Pajares, investigated the degree to which Bandura's hypothesized sources of self-efficacy predicted the self-efficacy beliefs of middle schools students (N=319) in science courses. Significant correlations were found between mastery experiences, vicarious experiences, social persuasion, physiological arousal, and self-efficacy (Britner & Pajares, 2006). However, only mastery experiences significantly predicted science self-efficacy. Interestingly, girls reported stronger science self-efficacy than boys. These findings extend the theoretical tenets of Bandura's social cognitive theory and point to the need to expand research using the self-efficacy model to include more exploration of the self-efficacy of students and their support, including teachers.

Caprara, Barbarnelli, Steca, and Malone (2006) examined teachers' self-efficacy beliefs as determinants of their job satisfaction and students' academic achievement. Over 2,000 teachers in 75 Italian junior high schools were administered self-report questionnaires to assess their self-efficacy beliefs and their job satisfaction. The researchers expected that teachers' aggregated self-efficacy beliefs would contribute to their job satisfaction, which in turn, would

exert a positive influence on students' aggregated achievement. Simply put, happy teachers were expected to make happy high achieving students. Study results corroborated the contribution of teachers' self-efficacy in the students' ability to effectively handle various tasks, obligations and challenges during their developmental transition.

In a recent study, Patrick, Care, and Ainley (2011) explored the influence of vocational interest, self-efficacy beliefs, and academic achievement on choice of educational pathway in a cohort of Australian students. Participants were 189 students aged 14—15 years, who were considering either academic or applied learning pathways and choices of subjects for the final 3 years of secondary school. Using Holland's interest model within a social cognitive career theory (SCCT) framework, logistic regression analyses indicated that all three constructs were significant predictors of pathway selection and enrollment. Self-efficacy was identified as the best predictor model for students with strong realistic interests. For investigative students, both self-efficacy and achievement were best predictors and for artistic, social, and conventional students; achievement was the best predictor of future course enrollment (Patrick et al., 2011).

This research supports the notion that by increasing self-efficacy one can increase minority student success of choosing and getting through nursing. In a study led by Turner and Lapan (2002), the relative contributions of both proximal and distal supports to the career interest and self-efficacy in a sample (n=139) of middle school adolescents was examined. The study showed that self-efficacy and career planning consistently predicted young adolescents' career interests and perceived parent support accounted for 29% to 43% of the total unique variance in self-efficacy.

Self-Efficacy - Academic & Clinical Performance

Self-efficacy has been shown to influence academic motivation as choice of activities, level of effort persistence, and emotional reactions (Zimmer, 2000). According to Zimmer, self-efficacious students work harder, participate longer, and have less emotional reactions when they encounter difficulties than those who doubt. Students must have strong self-efficacy beliefs to utilize an array of learning strategies to be successful academically in their first year of a nursing program (Andrew & Vialle, 1998).

Andrew and Vialle (1998) conducted an international study to examine the relationships among self-efficacy, learning strategies and academic performance. The study (N=303) incorporated several research instruments and items pertaining to the socio-demographic background of the students. Specifically, the study included students from several universities who were surveyed by questionnaire and telephone interviews. Results of the study suggested there to be significant differences in student variables such as learning strategies between high and low achievers as well as the value placed on science. These findings support the need for variable learning strategies to meet the changing demographic and maturity levels of students interested in nursing.

Self-efficacy and learning strategies have been linked with student performance measures (Chemers, Hu, & Garcia, 2001; Harvey & McMurray, 1994; Pintrich & Schauben, 1992). Further, these measures can be assessed utilizing the Nursing Academic Self-Efficacy Scale – NASES (Andrew & Vialle, 1998) and the Nursing Clinical Self-Efficacy Scale – NCSES (Harvey & McMurray, 1994). According to Gore (2006), these measures are connected with a specific domain or curriculum requirements in an attempt to identify students who might be at risk for attrition.

In 2001, Chemers et al. conducted a longitudinal study to examine first-year college student performance and adjustment. First-year university students were assessed by observing the effects of academic self-efficacy and optimism on a student's academic performance, stress, health, and commitment to remain in school. The study included both predictive variables (high school grade point average – GPA, academic self-efficacy, and optimism) and moderating variables (academic expectations and perceived coping abilities). The students were measured twice in first academic year, at the end of the first quarter and at the end of the academic year. Study results indicated that students who entered college with certainty and confidence in their ability to be successful performed better and showed higher performance than those students who had low self-confidence (Chemers et al., 2001). Chemers et al. (2001) concluded that evaluating a student's self-efficacy had a predictive power of expectations and performance.

In 2006, Gore expanding research on the relationship of academic self-efficacy in predicting college performance. Gore studied 629 freshmen and sophomore students. Participant ethnicity included 78% Caucasian, 13% African American, 3% Latino, 2% Asian American and 4% other. In addition, results support the notion that the transition of students from high school to their first semester of college is a critical time for promoting self-efficacy. Though the sample of African Americans in the study was small, results indicated that self-efficacy beliefs of experienced college students are more strongly related to college performance and persistence than inexperienced first semester students (Gore, 2006).

The relationship between academic self-efficacy and ethnic identity was examined, using hierarchical multiple regression analysis (Ivory, 2002). College academic self-efficacy was found to be a significant predictor of academic performance as opposed to ethnic identity. A

higher level of ethnic identity was positively related to a higher level of self-confidence, using regression analysis. Bandura (2010) suggest that there may be cultural variations in the ways in which self-efficacy is developed and experienced in ethnically diverse individuals. Results of this study present possibilities to increase student self-efficacy by implementing a variety of interventions.

Summary

While in the past, educational and career options were not available to African-Americans, today's opportunities are growing. Though these opportunities are available, many young African-American adolescents are not positioned to take advantage of the opportunities. Instead, African-Americans continue to experience lower graduation rates than rates of the overall population. Efforts to explain this phenomenon are important to workforce development and the future of health care quality.

Understanding and valuing the realities of minority students are critical for increasing diversity in the nursing profession. Each ethnic group should be a separate cohort, rather than bundling all minorities together. The self-efficacy of different ethnic groups may differ based on a multitude of factors. Few studies, however, have been conducted by minority leaders that are committed to advancing change, through research. Meeting the call to action for research is imperative if nurse leaders are to influence the delivery of care to diverse racial and ethnic groups in the future.

CHAPTER III: RESEARCH METHODOLOGY

This chapter describes the research plan used to evaluate the relationship between personal factors (age, race, gender, marital status, socioeconomic status, social support, and personal mastery), community factors (previous exposure to nursing role models and vicarious experiences, and mastery experiences in education) and the level of self-efficacy in pre-nursing minority students in higher education.

The chapter is divided into four sections. Section 1, includes the research questions, the study aims and objectives and study hypothesis. Section 2, describes the methodology used in the study and includes an overview of the population and sample, research setting, protection of human subjects, instrumentation, and consent process. Section 3, highlights the study variables. Section 4, contains details of the statistical analysis plan.

Research Questions

1. What are the relationships between academic self-efficacy, clinical self-efficacy, and general self-efficacy in White and Black pre-nursing students?
2. Is there a difference in academic self-efficacy, clinical self-efficacy, and general self-efficacy between Black and White pre-nursing students?
3. Is there a difference in the personal and community factors between White and Black pre-nursing students?
4. What are the relationships between academic self-efficacy, clinical self-efficacy, general self-efficacy and the personal and community factors in the Black and White pre-nursing students?

Aims and Objectives

Specific aim 1. Identify differences between African-American and White pre-nursing students based on personal factors.

Specific aim 2. Identify differences between African-American and White pre-nursing students based on community factors.

Specific aim 3. Identify differences between African-American and White pre-nursing students based on assessed levels of self-efficacy.

Objectives. These aims will be accomplished by meeting the following objectives:

1. Assess the self-efficacy of African-American and White pre-nursing using the NCSES, NASES and GSE tools via Qualtrics.
2. Assessing the personal and community factors of African-American and White pre-nursing using a Nursing Student Data Survey via Qualtrics.
3. Analyze and compare the relationship between self-efficacy, personal, and community factors for both African-American and White pre-nursing students.

Hypothesis

1. There are differences in the nursing clinical self-efficacy, academic self-efficacy, and general self-efficacy scores between African American and White pre-nursing students.
2. There are differences in self-efficacy, personal factors, and community factors between African American and White pre-nursing students.

Methodology

This study uses a cross-sectional, correlational research design. According to Polit and Beck (2008), cross-sectional designed studies allow researchers to assess behavior and/or

attitudes at a single time in a participant's life. Several surveys were combined to measure quantitative information about variables by asking questions of each volunteer participant via Qualtrics. The relationships among the variables was examined. In this research, data was gathered on self-efficacy, social support, role models, vicarious experiences, mastery experiences, race, age, gender, marital status, and socioeconomic status. Hypotheses for future research may be generated from this study. Basic exploratory research is fundamental in responding to the future nursing workforce demand.

Population and Sample

All pre-nursing African-American and White American students from Armstrong Atlantic University located in Savannah, Georgia meeting the following eligibility criteria were invited to participate in the study:

1. African-American and White American freshmen and sophomores who declare nursing as a major
2. English speaking students
3. Agreement to participate in the study and complete the survey

Research Setting/Sample Size

The research was conducted using a Qualtrics survey sent to students, inviting them to participate at Armstrong Atlantic University (AASU), located in Savannah Georgia. AASU is public university, which houses the largest undergraduate health college in the state of Georgia. Undergraduate enrollment exceeds 6800 students, of which, 64% are female; 36% are male; and 23.6% are African American. Per college records, there are approximately 500 African American and White pre-nursing students enrolled at the university and eligible to participate.

Based on prior year enrollments, African Americans have represented 30-40% of the total enrollees, while Whites remained the majority.

Protection of Human Subjects

Prior to implementation, the proposed study was sent for approval to the Institutional Review Board at Armstrong Atlantic University - AASU (see Appendix A) and East Carolina University - ECU (see Appendix B). Because the data had no identifying information made available to the researcher, the study was submitted, requesting exemption from full review. Information describing the study and planned intervention (see Appendix C) was sent to the students via email by Helen Taggart, *Professor, Armstrong Atlantic State University*, prior to the researcher beginning data compilation.

Consent Process

Included in the email sent out to possible participants was an overview of the research, which explained the study, the estimated time needed to complete the surveys, the risks and benefits of the research and contact information for the professor who is acting as the research liaison for the study. Study participants were not required to sign or return a consent form. Students who open the email and subsequently complete the survey were considered having given informed consent.

Instrumentation

Several validated tools were used in this study. The tools were combined and formatted in Qualtrics. The Social Provisions Scale (Cutrona & Russell, 1987) was used to examine social support (see Appendix D). Formal permission via email was granted to the student researcher by Cutrona (see Appendix E). The Nursing Student Data Survey (see Appendix F) was created from the situational construct of Seago to capture information regarding general demographics,

such as race/ethnicity, age, gender, and marital status and items related to community and personal factors. The questionnaire also included items to assess the presence of nursing role models, vicarious experiences in healthcare and nursing, and personal mastery (Lewis, 2011; Usher & Pajares, 2009; Yancey, Grant, Kurosky, Kravitz-Wirtz, & Mistry, 2011). Self-efficacy was measured using three tools: General Self-Efficacy Scale (GSE) (Jerusalem & Schwarzer, 1992), Nursing Academic Self-Efficacy Scale (NASES) (Andrew & Vialle, 1998) and Nursing Clinical Self-Efficacy Scale (NCSES) (Harvey & McMurray, 1994).

Social Provisions Scale

The Social Provisions Scale was used to measure the personal factor of social support. This tool was developed in 1978 by a research group at UCLA (Russell & Cutrona, Rose, Yurko 1984). Six provisions were identified and include guidance (advice or information), reliable alliance (assurance that others can be counted on in times of stress), reassurance of worth (recognition of one's competence), attachment (emotional closeness), social integration (a sense of belonging to a group of friends), and opportunity for nurturance (providing assistance to others). Half of the items describe the presence of a type of support and the others describe the absence of a type of support.

The survey includes 24 questions, based on a 4-point Likert-scale, ranging from 'strongly disagree' to 'strongly agree'. Participants are asked to think about their current relationships with friends, family members, co-workers, and community members, and indicate to what extent each statement describes their current relationships with other people. According to Cutrona and Russell (1987), research has supported the reliability and validity of the Social Provisions Scale. Scores on the measures will range from 146 to 576 and have been shown to predict adaptation to stress among a wide variety of populations (Cutrona & Russell, 1987).

Reliability Internal Consistency: Overall, the internal consistency of this scale is acceptable. Cutrona and Russell (1987) tested the reliability of the instrument on a sample of 1792 respondents, which included 1183 students. Results indicated that reliabilities of the individual social provision subscales were adequate for use of the instrument in research contexts, with coefficient alphas ranging from .65 to .76. Each pair of items contained one item that was worded positively and one that was worded negatively. The correlations between the two items for each provision range from $r = -.33$ (Reassurance of Worth) to $r = -.56$ (Reliable Alliance). Internal consistency figures across all provisions have been found to be above .70. Test-retest reliability coefficient ranges from .37 to .66. Intercorrelations among the six provisions range from .10 to .51, with a mean intercorrelation of .27.

Individual provisions have also been shown to correlate significantly and differentially with ratings of different relationship categories (Cutrona & Russell, 1987). For example, among college students, social integration correlated with relationship ratings most highly of all of the provisions. Additionally, scores on the Social Provisions scale were found to correlate with measures of social networks (i.e., number of relationships and frequency of contact) and satisfaction with different types of social relationships among the elderly (Cutrona & Russell, 1987).

