

STRESSED OUT: STRESSED OUT! IMPLICATIONS OF MINORITY STATUS  
STRESS AMONG UNDERREPRESENTED MINORITY BSN STUDENTS

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the Faculty of the Graduate School  
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In Partial Fulfillment  
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Doctor of Philosophy

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by  
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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled:

**STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS AMONG UNDERREPRESENTED MINORITY BSN STUDENTS**

presented by Eve McGee,

a candidate for the degree of doctor of philosophy,

and hereby certify that, in their opinion, it is worthy of acceptance.

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## ABSTRACT

This study explored and described the prevalence of perceived stress and minority status stress levels among undergraduate Bachelor of Science in Nursing (BSN) students and their relationship to academic persistence. Two research questions motivate this study: 1) What are the differences in perceived stress levels between underrepresented minority (URM) and White BSN students, and 2) What is the relationship between minority status stress (MSS) and the persistence attitudes of URM BSN students. It was hypothesized that: 1) URM BSN students experience stress related to minority status, and 2) the additive levels of perceived MSS will be significantly related to academic persistence attitudes. Previous research studies utilize traditional models of stress and coping in a sample of predominately White, young, traditional college students. Therefore, the unique stressors related to one's minority status are not examined. This study advances our understanding of stress among URM BSN students and proposes a conceptual framework in which to analyze the problem, thus allowing social workers to understand the context of stress in marginalized groups holistically. A quantitative, cross-sectional survey design study was conducted. Using a convenience sample (N=99), we collected data from three four-year, public, accredited BSN programs in the Midwestern region of the United States. The findings from this research study show the impact of parental income and mother's level of education upon academic persistence attitudes. Underrepresented minority students experience minority status stress. The findings offer insight for social workers, nursing school administrators, and student affairs personnel in better understanding the relationship between MSS and academic persistence.

*Keywords:* minority status stress, perceived stress, underrepresented minorities

## CHAPTER ONE: INTRODUCTION

The largest segment of the United States health workforce is nursing (Robert Wood Johnson Foundation, n.d.). As health practitioners, nurses are heavily invested in assuring that health care and patient safety standards are met (U. S. Department of Health and Human Services, 2019). Unfortunately, the profession is experiencing a significant shortage (Kennedy, 2018). The U.S. nursing supply will fall 36% (approximately one million nurses) below national requirements by 2020 (American Association of Colleges of Nursing [AACN], 2019). This inadequate supply of skilled professionals needed by the nation's increasingly diverse patient population is anticipated to become worse and could adversely impact the delivery of healthcare services (Aiken et al., 2018).

One factor contributing to the nursing shortage is an aging workforce. Globally, the nursing workforce is losing valuable leadership with inexperienced, younger registered nurses (RNs) entering the workforce to replenish the significant number of Baby Boomers who will be retiring in the next decade (Goodare, 2017). The National Council of State Boards of Nursing (2017), reports that the average age of RNs is 43.7. Within the next five to 10 years, because of retirement, the nursing profession will lose the majority of its most skilled health care providers (Auerbach, Buerhaus, & Staiger, 2017).

The shortage compounds another issue facing the profession of nursing—that is, a lack of diversity. The nursing profession has not been an exemplar of diversity, with females outnumbering males 15 to 1. Men make up only 9.6% of the nursing workforce (AACN, 2015a). African Americans, American Indians, and Latinos comprise

approximately a quarter of the U.S. population yet make up just 19% of the nursing profession (AACN, 2015a).

As the United States becomes increasingly ethnically and racially diverse, a more diverse health care workforce, particularly nursing, is necessary to advance the quality of patient care (Robert Wood Johnson Foundation, n.d.). While numerous factors contribute to the nursing shortage and lack of diversity within the profession, colleges, and universities that educate nurses can reduce the shortage by increasing graduation rates (Kubec, 2017).

Over the last 40 years, the associate degree in nursing (ADN) has been viewed as the standard nursing credential. However, within the past ten years, there has been a shift in entry-level nursing education from the ADN degree to the Bachelor of Science in Nursing (BSN) degree. By 2020, according to the landmark Institute of Medicine's (IOM) 2010 report, the future of nursing will require leading change and advancing health. As such, the IOM recommends that at least 80% of RNs be prepared at the BSN level (IOM, 2010). The IOM is a non-profit, non-governmental organization, that offers national guidance on issues related to biomedical science, health, and medicine and provides recommendations, information, advice regarding health and science policy to health care professionals, leaders in all sectors of the population, and policy-makers nationwide (National Academies of Sciences, Engineering, and Medicine, 2016). Ultimately, considering the changing landscape of nursing scope and practice, the BSN degree is perceived as the new entry-level nursing degree and, thus, is the focus of this research.

Undergraduate nursing programs encounter challenges in recruiting and retaining a diverse student body (Diefenbeck, Michalec, & Alexander, 2016; Muronda, 2016; Murray, Pole, Ciarlo, & Holmes, 2016). Although nursing programs have increased the enrollment and graduation of minority students, additional work is necessary to mirror an increasingly diverse U.S. population (National League for Nursing, 2016). In 2017, 197,206 students were enrolled nationally in generic, entry-level, BSN programs (National League for Nursing, 2014). The ethnic breakdown of that enrollment was: African-American 9.5% (18,687), American Indian or Alaskan Native 0.5% (956), Asian 8.1% (15,959), Latino 11.7% (23,102), Native Hawaiian or Pacific Islander 0.4% (804), two or more races 3.0% (5981), and White 66.8% (131,717). Minority students comprised 33.2% (65,489) of total enrollment (AACN, 2018). Nursing programs nationwide struggle to retain BSN students who belong to underrepresented minority (URM) groups. Typically, URM students are those who identify as African-American, Alaskan Native, Asian, or Latino BSN (Ferrell & DeCrane, 2016). In 2017, only 8.8% (5,825) of African-American students, 0.5% (300) of American Indian or Alaskan Native students, 8.1% (5,389) of Asian students, 10.7% (7,139) of Latino students, 0.6% (404) of Native Hawaiian or Pacific Islander students, and 2.5% (1,687) of those who belong to two or more races graduated out of 66,451. These graduation rates are concerning.

There is a critical shortage of BSN nurses, particularly nurses of color (AACN, 2019). Consequently, the profession needs more underrepresented minority students enrolled in BSN programs, as underrepresented minority students are not enrolling in high numbers (AACN, 2017). Nursing school is stressful (Turner & McCarthy, 2017). URM students who enroll are not finishing at a rate equivalent to that of white students

(Gipson-Jones, 2017). The additional stress of minority status stress (MSS) might be a factor contributing to low retention rates, but it has not been studied enough.

Student retention has become a critical discussion for nursing programs as funders, parents, prospective students, policymakers, and stakeholders view student retention as a measure of an institution's success (Guilbault, 2016). Potential nursing students are interested in attending nursing programs with high retention rates as such rates demonstrate robust academic support services and student success (Kennell & Ward-Smith, 2017).

The social work profession can positively impact the nursing shortage. This research is vital as, historically, the social work profession has taken leadership and supportive roles in transforming conditions that impede one's dignity and potential (Wormer & Besthorn, 2017). Understanding the impact of one's minority status on their emotional and physical health, as well as their academic success could improve social workers' assessment and intervention efforts, which could result in a better understanding of how racial discrimination influences students' functioning in various areas. For example, social workers can design and implement evidence-based cultural interventions geared toward expanding URM students' perceptions of how their reactions to the campus environment affect their mental health. This research may add valuable information to the literature on URM college student mental health and have crucial social work implications which may allow URM students space and freedom to explore, critically think about, and reflect upon their ethnic or racial identity. The results of this study could create a pathway for students to learn more about themselves, their interactions with others, and how their encounters on predominately White universities



affect their mental health. The National Association of Social Workers (n.d.) asserts that social workers are tasked with the responsibility to acknowledge, recognize, and confront all forms of racism which are relevant to social work. Social workers also have the responsibility to advocate for change within organizations.

### **Problem Statement**

This research study examined sources of stress among URM BSN students. More specifically, the study examined the extent to which racial/ethnic minority status impacts the persistence attitudes of URM BSN students. This study postulated that while prior research suggests BSN students experience high levels of stress (Labrague et al., 2017; Van Vliet, Jong, & Jong, 2017; Zhang, Peters, & Chen, 2018), there are possible drawbacks of evaluating URM BSN students under a general stress model. The significance of discrimination, racism, and social isolation act as barriers to the retention of URM BSN students (Graham, Phillips, Newman, & Atz, 2016). Little is known about the impact of one's minority status upon persistence attitudes and student retention. Information from this research may aid in understanding the context of stress in marginalized groups and how those who practice social work can serve as a mediator. This research study utilized a cross-sectional methodology to examine the stress related to minority status and its impact on persistence attitudes of URM BSN students. The study used an online self-administered survey with BSN students within three Missouri nursing programs.