Nursing Student Data Survey

The researcher developed a Student Data Survey instrument to assess demographics, role modeling, vicarious experiences, mastery experiences, and grade point average using questions adapted from a number of previous studies (Lewis, 2011; Seago, Wong, Keane, & Grumbach, 2008; Usher & Pajares, 2009; Yancey et al., 2011). According to Seago et al. (2008), because of the most recent nursing shortage it has become important to determine factors of nursing students

in the context of various aspects of college nursing programs and institutions. In 2009, Usher and Pajares conducted a study to develop and validate items with which to assess Bandura's theorized sources of self-efficacy including mastery of goals and vicarious experiences.

General Self-Efficacy Survey (GSE)

The General Self-Efficacy Scale (see Appendix G) is a 10 item scale, which asks the student to assess a general sense of perceived self-efficacy with the aim in mind to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events and is designed for the general adult population, including adolescents. A 4-point response format ranging from 1(not at all true) to 4 (exactly true) is used. Scores range from 1 to 40.

According to Jerusalem and Schwarzer (1992), the construct of Perceived Self-Efficacy reflects an optimistic self-belief. This is the belief that one can perform novel or difficult tasks, or cope with adversity in various domains of human functioning. Perceived self-efficacy facilitates goal-setting, effort investment, persistence in face of barriers and recovery from setbacks. It can be regarded as a positive resistance resource factor. Ten items are designed to tap this construct. Each item refers to successful coping and implies an internal-stable attribution of success.

In samples from 23 nations, Cronbach's alphas on the GES ranged from .76 to .90, with the majority in the high .80s. The scale is one-dimensional. Criterion-related validity is documented in numerous correlation studies where positive coefficients were found with favorable emotions, dispositional optimism, and work satisfaction (Zhang & Schwarzer, 1995). The measure has been used internationally with success for two decades. It is suitable for a broad

range of applications. It can be taken to predict adaptation after life changes, but it is also suitable as an indicator of quality of life at any point in time (Jerusalem & Schwarzer, 1992).

Nursing Academic Self-Efficacy Scale (NASES)

The Nursing Academic Self-Efficacy Scale (see Appendix H) is a 22 item scale which asks the student to assess how confident they are that they can learn each of the educational requirements using a 10-point response format ranging from 1 (very unsure) to 10 (very sure) (Andrew & Vialle, 1998). Scores can range from 22 – 220. Students were asked to assume they are motivated to make their best effort using a 10 point Likert-scale to indicate their level of confidence, and ranging from ‘I don’t think I can do it’ to ‘I am very sure I can do it’. The higher the rating given, the stronger the nursing academic self-efficacy expectation. According to Andrew and Vialle (1998), psychometrics of the survey include an alpha coefficient of 0.94, internal consistency of $r = 0.67$ ($p < 0.0010$), and Cronbach’s alpha reliability of .956 at the 95% confidence level. For each of the pre-nurse’s academic education requirements listed in the survey, students were asked to indicate the extent to which they believe they could successfully complete the requirement.

Nursing Clinical Self-Efficacy Scale (NCSES)

The Nursing Clinical Self-Efficacy Scale (see Appendix I) offers a validated measure of clinical self-efficacy for nursing students (Harvey & McMurray, 1994). The scale includes 24 items that assesses the student’s confidence in successfully learning nursing clinical skills. This scale uses a 10-point Likert response format ranging from 1 (very unsure) to 10 (very sure). Scores will range from 24 to 240. The higher the rating given, the stronger the nursing clinical self-efficacy expectation. Psychometrics of the survey include an alpha coefficient of 0.96., reliability over time with a test-retest reliability of $r = 0.76$ ($p < 0.001$).

Data Collection Procedure

The data collection process for this study involved the following steps:

1. The investigator discussed research interests with Helen Taggart, *Professor & Department Head Nursing, Armstrong Atlantic State University*.
2. Once preliminary approval was given to conduct the research at Armstrong Atlantic State University (AASU), a proposal was submitted to and approved by the Institutional Review Boards (IRB) of both AASU and ECU.
3. Students were identified by Dr. Helen Taggart, using study inclusion criteria. Emails were retrieved from AASU college email database. Student emails were organized into a group called 'Participate and Win - Self-Efficacy'.
4. A description of the study, a confidentiality statement, assurance of minimal risk, and the ability to stop voluntary participation at any time were sent via email to students at Armstrong Atlantic State University by Helen Taggart to assure anonymity (see Appendix C). Students who read the email and clicked on the link to complete the survey were considered consenting participants.
5. Each completed survey was housed in the Qualtrics database and included no identifying student information. The researcher, Dr. Taggart, dissertation chair, and the statistician for this study were able to track the number of surveys completed, via Qualtrics.
6. After the survey was closed to students, the statistician was able to download completed anonymous surveys into SPSS for analysis.
7. Eligible participants who did not complete the survey received three weekly reminders subsequent to the issuing of the initial email survey link. All participating

students were entered into a drawing for a 19' flat screen television. Dr. Taggart conducted the drawing to protect the identity of the students. The prize(s) was delivered to the student by Dr. Taggart and the student was recognized during class time on AASU campus.

Definition of Variables for Current Study

There are twenty-three independent variables used in this study. Table 1 presents an overview of the variables, operational definitions and coding for the study. Tools used to capture this information are also noted.

Data Analysis

The survey tools, including the, Nursing Academic Self-Efficacy Scale (NASES), Nursing Clinical Self-Efficacy Scale (NCSES), Social Provisions Scale (SPS), General Self-Efficacy Scale (GSE), and the Nursing Data Survey were entered into the IBM SPSS Statistics 19 statistical package. Internal consistency reliability using Cronbach's alpha was evaluated for all measurement scales in the study sample. Statistical significance was determined with a p value less than .05.

Descriptive Analysis

The characteristics of the sample are described using frequency distribution, means, and standard deviations. Means and standard deviations are used for the continuous variables and frequency and percentages for the categorical variables.

Bivariate Analysis

For research question 1, Pearson correlations were used to assess the correlations between the three self-efficacy measures in the White and Black students. For the second research question one-way analysis of variance was used to compare the mean self-efficacy

scores between the White and Black students. For the third research question, one-way analysis of variance was used to compare the continuous variables of age, grade point average and hours worked between White and Black students. The chi-square for independence was used to compare the categorical personal and community factors with the ethnicity of the students.

For research question 4, relationships between the self-efficacy measures and the continuous personal and community factors were assessed with Pearson correlations, and relationships between the self-efficacy measures and categorical personal and community factors were assessed with one-way analysis of variance.

Table 1

Definitions for Variables

Variable Name	Operational Description/Coding	Tool
Demographics		
Race/Ethnicity	1=Caucasian, Non-Hispanic 2=Black, African-American, or African 3=American Indian 4=Hispanic, Latino 5=Asian 7=Middle Eastern 8=Other-please specify	Nursing Student Data Sheet
Age	Age in years	Nursing Student Data Sheet
Gender	1=Male; 2=Female	Nursing Student Data Sheet
Marital Status	1=married 2=divorced/separated 3=single 4=single, living with a partner 5=widowed	Nursing Student Data Sheet
Role Models		
Completion of College by an immediate Family Member	1=Mother 2=Father 3=Sister 4=Brother	Nursing Student Data Sheet
Having an experience with a nurse that influenced the student to be like them	1=Yes; 2=No	Nursing Student Data Sheet
Vicarious Experiences		
Have you worked in a healthcare setting?	1=No; 2=Yes	Nursing Student Data Sheet

Table 1 (*continued*)

Have you provided direct patient care for a sick family member or friend?	1=No; 2=Yes	Nursing Student Data Sheet
Have you ever taken a course like Health Occupations or participated in a summer institute to learn more about health occupations?	1=No; 2=Yes	Nursing Student Data Sheet
Mastery Experiences		
Do you have a prior degree?	1=No; 2=Yes	Nursing Student Data Sheet
Have you ever completed a program or course in the past and performed extremely well and felt good about your successful accomplishment?	1=No; 2=Yes	Nursing Student Data Sheet
What was your GPA the first semester of college?		Nursing Student Data Sheet
Self-Efficacy	4-Point Liker Scale “Not at all true” “Hardly true” “Moderately true” “Exactly true”	General Self-Efficacy Survey
	10-Point Likert Scale “I don’t think I could do it” “Fairly sure I could do it” “I am very sure I could do it”	Nursing Academic Self-Efficacy Scale

Table 1 (*continued*)

Socioeconomic Status		
Employment Status	1=Full-time 2=Part-time 3=Not Employed	Nursing Student Data Sheet
Number of hours worked per week	1=> 40 hours 2=21-40 hours 3=1-20 hours 4=0 hours	Student Career Survey
It is difficult for me to afford the costs of attending college	1=strongly agree 2=somewhat agree 3=somewhat disagree 4=strongly disagree	Student Career Survey
My family/parents help me to pay for college	1=strongly agree 2=somewhat agree 3=somewhat disagree 4=strongly disagree	Student Career Survey
Does your job interfere with your studies?	1=often 2=sometimes 3=rarely 4=never	College Student Career Survey
Adequacy of financial aid for tuition	1=I didn't need or receive financial aid 2=I received all or most of what I needed 3=I received less financial aid than I needed	College Student Career Survey
Social Support	4-Point Likert Scale (6 – provisions) 1=strongly agree 2=somewhat agree 3=somewhat disagree 4=strongly disagree	Social Provisions Scale

CHAPTER IV: FINDINGS

Sample Selection and Response Rate

The sample for this study was drawn from freshman and sophomore students who declared nursing as a major in a Bachelor of Science in Nursing (BSN) program at Armstrong Atlantic State University, in Savannah Georgia. Approximately 499 students were enrolled as freshmen and sophomores; 496 students met the inclusion criteria and were eligible to participate. The overall response rate for the survey (18%) was calculated as a percentage of the number of students who completed the survey (88) divided by the number of students eligible to participate (496).

Characteristics of the Study Sample

Table 2 describes the characteristics of the Caucasian and African American students in the study sample. A majority of the study sample was Caucasian (58%), over 20 years of age (51%), female (85%), and not married (66%).

Psychometrics of the Self-Efficacy and Social Provision Measures

Table 3 presents the internal consistency reliabilities (coefficient alpha), means and standard deviations, potential score range, and actual score range for all the standardized scales used in the study. All the scales achieved the acceptable minimum alpha of .70 except for the attachment ($\alpha = .64$), social integration ($\alpha = .64$), and reliable alliances ($\alpha = .69$) subscales. The Pearson correlations among the self-efficacy measures ranged from .51 to .77, and from .29 to .75 for the Social Provision subscales.

Table 2

Characteristics of Caucasian and African American Students on Major Study Variables

Variable	Caucasian (n=51)		AA (n=37)		Total (n=88)	
	n	%	n	%	N	%
Age						
≤ 20	22	(43.1)	21	(56.8)	43	(48.9)
> 20	29	(56.9)	16	(43.2)	45	(51.1)
Gender						
Female	48	(94.1)	27	(73.0)	75	(85.2)
Male	3	(5.9)	10	(27.0)	13	(14.8)
Marital Status						
Single	31	(60.8)	27	(73.0)	58	(65.9)
Married	18	(35.3)	7	(18.9)	25	(28.4)
Divorced/separated	2	(3.9)	3	(8.1)	5	(5.7)
Grade Point Average						
< 3.0	7	(15.9)	11	(32.4)	18	(23.1)
≥ 3.0	37	(84.1)	23	(67.6)	60	(76.9)
Afford Cost of College						
Strongly Disagree	1	(2.0)	2	(5.4)	3	(3.4)
Disagree	15	(29.4)	5	(13.5)	20	(22.7)
Agree	29	(56.9)	24	(64.9)	53	(60.2)
Strongly Agree	6	(11.8)	6	(16.2)	12	(13.6)
Family/parents pay for college*						
Strongly Disagree	18	(35.3)	10	(27.0)	28	(31.8)
Disagree	12	(23.5)	7	(18.9)	19	(21.6)
Agree	10	(19.6)	17	(45.9)	27	(30.7)
Strongly Agree	11	(21.6)	3	(8.1)	14	(15.9)
Job Interfere with studies						
Often	1	(5.6)	5	(23.8)	69	(15.4)
Sometimes	7	(38.9)	12	(57.1)	19	(48.7)
Rarely	7	(38.9)	3	(14.3)	10	(25.6)
Never	3	(16.7)	1	(4.8)	4	(10.3)

Table 2 (continued)

Currently Work**						
Full-time	1	(2.0)	8	(22.2)	9	(10.3)
Part-time	17	(33.3)	14	(38.9)	31	(35.6)
Not Currently	33	(64.7)	14	(38.9)	47	(54.0)
Adequacy of financial aid**						
Did not need/receive	9	(17.6)	0	(0.0)	9	(10.5)
Received all/most	30	(58.8)	19	(54.3)	49	(57.0)
Received less than need	12	(23.5)	16	(45.7)	28	(32.6)
Family completed college*						
Yes	37	(72.5)	18	(48.6)	55	(62.5)
No	14	(27.5)	19	(51.4)	33	(37.5)
Positive experience with a nurse						
Yes	47	(92.2)	33	(89.2)	80	(90.9)
No	4	(7.8)	4	(10.8)	8	(9.1)
Worked in a healthcare setting*						
Yes	16	(31.4)	21	(58.6)	37	(42.0)
No	35	(68.6)	16	(43.2)	51	(58.0)
Provided direct care						
Yes	36	(70.6)	22	(61.1)	58	(66.7)
No	15	(29.4)	14	(38.9)	29	(33.3)
Taken a healthcare course**						
Yes	7	(13.7)	19	(51.4)	26	(29.5)
No	44	(86.3)	18	(48.6)	62	(70.5)
Prior college degree						
Yes	8	(15.7)	4	(11.4)	12	(14.0)
No	43	(84.3)	31	(88.6)	74	(86.0)
Completed a college course**						
Yes	41	(80.4)	17	(45.9)	58	(65.9)
No	10	(19.6)	20	(54.1)	30	(34.1)

Note. *p <.05; **p <.01.