## **Purpose of the Study**

The purpose of this cross-sectional study was to explore and describe the prevalence of perceived stress and minority stress levels among BSN students and their relationship to academic persistence.

## **Conceptual Framework**

Because the experiences of White populations are typically elevated, keeping with societal norms, research tends to overlook the unique experiences of other ethnic groups. The Model of Stress and Coping Process of African-American Students (MSCPAAS) describes the academic and psychological functioning of African-American college students attending predominately White institutions. This theoretical framework has four parts: (1) background variables; (2) sociocultural orientation; (3) minority status stress (MSS); and (4) academic and psychological adaptation (Smedley, Myers, & Harrell, 1993). The model suggests that an individual's sociocultural orientation influences academic success and psychological adaptation to campus climate. The MSCPAAS model may provide an understanding of the context of stress in marginalized ethnic or racial groups.

## **Theoretical Definitions**

For this study, the following definitions were utilized:

*Stress*: A state of mental or emotional tension and worry caused by problems in one's life or work (American Psychological Association, 2019).

*Perceived stress*: the feelings or thoughts that an individual has about how much stress they are under at a given point in time or over a given period (Cohen, Kamarch, & Mermelstein, 1983).

*Minority status stress:* Stress related to racial or ethnic minority status that interferes with college adjustment and integration into the university community (Smedley et al., 1993).

*Persistence:* A student's behavioral commitment to continuously enroll in coursework in a sequential manner and successfully matriculate through a degree program from admission through graduation in the same academic program (Noel, Levitz, & Saluri, 1985; Roland, De Clercg, Dupont, Parmentier, & Frenay, 2015; Tinto, 1975).

*Retention:* "An educational institution's ability to retain a student from admission through graduation" (Berger & Lyon, 2005).

*Attrition:* Student departure from an institution of higher learning before degree completion (Tinto, 2006).

*Underrepresented minorities:* Ethnic and racial groups that are underrepresented in the nursing profession comparative to their numbers in the overall population; African-Americans, Alaskan Native, American Indian, Asian, and Latino (Health Resources and Services Administration, 2019.).

### **Assumptions**

The following are assumptions regarding this study: a) the instruments have validity and are measuring the desired constructs; b) the instruments used will elicit reliable responses; c) the respondents will fully understand the questions they will be asked, and d) participants will provide open and honest feedback.

## **Significance of the Study**

RNs make up the largest segment of health care professionals; however, this group is experiencing a significant shortage (IOM, 2010). Amid significant demographic changes in the United States, the enactment of the Affordable Care Act (ACA), and an aging populace, access to health care will surge, and the need for more diverse, competent nursing graduates will increase (Pacquiao, 2018). Simultaneously, the U.S. nursing workforce is experiencing a lack of diversity within the nursing workforce (Daniel & Smith, 2018). As a result, there are not enough skilled professionals to meet the growing demand for healthcare services by the nation's increasingly diverse population (Ashley, Halcomb, Brown, & Peters, 2017). As schools of nursing attempt to address the nursing shortage, challenges such as high attrition rates, low numbers of graduating nurses, and a lack of minority nursing graduates remain (Tranter, Gaul, McKenzie, & Graham, 2018). Unfortunately, there is a scarcity of research analyzing the correlation between attrition and lack of diversity. As the U.S. faces a critical nursing shortage, a possible strategy to address the crisis is an examination of the unique stressors that impede the academic success of URM BSN students.

The significance of this research study is to understand the prevalence of stress among URM BSN students and propose a conceptual framework through which to analyze the problem, thus allowing social workers to holistically understand the context of stress in marginalized groups. Results from this study could assist nursing school administrators, social workers, and student affairs personnel in better understanding the relationship between MSS, high attrition rates, and academic persistence, but also help individuals explore their biases related to race. The results of this study may add to the

body of existing knowledge by researching new and improved ways of measuring the stress levels of minority students, as well as ways in which minority students cope with MSS. Research findings may also demonstrate a need for social workers to be placed in academic units to work with students to increase student retention.

### **Research Question and Hypotheses**

The research study answered the following research questions:

- 1) What were the differences in perceived stress levels between URM and White BSN students?
- 2) What was the relationship between MSS and the persistence attitudes of URM BSN students?

The study hypotheses were:

- 1) URM BSN students experience stress related to minority status; and
- 2) The additive levels of perceived minority status stress will be significantly related to academic persistence attitudes.

Specific study objectives were:

- 1) Determine the degree of MSS in URM BSN students;
- 2) Determine how MSS impacts academic persistence attitudes in URM BSN students;
- 3) Determine the manifestation of MSS in URM BSN students.

The independent variables for this study were perceived stress and MSS. The dependent variable was academic persistence.

## **Summary**

Currently, there is a paucity of studies on MSS among college students, especially URM BSN students. As a result, there is a small knowledge base within the social work profession that is available to use when designing and implementing evidence-based interventions. Despite this lack of knowledge, the nursing profession is undergoing a critical shortage and is facing a lack of diversity, as the United States becomes increasingly ethnically and racially diverse. To better understand MSS, the Model of Stress and Coping Process of African-American Students (MSCPAAS) model was used as a framework for understanding different sources, manifestations, and patterns of stress among URM BSN students. The constructs of the MSCPAAS model were hypothesized to predict whether URM BSN students experience stress related to minority status, discrimination, and racism. Additionally, social integration negatively influences academic persistence attitudes in URM BSN students.

## CHAPTER TWO: LITERATURE REVIEW

The literature concerning the retention of URM BSN students is commonly discussed and researched within higher education. Many theoretical frameworks describe the process by which students enter and depart colleges and universities. However, few provide an in-depth exploration of the unique stressors that minority students encounter and the impact of these stressors on student retention. This chapter will discuss scholarly research related to the composition of the nursing workforce, undergraduate nursing programs, and the importance of a diverse nursing workforce and student body.

Additionally, this chapter will review and critique studies that examine challenges to minority student retention. Furthermore, an overview of the MSCPAS at PWIs is presented as this theoretical framework guided this research study. The focus of this literature review is BSN nursing students. The chapter will conclude with a discussion of why this topic is essential for the profession of social work.

### **Nursing Workforce**

Nurses are a vital component of the healthcare delivery system (Salmond & Echevarria, 2017). As health practitioners, they are heavily invested in ensuring quality and safe patient health care (Starkweather et al., 2018).

**Description of Nursing Profession.** Over the past ten years, new and creative ways to train nurses to engage in a progressively complex healthcare environment have materialized. The nursing profession offers various entry points for a student to enter the profession (Nininger, Abbott, & Shaw, 2019). The three traditional entry points to becoming a nurse in the U.S. are (a) a diploma program (Papp, Podolak, Kosturko, &

Gambardella, 2018); (b) an associate's degree program (Anbari & Vogelsmeier, 2018); and (c) a baccalaureate degree program (Spetz, 2018).

**Diploma programs.** Diploma programs utilize the apprenticeship model as most are hospital-based. The emphasis is on clinical practice and patient care. An advantage of this type of program is that students spend a considerable amount of time working as a nursing assistant, thereby gaining valuable clinical experience while they earn their degree (Auerbach, Buerhaus, & Staiger, 2015). Students from economically challenged backgrounds may find pursuing a nursing diploma program more affordable than a bachelor's degree program, as the number and cost of credit hours are cheaper. Some colleges and universities partner with diploma programs to offer credit courses, thereby creating a pathway for students to pursue a BSN (Pittman, Kurtzman, & Johnson, 2014). A disadvantage of diploma programs is that graduates only receive an associate degree while many health-care institutions are now moving toward requiring nurses to have at least a baccalaureate degree for employment. While earning an associate degree is an accomplishment, students aspiring to pursue a BSN are required to complete additional coursework. The number of diploma programs is decreasing as hospital-based programs have transitioned to colleges and universities (Isaacs, Colby, & Mason, 2011). Currently, there are fewer than 100 nursing diploma programs nationwide (Morin, 2014).

**Associate degree programs.** For the past 40 years, the associate degree in nursing (ADN) has been viewed as the benchmark credential for obtaining a nursing job (Pittman, Kurtzman, & Johnson, 2014). An ADN is customarily offered at community colleges, making ADN programs an economical and efficient pathway to a BSN. According to the AACN (2015), ADN programs require two years of coursework.



Graduates must pass the National Council Licensure Examination (NCLEX) to work as a licensed practicing nurse (LPN; American Association of Community Colleges [AACCC], 2011). Between 2010 and 2012, 630,395 individuals earned an LPN degree. Of that number, 162,800 were African-Americans, 51,800 were Latino, 24,800 were Asian, and 4,100 were American Indian or Alaskan Native (U.S. Department of Education, 2015). An advantage of ADN programs is the short time frame of coursework and clinical hours to practice as an LPN. The ADN program typically requires 71.5 credit hours, while BSN programs require 120 (Ashford, 2011). As a result, graduates of ADN programs begin practicing as LPNs and gain valuable work experience before those in BSN programs.