Table 3

Psychometric Properties of the Study Scales

Variable	M	SD	α	Range	
				Potential	Actual
General Self-Efficacy	33.69	3.48	.82	10-40	26-40
Nursing Self-Efficacy					
Nursing Academic	187.93	26.45	.96	22-220	110-220
Nursing Clinical	217.99	26.92	.96	24-240	110-240
Social Provision					
Attachment	14.51	1.93	.64	4-16	9-16
Social Integration	13.85	2.16	.64	4-16	8-16
Reassurance	14.38	1.72	.72	4-16	10-16
Reliable Alliances	14.20	2.00	.69	4-16	7-16
Guidance	13.66	2.21	.74	4-16	7-16
Opportunity for Nurturance	14.48	1.89	.76	4-16	9-16
Total Scale			.92	24-96	55-96

Results Related to the Research Questions

Question 1. What are the relationships between academic self-efficacy, clinical self-efficacy, and general self-efficacy in Caucasian and African American pre-nursing students?

Pearson correlations between the three self-efficacy measures were similar in both the Caucasians and African Americans. For Caucasian students general self-efficacy correlated .66 ($p < .01$) with nursing academic self-efficacy and .55 ($p < .01$) with nursing clinical self-efficacy, while academic and clinical self-efficacy correlated .77 ($p < .01$). In the African American students, general self-efficacy correlated .55 ($p < .01$) with academic self-efficacy and .46 ($p < .01$) with clinical self-efficacy, and nursing and clinical self-efficacy correlated .78 ($p < .01$). All of these correlations represent medium to large effect sizes.

Question 2. Is there a difference in nursing academic self-efficacy, nursing clinical self-efficacy, and general self-efficacy between Caucasian and African American pre-nursing students?

Table 4 shows the self-efficacy means and standard deviations for the Caucasian and African American students. There were no statistically significant differences between the two groups of students.

Question 3. Is there a difference in the personal and community factors between Caucasian and African American pre-nursing students?

The personal factors included in the analysis include marital status, gender, age, and socioeconomic status (see Table 2), and social support (see Table 4). Although 35% of the Caucasian students were married compared to 19% of the African American students, marital status was not statistically difference between the ethnic groups. There was no statistically significant difference between the groups on gender, with 94% of the Caucasian students being

Table 4

*Self-Efficacy and Social Provision Comparisons Between Caucasian and African American**Students*

Scale	Caucasian		African American	
	M	SD	M	SD
Self-Efficacy				
General	34.02	3.51	33.24	3.44
Nursing Academic	190.47	25.90	184.43	25.76
Nursing Clinical	219.31	25.76	216.16	28.69
Social Provision				
Attachment	14.78	1.71	14.14	2.16
Social Integration	13.86	2.19	13.84	2.15
Reassurance	14.67	1.57	13.97	1.85
Reliable Alliances	14.47	1.88	13.84	2.13
Guidance	13.80	2.05	13.46	2.43
Nurturance	14.57	1.95	14.35	1.81
Total Scale	86.16	9.10	83.59	9.83

female compared to 73% in the African American group. The average age was 24.8 years and 22.8 years for the Caucasians and African Americans respectively and not statistically significant. The means and standard deviations of the Social Support scales are presented in Table 4 for the two ethnic groups and none of the mean differences between the groups are statistically significant. The variables used to assess socioeconomic status include employment status, being able to afford the costs of attending college, family assistance with the costs of attending college, how much working interferes with studies, and adequacy of financial aid (see Table 2). Compared to the Caucasian students, African American students were more likely to be working (61% versus 35%, $p < .01$), to receive less financial aid than needed (46% versus 24%, $p < .01$), and to have their parents help pay for college (54% versus 41%, $p < .05$). There were no statistically significant differences between the groups on being able to afford the costs of college and on the amount of interference that working has on their studies.

The community factors included in the analysis includes vicarious experiences, mastery experiences, and role models (see Table 2). Vicarious experiences were measured by whether the students ever worked in a healthcare setting, provided direct patient care to a sick family member, and whether they ever took a course like Health Occupations or participated in a summer institute to learn more about health occupations. Compared to the Caucasian students, African American students were more likely to have worked in a health care setting (59% versus 31%, $p < .05$) and to have taken a course or participated in a summer institute to learn about health occupation opportunities (51% versus 14%, $p < .01$). There was no statistically significant difference between ethnic groups in terms of providing direct patient care. Mastery experiences were measured by whether the students had a prior degree, ever completed a program or course in the past and performed well and felt good about their successful accomplishment, and their

first semester grade point average. Compared to Caucasian students, African American students were less likely to have completed a course in the past and performed extremely well and felt good about the successful accomplishment (46% versus 80%, $p < .01$). There were no statistically significant differences between the ethnic groups based on having a prior degree and first semester grade point average. Role modeling was measured by whether the students had an immediate family member who completed college and whether they had an experience with a nurse that influenced them to be like the nurse. Compared to Caucasian students, African American students were less likely to have someone in their immediate family who completed college (49% versus 73%, $p < .05$). There was no statistically significant difference between groups on the proportion of students having a positive nurse experience.

Question 4. What are the relationships between academic self-efficacy, clinical self-efficacy, general self-efficacy and the personal and community factors in the Caucasian and African American pre-nursing students?

None of the community factors (vicarious experiences, mastery experiences, and role models) were related to the self-efficacy measures in the total group or within the two ethnic groups. Of the personal factors (marital status, age, gender, social support, and socioeconomic status), only age and social support were related to self-efficacy (see Table 5). For the Caucasian students, general self-efficacy had large correlations ($r \geq .50$) with all the support scales except the guidance subscale and for the African American students general self-efficacy had moderate correlations ($r = .30$ to $.49$) with the reassurance and guidance subscales and the total support score. For Caucasian students, nursing academic self-efficacy had moderate to large correlations with all the support scales except the guidance subscale and for the African American students

Table 5

Correlations of Self-Efficacy With Social Provision Subscales and Total Social Provisions Scale

Variable	Cauc	AA	Cauc	AA	Cauc	AA
	Nurs Acad	Nurs Acad	Nurs Clin	Nurs Clin	General	General
Age	.10	.30	.10	.39*	.08	.11
Attachment	.34*	.28	.22	.46**	.54**	.31
Social Integration	.47**	.34*	.26	.47**	.55**	.29
Reassurance	.38**	.46**	.17	.39*	.52**	.40*
Reliable Alliances	.37**	.30	.27	.47**	.51**	.26
Guidance	.09	.37*	.10	.35*	.38**	.33*
Opportunity for Nurturance	.57**	.30	.39**	.40*	.64**	.32
Total	.46**	.43*	.30*	.54**	.65**	.40*

Note. * $p < .05$; ** $p < .01$; $r = .10$ to $.29$ small correlations, $r = .30$ to $.49$ moderate correlations, $r = .50$ to 1.00 large correlations.

nursing academic self-efficacy had moderate correlations with social integration, reassurance, guidance, and total support score. For African American students, nursing clinical self-efficacy had a moderate correlation with age, and moderate to large correlations with all the support subscales and total support score. For the Caucasian students, nursing clinical self-efficacy had moderate correlations with only the nurturance subscale and total support score.

CHAPTER V: DISCUSSION

This study examined the relationships between personal factors (race, age, socioeconomic status, social support, and personal mastery), community factors (previous exposure to role models and vicarious experiences in nursing) and the level of self-efficacy related to nursing as a career, in pre-nursing students in higher education. The vast majority of the literature supports that minorities are disadvantaged in schools, both high school and college (Abbot et al., 2009; Murnane & Steele, 2007). However, survey results from this study found no statistically significant difference in academic, clinical nursing, or general self-efficacy in Caucasians as compared to African Americans. There were noted differences between Caucasians and African Americans on some of the variable outcomes in the scales.

This study supports that when minorities have relatively the same personal and community influencing factors as Caucasian students, they achieve comparable levels of self-efficacy. These findings may suggest that other variables and perhaps other theories need to be examined to identify predictors of student success in nursing school and to successfully increase the ethnic diversity of student populations in response to the growth of the ethnically diverse patient population.

This chapter will discuss the study findings, highlighting the demographic variables first, then including a discussion regarding general, academic and clinical self-efficacy, as well as social support, personal factors and community factors. The limitations of the study, implications for future research, and some closing thoughts on this complex topic of self-efficacy are discussed.

Discussion Related to Research Findings

Question 1

What are the relationships between academic self-efficacy, clinical self-efficacy, and general self-efficacy in Caucasian and African American pre-nursing students?

Survey results for this study found no racial differences in academic, clinical nursing self-efficacy, or general self-efficacy. In both White and Black pre-nursing students there were significant correlations between academic self-efficacy, clinical self-efficacy and general self-efficacy. If a student had a high degree of general self-efficacy, they were also likely to have a high degree of academic and clinical self-efficacy.

The General Self-Efficacy Scale was created in 1993 by Jerusalem and Schwarzer to assess a general sense of perceived self-efficacy with the aim in mind to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events. As recommended by Jerusalem and Schwarzer, this scale was combined with a more comprehensive questionnaire, which included the Nursing Academic Self-Efficacy Scale (NASES) and the Nursing Clinical Self-Efficacy Scale (NCSES).

The NASES and the NCSES were constructed by Harvey and McMurray (1994) based on Bandura's (1997) theory, that nursing self-efficacy is developed through four factors: mastery experiences, vicarious states, physiological states, and verbal persuasion. Consistent with this study, the scales have been used in prior studies, which demonstrated relationships between academic and clinical self-efficacy (Kuznar, 2009; Lewis, 2011). No studies were found that combine the General Self-Efficacy scale with the NASES and the NCSES. Though, as noted above, no racial differences were found when combined.

Question 2

Is there a difference in nursing academic self-efficacy, nursing clinical self-efficacy, and general self-efficacy between Caucasian and African American pre-nursing students?

The three instruments, NASES, NCSES, and the General Self-Efficacy scale, tested the students' confidence in completing clinical tasks, performing academically, and general self-efficacy during adversities. There were no statistically significant differences found between the two groups of ethnically diverse students. Bandura (1986) asserts that human accomplishment, including the acquisition of knowledge and competencies, requires an optimistic sense of personal self-efficacy because social realities are replete with impediments, adversities, failures, setbacks, and inequities. Studies found in the literature support the need for self-efficacy, gained through intervention (Kuznar, 2009; Lewis, 2011).

In another study, using a sample drawn from 14 universities and community colleges across the state of Tennessee, Lewis (2011) examined self-efficacy and retention among ethnically diverse (non-Caucasian) nursing students. There were no racial differences found in nursing academic or clinical self-efficacy scores between the two ethnic groups. However, using logistic regression analyses the researcher found that academic self-efficacy was a significant predictor of progression for Caucasian students, but not for the ethnically diverse students. Nursing clinical self-efficacy was not a significant predictor in either group. This study found similar results in self-efficacy between Caucasian and African American pre-nursing students. Logistic regression was not used to examine the results in this study due to small sample size (N=88).

Question 3

Is there a difference in the personal and community factors between Caucasian and African American pre-nursing students?

In this study, there were no statistically significant differences based on personal factors (gender, marital status, socioeconomic status, or age) and community factors (vicarious experiences, mastery experiences, and role models) between Caucasians and African Americans. However, there were differences in types of social support experienced by the two ethnic groups. Lewis (2011) also found no differences in mastery experiences or vicarious experiences between minority and Caucasian nursing students. There was variability in the degree of verbal persuasion with Caucasian nursing students reporting higher levels of verbal support for nursing school.

Personal factors. Slightly more study participants were Caucasian, over 20 years of age, and reported being married. Though not found to be statistically significant, in this study, more than half (51.1%) of the participants were greater than 20 years old. This may be an indication that nursing was a second career. African Americans were found to be less socioeconomically secure and reported a greater likelihood of working, needing financial aid, and depending on their parents to pay for college. This finding is consistent with the current economic status in the United States. According to the United States Bureau of Labor (2012) the unemployment rate for Blacks rose to 14.4% from 13.6% in May, a sharp contrast to the White unemployment rate, which stayed put at 7.4% and the Hispanic rate, which held at 11%.

Race is a key component of identity, particularly for minority groups. Alongside the issue of race is the issue of gender and age. Caucasian women account for more than 80% of the nurses in the United States (United States Census Bureau, 2007). According to a recent study

by the U.S. Department of Health and Human Services (2012), the average age of graduates from basic nursing education program is on the rise, indicated by the graduation age of 31.7 years, up from 23.2 years, over 15 years ago. Only 8.0% of all RNs are under the age of 30, with the majority being female and approximately 168,181 RNs are men – only 5.8% of the total nursing population. In this study, 14.8% of the total participants were male. Even more interesting, most of the men in the study were African American (n = 10), showing promise that efforts to recruit may be showing positive results. In a study by Shapiro and Keyes (2008), marital status and its link to social well-being is explored. Researchers found that married persons did not have a significant social well-being advantage over non-married persons. Rather, both singles and couples benefit from having a broad spectrum of influences.

Community factors. Though there were no statistically significant differences between ethnic groups, variances in the level of vicarious experiences, mastery experiences and exposure to role models were found. Although not statistically significant, in this study, African Americans were more likely to have worked in a healthcare setting, but reported fewer mastery experiences, lower self-reported grade point averages, and far less exposure to role models. According to the literature role models are important in influencing these variables.

In a longitudinal study by Zirkel (2002), young adolescents (N=80) with race and gender matched role models provided young people with a greater sense of the opportunities available to them in the world. Study results revealed that students who reported having at least one race and gender matched role model at the beginning of the study performed better academically up to 24 months later, reported more achievement-oriented goals, enjoyed achievement-relevant activities to a greater degree, thought more about their future, and looked up to adults rather than peers more often than students without a race and gender match role model.

Kelly (2006) conducted a study of 495 ADN, diploma, and bachelor of science in nursing students in North Carolina, it was noted that the four most important factors influencing nursing students to choose a career in nursing were, in rank order, prior experience when they or a loved one was hospitalized, prior experience working in healthcare, the presence of a family member or friend who was a nurse, and a nurse role model. Nurses who are currently practicing must also acknowledge that their actions are being observed and their words are being listened to by potential students who are making career choices.

In this study personal mastery was also represented by GPA, since GPA indicates the degree of competency one has in coursework. There were no statistically significant differences in GPA between African American and Caucasian pre-nursing students. Becker and Gable (2009) conducted a study to examine the relationship between self-efficacy or belief in one's capability and first-term GPA, attendance, and retention based on the premise that the greatest problem in a career college serving an urban, highly diverse, low-income population is students' inability to focus on educational effort due to life's general challenges, which materially detract from their academic performance. The study involved $N = 194$ first-term day and evening students, $n = 66$ males (34%) and $n = 128$ females (66%). Study results indicated that self-efficacy was related to GPA achievement.

Today, many schools, such as the schools in Savannah Georgia, where this study was conducted offer technical programs to high school students, giving them the opportunity to take health occupation courses. In addition, summer institutes are offered in conjunction with these programs. In Georgia, this program is called the Beach High School Career and Technical Education program. Students are introduced to job related technical skills. The program includes classroom instruction and on-the job training at local hospitals and health care facilities.

Upon completion of courses, students earn a certificate which equips them for entry-level positions in hospital support services and clerical areas. These results call to question the timing of interventions in African American students, and imply the need for early programming, perhaps before high school, with ongoing follow-up.

Question 4: What are the relationships between academic self-efficacy, clinical self-efficacy, general self-efficacy and the personal and community factors in the Caucasian and African American pre-nursing students?

None of the community factors (vicarious experiences, mastery experiences, and role models) were related to the self-efficacy measures in the total group or within the two ethnic groups. In this question, the Social Provisions Scale was used to assess the relationship between self-efficacy and the personal factor of support. Of the personal factors only age and social support were related to self-efficacy. With age, often times comes maturity, due to more exposure to life experiences. In this cohort, more than half (51.1%) of the participants were over 20 years.

For the Caucasian students, general self-efficacy had large correlations ($r \geq .50$) with all the support scales except the guidance subscale and for the African American students general self-efficacy had moderate correlations ($r = .30$ to $.49$) with the reassurance and guidance subscales and the total support score. More Caucasians were found to be married, thus making it possible that they seek guidance from other sources, rather than in the academic setting.

According to Crisp and Cruz (2009), one of the most methodologically rigorous quantitative mentoring studies to date was conducted by Campbell and Campbell in 1997, utilizing an experimental design to investigate the effects of mentoring (guidance) on over 300 minority students' academic success, defined by a higher grade point average (GPA) and

retention rates. Minority students attending a large metropolitan university were randomly assigned to two groups; a group of students who received faculty mentoring and a control group who did not. T-test results indicated mentored minority students had significantly higher grade point averages and were twice as likely to persist as non-mentored minority students.

Students who had more contact with their faculty member were found to be more academically successful. A significant positive relationship was found between faculty contact, the number of credit hours earned, and grade point average (Campbell & Campbell, 1997). The results of the Campbell and Campbell study support one of the original hypotheses of this study, that there are differences in the nursing clinical self-efficacy, academic self-efficacy, and general self-efficacy scores between African American and White pre-nursing students. While it is the responsibility of the faculty to establish structure for the student, the students also carry a level of responsibility to engage and to seek out guidance, from both the faculty and from others.

For Caucasian students, nursing academic self-efficacy had moderate to large correlations with all the support scales except the guidance subscale and for the African American students nursing academic self-efficacy had moderate correlations with social integration, reassurance, guidance, and total support score. For African American students, nursing clinical self-efficacy had a moderate correlation with age, and moderate to large correlations with all the support subscales and total support score. General self-efficacy was found to have large correlations with attachment, social integration, reassurance, reliable alliances, and opportunity for nurturance.

In 2004, Zeitlin-Ophir, Melitz, Miller, Podoshin, and Mesh attempted to analyze the variables that influence the academic integration of nursing students. One hypothesis of the study was related to the positive influence of social integration on the level of students' academic

integration. Of the 111 students enrolled, 92 (83%) agreed to participate in the study. The independent variables included the student's background; amount of support received in the course of studies; extent of outside family and social commitments; satisfaction with the school's facilities and services; and level of social integration. The dependent variable was the student's level of academic integration. The findings substantiated that academic integration is influenced by a number of variables, the most prominent of which is the social integration of the student with colleagues and faculty. In addition, Zeitlin-Ophir et al. (2004) found that the likelihood of students' completing their studies directly correlates with their academic and social integration.

If students are struggling to integrate socially, many of the services offered to assist with insuring their success go unattended and the student maintains a level of disconnect or alienation. Such circumstances could only work against all involved. The consequences of student attrition are realized by the student, the college of nursing, and the nursing profession. These consequences then transfer their impact to the institutions that desperately need the nursing workforce to continue to grow and to produce highly confident and competent nurses.

Study Limitations

Self-efficacy in all students, and particularly new students, is a broad and complicated concept. One limitation of this study was possible survey fatigue. There were over 114 students who opened/began the survey, but only 88 completed the entire questionnaire. While it was considered important to measure self-efficacy from various aspects, the number of questions required to accomplish this generated a 99-item survey for the students. While many studies report difficulty in recruiting African Americans to participate (Kuznar, 2009), uniquely, this sample, had a strong representation of minority students, almost half (42%).

The small sample size was also identified as a limitation. A larger sample would broaden the number statistical analysis appropriate for this sample, such as logistical regression. In a

study by Sheehan (2001), response rates to e-mail surveys and influences on response rates were examined. Influences on response rates included the year of the study, the number of questions, the number of pre-notification contacts, the number of follow-up contacts, and the survey topic. Results indicated that the number of contacts had the most influence on response rates. During this study, participants were sent weekly emails for the first three weeks of the study. During the last week, daily reminders were sent.

Thirdly, the study was conducted during the same time as students were taking fall exams. Students perhaps responded to the survey during times when they could break away from studying, but they may not have been at their sharpest. A review of the study times on Qualtrics found that students took as little as 10 minutes to take the survey and as long as 60 minutes. Since the survey included 99 questions, taking the survey in 10 minutes would equate to spending less than 6 seconds on each question. Perhaps these students did not take the time to read the question, ponder the answer, and choose the answer best describing them.

And finally, the study was conducted at only one college of nursing. Though the college, Armstrong Atlantic State University, is a public school with an ethnically diverse student body, study results suggest that all schools are different, for a variety of reasons.

Implications and Recommendations for Practice and Research

This study found that AA students with a comparable GPA and socioeconomic support system, had comparable self-efficacy as Caucasian students. This suggests that being able to identify “at-risk” students as they begin their educational effort will allow timely and efficient allocation of limited resources for early academic and social support intervention, which could take many forms including in-depth assessment, progress tracking, tutoring, advising, appropriate class assignments, study group assignments, and/or personal counseling.

Self-efficacy was not found to differ between Caucasians and African Americans in this study, but GPA was not significantly different either. GPA and self-efficacy have been shown in previous studies to have a strong relationship (Becker & Gable, 2009). In there had been more variability in social support, GPA, and personal factors between the AA and Caucasian pre-nursing students, there might have been more variability in measures of self-efficacy. Replicating this research study in multiple public four-year schools, in multiple states and economic sectors may yield different results from a larger sample of students. Though representing a small sample, this study included older more mature students, who may bring a different set of life experiences, challenges, and assumptions to their academic work. Future research will help to sort through the results of such a shift in the demographics of nursing students.

Conclusions

Although there were no statistically significant differences between Caucasian and African American students in this study, the implications for nursing are significant. Future generations of nurses from diverse backgrounds are needed. The nursing student population has and will continue to change. According to Bednash (2000), the future of health care is dependent on an adequate supply of appropriately educated and skilled professional registered nurses. Students will come to us with previous college experience and/or degrees, they will perhaps be older, they may have jobs, they will have family responsibilities, they will be living in various home situations, and they will have more sophisticated expectations of their education experience.

Based on the student participants in this study and in other schools of nursing, students from various demographic backgrounds and with differing personal factors, and community

factors are the new traditional students, and the 18-year-old who graduates from high school and enters directly into college is the nontraditional student. This study suggests that interventions before college are critical in establishing personal mastery and vicarious experiences that influence minority students to consider nursing as a career. In addition, study results may challenge the current thinking regarding what interventions are desired by minority students, as well as how faculty organize these offerings as a part of the minority student experience. Thus early interventions in schools and strategies to meet the needs of new learners must continue. Leaders must examine ways to enhance the learning environment to foster enrollment and matriculation of diverse students. This study supports that when the resources are aligned equally, students from varying backgrounds and experiences have a high likelihood of succeeding in becoming nurses.

REFERENCES

- Abbott, M. L., & Joireman, J. (2001). *The relationships among achievement, low income, and ethnicity across six groups of Washington State students*. Washington: Washington School Research Center.
- Abbott, M. L., Hart, C., Lybrand, J., & Nouri, L. (2009). *The relationships among achievement, low income, and ethnicity*. Washington: Washington School Research Center.
- Agency for Healthcare Research and Quality (2009). Retrieved from
from <http://www.ahrq.gov/qual/qrd11.htm>
- Agency for Healthcare Research and Quality. (2010). Retrieved from www.ahrq.gov/
- Alliman-Brissett, A. E., Turner, S. L., & Skovholt, T. M. (2004). Parent support and African American adolescents' career self-efficacy. *Professional School Counseling, 7*(3), 124-140.
- American Association of Colleges of Nursing. (1997). AACN position statement: Diversity and equality of opportunity. Retrieved from
<http://www.aacn.nche.edu/Publications/positions/diverse.htm>
- American Nurses Association. (1998). Addressing diversity in the profession. *ANA, 1*, 25.
- American Organization of Nurse Executives – AONE. (2007). *AONE guiding principles for diversity in healthcare organizations*. Retrieved from
http://www.aone.org/resources/PDFs/AONE_GP_Diversity.pdf
- Andrews-Beard, C., Swanson, J., & Stewart, S. (1990). An innovative recruitment approach: Day with a nurse. *Journal of Nursing Education, 29*(1), 40-42.

- Andrew, S., & Vialle, W. (1998). *Nursing students' self-efficacy, self-regulated learning and academic performance in science*. Retrieved from <http://www.aare.edu.au/98pap/and98319.htm>
- Arnet, J. J. (2000). Emerging adulthood: A theory of development from late teens through the twenties. *American Psychologist*, 55(5), 469-480.
- Astin, H. S. (1984). The meaning of work in women's lives: A socio-psychological model of career choice and work behavior. *Counseling Psychologist*, 12, 117-126.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50, 248-287.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bandura, A., Barbaranelli, C., Caprara, G., & Pastorelli, C. (2001). Self-efficacy beliefs as shapers of children's aspirations and career trajectories. *Child Development*, 72(1), 187-206.
- Bandura, A. (2010). Self-efficacy and the construction of an optimistic self. *The International Child and Youth Care Network*. Retrieved from <http://www.cyc-net.org/cyc-online/cyconline-oct2010-bandura.html>
- Barton, A. J., & Swider, S. M. (2009). Creating diversity in a baccalaureate nursing program: A case study. *International Journal of Nursing Education Scholarship*, 9(1), 1-11.
- Becker, S. ., & Gable, R. K. (2009). The relationship of self-efficacy, GPA, attendance, and college student retention. *Higher Education*. Retrieved from <http://scholarsarchive.jwu.edu/higher/2>

- Bednarz, H., Schim, S., Doorenbos, A. (2010). Cultural diversity in nursing education: Perils, pitfalls, and pearls. *Journal of Nursing Education*, 49(5), 253-260.
- Bednash, G. (2000). The decreasing supply of registered nurses inevitable future or call to action? *JAMA*, 283(22), 2985-2987.
- Bidwell, A. S., & Brasler, M. L. (1989). Role modeling versus mentoring in nursing education. *Journal of Nursing Scholarship*, 21(1), 23-25.
- Bong, M. (1999). Personal factors affecting the generality of academic self-efficacy judgments: Gender, ethnicity, and relative expertise. *Journal of Experimental Education*, 67(4), 1-21.
- Borman, G. D., & Rachuba, L. T. (2001). Academic success among poor and minority students. *Center for Research on the Education of Students Placed at Risk*.
- Bridges, W. (1980). *Transitions*. Reading, MA: Addison Wesley.
- Britner, S. L., & Parjares, F. (2006). Sources of science self-efficacy beliefs of middle school students. *Journal of Research in Science Teaching*, 43(5), 485-499.
- Brooks-Gunn, J., Petersen, A. C., & Eichorn, D. (1985). Time of maturation and psychosocial functioning in adolescence. *Journal of Youth and Adolescence*, 14(3/4), 149-372.
- Buerhaus, P. I., Donelan, K., Norman, L., & Dittus, R. (2005). Nursing students' perceptions of a career in nursing and impact of a national campaign designed to attract people into the nursing profession. *Journal of Professional Nursing*, 21(2), 75-83.
- Cairns, R. B., Carins, B. D., & Neckerman, J. J. (1989). Early school dropout: Configuration and determinants. *Child Development*, 60, 1437-1452.
- Caldas, S. J., & Bankston, C. (2001). Effect of school population socioeconomic status on individual academic achievement. *The Journal of Educational Research*, 90(5), 269-277.