**Baccalaureate programs.** Many nurse leaders support the idea that a BSN degree should be the minimum degree for entry into the nursing profession because of its preparation for the current job market. There are approximately 674 BSN programs in the United States offered at four-year colleges and universities (AACN, 2016). Similar to an ADN program, BSN students must pass the NCLEX to work as an RN. The BSN program covers all the coursework taught in diploma and ADN programs in addition to providing in-depth knowledge of the community and public health, humanities, nursing management, research, and physical and social sciences. The added coursework augments professional development skills, prepares students for widespread nursing practice, and offers a foundation for advanced practice (AACN, 2011). The IOM (2010) asserts that BSN RNs have the abilities, knowledge, and skills necessary to maneuver through the complexity of the healthcare system and patients. Ultimately, considering the changing landscape of nursing scope and practice, the BSN degree is perceived as the new entry-level nursing degree.

## **What is the Problem?**

### **Shortage of Nurses**

Nurses are a vital component of the healthcare delivery system. As bedside practitioners, they are heavily invested in ensuring quality and safe health care to enhance patient care (Kieft, de Brouwer, Francke, & Delnoij, 2014). This section will examine the origins of the nursing shortage, its impact, and how it may affect patient outcomes.

The health labor force in the United States has a dearth of nurses, especially nurses from racial and ethnic minority groups, to address the demands of the diverse patient population. The diversity gap is due to a lack of African-American and Latino RNs in the U.S. workforce (Xue & Brewer, 2013). Currently, RNs make up the largest segment of healthcare professionals (2.6 million) but are also experiencing the most significant decline (IOM, 2010). The AACN (2014a) stated that by 2020, the shortage of nurses in the U.S. would exceed one million. As a result, there are not enough skilled professionals to address the growing demands of the nation's increasingly diverse patient population.

### **Causes of Nursing Shortage**

**Increased demand for nursing care.** The 2012 U.S. Census estimated that 40.3 million Americans age 65 and older account for 13% of the total population. In 2010, this age group was more abundant than in any other decennial census, up from 31.2 million in 1990 and 35.0 million in 2000. The first wave of Baby Boomers turned 65 in 2011. As of January 1, 2011, 10,000 Baby Boomers will turn 65 daily. By 2030, one in five Americans will be 65 or older compared to the current rate of one in eight. The number of individuals 85 and older was anticipated to grow by 40% by 2015 and rapidly increase

until 2050. The rate of individuals over the age of 85 is expected to triple by 2050 (Association of Academic Health Centers, n.d.).

In addition to the aging process, the aging population may encounter chronic diseases (Dall et al., 2013). Nearly 10 million people over the age of 65 have more than one chronic illness (e.g., heart disease, Alzheimer's, and diabetes), and this number is projected to grow to more than 35 million by 2030 (American Hospital Association, 2015.). As individuals live longer with more chronic conditions, the need for health care services will increase. By 2020, it is anticipated that a cataclysmic cycle could occur. As this age group begins to peak in their need for health care services, the nursing shortage will be in full force, creating potentially disastrous outcomes.

**Aging nurses.** The phenomenon of aging is evident within the nursing workforce. The average age of RNs in the United States is 50 (Budden, Zhong, Moulton, & Cimiotti, 2013). The average retirement age for RNs is 54 years, and it was estimated that over half of the current number of RNs would reach retirement age by 2015 (Stokowksi, 2014). Within the next five to 10 years, because of retirement, the nursing profession will lose the majority of its most skilled health care providers (AACN, 2014a). The loss of these qualified professionals over a short period will worsen the nursing shortage.

**Nursing education.** Currently, there is an insufficient number of faculty to educate nursing students and fewer slots available within nursing programs to accommodate the increasing number of qualified applicants (McDermid, Peters, Jackson, & Daly, 2012). The 2014-2015 AACN report, *Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing* (2015c), found that nationwide, 68,936 eligible nursing candidates from baccalaureate and graduate programs were

denied admission to nursing programs due partially to a lack of nursing faculty and filled admission seats. Approximately two-thirds of the nursing schools that participated in the survey indicated that faculty shortages negatively impact nursing student admission rates.

The AACN report *Special Survey on Vacant Faculty Positions* (AACN, 2015d) stated that 714 nursing schools (80% response rate) reported 1,236 faculty vacancies in undergraduate and graduate-level programs. Additionally, nursing programs indicated the need to hire 103 additional professors to accommodate an increased student population (AACN, 2015d). Since 88.3% of these faculty positions required or preferred a doctoral degree, the limited number of doctorally prepared nursing applicants was insufficient to fill these vacant positions (AACN, 2015d). The insufficient numbers of nursing faculty to teach students constrains nursing programs' ability to boost student enrollment, address the shortage of nurses, and infuse diversity with the nursing profession.

### **Diversity within the Nursing Workforce**

An ethnically and racially diverse health care workforce may offer a step forward for attaining health equity for all U.S. citizens (Institute of Medicine, 2010; Williams et al., 2014). The shortage of nurses compounds another issue facing the profession and the healthcare industry—a lack of diversity among caregivers. The 2010 U.S. Census reported that racial and ethnic minority groups comprised over one-third of the U.S. population (37%). By 2048, minorities will comprise over half of the U.S. population, with Latinos projected to make up the largest ethnic group (U.S. Census, 2011).

**Racial and Ethnic Composition of the Nursing Workforce.** The nursing profession does not reflect the diversity of the population, with females outnumbering males 15 to 1, men make up only 9.6% of the nursing workforce (U. S. Census, 2013).

According to the *National Council of State Boards of Nursing and the Forum of State Nursing Workforce Centers 2013 National Workforce Survey of RNs*, the nursing workforce consists of 3.9 million nurses. More specifically, the nursing workforce consists of 19% ethnic and racial minorities: African American 6%, American Indian and Alaskan Native 1%, Asian 6%, Latino 3%, Native Hawaiian or Pacific Islander 1%, other races 1% while White nurses make up 83% of the workforce (see Figure 1; AACN, 2015e).

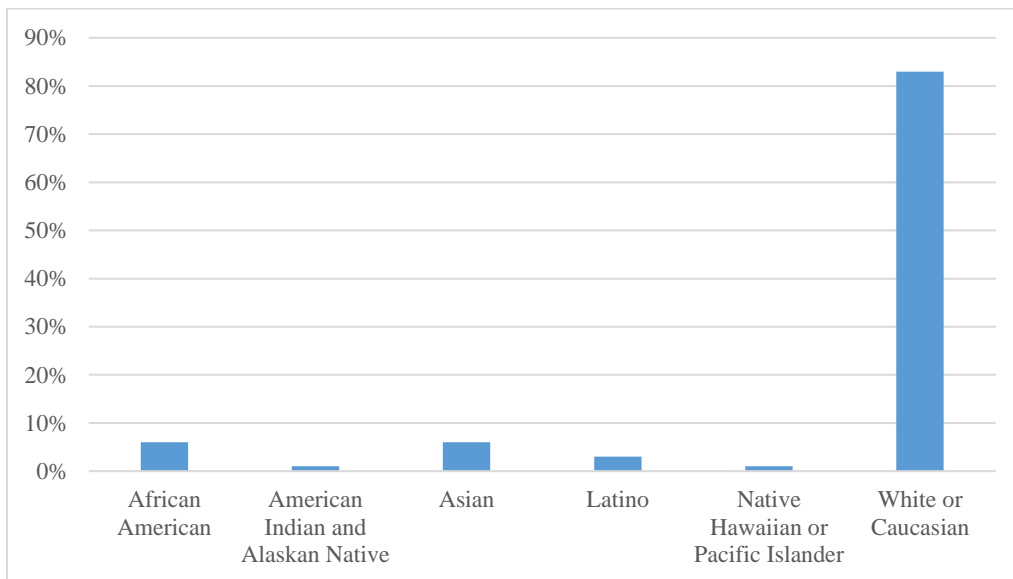


Figure 1.

*Race and ethnicity of the current nursing workforce. Data from the AACN (2015e).*

The need for diversity was reinforced by two landmark research studies commissioned by the W.K Kellogg Foundation in 2004, *In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce* (Institute of Medicine, 2004) and *Missing Persons: Minorities in the Health Professions* (Sullivan Commission, 2004). These studies documented the critical need to increase diversity within the healthcare labor force, especially nursing. In particular, the *Missing Persons: Minorities in the*

Health Professions report asserted that the more significant factors of inequality in health care access and outcomes were the realization that our nation's health care professions do not mirror changing U.S. demographics and there is a lack of insurance for millions of Americans. Several recommendations from *In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce* (Institute of Medicine, 2004) and *Missing Persons: Minorities in the Health Professions* (Sullivan Commission, 2004) were: (1) to increase the number of URM health professionals; (2) require health professional schools to work to expand the number of URM and multilingual students; and (3) to reduce the debt of URM students by offering federal, state, and local loan forgiveness programs and scholarships.