- Campbell, T. A., & Campbell, D. E. (1997). Faculty/student mentor programs: Effects on academic performance and retention. *Research in Higher Education, 38*(6), 727-742.
- Campbell, J. L., Ramsay, J., & Green, J. (2001). Age, gender, socioeconomic, and ethnic differences in patients' assessments of primary health care. *Quality in Health Care, 10*, 90-95.
- Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology, 44*, 473-490.
- Caprara, G. V., Vecchione, M., Alessandri, G., Gerbino, M., & Barbaranelli, C. (2010). The contribution of personality traits and self-efficacy beliefs to academic achievement: A longitudinal study. *British Journal of Educational Psychology, 78*-96.
- Carline, J. D., & Patterson, D. G. (2003). Characteristics of health professions schools, public school systems, and community-based organizations in successful partnerships to increase the numbers of underrepresented minority students entering health professions education. *Academic Medicine, 78*(5), 467-482.
- Carter-Pokras, O., & Baquet, C. (2002). What is a health disparity? *Public Health Reports, 117*, 426-434.
- Ceballo, R., McLoyd, V. C., & Toyokawa, T. (2004). The influence of neighborhood quality on adolescents' educational values and school effort. *Journal of Adolescent Research, 19*(6), 716-739.
- Centers for Disease Control and Prevention. (2011). Retrieved from <http://www.cdc.gov/>

- Chemers, M., Hu, L., & Garcia, B. (2001). Academic self-efficacy and first-year college student's performance and adjustment. *The Journal of Educational Psychology*, 93(1), 55-64.
- Chick, N., & Meleis, A. I. (1986). *Transitions: A nursing concern*. Maryland: Aspen Publishers.
- Cicchetti, D., & Rogosch, F. A. (2002). A development psychopathology perspective of adolescence. *Journal of Consulting and Clinical Psychology*, 70(1), 6-20.
- Cleary, T. J., & Zimmerman, B. J. (2004). Self-regulation empowerment program: A school-based program to enhance self-regulated and self-motivated cycles of student learning. *Psychology in the Schools*, 41(5), 537-550
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New Jersey: Lawrence Erlbaum.
- Cohen, P., Kasen, S., Chen, H., Hartmark, C., & Gordon, K. (2003). Variations in patterns of developmental transitions in the emerging adulthood period. *Developmental Psychology*, 39(4), 657-669.
- Collins, K., Hughes, D., Doty, M., Ives, B., Edwards, J., & Tenney, K. (2002). *Diverse communities, common concerns: Assessing health care quality for minority Americans*. New York: The Commonwealth Fund.
- Coleman, J. S. (1961). *Social climates in high schools*. Washington, DC: U.S. Government Printing Office.
- Coleman, J., & Roker, D. (1998). Adolescence: A review. *The Psychologist*, 11, 593-596.
- Crisp, G. & Cruz, I. (2009). Mentoring college students: A critical review of the literature between 1990 and 2007. *Research in Higher Education*, 50, 525-545.

- Cunningham, A. F., Erisman, W., & Looney, S. M. (2007). From aspirations to action: The role of middle school parents in making the dream of college a reality. *Institute of Higher Education Policy*, 1-40.
- Cutrona, C. E., & Russell, D. (1987). The provisions of social relationships and adaptation to stress. Connecticut: JAI Press.
- Degazon, C. E., & Shaw, H. K. (2007). Urban high school students' perceptions of nursing as a career choice. *Journal of National Black Nurses Association*, 18(1), 8-13.
- Dowell, M. A. (1996). Issues in recruitment and retention of nursing students. *Journal of Nursing Education*, 35, 293-297.
- Dunkelberger, J. E., & Aadland, S. C. (1984). *Nursing Research*, 33(4), 235-240.
- Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & MacIver, D. M. (1993). The impact of stage – environment fit on young adolescent experience in schools and in families. *American Psychologist*, 48(2), 90-101.
- Erwin, K., Blumenthal, D. S., Chapel, T., & Allwood, L. V. (2004). Building an academic community partnership for increasing the representation of minorities in the health professions. *Journal of Health Care for the Poor and Underserved*, 15, 589-602.
- Ferguson, C. (2008). The school-family connection: Looking at the larger picture - A review of current literature. National Center for Family and Community Connections with School.
- Fordham, S., & Ogbu, J. (1986). Black students' school success: Coping with the burden of 'acting white'. *Urban Review*, 18, 176-206.
- Fouad, N. A., & Byars-Winston, A. M. (2005). Cultural context of career choice: Meta-analysis of race/ethnicity differences. *The Career Development Quarterly*, 53(3), 223-233.

- France, N., Fields, A., & Garth, K. G. (2004). You're just shoved to the corner: The lived experience of Black nursing students being isolated and discounted – A pilot study. *Visions, 12*(1), 28-36.
- Freedman, H. S., & Newland, L. A. (2002). Family transitions during the adolescent transition: Implications for parenting. *Adolescence, 37*, 457-475.
- Gaskins, D. J., Arbelaez, J. J., Brown, J. R., Petras, H., Wagner, F. A., & Cooper, L. A. (2007). Examining racial and ethnic disparities in site of usual source of care. *Journal of the National Medical Association, 99*(1), 22-30.
- Goldscheider, F. K., & Goldscheider, C. (1998). The effects of childhood family structure on leaving and returning home. *Journal of Marriage and the Family, 60*(3), 745-756.
- Gore, P. (2006). Academic self-efficacy as a predictor of college outcomes: Two incremental validity studies. *Journal of Career Assessment, 14*(1), 92-115.
- Graber, J. A., & Brooks-Gunn, J. (1996). Transitions and turning points: Navigating the passage from childhood through adolescence. *Developmental Psychology, 32*(4), 768-776.
- Gushue, G.V., Scanlan, K.R., Pantzer, K. M., & Clarke, C.P. (2006). The relationship of career decision-making self-efficacy, vocational identify, and career exploration behavior in African-American high school students. *Journal of Career Development, 33*(1), 19-28.
- Harold, G. T., Aitken, J. J., & Shelton, K. H. (2007). Inter-parental conflict and children's academic attainment: A longitudinal analysis. *Journal of Child Psychology and Psychiatry, 48*(12), 1223-1232.
- Harvey, V., & McMurray, N. (1994). Self-efficacy: A means of identifying problems in nursing education and career progress. *International Journal of Nursing Studies, 31*(5), 471-485.

- Haynes, A., Winters, K., & Davis, S. (2003). Recruitment, retention and matriculation of ethnic minority nursing students: A university of Mississippi school of nursing approach. *Journal of Cultural Diversity*, 10(4), 128-133.
- Hill, S. E. K., & Grant, G. (2000). Mentoring by minorities for minorities: The organizational communications support program. *Review of Business*, 21, 53-57.
- Hirschi, A., Niles, S., & Akos, P. (2011). Engagement in adolescent a career preparation: Social support, personality and the development of choice decidedness and congruence. *Journal of Adolescence*, 34, 173-182.
- Hochschild, J. L. (2003). Social class in public schools. *Journal of Social Issues*, 59(4), 821-840.
- Hodgman, E. (1999). High school students of color tell us what nursing and college mean to them. *Journal of Professional Nursing*, 15(2), 95-105.
- Hurst, S., & Koplín-Baucum, S. (2003). Role acquisition, socialization, and retention: Unique aspects of a mentoring program. *Journal of Nurses in Staff Development*, 19(4), 176-180.
- Im, E. O. (1997). Neglecting and ignoring menopause within a gendered multiple transitional context: Low income Korean immigrant women. Doctoral Dissertation, University of California: San Francisco.
- Institute for College Access and Success. (2008). *How financial aid awareness affects college access and success*. Retrieved from http://www.ticas.org/files/pub/Paving_the_Way.pdf
- Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academy Press.
- Institute of Medicine. (2003). Unequal treatment: Report of the institute of medicine on racial and ethnic disparities in healthcare. *The Annals of Thoracic Surgery*, 76, 1377-1381.

- Israelson-Hartley, S. (2011). As traditional families decline, global concerns mount. Retrieved from <http://www.deseretnews.com/article/700104288/As-traditional-family-declines-global-concern-mounts.html?pg=all>
- Ivory, L. (2002). Ethnic identity, college academic self-efficacy, and academic performance of African-American and Puerto Rican college students under the aegis of a higher education opportunity program. *Dissertation Abstracts International*, 63-107.
- Jackson, J. (2002). Enhancing self-efficacy and learning performance. *The Journal of Experimental Education*, 70(3), 243-255.
- Jerusalem, M., & Schwarzer, R. (1992). *Self-efficacy as a resource factor in stress appraisal processes*. Washington, DC: Hemisphere.
- Jimenez-Cook, S., & Kleiner, B. H. (2005). Nursing at the crossroads: Increasing workforce diversity and addressing health disparities. *Equal Opportunities International*, 24(7), 1-10.
- Jones, B., Dominiguez, C. S., & Durodoye, B. (2011). Career maturity and ethnically diverse high school students. *The National Career Development Association*, 1-4.
- Jones, D., & Motluk, A. (2011). The power of persuasion: Eight ways to get exactly what you want. *New Scientist*, 1-6.
- Katz, J. R., Smart, D., & Paul, R. (2010). Creating a path: American Indian/Alaska native high school students pursuing college and a career in nursing. *International Journal of Nursing Education Scholarship*, 7(1), 1-14.
- Keller, T. E., Cusick, G. R., & Courtney, M. E. (2007). Approaching the transition to adulthood: Distinctive profiles of adolescents aging out of the child welfare system. *Social Service Review*, 1(81), 453-484.

- Kelly, K. (2006). Recruiting the next generation into nursing – no negativity allowed. *JONA*, 36(2), 55-57.
- Kirkland, M. L. S. (1998). Stressors and coping strategies among successful female African American baccalaureate nursing students. *Journal of Nursing Education*, 37(1), 5-12.
- Klomegah, R. Y. (2007). Predictors of academic performance of university students: An application of the goal efficacy model. *College Student Journal*, 1-4.
- Koskinen, K. U., & Vartia, J. (2006). Role of storytelling I the mentoring process.
Retrieved from
http://www2.warwick.ac.uk/fac/soc/wbs/conf/olkc/archive/olkc1/papers/105_koskinen.pdf
- Kuznar, K. A. (2009). Effects of high-fidelity human patient simulation experience on self-efficacy, motivation and learning of first semester associate degree nursing students. Dissertation, University of Minnesota, Minnesota.
- Larson, E. (1994). Minority high school student summer research apprentice program. *Journal of Nursing Education*, 33(4), 149-150.
- LaVeist, T. A., Nickerson, K. J., & Bowie, J. V. (2000). Attitudes about racism, medical mistrust and satisfaction with care among African American and white cardiac patients. *Med Care Resource Review*, 57(1), 146-161.
- Levine, D. A., Neidecker, M.V., Keife, C. I., Karve, S., Williams, L. S., & Allison, J. J. (2010). Racial/ethnic disparities in access to physician care and medications among U.S. stroke survivors. *Neurology*, 76, 53-61.
- Lewis, J. C. (2011). *Self-efficacy and retention among ethnically diverse nursing students*. Dissertation, University of Northern Colorado, Colorado.

- Linnehan, F. (2001). A longitudinal study of work-based, adult-youth mentoring. *Journal of Vocational Behavior*, 63, 40-54.
- Marcia, J. E. (1983). Some directions for the investigation of ego development in early adolescence. *The Journal of Early Adolescence*, 3(3), 215-223.
- Matutina, R. E., Newman, S. D., & Jenkins, C. M. (2010). Measurement of students' perceptions of nursing as a career. *Journal of Nursing Scholarship*, 42(3), 319-329.
- Mau, W. J. (2004). Cultural dimensions of career decision-making difficulties. *The Career Development Quarterly*, 53, 67-77.
- Mau, W. C., & Bikos, L. H. (2000). Educational and vocational aspirations of minority and female students: A longitudinal study. *Journal of Counseling*, 78, 186-194.
- Mead, N., & Roland, M. (2009). Understanding why some ethnic minority patients evaluate medical care more negatively than white patients: A cross sectional analysis of a routine patient survey in English general practices. *Online First*, 1-10.
- Meleis, A. (2010). *Transition Theory – middle range and situation-specific theories in nursing research and practice*. New York: Springer Publishing.
- Meleis, A. I., & Trangenstein, P. A. (1994). Facilitating transitions: Redefinition of the nursing mission. *Nursing Outlook*, 42(6), 255-259.
- Messias, D. K. (1997). *Narratives of transnational migration, work, and health: The lived experiences of Brazilian women in the United States*. Doctoral Dissertation, University of California, San Francisco.
- Messias, D. K., Gillis, C. L., Sparacino, P. S., Tong, E. M., & Foote, D. (1995). Stories of transition: Parents recall the diagnosis of congenital heart defects. *Family Systems Medicine*, 3(3), 367-377.