**Why is a Diverse Nursing Workforce Important?** The passage and implementation of the Affordable Care Act (ACA) reinforced the need for a diverse health workforce. While minorities made up one-third of the U.S. population, over half of them were uninsured (Koh, Graham, & Glied, 2011). The ACA extended health insurance coverage to this population, as well as other formerly uninsured Americans (Robert Wood Johnson Foundation, 2013). This year, when the federal government fully implemented the ACA, health care coverage is expected to expand from 83% to 94% of the entire U.S. population (Rosenbaum & Hall, 2012). While broadening the number of insured Americans is a significant accomplishment, the surge of covered minority Americans accessing primary care services has a high potential to strain a health care system that is already experiencing a shortage of primary care providers (Robert Wood Johnson, 2012). With the passage of the ACA and the subsequent increase in the use of medical services, institutions of higher learning, especially student affairs personnel, have

an opportunity to develop and implement interventions to address both the overall supply of and the lack of diversity among nurses.

There is a connection between the lack of diversity within the nursing workforce and the nursing profession's ability to adequately address health disparities with competent, high-quality care (AACN, 2011). Lack of diversity can foster biases and enhance cultural and linguistic barriers, which can result in adverse patient outcomes in vulnerable populations (Braveman & Gottlieb, 2014; Gates & Mark, 2012). These obstacles may create misunderstandings, non-compliance with treatment plans, and distrust of healthcare practitioners (U.S. Department of Health and Human Services, n.d.). Because nurses spend a significant amount of time in direct contact with patients, enhancements to the production of culturally competent, bilingual nurses are essential components to alleviating the nursing workforce shortage and are an influential component to ensuring quality care for a diverse patient population. As the ethnic and racial composition of the United States continues to shift, it will be increasingly crucial for males and URMs in nursing to mirror the composition of society (Premji & Etowa, 2014). The recruitment, retention, and graduation of URM BSN are, therefore, critical factors of this process (Loftin, Newman, Bond, Dumas, & Gilden, 2012).

**Benefits of a Diverse Health Care Workforce.** Many vulnerable populations in the U.S., including low-income and minority groups, lack equitable access to health care, resulting in an increasing number of individuals with poor clinical outcomes (Grantmakers in Health, 2010). A lack of diversity in the healthcare workforce may be a contributing factor. Health care providers of color tend to provide care to a patient population that mirrors his or her racial or ethnic background, work in medically

underserved or designated health care shortage areas, and provide care for patients regardless of their ability to pay or lack of insurance (Williams et al., 2014). Patients identifying as racial or ethnic minorities reported an enhanced sense of satisfaction regarding their choice of health care provider and overall experience with the provider. These patients also described improved patient-provider communication when the health care provider mirrored their race or ethnicity than when race or ethnicity was incongruent (Williams et al., 2014). Patients with limited English proficiency experience reported improved interpersonal care, increased comprehension of their medical care, and tended to keep follow-up appointments when they received care from a bilingual health care provider rather than from a monolingual health care provider (Brisset, Leanza, & Laforest, 2013); thereby creating the need for a diverse healthcare workforce.

### **Role of Academic Institutions**

Relevant stakeholders of the healthcare workforce are the colleges and universities that educate healthcare professionals. Many of these institutions now have a focus on diversifying their student bodies as part of their effort to prepare students to care for a diverse patient population (Whittaker & Montgomery, 2012). These institutions are a critical conduit for increased diversity within the healthcare workforce. In addition to recruitment challenges, however, the retention of students from diverse racial or ethnic backgrounds is an ongoing and problematic process.

### **Ethnic and Racial Composition of BSN programs**

Leaders of the nursing profession recognize the links between a culturally diverse nursing workforce, the skills necessary to deliver quality, culturally competent patient care, and nursing education (Andrulis, Jahnke, Siddiqui, & Cooper, 2013). While nursing



programs have increased the enrollment and graduation of minority students, additional work is necessary to mirror the increasingly diverse U.S. population. Between 1976 and 2012, student enrollment expanded for African-Americans from 10% to 15%, American Indian/Alaska Native from 0.7% to 0.9%, Asian/Pacific Islander from 2% to 6%, and Latino student enrollment expanded from 4% to 15% (U.S. Department of Education, 2015a) (see Figure 2).

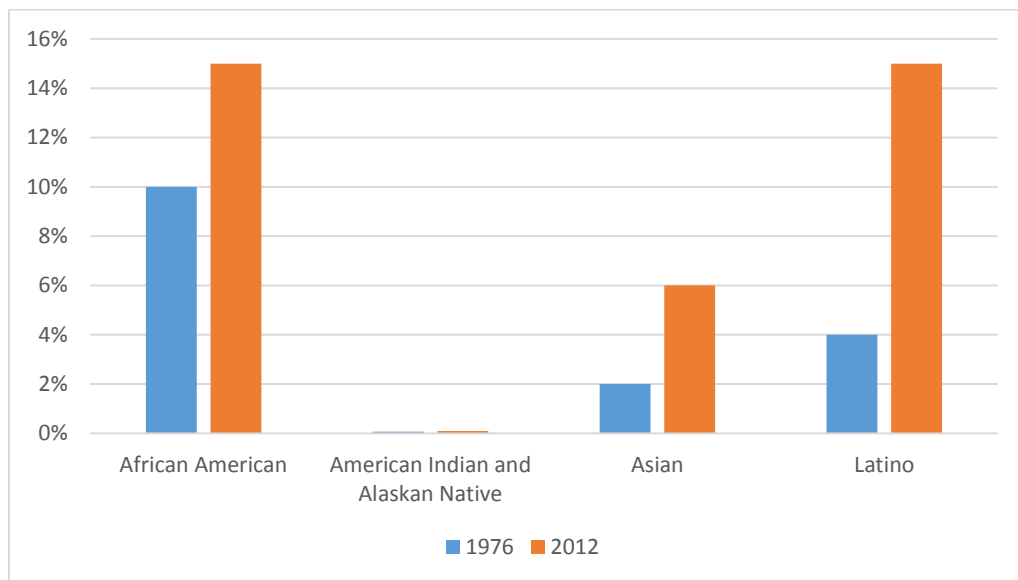


Figure 2.

*BSN student enrollment by race and ethnicity between 1976 and 2012. Data from the U.S. Department of Education (2015a).*

In 2015, nationally, 182,852 students were enrolled in generic, entry-level, BSN programs. The ethnic characteristics of those students broke down as follows: Asian, Native Hawaiian, or Pacific Islander 8.1% (14,884), African-American 9.9% (18,035), American Indian or Alaskan Native 0.5% (899), Latino 10.4% (19,007), two or more races 2.7% (4,906), and White 68.4% (125,121). Minority students comprised 31.6% (57,731) of the total enrollment (see Figure 3; AACN, 2016a).

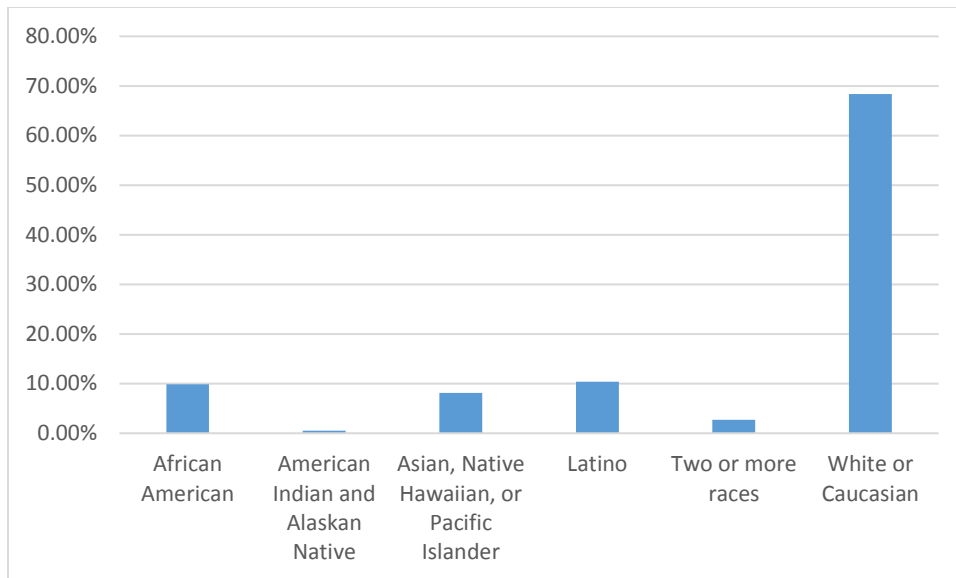


Figure 3.

*2015 National BSN enrollment by race and ethnicity. Data from AACN (2016 a).*

**Underrepresented minorities in nursing education.** Educational equity in the U.S. remains a challenge despite the implementation of various policies and programs to bolster educational opportunities for URM students. The underrepresentation of minorities in all levels of nursing education and nursing practice is well documented (National Advisory Council on Nurse Education and Practice, 2013; Phillips & Malone, 2014). This group of students encounters distinct academic and non-academic barriers along the post-secondary educational pipeline from pre-entry support to graduation (Syed, Azmitia, & Cooper, 2011). While nursing education is a pipeline to the nursing workforce, URM student retention problems persist due to specific ethnic and racial challenges.

### **Student Retention**

One out of three students entering a college or university in any given fall term does not return the next year (National Center for Education Statistics, 2015a), and roughly 40% of college students never complete a degree program in their lifetime (U.S.

Department of Education, 2015). The success of colleges and universities hinges upon their ability to retain students (Thompson & Prieto, 2013). The concept of student retention is rooted in student success and speaks to an institution's commitment to students. A primary function of retention activities focuses on providing a campus environment in which students complete academic goals and educational programs, or graduate from a college or university (Tinto, 1993).

Student retention is a critical topic for colleges and universities as parents, prospective students, policymakers, and stakeholders view student retention as a measure of an institution's success (Tinto, 1993). Concerning student recruitment, potential students are interested in attending colleges and universities with high retention rates as it demonstrates robust academic support services and student success (Weber, Krylow, & Zhang, 2013). High attrition rates in nursing programs are concerning for the U.S. population as health care demands are expected to increase with the full implementation of the ACA, an aging population, and diverse population (AACN, 2012b; U.S. Census Bureau, 2012). As a result, it is imperative that nursing programs examine their attrition rates, especially for URM students, gain an improved understanding of URM student needs, and identify or refine strategies to bolster URM student success. With a renewed understanding of prevailing attrition rates for URM students and barriers to student success, nursing school administrators, faculty, social workers, and academic affairs personnel can obtain a deeper understanding of the challenges akin to attrition and develop evidence-based methods to increase student success (Harris, Rosenberg, O'Rourke, 2014).

**Challenges to minority student retention.** Nursing programs nationwide struggle to retain URM BSN students (Smith, 2011). Between 2008 and 2012, overall graduation rates across BSN nursing programs declined for African-Americans from 167 (6.8%) to 150 (5.0%) and for Native Hawaiians or Pacific Islanders from 51 (2.1%) to 9 (0.3%); Brooks, Nguyen, Chittams, Park, & Guevara, 2014) (See Figure 4).

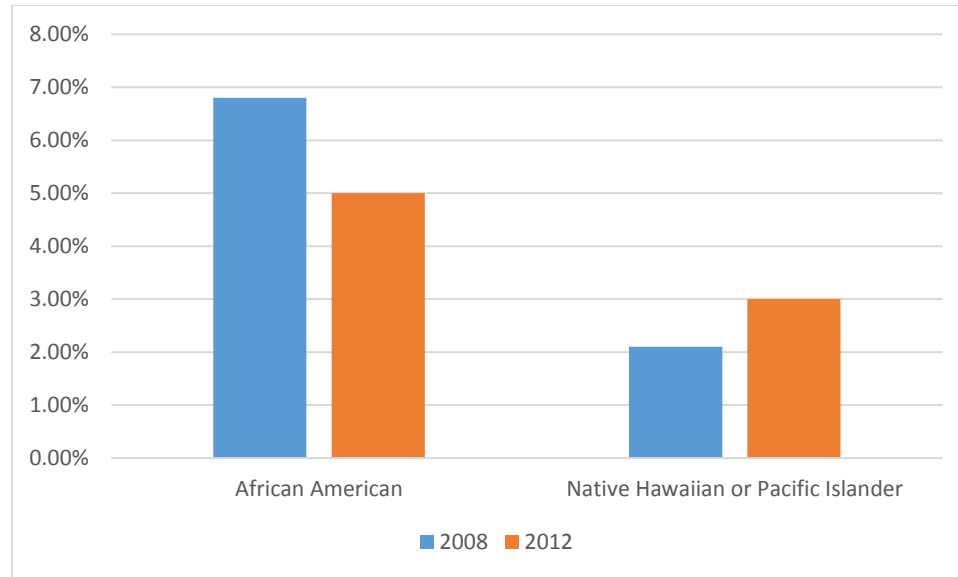


Figure 4.

*Declining BSN graduation rates by race and ethnicity from 2008 to 2012. Data from Brooks, Nguyen, Chittams, Park, & Guevara (2014).*

The decline in graduation rates is concerning. Nursing programs nationwide struggle with efforts to retain URM BSN students due to high attrition rates (Igbo et al., 2011). There is an abundance of scholarly research identifying barriers for URM BSN students. These students face numerous academic and non-academic barriers such as insufficient financial aid, mentoring, emotional and mental support, inadequate academic preparation and study skills, lack of institutional support, professional socialization, alienation, discrimination, isolation, a lack of social and peer support, living in non-inclusive

campus communities, and a lack of nursing faculty of color (Igbo et al, 2011; Loftin et al. , 2012a; Murray, 2015; Loftin, Newman, Dumas, Gilden, & Bond, 2012b; Smith, Williams-Jones, Lewis-Trabeaux, & Mitchell, 2012; Tabi, Thornton, Garno, & Rushing, 2013). Alienation, isolation, and discrimination pose a significant threat to URM BSN student success.

Many research studies have utilized qualitative methods, such as open-ended interviews and focus groups, when exploring the lived experiences of URM BSN students. Payton, Howe, Timmons, and Richardson (2013) noted that the limited number of URM students inhibited opportunities for URM students to connect, bond, and build relationships with other URM students, which contributed to feelings of alienation and social isolation. Frequently, URM students experience feelings of differentness and isolation as they are the only minorities in the class. One study described that the small numbers of diverse faculty of color and nurses of color in clinical rotations limited social and professional connections with nurses and role models (Crooks, 2013). Often URM students felt that faculty were unwelcoming, (Dapremont, 2011) uncaring, and unsupportive (Payton, Howe, Timmons, & Richardson, 2013).

Sedgwick, Oosterbroek, and Ponomar (2014) identified barriers that impeded URM BSN students in the clinical setting. It was noted that URM students frequently felt uncomfortable and unwelcomed. One student commented, “Every clinical there's always that...you come on to the unit, and it's almost like they don't notice you. I'm not asking for a welcome parade, but give me the same welcome that you extend to my White counterparts” in the same study, URM students perceived discrimination as pervasive. For example, a URM student commented, “To be successful, I needed to work harder to

prove to the instructor, nurses, and clients that I was capable and competent” URM students also reported blatant discrimination by White peers in clinical groups. For instance, a White student commented, “I hate to say this, but sometimes when I see like a Chinese person, and they don't speak English very well, I think they're really dumb.’ And I'm thinking, why would you say something like that? What are you trying to tell me? It's a tough situation. That can really shake your sense of belonging a lot of times.”

Experiences such as these make it challenging to retain URM BSN students. Consequently, efforts to retain URM students in BSN programs remains a challenge (Loftin et al., 2012a). Excessive levels of perceived stress and ineffective coping skills may present a barrier for student retention, especially for URM BSN students.

### **Stress**

Stress is the body's response to person-in-environment interactions, which are perceived as challenging one's ability or exceeding one's or resources to cope with a situation (American Psychological Association, n.d.). Stress is a normal facet of life. It may serve as a driving force toward goal attainment or, conversely, serve as a barrier. Prolonged periods of high stress can result in adverse emotional and physical health outcomes such as anxiety, depression, heart disease, and high blood pressure (National Institute of Mental Health, n.d.).

By the year 2020, stress-related diseases will be a significant cause of disability in the United States (World Health Organization, 2012). Research demonstrates that college students are exposed to a variety of stressors such as academic performance, finances, as well as balancing work, family, and school. Often, these stressors can affect an

individual's ability to cope, resulting in behavioral, emotional, and physical challenges (Kurebayashi, Prado, & Silva, 2012).

College students are under a tremendous amount of stress (Novotney, 2014). Within the past decade, studies suggest that elevated stress levels and mental health challenges among college students in the U.S. are increasing in frequency and severity (Watkins, Hunt, & Eisenbert, 2012). A 2012 national college health assessment of 90,666 students conducted by the American College Health Association (2013) reported that over 40% of college students have experienced above-average levels of stress within the past year. Eighty percent of these college students reported feeling overwhelmed by the rigors of college compared to the previous year, and approximately 45% experienced feelings of hopelessness. Twenty-nine percent of students reported stress negatively impacted their academic performance resulting in low course grades or exam scores, dropping a class, or receiving an incomplete.