- Muldoon, O. T., & Reilly, J. (2003). Career choice in nursing students: Gendered constructs as psychological barriers. *Journal of Advanced Nursing*, 43(1), 93-100.
- Murnane, R., & Steele, L. (2007). What is the problem: The challenge of providing effective teachers of all children. *The Future Children*, 17(1) 15-43.
- Myers, V. L. (2007). Recruitment and retention of a diverse workforce: Challenges and opportunities. *Journal of Healthcare Management*, 52(5), 290-298.
- Myers, V. L., & Dreachslin, J. L. (2007). Recruitment and retention of a diverse workforce: Challenges and opportunities. *Journal of Healthcare Management*, 52(5), 290.
- Nair, R. B. (2002). *Narrative gravity: Conversation, cognition, culture*. Routledge Printing, 259.
- National Center for Law and Economic Justice. (2011). Poverty in the United States: A snapshot. Retrieved from <http://www.nclaj.org/poverty-in-the-us.php>
- Nibert, A. T., & Young, A. (2008). A third study on predicting NCLEX success with the HESI exit exam. *Computers in Nursing*, 19(4), 172-178.
- Nota, L., Ferrari, L., Solberg, V. S., & Soresi, S. (2007). Career search self-efficacy, family support, and career indecision with Italian youth. *Journal of Career Assessment*, 15, 181-194.
- Nursing Innovations. (2011). *The nurses you're searching for are right inside your hospital walls*. Retrieved from <http://healthcare.utah.edu/nursinginnovation/10ideas/four.php>
- O'Brien, F., Mooney, M., & Glacken, M. (2008). Impressions of nursing before exposure to the field. *Journal of Clinical Nursing*, 17, 1843-1850.
- Olden, K., & White, S. L. (2005). Health-related disparities: Influence of environmental factors. *Med Clinics of North America*, 89, 721-738.

- Otto, L. B. (2000). Youth perspectives on parental career influence. *Journal of Career Development, 27*, 111-118.
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research, 66*(4), 543-578.
- Patterson, D. G., & Carline, J. D. (2006). Promoting minority access to health careers through health profession-public school partnerships: A review of the literature. *Academic Medicine, 81*(6), 5-10.
- Paterson, R. M. (2002). Mentoring nursing career pathways: The Maryvale high school student nurse academy. *Journal of School Nursing, 18*(6), 329-335.
- Patrick, L., Care, E., & Ainley, M. (2011). The relationship between vocational interests, self-efficacy and achievement in the prediction of educational pathways. *Journal of Career Assessment, 19*(1), 61-74.
- Peters, C. (2005). Learning: Whose responsibility is it? *Nurse Educator, 30*(4), 159-165.
- Peterson, E. R., & Whiteman, M. C. (2007). I think I can, I think I can....: The interrelationships among self-assessed intelligence, self-concept, self-efficacy and the personality trait intellect in university students in Scotland and New Zealand. *Personality and Individual Differences, 43*, 959-968.
- Pew Health Professions Commission. (1998). *Recreating health professional practice for the new century*. San Francisco: Center for the Health Professions.
- Phillips, B. C., Spurling, M. A., & Armstrong, W. A. (2002). Associate degree nursing: Model prerequisite validation study. California community college system: Final report. Raleigh, NC: North Carolina State Department of Community Colleges.

- Phillips, K., Kwon, J. Y., & Klein, S. (1998). *Dropout rates in the United States*. Retrieved from http://eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch
- Pintrich, P., & Schauben, B. (1992). *Student's motivational beliefs and their cognitive engagement in classroom academic tasks*. New Jersey: Lawrence Erlbaum.
- Pintrich, P. R., & Schunk, D. H. (1996). *Motivation in education: Theory, research, and applications*. New Jersey: Prentice Hall Merrill.
- Polit, D., & Beck, C. (2008). *Nursing research: Generating and assessing evidence for nursing practice* (8th ed.). Philadelphia: Lippincott, Wilkins, & Williams.
- Porter, G., Edwards, P. B., & Granger, B. B. (2009). Stagnant perceptions of nursing amongst high school students: Result of a shadowing intervention study. *Journal of Professional Nursing, 25*(4), 227-233.
- Powell, D. F., & Luzzo, D. A. (1998). Evaluating factors associated with the career maturity of high school students. *The Career Development Quarterly, 47*, 145-158.
- Price, S. L. (2008). Becoming a nurse: A meta-study of early professional socialization and career choice nursing. *Journal of Advanced Nursing, 65*(1), 11-19.
- Roberts L. W., Johnson, M. E., Brems, C., & Warner, T. D. (2007). Ethical disparities: Challenges encountered by multidisciplinary providers in fulfilling ethical standard in the care of rural and minority people. *The Journal of Rural Health, 23*, 89-97.
- Robinson, S. B., Miller, P. L., McGinnis, K. C., & Matthews, B. J. (1992). A creative recruitment program – future nurses' camp. *Journal of Staff Development, 8*(3), 104-108.
- Rojewski, J. W., Wicklein, R. C., & Schell, J. W. (1995). Effects of gender and academic-risk behavior on the career maturity of rural youth. *Journal of Research in Rural Education, 11*(2), 1-17.

- Rossen, E. K., & Knafel, K. A. (2003). Older women's response to residential relocation: Description of transition styles. *Qualitative Health Research, 13*(20), 20-36.
- Russell, D., Cutrona, C. E., Rose, J., & Yurko, K. (1984). Social and emotional loneliness: an examination of Weiss's topology of loneliness. *Journal of Personality and Social Psychology, 46*(6), 1313-1321.
- Sawyer, L. M. (1999). Engaged mothering: The transition to motherhood for a group of African American women. *Journal of Transcultural Nursing, 1*, 14-21.
- Schumacher, K. L. (1994). Shifting patterns of self-care and caregiving during chemotherapy. Dissertation, University of California, San Francisco.
- Schunk, D. H. (1995). *Self-efficacy and education and instruction*. New York: Plenum Press.
- Seidman, E., Allen, L., Aber, J. L., Mitchell, C., & Feinman, J. (1994). The impact of school transitions in early adolescence on the self-system and perceived social context of poor urban youth. *Child Development, 65*, 507-522.
- Seago, J. A., Wong, S. T., Keane, D., & Grumbach, K. (2008). Measuring attributes of success of college students in nursing programs: A psychometric analysis. *Journal of Nursing Measurement, 16*(3), 184-200.
- Shapiro, A., & Keyes, C. L. M. (2008). Marital status and social well-being: Are the married always better off? *Soc Indic Res, 88*, 329-346.
- Sheehan, K. (2001). E-mail survey response rates: A review. Retrieved from <http://jcmc.indiana.edu/vol6issue2/sheehan.html>
- Skorikov, V. (2007). Continuity in adolescent career preparation and its effects on adjustment. *Journal of Vocational Behavior, 70*, 8-24.

- Stearns, S. J., & Marchione, J. (1989). Pre-nursing club: A recruitment program for minority school-age children. *Nurse Education, 14*(3), 34-36.
- Stewart, S., & Cleveland, R. (2003). A pre-college program for culturally diverse high school students. *Nurse Educator, 28*(3), 107-110.
- Sullivan Commission. (2004). Missing persons: Minorities in the health professions.
Retrieved from
<http://www.jointcenter.org/healthpolicy/doc/SullivanExecutiveSummary.pdf>
- Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown & L. Brooks (Eds.), *Career choice and development* (2nd ed.), pp. 197,261. San Francisco: Jossey-Bass.
- Swap, W., Leonard, D., Shields, M., & Abrams, L. (2001). Using mentoring and storytelling to transfer knowledge in the workplace. *Journal of Management Information Systems, 18*(1), 95-114.
- Tang, M., Pan, W., & Newmeyer, M. D. (2008). Factors influencing high school career aspirations. *Professional School Counseling, 11*, 285-295.
- Thomka, L. A. (2007). Mentoring and its impact on intellectual capital: Through the eyes of the mentee. *Nursing Administration Quarterly, 31*(1), 22-26.
- Timer, J. E., & Clauson, M. I. (2011). The use of selective admissions tools to predict students' success in an advanced standing baccalaureate nursing program. *Nurse Education Today, 31*(6), 601-606.
- Turner, S., & Lapan, R. T. (2002). Career self-efficacy and perceptions of parent support in adolescent career development. *The Career Development Quarterly, 51*, 44-55.

- Unicef. (2005). *Child poverty in rich countries*. Retrieved from <http://www.unicef-irc.org/publications/pdf/repcard6e.pdf>
- United States Bureau of Labor Statistics. (2002). *Employment characteristics of families*. Retrieved from <http://www.bls.gov/news.release/pdf/famee.pdf>
- United States Bureau of Labor Statistics. (2012). Retrieved from <http://www.dol.gov/dol/topic/statistics/index.htm>
- United States Census Bureau. (2007). *Quick Facts*. Retrieved from <http://quickfacts.census.gov/qfd/states/13000.html>
- United States Census Bureau. (2010). Quick Facts. Retrieved from <http://2010.census.gov/2010census/data/>
- U. S. Department of Health and Human Services. (2006). *Annual update of the HHS poverty guidelines*. Retrieved from <http://www.census.gov/hhes/www/poverty/threshld.html>
- U.S. Department of Health and Human Services. (2008). Preliminary findings: 2008 National Sample Survey of Registered Nurses. Retrieved from <http://bhpr.hrsa.gov/healthworkforce/rnsurvey04/footnotes.htm>
- Usher, E. L., & Pajares, F. (2009). Sources of self-efficacy in mathematics: A validation study. *Contemporary Educational Psychology, 34*, 89-101.
- Villarruel, A. M., Canales, M., & Torres, S. (2001). Bridges and barriers: Educational mobility of Hispanic nurses. *Journal of Nursing Education, 40*, 245-251.
- Washington, D. L., Bowles, J., Saha, S., Horowitz, C. R., Moody-Ayers, S., Brown, A. F., Stone, V. E., & Cooper, L. A. (2007). Transforming clinical practice to eliminate racial-ethnic disparities in healthcare. *Journal of General Internal Medicine, 23*(5), 685-691.

- Watts, R. (2003). Race consciousness and the health of African Americans. *Online Journal of Issues in Nursing*, 8(1). Retrieved from <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume82003/No1Jan2003/RaceandHealth.html>
- Wessling, S. (2011). *Does the NCLEX-RN pass the test for cultural sensitivity?* Retrieved from MinorityNurse.com
- Williams, R. P., & Calvillo, E. R. (2002). Maximizing learning among students from diverse backgrounds. *Nurse Educator*, 27, 222-226.
- Williams, S. (2009). A win-win partnership - VA style. Retrieved from <http://www.minoritynurse.com/veterans-affairs-va-nursing/win-win-partnership-va-style>
- Wiseman, R. F. (1994). Role model behaviors in the clinical setting. *Journal of Nursing Education*, 33(9), 405-410.
- Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socio-emotional adjustment. *Journal of Personality* 71(6), 1197–1232.
- Wright, J. P., Cullen, F. T., & Williams, N. (2002). The embeddedness of adolescent employment and participation in delinquency: A life course perspective. *Western Criminology Review*, 4(1), 1-19.
- Wright, S., & Perrone, K. (2010). *An Examination of the Role of Attachment and Efficacy in Life Satisfaction. The Counseling Psychologist*. doi: 10.1177/0011000009359204
- Wroten, S. J., & Waite, R. (2009). A call to action: Mentoring within the nursing profession – A wonderful gift to give and share. *Association of Black Nursing Faculty Journal*, 106-108.

- Yancy, A. K., Grant, D., Kurosky, S., Kravitz-Wirtz, N., & Mistry, R. (2011). Role modeling, risk, and resilience in California adolescents. *Journal of Adolescent Health, 48*, 36-43.
- Zayas, L. E., & McGuigan, D. (2006). Experiences promoting healthcare career interest among high-school students from underserved communities. *Journal of the National Medical Association, 98*(9), 1523-1531.
- Zeitlin-Ophir, I., Melitz, O., Miller, R., Podoshin, P., & Mesh, G. (2004). Variables affecting the academic and social integration of nursing students. *Journal of Nursing Education, 43*(7), 326-329.
- Zhang, J. X., & Schwarzer, R. (1995). Measuring optimistic self-beliefs: A Chinese adaptation of the General Self-Efficacy Scale. *Psychologia: An International Journal of Psychology in the Orient, 38*(3), 174-181.
- Zimmerman, B. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology, 25*, 82-91.
- Zirkel, S. (2002). Is there a place for me? Role models and academic identity among white students and students of color. *Teachers College Record, 104*(2), 357-376.

APPENDIX A: ARMSTRONG IRB

ARMSTRONG ATLANTIC STATE UNIVERSITY

Office of Academic Affairs
11935 Abercorn Street | Savannah GA 31419
912.344.2589 | Fax 912.344.3492
armstrong.edu

Notice of IRB Approval

Name: Mary B. Chatman

Co-Investigators:

Academic Unit: Nursing

Date: September 7, 2012

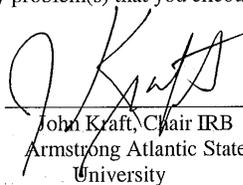
RE: # 1033 Self-Efficacy in Freshman and Sophomore Nursing Students

The above project has been reviewed and is approved by the IRB under the provisions of Federal Regulations 45 CFR 46.

This approval is based on the following conditions:

1. The materials you submitted to the IRB provide a complete and accurate account of how human subjects are involved in your project.
2. You will carry on your research strictly according to the procedures as described in the materials presented to the IRB.
3. You will report to the IRB any changes in procedures that may have a bearing on this approval and require another IRB review.
4. If any changes are made, you will submit the modified project for IRB review.
5. You will immediately report to the IRB any problem(s) that you encounter while using human subjects.

Signed

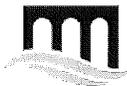


John Kraft, Chair IRB
Armstrong Atlantic State
University

cc: Dr. Donna Brooks, Int. Dean, College of Health Professions
Dr. Catherine Gilbert, Interim Dept. Head, Nursing

APPENDIX B: INSTITUTIONAL REVIEW BOARD APPROVAL

Page 1 of 1



EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board Office
4N-70 Brody Medical Sciences Building · Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office 252-744-2914 · Fax 252-744-2284 · www.ecu.edu/irb

Notification of Exempt Certification

From: Biomedical IRB
To: [Mary Chatman](#)
CC: [Elaine Scott](#)
Date: 8/29/2012
Re: [UMCIRB 12-001422](#)
Self-Efficacy

I am pleased to inform you that your research submission has been certified as exempt on 8/28/2012. This study is eligible for Exempt Certification under category #2.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

The UMCIRB office will hold your exemption application for a period of five years from the date of this letter. If you wish to continue this protocol beyond this period, you will need to submit an Exemption Certification request at least 30 days before the end of the five year period.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

IRB00000705 East Carolina U IRB #1 (Biomedical) IORG0000418
IRB00003781 East Carolina U IRB #2 (Behavioral/SS) IORG0000418 IRB000004973

APPENDIX C: STUDY DESCRIPTION/PARTICIPANT INVITE

Dear Student,

This is to ask you to participate in an approximately **40-minute** survey concerning self-efficacy in nursing students. I am a nurse who is currently conducting the research as a part of the requirements for a PHD in Nursing Science degree at East Carolina University College of Nursing. It is important to gain knowledge about positive influences on minority students' interest in and pursuit of nursing as a career are needed to increase diversity in the profession. This study has the potential to promote diversity in nursing by examining methods to successfully influence and support minority student's career choice of nursing as a profession. The study will also expand understanding of interventions the nursing profession can undertake to improve the self-efficacy and personal mastery of minority students.

The minimal risk study includes a survey developed from several validated tools including the Nursing Academic Self-Efficacy Scale, Nursing Clinical Self-Efficacy Scale, General Self-Efficacy Scale, and a survey to capture additional information including demographics, your access to role models, your vicarious experiences, and other pertinent data. Your identity will not be known to me at any time during the study. And, you may withdraw from participating at any time, by discontinuing to answer the questions or an email to Dr. Taggart.

When you have completed the survey, it should be forward back to Dr. Taggart, who will assign a unique identifier using letters and numbers. Data collected from this research will be secured. Completion of the study serves as consent. No signature is required. The study has been approved by the East Carolina University (ECU) and Armstrong Atlantic State University (AASU) Institutional Review Board Office as "exempt". If you have questions about your rights as someone taking part in research, you may call the ECU IRB Office at 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director of the ECU IRB Office, at 252-744-1971. The AASU IRB can be reached at _____. Please return the survey by _____.

The study results may be submitted for publication in a nursing journal following completion of the research study and dissertation defense. If you have any questions, you may contact Dr. Taggart @ 912-344-2667.

Thank you for your time and consideration.

Sincerely,

Mary Brimmage Chatman, RN, PhD(c)
Doctoral Candidate
East Carolina University

	<u>Rating</u>
15. There is no one who really relies on me for their well-being.	_____
16. There is a trustworthy person I could turn to for advice if I were having problems.	_____
17. I feel a strong emotional bond with at least one other person.	_____
18. There is no one I can depend on for aid if I really need it.	_____
19. There is no one I feel comfortable talking about problems with.	_____
20. There are people who admire my talents and abilities.	_____
21. I lack a feeling of intimacy with another person.	_____
22. There is no one who likes to do the things I do.	_____
23. There are people who I can count on in an emergency.	_____
24. No one needs me to care for them.	_____

Scoring:

A score for each social provision is derived such that a high score indicates that the individual is receiving that provision. Items that are asterisked should be reversed before scoring (i.e., 4=1, 3=2, 2=3, 1=4).

1. Guidance: 3*, 12, 16, 19*
2. Reassurance of Worth: 6*, 9*, 13, 20
3. Social Integration: 5, 8, 14*, 22*
4. Attachment: 2*, 11, 17, 21 *
5. Nurturance: 4, 7, 15*, 24*
6. Reliable Alliance: 1, 10*, 18*, 23

Social Provisions Scale - 2

APPENDIX E: PERMISSION – SOCIAL PROVISIONS SCALE

Page 1 of 1

Mary Chatman - RE: Research Tool

From: "Cutrona, Carolyn [PSYCH]" <ccutrona@iastate.edu>
To: marychatman@memorialhealth.com
Date: 2/16/2012 3:32 PM
Subject: RE: Research Tool
Attachments: Social Provisions Scale-Short Version.doc; Social provisions scale spouse version.doc; Social Provisions Scale Items.doc; Social Provisions Scale Description.doc; Social Provisions Scale chapter.pdf

Mary,

You have my permission to use the Social Provisions Scale. Please find relevant materials attached.

Carolyn Cutrona

From: Mary Chatman [mailto:marychatman@memorialhealth.com]
Sent: Wednesday, February 15, 2012 4:08 PM
To: ccutrona@iastate.edu
Subject: Research Tool

Hello Dr. Cutrona. I am enrolled in a PhD program at East Carolina University and would like permission to use your Social Provisions Scale in my research to measure perceived self-efficacy. Hope to hear from you soon.

APPENDIX F: NURSING STUDENT DATA SHEET

Directions: Please complete the following information about yourself. If the question is a multiple choice question, please circle the item which *best* describes your present status.

Personal Factors

1. Age: _____
2. Gender:
 - a. Male
 - b. Female
3. Race or ethnicity:
 - a. Caucasian/non-Hispanic
 - b. Black, African-American or African
 - c. Asian
 - d. Hispanic
 - e. Middle Eastern
 - f. American Indian
 - g. Other (please specify) _____
4. Marital status:
 - a. Single
 - b. Single, living with significant other
 - c. Married
 - d. Divorced/Separated
 - e. Widowed

Socioeconomic Factors

5. Do you currently work?
 - a. Full-time
 - b. Part-time
 - c. Not currently employed
6. If you work part-time, how many hours do you average per week? _____
7. It is difficult for me to afford the costs of attending college (Seago – Finance)

1=strongly agree
2=somewhat agree
3=somewhat disagree
4=strongly disagree
8. My family/parents help me to pay for college (Seago – Finance)

- 1=strongly agree
- 2=somewhat agree
- 3=somewhat disagree
- 4=strongly disagree

9. Does your job interfere with your studies (Seago – Finance/Work)

- 1=often
- 2=sometimes
- 3=rarely
- 4=never

10. How adequate is your financial aid for tuition (Seago – Finance)

- 1= I didn't need or receive financial aid
- 2= I received all or most of what I needed
- 3=I received less financial aid than I needed

Mastery Experiences

11. Do you have a prior degree? (Mastery)

- a. Yes
- b. No

12. Have you ever completed a program or course in the past and performed extremely well and felt good about your successful accomplishment? (Mastery)

- a. Yes
- b. No

13. What was your Grade Point Average the first semester of college? _____

Role Models

14. Has anyone in your immediate family completed college? (Check all that apply) Yes

- a. Mother
- b. Father
- c. Sister
- d. Brother

15. Have you ever had an experience with a nurse that influenced you to want to be like them?

- a. Yes
- b. No

16. Tell me a little about that experience

17. How would you describe your relationship with this nurse?

- a. Family member
- b. Friend
- c. Community member
- d. Other, please define _____

Vicarious Experiences

18. Have you ever worked in a healthcare setting? (Vicarious Experience)

- a. Yes
- b. No

19. If yes, please describe that experience

20. Have you provided direct patient care for a sick family member or friend?

- a. Yes
- b. No

21. Have you ever taken a course like Health Occupations or participated in a summer institute to learn about health occupations?

- a. Yes
- b. No

APPENDIX G: GENERAL SELF-EFFICACY SCALE

1. I can always manage to solve difficult problems if I try hard enough.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

2. If someone opposes me, I can find the means and ways to get what I want.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

3. It is easy for me to stick to my aims and accomplish my goals.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

4. I am confident that I could deal efficiently with unexpected events.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

5. Thanks to my resourcefulness, I know how to handle unforeseen situations.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

6. I can solve most problems if I invest the necessary effort.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

7. I can remain calm when facing difficulties because I can rely on my coping abilities.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

8. When I am confronted with a problem, I can usually find several solutions.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

9. If I am in trouble, I can usually think of a solution.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

10. I can usually handle whatever comes my way.

1 = Not at all true 2 = Hardly true 3 = Moderately true 4 = Exactly true

APPENDIX H: NURSING ACADEMIC SELF-EFFICACY SCALE

Nursing Academic Self-Efficacy Scale (NASES)

Nursing Academic Tasks Scale

For each of the nurses' academic education requirements listed below, please indicate the extent to which you believe you could successfully complete these. Assume you are motivated to make your best effort using the 10 point scale to indicate your level of confidence. If you are very unsure and don't think you could successfully complete the educational requirement circle '1'. If you think you could complete the requirement successfully, use the numbers '2' to '10' to rate how **confident** you are, circling '10' if you are *very sure* you could.

I could learn:

1. the principles of physics as they apply to radiology, radio-activity and nuclear medicine

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

2. nursing management skills related to client care

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

3. about individual differences in people's abilities

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

4. how people communicate and apply this knowledge to my interaction with others

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

5. administrative skills related to unit/ward management

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

6. the different theoretical explanations of health, illness and abnormal behavior

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

7. sufficient chemistry to understand the mechanisms of breathing, micturition (urination), reproduction and pharmacology

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

8. sufficient physics to understand mechanics, basic electricity and electrical safety

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

9. pathophysiology and apply this knowledge to infections, trauma, tumors and allergies

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

10. nutrition needs in health and disease

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

11. the legal and ethical aspects of professional nursing

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

I could learn:

12. how emotional and social needs are modified during illness

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

13. obstetrics (maternity) and gynecological (female reproductive) health care

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

14. sufficient physics to understand equipment management, unit measurement, body mechanisms and pressure processes

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

15. sufficient microbiology to understand the body's immune system

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

16. the neural (nervous control) system

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

17. the emotional and social needs of clients and their families

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

18. sufficient microbiology to understand infection control

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I			I am very sure		
I could do it				I could do it			I could do it		

19. roles people occupy and their attitudes

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I				I am very sure	
I could do it				I could do it				I could do it	

20. sufficient pathophysiology to understand the effects of disease on cells, tissues, organs, and systems of the body

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I				I am very sure	
I could do it				I could do it				I could do it	

21. aspects of chemistry such as atomic structure, chemical bonding, acids and bases and biological molecules

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I				I am very sure	
I could do it				I could do it				I could do it	

22. the body's endocrine (glandular control) system

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I				I am very sure	
I could do it				I could do it				I could do it	

APPENDIX I: NURSING CLINICAL SELF-EFFICACY SCALE

Nursing Clinical Self-Efficacy Scale (NCSES)

Nursing Clinical Skills Scale

Below are a number of skills that nurses acquire in the course of their work. By circling one of the numbers given, please indicate how confident you are that you could learn each skill successfully. If you don't think you could learn this skill successfully, circle '1'. If you think you could learn this skill successfully, use the numbers from '2' to '10' to rate how **confident** you are, circling '10' if you are *very sure* you could.