Stress is a psychosocial phenomenon that negatively impacts the academic success and well-being of nursing students (Pulido, Augusto, Lopez-Zafra, 2012). BSN students experience higher levels of stress compared to other undergraduate degree programs (Cleary, Horsfall, Baines, & Happell, 2012). High levels of stress can be related to study time, completion of academic assignments, and clinical work (Cleary, Horsfall, Baines, & Happell, 2012) during their training period.

Undoubtedly, clinical practice is a critical component of nursing education and a challenging training time for students (Akhu-Zaheya, Shaban, & Khater, 2015). Nursing students encounter challenges in complex clinical environments; for instance, learning to operate high-tech medical equipment, working within interdisciplinary teams, caring for

challenging or acutely ill patients along with meeting the demands of a patients' family (Silva & Guimaraes, 2016). As a result, these clinical experiences may create stress for students. Persistently high levels of stress can negatively impact a student's clinical training along with their emotional, physical, and mental health. While various research studies have focused on occupational stress within the nursing profession (Das & Baby, 2013; Shivaprasad, 2013; Magnavita, 2014; Nowrouzi et al., 2015), it is essential to explore how stress impacts nurses during their training period before they enter the workforce.

An overwhelming majority of scholarly research regarding stress among BSN students utilizes the theoretical framework of the Transactional Model of Stress and Coping (TMSC). This model is extensively studied and widely recognized by practitioners and researchers (Folkman & Lazarus, 1985; Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986; Cooper, Dewe, & O'Driscoll, 2001; Hulbert-Williams, Morrison, Wilkinson, & Neal, 2013; Martin & Daniels, 2014). The TMSC asserts that stress is a series of interactions between person and environment that originates from an incongruence amid demands and resources. As a result, stress ensues when individuals perceive that life's needs outweigh their ability to manage the stressor. Lastly, a series of transactions are mediated by an individual's assessment of the stressor and one's access to social and cultural resources. The constructs of the TMSC are: (1) primary appraisal—how one perceives the stressor (e.g., challenging, irrelevant, or positive); (2) secondary appraisal—assessment of one's internal (e.g. willpower) and external (e.g. family, peers, and mental health professionals) coping mechanisms; and (3) coping behaviors adopted by the individual to reduce or remove the source of stress. This



model mirrors the nursing process (e.g., assessment of the problem, plan to deal with the problem, execution of a plan, reassessment; Bailey & Clarke, 2013) and perhaps explains its extensive use within nursing research.

**Limitations of the transactional model of stress and coping.** While traditional models of stress and coping are modified to investigate race-related stress, there are limitations. Traditional models originate from Western and Eurocentric traditions and values, which affirm individualist ideals. The significance of individualism negates common forms of coping, which may vary according to one's gender or race. The model's appraisals are rooted in an individual's response. This model excludes spirituality as a method of coping. For instance, African-Americans often rely on spirituality as a form of coping (Archibald, Dobson Sydnor, Daniels, & Bronner, 2013; Cokley et al., 2013a; Hamilton, Sandelowski, Moore, Agarwal, & Koenig, 2013), which is not reflected in traditional stress and coping models. Spirituality is problem-driven because individuals tend to ask for help as problems occur instead of reflecting upon positive experiences. Nonetheless, divinity is perceived as supportive; consequently, spiritual coping is conceivably viewed as emotion-focused (Constantine, Donnelly, & Myers, 2002). The Eurocentric view of individualism focuses upon the adaptive process of problem-focused coping where the focal point is eliminating the stressor versus a traditional collectivist approach which seeks to attain balance, harmony, and peace.

Traditional coping and stress models tend to overlook ecological and external factors such as education, socioeconomic status, or race in its construct. These cultural, environmental, and social influences may negatively impact an individual's health and

academic success. Additionally, the coping measures originating from this theoretical framework fail to address the unique coping strategies of minorities adequately.

Many research studies comprise a sample of predominately White, young, traditional college students. Therefore, the unique stressors related to one's minority status, identification of the sources, and manifestations of stress among URM BSN students are not examined. As a result, the experiences of minorities are often overlooked. Thus, it is vital to examine and conduct research studies that explore the different sources of stress for this population of students.

**Stressors related to minority college students.** While stress is a normal facet of daily functioning, URM college students face additional stress related to their race or ethnicity, such as social isolation, discrimination, prejudice, and environmental culture of PWIs that fails to address or meet their needs (Wei, Ku, & Liao, 2011). Perceptions of stress among URM students correlated with maladjustment to the role of a college student (Wei, Liao, Chao, Mallinckrodt, Tsai, & Botello-Zamarron, 2010), low academic performance, and high attrition rates (Arbona & Jimenez, 2014). Entering college may represent a URM student's first experience with existing as a minority in a primarily White space (Alvarez, Blume, Cervantes, & Thomas, 2009). As a result, this environment could be drastically different from the communities URM students originate from and where their ethnic, racial, or cultural identity is undoubtedly represented. Therefore, many URM students may experience added stress related to academic success as well as learning how to navigate a PWI.

Swim, Hyers, Cohen, Fitzgerald, and Bylsma (2003) conducted a mixed-method study with African-American undergraduate college students ( $N = 51$ ) to examine

incidences of racism they experienced while attending a PWI. The methods included utilizing a daily diary and an emotions scale to capture to assist participants in capturing their experiences. Students recorded various types of perceived racial or discriminatory occurrences ranging from prejudicial comments, glaring looks, discourteous service, and uncomfortable interpersonal, racial communication. Students reported incidents of interpersonal prejudice and racism as prevalent that often occurred with other students, friends, and intimate partner situations. Responses to the emotional scale indicated that 58% of the incidents ( $n = 19$ ) that students reported concerned feelings of anger and comfortability.

Additionally, researchers noted that African-American students described frequent incidents of racism ( $p = .04$ ). African-American women also reported recurrent incidents of racism. This research study offers concrete data supporting the frequency of racism occurring bi-weekly for African-American college students. These incidents had a profound emotional effect on the students' comfort level and perceptions of threat during the encounters.

Research indicates that African-American, Asian, Latino, Native American, and Pacific Islander students have more negative perceptions of the campus climate when compared to their White counterparts (Johnson, 2012; Arbona & Jimenez, 2014; Johnson, Wasserman, Yildirim, & Yonai, 2014). Harwood, Hunt, Medenhall, and Lewis (2012) conducted a qualitative study ( $N = 81$ ) with undergraduate and graduate students of color (36 African-American, 20 Asian-American, 24 Latino, and 1 Native Americans) from diverse majors (communication, engineering, psychology) regarding their experiences while enrolled at a PWI. Many students portrayed their experiences as unsupportive and

unwelcoming due to covert and overt forms of racism. Researchers identified four themes related to microaggressions: 1) racial jokes and verbal comments; 2) racial slurs were written in shared spaces; 3) segregated spaces and unequal treatment, and 4) denial and minimization of racism. The negative perceptions and experiences these students encountered may have exacerbated general feelings of stress related to academics resulting in depression, low academic performance, or suicidal ideation, necessitating the need for one-on-one counseling.

Chao, Mallinckrodt, and Wei (2012) investigated archival data from 12 college counseling centers for three consecutive semesters. Of the 12 counseling centers, seven were public PWIs. A total of 1,555 (987 women, 568 men) African-American undergraduate students took part in the research study. The study aimed to determine the incidence of ethnic/racial discrimination among African-American college students, examine how they cope with stress and analyze the correlation between stress and well-being with various levels of social support. Researchers utilized intake data from the Presenting Problems Checklist (PPC) completed by college students seeking treatment. The 42-item, self-report PPC is a standard assessment form utilized at more than 50 U.S. college counseling centers. Study findings indicated that ethnic/racial discrimination was prevalent as 10% of the sample reported feeling “extremely distressed.” Additionally, 16% of study participants reported feeling “quite a bit” of stress related to perceptions of racism.

Furthermore, women described higher levels of distress than men. Researchers also noted that men were describing feelings of anger or irritability. Three themes emerging from the study reported by were perceived racial discrimination associated with

a wide array of co-occurring presenting problems: 1) academic (adjustment to university); 2) interpersonal (faculty and student interactions); and 3) emotional or psychological (depression, suicidal ideation). Findings from this study provided further evidence of the complicated nature by which perceived ethnic/race stress impacts, African-American students, along with its role as an additional stressor distinct from the general stress all college students encounter.

## **Theoretical Framework**

### **Model of Stress and Coping Process of African-American Students**

An incongruent fit between the person and the environment can exacerbate one's level of stress (Greer & Brown, 2011). Manifestations of stress for URM BSN students attending PWIs may originate from everyday college challenges (e.g., coursework, lack of finances) as well as stress-related to one's minority status (e.g., prejudice, racism, discrimination). Research studies propose that the academic success and psychological functioning of African-American students are influenced by contrasting factors than those of their White counterparts. For instance, unique psychosocial stressors related to one's minority status (Greer & Brown, 2011; Smedley et al., 1993; Wei et al., 2011). As a result, it is crucial to investigate the specific factors that influence the academic success and psychological functioning of URM BSN students, especially African-American students attending PWIs. As the enrollment and attrition rates of African-American BSN students continues to rise, it is imperative to explore the nature of these stressors, the variables which affect the manifestation of these stressors, along with explanations as to the degree to which these stressors influence the academic success and adaptation of African-American students. The Model of Stress and Coping Process of African-

American Students (MSCPAS) seeks to describe the academic, sociocultural, and psychological functioning of African-American college students.