I could learn to:

1. reassure or comfort a distressed client and help them to cope
1 2 3 4 5 6 7 8 9 10
I don't think Fairly sure I I am very sure
I could do it I could do it I could do it
2. collect a wound specimen from a client
1 2 3 4 5 6 7 8 9 10
I don't think Fairly sure I I am very sure
I could do it I could do it I could do it
3. give a client an enema or suppositories (make their bowels move or pass their motion)
1 2 3 4 5 6 7 8 9 10
I don't think Fairly sure I I am very sure
I could do it I could do it I could do it
4. remove a client's stitches
1 2 3 4 5 6 7 8 9 10
I don't think Fairly sure I I am very sure
I could do it I could do it I could do it
5. clean and instill medication in a client's eyes, ears, or nose
1 2 3 4 5 6 7 8 9 10
I don't think Fairly sure I I am very sure
I could do it I could do it I could do it
6. cope with working with new staff and in new environments following ward changes
1 2 3 4 5 6 7 8 9 10
I don't think Fairly sure I I am very sure
I could do it I could do it I could do it
7. advise a doctor about his/her client's condition or contact a doctor in an emergency
1 2 3 4 5 6 7 8 9 10
I don't think Fairly sure I I am very sure
I could do it I could do it I could do it
8. ask for clarification of instructions or for help with any procedures not understood
1 2 3 4 5 6 7 8 9 10
I don't think Fairly sure I I am very sure
I could do it I could do it I could do it

9. explain to the client about the treatment to be given (dress wound, take out stitches, give injection)

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I					I am very sure
I could do it				I could do it					I could do it

10. form a positive working relationship with the charge nurse and other nursing staff

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I					I am very sure
I could do it				I could do it					I could do it

11. form an interpersonal relationship which assists the client to ask my help, i.e., get on so well with clients that they are able to seek my help without embarrassment

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I					I am very sure
I could do it				I could do it					I could do it

I could learn to:

12. take a client's ECG (record of heartbeats)

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I					I am very sure
I could do it				I could do it					I could do it

13. Establish and maintain continuous catheter/urodome drainage

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I					I am very sure
I could do it				I could do it					I could do it

14. assist the anesthetist in inducing and maintaining an anesthetic

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I					I am very sure
I could do it				I could do it					I could do it

15. organize the equipment for and maintain an intravenous drip (monitor flow rate, infusion regulator, change containers)

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I					I am very sure
I could do it				I could do it					I could do it

16. catheterize a female client (remove urine via a catheter)

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I					I am very sure
I could do it				I could do it					I could do it

17. give a baby or child an injection

1	2	3	4	5	6	7	8	9	10
I don't think				Fairly sure I					I am very sure
I could do it				I could do it					I could do it

18. nurse a client in isolation (barrier nurse)

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

	I don't think I could do it					Fairly sure I I could do it					I am very sure I could do it
19. attend to a body after death	1	2	3	4	5	6	7	8	9	10	
	I don't think I could do it					Fairly sure I I could do it					I am very sure I could do it
20. give a client drugs by injection as ordered	1	2	3	4	5	6	7	8	9	10	
	I don't think I could do it					Fairly sure I I could do it					I am very sure I could do it
21. discuss problems with a client and help in finding solutions, keeping disclosures in confidence	1	2	3	4	5	6	7	8	9	10	
	I don't think I could do it					Fairly sure I I could do it					I am very sure I could do it
22. assist at an operation (hand instruments to a surgeon)	1	2	3	4	5	6	7	8	9	10	
	I don't think I could do it					Fairly sure I I could do it					I am very sure I could do it
23. give prescribed tablets at the correct times and supervise the drug trolley during this routine	1	2	3	4	5	6	7	8	9	10	
	I don't think I could do it					Fairly sure I I could do it					I am very sure I could do it
24. teach a child how to self-inject insulin	1	2	3	4	5	6	7	8	9	10	
	I don't think I could do it					Fairly sure I I could do it					I am very sure I could do it

APPENDIX J: QUALTRICS – STUDENT SELF-EFFICACY SURVEY

Welcome!!!

Greetings. I am a minority nurse currently working on my doctorate. My journey in nursing has not been easy but one that has really been rewarding. Based on statistics, there are fewer minority nurses in the United States. I am studying the experiences of college students that want to become nurses. From this I hope to be able to make recommendations that colleges can use to help minority students. Your experience is unique and very valuable to me as I do this research. This survey will take you around 40 minutes to complete. I will not be able to identify who you are. All of the data collected will be kept in a secure place. By completing this survey you are consenting to giving me permission to use the data in my research. Thank you for taking the time to fill out this survey and help me learn about your needs and beliefs related to nursing.

1. I can always manage to solve difficult problems if I try hard enough.

	Not at all true 1	Hardly true 2	Moderately true 3	Exactly true 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. If someone opposes me, I can find the means and ways to get what I want.

	Not at all true 1	Hardly true 2	Moderately true 3	Exactly true 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. It is easy for me to stick to my aims and accomplish my goals.

	Not at all true 1	Hardly true 2	Hardly true 3	Exactly true 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. I am confident that I could deal efficiently with unexpected events.

	Not at all true 1	Hardly true 2	Moderately true 3	Exactly true 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Thanks to my resourcefulness, I know how to handle unforeseen situations.

	Not at all true 1	Hardly true 2	Moderately true 3	Exactly true 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. I can solve most problems if I invest the necessary effort.

	Not at all true	Hardly true	Moderately true	Exactly true
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1	2	3	4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. I can remain calm when facing difficulties because I can rely on my coping abilities.

	Not at all true 1	Hardly true 2	Moderately true 3	Exactly true 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. If I am in trouble, I can usually think of a solution.

	Not at all true 1	Hardly true 2	Moderately true 3	Exactly true 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. I can usually handle whatever comes my way.

	Not at all true 1	Hardly true 2	Moderately true 3	Exactly true 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. When I am confronted with a problem, I can usually find several solutions.

	Not at all true 1	Hardly true 2	Moderately true 3	Exactly true 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Academic

There are many academic requirements for becoming a nurse. For each of the requirements listed below please indicate how confident you are that you could learn each skill successfully. If you don't think you could learn this skill successfully, circle '1'. If you think you could learn this skill successfully, use the numbers from '2' to '10' to rate how confident you are, circling '10' if you are very sure you could.

I could learn:

11. the principles of physics as they apply to radiology, radio-activity and nuclear medicine

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. nursing management skills related to client care

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. about individual differences in people's abilities

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. how people communicate and apply this knowledge to my interaction with others

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. administrative skills related to unit/ward management

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. the different theoretical explanations of health, illness and abnormal behavior

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. sufficient chemistry to understand the mechanisms of breathing, micturition (urination), reproduction and pharmacology

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. sufficient physics to understand mechanics, basic electricity and electrical safety

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. pathophysiology and apply this knowledge to infections, trauma, tumors and allergies

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. nutrition needs in health and disease

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. the legal and ethical aspects of professional nursing

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. how emotional and social needs are modified during illness

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. obstetrics (maternity) and gynecological (female reproductive) health care

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. sufficient physics to understand equipment management, unit measurement, body mechanisms and pressure processes

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

25. sufficient microbiology to understand the body's immune system

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. the neural (nervous control) system

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

27. the emotional and social needs of clients and their families

	<input type="radio"/>
--	-----------------------

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28. sufficient microbiology to understand infection control

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

29. roles people occupy and their attitudes

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

30. sufficient pathophysiology to understand the effects of disease on cells, tissues, organs, and systems of the body

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31. aspects of chemistry such as atomic structure, chemical bonding, acids and bases and biological molecules

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32. the body's endocrine (glandular control) system

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Clinical

In addition to academic coursework, nursing students have to learn many new skills and clinical techniques. Below are a number of skills that nurses acquire in the course of their work. By circling one of the numbers given, please indicate how confident you are that you could learn each skill successfully. If you don't think you could learn this skill successfully, circle '1'. If you think you could learn this skill successfully, use the numbers from '2' to '10' to rate how confident you are, circling '10' if you are very sure you could. I could learn to:

33. reassure or comfort a distressed client and help them to cope

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

34. collect a wound specimen from a client

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35. give a client an enema or suppositories (make their bowels move or pass their motion)

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

36. remove a client's stitches

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

37. clean and instill medication in a client's eyes, ears, or nose

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

38. cope with working with new staff and in new environments following ward changes

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

39. advise a doctor about his/her client's condition or contact a doctor in an emergency

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

40. ask for clarification of instructions or for help with any procedures not understood

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41. explain to the client about the treatment to be given (dress wound, take out stitches, give injection)

I am

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

42. form a positive working relationship with the charge nurse and other nursing staff

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

43. form an interpersonal relationship which assists the client to ask my help, i.e., get on so well with clients that they are able to seek my help without embarrassment

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

44. take a client's ECG (record of heartbeats)

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

45. establish and maintain continuous catheter/urodome drainage

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

46. assist the anesthetist in inducing and maintaining an anesthetic

I am

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

47. organize the equipment for and maintain an intravenous drip (monitor flow rate, infusion regulator, change containers)

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

48. catheterize a female client (remove urine via a catheter)

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

49. give a baby or child an injection

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

50. nurse a client in isolation (barrier nurse)

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

51. attend to a body after death

I am

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

52. give a client drugs by injection as ordered

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

53. discuss problems with a client and help in finding solutions, keeping disclosures in confidence

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

54. assist at an operation (hand instruments to a surgeon)

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

55. give prescribed tablets at the correct times and supervise the drug trolley during this routine

	I don't think I could do it 1	2	3	4	Fairly sure I could do it 5	6	7	8	9	I am very sure I could do it 10
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

56. teach a child how to self-inject insulin

	I don't	Fairly	I am very
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	think I could do it					sure I could do it				sure I could do it
	1	2	3	4	5	6	7	8	9	10
Rating	<input type="radio"/>									

Social Support

Having people you can depend on during your journey in nursing is important. Listed below are a number of questions which will identify your level of support.

57. There are people I can depend on to help me if I really need it.

	Strongly Disagree	Disagree	Agree	Strongly Agree
	1	2	3	4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

58. I feel that I do not have close personal relationships with other people.

	Strongly Disagree	Disagree	Agree	Strongly Agree
	1	2	3	4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

59. There is no one I can turn to for guidance in times of stress.

	Strongly Disagree	Disagree	Agree	Strongly Agree
	1	2	3	4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

60. There are people who depend on me for help.

	Strongly Disagree	Disagree	Agree	Strongly Agree
	1	2	3	4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

61. There are people who enjoy the same social activities I do.

	Strongly Disagree	Disagree	Agree	Strongly Agree
	1	2	3	4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

62. Other people do not view me as competent.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

63. I feel personally responsible for the well-being of another person.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

64. I feel part of a group of people who share my attitudes and beliefs.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

65. I do not think other people respect my skills and abilities.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

66. If something went wrong, no one would come to my assistance.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

67. I have close relationships that provide me with a sense of emotional security and well-being.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

68. There is someone I could talk to about important decisions in my life.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

69. I have relationships where my competence and skill are recognized.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rating

70. There is no one who shares my interests and concerns.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

71. There is no one who really relies on me for their well-being.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

72. There is a trustworthy person I could turn to for advice if I were having problems.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

73. I feel a strong emotional bond with at least one other person.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

74. There is no one I can depend on for aid if I really need it.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

75. There is no one I feel comfortable talking about problems with.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

76. There are people who admire my talents and abilities.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

77. I lack a feeling of intimacy with another person.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

78. There is no one who likes to do the things I do.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

79. There are people who I can count on in an emergency.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

80. No one needs me to care for them.

	Strongly Disagree 1	Disagree 2	Agree 3	Strongly Agree 4
Rating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Nursing Student Data Sheet

Below are a number of questions to collect your demographics information, as well as some additional information regarding financial support, exposure to role models, and experiences in or around health care.

81. Please specify your current age in the block below.

82. Gender

- Male
 Female

83. Race or Ethnicity

- Caucasian/non-Hispanic

- Black, African-American or African
 - Asian
 - Hispanic
 - Middle Eastern
 - American Indian
 - Other
-

84. Marital status

- Single
- Single, living with significant other
- Married
- Divorced/Separated
- Widowed

85. Do you currently work?

- Full-time
- Part-time
- Not currently employed

86. If you work part-time, how many hours do you average per week?

- Hours
-

87. It is difficult for me to afford the costs of attending college.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

88. My family/parents help me to pay for college.

- Strongly Disagree
- Disagree
- Agree

Strongly Agree

89. Does your job interfere with your studies?

- Often
- Sometimes
- Rarely
- Never

90. How adequate is your financial aid for tuition?

- I didn't need or receive financial aid
- I received all or most of what I needed
- I received less financial aid than I needed

91. Do you have a prior degree?

- Yes
- No

92. Have you ever completed a college program or course in the past and performed extremely well and felt good about your successful accomplishment?

- Yes
- No

93. What was your Grade Point Average the first semester of college?

94. Has anyone in your immediate family completed college?

- Yes
- No
- If yes, list all (mother, father, sister, brother, etc.) who have completed a 2-year degree

- If yes, list all (mother, father, sister, brother, etc.) who have completed a 4-year degree

95. Have you ever had a positive experience with a nurse? This could be when you were a patient, when you were visiting or working in a hospital, or when you saw a nurse taking care of someone you know.

- Yes
- No
- If yes, tell me about that experience.

96. How would you describe your relationship with this nurse?

- Family member
- Friend
- Community member
- Other, please define.

97. Have you ever worked in a healthcare setting?

- Yes
- No
- If yes, please specify the role you had and the work you performed.

98. Have you provided direct patient care for a sick family member or friend?

- Yes
- No
- If yes, please specify the duties you performed.

99. Have you ever taken a course like Health Occupations or participated in a summer institute to learn about health occupations?

- Yes
- No
- If yes, please specify the name of the course or describe the summer institute.

Thank you for completing this survey. It is important to gain knowledge about positive influences on minority students' interest in and pursuit of nursing as a career are needed to increase diversity in the profession. This study has the potential to promote diversity in nursing by examining methods to successfully influence and support minority student's career choice of nursing as a profession. The study will also expand understanding of interventions the nursing profession can undertake to improve the self-efficacy and personal mastery of minority

students.

The study results may be submitted for publication in a nursing journal following completion of the research study and dissertation defense. If you have any questions, you may contact Dr. Taggart @ 912-344-2667.