MSCPAS describes the academic and psychological functioning of African-American college students attending PWIs. This theoretical framework is comprised of four factors: (1) background variables; (2) sociocultural orientation; (3) MSS; and (4) academic and psychological adaptation (Smedley et al., 1993).

Background variables examine individual attributes such as academic preparation, socioeconomic status, and generation status. Sociocultural orientation explores the coping styles African-American college students utilize to face the challenge of racially-based stressors. The MSCPAS consists of one's behavior, social stances (e.g., occupation, political views, and socioeconomic status), racial identity, intraracial, and interracial interactions.

An individual's sociocultural orientation is an attitudinal state which influences his or her psychological development and life experiences (Smedley et al., 1993). An individual's sociocultural orientation manifests itself in three ways: (1) positive ethnic affirmation, racial identity, and pride in one's ethnic and racial ancestry; (2) avoidance of Whites which reflects animosity toward Whites resulting in behavioral avoidance; and (3) alienation, which mirrors feelings of rejection from an individual's ethnic or racial group (Smedley et al., 1993).

This model affirms that an individual's sociocultural orientation influences the academic success and psychological adaptation to campus climate by changing the extent to which racially relevant stressors affect African-American college students (Arbona & Jimenez, 2014; Cokley, McClain, Enciso, & Martinez, 2013; Smedley et al., 1993).

African-American students who function at high levels are correlated with having positive ethnic and racial identification (Schmidt, Piontkowski, Raque-Bogdan, & Ziemer, 2014). Furthermore, affirming ethnic and racial values corresponds to lower stress rates (Perry, Stevens-Watkins, & Oser, 2013).

MSS is characterized by chronic levels of high stress encountered by members of a minority group (e.g., ethnicity, race, sexual orientation). Stress is caused by numerous adverse campus environmental factors such as racial discrimination, distrust of faculty, a limited number of minority faculty and classmates, and generational status. A hallmark factor of MSS is intrapersonal discrimination and prejudice (Smedley et al., 1993). Numerous research studies indicate that minorities encounter significant levels of discrimination due to their race or ethnicity, leading to stress responses (e.g., anxiety, high blood pressure; DeLilly & Flaskerud, 2012; Monk & Ellis, 2015; Sawyer, Major, Casad, Townsend, & Mendes, 2012) that build up over time, ultimately resulting in substandard mental and physical health (Hurd, Varner, Caldwell, & Zimmerman, 2014; Schmitt, Branscombe, Postmes, & Garcia, 2014). MSS encapsulates these research studies to describe how an incongruent fit between person and environment can lead to chronic stress and poor health outcomes for minorities.

**Strengths of MSCPAS.** Wei (2011) undertook a descriptive, cross-sectional research study to explore how university environment influences college persistence attitudes and MSS stress after factoring out perceived general stress among African-American, Asian-American, and Latino college students attending PWIs. The undergraduate students from various disciplines (agriculture, business, design, engineering, human services, liberal arts, life sciences, veterinary medicine) completed

four questionnaires (perceived general stress, minority stress, perceptions of the university environment, and persistence attitudes). One hundred and sixty students participated in the study. The study results indicate that the university environment significantly influences college persistence attitudes and MSS. Furthermore, study results demonstrate that MSS is separate and apart from perceived general stress. Lastly, multi-group comparisons imply the impact of the university climate is consistent across Asian American, African-American, and Latino/a college students, hence affirming the generalizability of study results.

A second descriptive, cross-sectional study by Wei et al. (2013) explores under what circumstances and for whom perceived racial discrimination would or would not positively impact mental stress. Ninety-five Asian American male college students completed an online questionnaire. Study results illustrated how family support, perceived racial discrimination, and self-esteem predicted mental stress after controlling for perceived general stress. When Asian American college students increased family support as a mechanism to counter perceived racial discrimination, psychological stress declined for students with high and low self-esteem. Study results suggested that when Asian American men utilized less family support, high and low self-esteem rates are much different. Study results further indicated that low utilization of family support may place Asian American males with low self-esteem at risk for stress.

Greer and Brown (2011) led a descriptive, cross-sectional study to examine coping efforts as moderators upon the effect of academic performance, perceived general stress, and MSS for African-American students attending PWIs and historically Black colleges and universities (HBCUs). Two hundred and two students ( $n = 99$ , HBCU &  $n =$



103, PWI) completed a survey packet. Study results indicated that African-American students attending PWIs experienced significantly higher rates of MSS when compared to students attending HBCUs. In many of the coping skills assessed, perceived levels of stress did not differ between students at the two types of universities. Study data indicated that students attending HBCUs utilize more problem-solving strategies and spirituality when compared to students attending PWIs. The impact of MSS upon perceived stress lowered as students increased coping strategies. Additionally, study results indicated that HBCUs might have offered students a nurturing environment to flourish academically due to ethnic familiarity.

Arbona and Jimenz (2014) investigated the influence of MSS that is associated with depression when controlling for gender and general perceived stress among Latino college students. Researchers also explored the impact of ethnic identity on MSS and depression symptoms. A total of 309 undergraduate college students attending an urban, public university completed a survey. Study results indicated that MSS and adverse perceptions of the campus climate added to depression symptoms after controlling for gender and general perceived stress. Data also illuminated that MSS compounded the negative effect of general perceived stress. Lastly, study data indicated that ethnic identity positively influenced MSS in terms of discrimination and interethnic stress.

MSCPAS provides a valuable framework to explore the unique stressors URM BSN students experience. The MSCPAS suggests that minorities encounter chronic, socially-based individual stress due to discrimination and stigma, impeding their adjustment and integration into their social environment. This theoretical framework suggests that minorities experience general stress and additional stress associated with

their minority status (Smedley et al., 1993). Additionally, this conceptual framework can offer a lens into the sources, manifestations, and patterns of stress among URM BSN students and their impact on academic persistence.

**Limitations of MSCPAS.** Despite several studies indicating that minority students encounter unique stressors related to their race or ethnicity, there are several methodological limitations to the MSCPAS. First, the MSCPAS model narrowly focuses on the negative experiences of minority students and overlooks the unique coping strategies (e.g., religion) and social support networks (e.g., family, community) available to students. Although religion is an essential means of coping, this research study did not address this strategy. While the MSCPAS addresses the coping strategies of minority students, research studies that utilized the MSCPAS model focus on the adverse academic, emotional, and psychosocial outcomes versus positive coping mechanisms.

Second, few research studies test the MSCPAS in its entirety. Several studies investigate two of the three constructs—identification of ethnic and racial-related stressors and the manifestation of ethnic and racial-related stress. Coping strategies are excluded.

Research studies utilizing the MSCPAS are correlational and cannot demonstrate causality. As a result, research studies are unable to prove that discrimination causes stress, which causes reduced persistence rates for minority students. One way to resolve this limitation is to utilize experimental and longitudinal research designs to test the impact of MSS on academic persistence.

The MSS scale (Smedley et al. 1993) originated from the MSCPAS to evaluate specific race-related stressors of minority college students and general role stressors of all

college students in these domains: social climate stresses, interracial stresses, racism, discrimination stresses, within-group stresses, and achievement pressures. While this instrument is a significant contribution to research concerning race-related stress, it has failed to accurately assess the specific race-related experiences of all minorities.

### **Relevance to Social Work Practice**

This study is relevant to social work as it may offer evidence that stress, particularly stress experienced by URM BSN students, may pose a barrier to academic success and retention for this group of students. Social workers who interact with college students, specifically minorities, must recognize the signs and symptoms of both general stress and MSS, and be familiar with resources that could enhance a student's ability to be academically, emotionally, and socially successful. Additionally, this study may offer insight into the unique stressors URM BSN students encounter and enhance the cultural competency of social workers, nursing school administrators, student affairs personnel, and educators. Also, the results of this study may highlight the need for improved academic and social interventions to increase the matriculation and graduation rates of URM BSN students. Additionally, results can inform new approaches to recruiting, educating, and supporting faculty engaged in teaching URM BSN students.

MSS research highlights the unique barriers URM BSN students attending PWIs encounter. As the United States becomes increasingly diverse, cultural competence becomes increasingly more critical to effectively assist individuals with issues and challenges. It is essential for social workers to be mindful of the influence of cultural oppression, racism, and ethnicity upon human behavior and development. Additionally, research describing the unique stressors of URM BSN students, especially African-

Americans, will require social workers to examine their cultural biases and the impact of issues related to social justice, oppression, and their effect on the human condition.

In the future, social workers can utilize this information to identify and challenge policies, practices, and procedures at PWIs (e.g., lack of tenured minority faculty) that inhibit and discourage academic success and well-being of minority students.

Furthermore, data from research studies related to MSS are helpful as social workers pursue funding opportunities to design, implement, and evaluate interventions that aim to reduce intragroup discrimination and prejudice at PWIs. Additionally, MSS research uncovers how minority students react differently to discrimination, prejudice, and racism. This information is a valuable tool as social workers work with African-American students to explore ways to reframe potential stressors to enhance their academic success and well-being. As a result, social workers can identify interventions that reduce internalized stigma and improve the well-being of minority students, coupled with institutional responses.

In summary, this study aimed to describe the prevalence of perceived stress and minority stress levels among URM BSN students and the relationship of those scores to student persistence. URM BSN students experience stress related to social integration, racial, and ethnic discrimination. Social inclusion, racial, and ethnic discrimination are factors that have led to high attrition rates among URM BSN students. Specifically, those correlations between demographic variables and reported stress levels provided concrete, specific, and valuable knowledge about the impact of stress on URM BSN students. The identification of sources and manifestations of stress among URM BSN students may lead to improved management of stress.

## CHAPTER THREE: METHODOLOGY

The purpose of this study was to identify and evaluate the impact of perceived stress and MSS upon academic persistence through the application of the MSCPAS utilizing a cross-sectional study design. The goals of this study were to answer the following research questions: 1) what were the unique sources, manifestations, and patterns of stress among underrepresented minority Bachelor of Science in nursing students; and 2) what was the relationship between minority status stress and the persistence attitudes of underrepresented minority Bachelor of Science in nursing students.

### **Research Design**

This was a cross-sectional study. This research design offers a snapshot of one or more groups at a fixed point in time (Sim and Wright, 2000). This design is often associated with self-administered survey questionnaires, telephone, and face-to-face interviews. Cross-sectional studies are often known as descriptive or survey designs (Fink, 2014).

Cross-sectional studies are utilized to characterize a study sample and offer baseline information at the beginning of a research project. The study sample can be made up of individuals or persons representing organizations such as businesses, hospitals, and universities (Polit & Beck, 2012). For example, a researcher who administers an online survey with students in three BSN programs to explore the impact of stress on students is conducting a cross-sectional study. Cross-sectional studies are helpful to researchers investigating a relationship between demographic data and study variables (Sim & Wright, 2000). A researcher could, for example, conduct a cross-

sectional survey of behaviors among BSN students to explore the relationship between race and levels of stress.

Survey data illuminates the magnitude of a phenomenon within a population; it can also offer a foundation for designing appropriate interventions (Polit & Beck, 2012). A survey method is a standard form of data collection within social science research primarily because of its simplicity (Hall, 2008). The approach allows researchers to ask individuals a series of questions in a written, fixed format about past, current, or future attitudes, behaviors, beliefs, or knowledge regarding a phenomenon. Surveys are also ideal for determining relationships between study variables when determining if cause and effect are of minimal concern (Sim & Wright, 2000). Advantages. There are several advantages to utilizing a cross-sectional survey design. For example, study participants are not intentionally exposed, treated, or not treated, resulting in minimal ethical dilemmas. Additionally, cross-sectional designs are relatively inexpensive and quick as one sample is used, data is collected once, and multiple outcomes will be considered. As a result of no necessary further follow-up, few resources are needed to conduct this type of study (Polit & Beck, 2012).

**Weaknesses.** A limitation of cross-sectional survey design is that it only captures a snapshot of a phenomenon; therefore, it only provides information about events occurring at one point in time. If the study was conducted at another point in time, study results might differ. Additionally, it is difficult to infer causation or identify a sequence of events. For example, it can be challenging to determine whether risk factors occur before, during, or after the onset of the study outcome (Fink, 2014). For instance, consider study data that suggests that minority students have higher stress levels than White students.

The researcher cannot conclude that one's minority status causes stress. The researcher can only find that the current survey indicates that stress is higher among minority students versus White students. While cross-sectional studies can assert that two variables are related somehow, they cannot conclude if one affected the other (Mann & Mann, 2012).

### **Research Population**

The target population for this study was BSN nursing students attending nursing programs at PWIs located in the Midwestern region of the United States.

### **Protection of Human Subjects**

Before obtaining consent from study participants, an exempt research application for permission to conduct the study was made to the University of Missouri-Kansas City Internal Review Board (IRB). Once granted permission to access students, an invitation letter and study recruitment flier were sent to designated faculty members asking that they post information about the study to their course Blackboard site.

All research studies are susceptible to various moral and ethical dilemmas. As a result, difficulties must be identified and addressed early in the research process in order to protect study participants from possible harm. To safeguard study participants, the following ethical principles were followed: (a) beneficence and non-maleficence, (b) autonomy, and (c) justice.

**Beneficence and non-maleficence.** Study participants may develop greater personal awareness of some of their experiences as a minority student as a result of participating in this study. The risks are considered minimal. However, some survey questions may be personal, resulting in emotional responses during or after participation.

If students experienced any discomfort, they were instructed to contact the researcher. A list of resources was provided. Confidentiality and privacy were maintained throughout the research study. The online survey was anonymous and did not contain identifiable information. Survey data was kept in a locked file cabinet and stored on an external hard drive that only the researcher had access to.

**Autonomy.** To respect the human right of free choice, the researcher ensured that all study participants completed the informed consent form electronically before joining the research study. Study participants were informed of their freedom to withdraw from the study at any time without repercussion or penalty.

**Justice.** Research findings and results were based upon factual information shared by study participants. All the information shared by individuals was reported as they were in the survey data. Assumptions and false information were not incorporated into research findings or results.

### **Setting**

The proposed study took place at three predominately White, four-year, urban BSN programs in the Midwestern region of the United States.

### **Sample and Recruitment**

A convenience sample of three BSN nursing programs, with students from both economically advantaged and disadvantaged backgrounds, was used. The proposed study used a sampling frame of junior level BSN nursing students during the fall semester of 2016. As all students are required to complete this level of coursework as a general requirement for the nursing program, recruiting from this class resulted in a sample



representing a broad range of students. Information about the study was posted on identified course Blackboard sites.

**Inclusion and exclusion criteria.** To obtain a representative sample, inclusive and exclusive criteria requirements were used. Inclusion criteria were (a) full-time undergraduate BSN nursing student and (b) third-year nursing student within the last two years of BSN program. Exclusion criteria consisted of any other level of nursing students (Accelerated, Bachelors of Health Science, graduate, and doctoral).

**Selection bias.** Individuals who self-select to participate in cross-sectional surveys pose a selection problem. As participants are not randomly selected to participate, volunteers may self-select to participate in the study due to a vested interest in issues related to minorities. Additionally, it is difficult to ascertain why individuals may not participate (Machin, Campbell & Walters, 2007).

### **Operational Definition and Measurement of Study Variables**

**Independent variables.** For this study, perceived stress and MSS stress were measured. Perceived stress was measured by the score on the Perceived Stress Scale (PSS-10). MSS was evaluated by the MSS scale. The MSCPAS asserts that MSS may inhibit academic persistence attitudes of URM students (Smedley et al., 1993). Recent research studies contend that URM students encounter additional stress due to their minority status, and MSS is distinctive from general perceived stress and additive in nature.

**Dependent variables.** For this study, perceived academic persistence was operationalized by the Persistence and Voluntary Dropout scale (PVDD).

## Measures

The online survey packet included an informed consent letter (see Appendix B), demographic form (see Appendix C), and study measures of perceived stress, MSS, and academic persistence (see Appendix D).

**Demographic information.** The demographic information, developed by the researcher, was comprised of 18 questions. Study participants were asked to report their race and ethnicity, generational status, living situation, parents' educational attainment, annual family income, and marital status.

**Perceived stress scale.** The perceived stress scale (PSS) measures psychological stress (Cohen, Kamarch, & Mermelstein, 1983). The PSS is widely used in various physical and mental health studies within undergraduate and graduate student populations (Lee, 2012). A psychometric assessment of the 14-item, five-point Likert scale revealed a high internal validity (Cronbach's  $\alpha = 0.85$ ; Lee, 2012). The ten-question PSS measures the level to which individuals have perceived their life as stressful during the past 30 days utilizing a five-point Likert scale with responses sequencing from "never" to "very often" (Cohen et al., 1983). A single score is computed from the ten-item, five-point Likert scale PSS questionnaire; high scores are indicative of high-stress levels, and lower scores suggest lower stress levels.

**Minority status stress scale.** The minority status stress scale (MSS); Smedley et al., 1993) was used to measure minority stress. The reported Cronbach's alpha of the MSS for African-American, American Indian, Filipino, and Latino students ranges from 0.76 to 0.93 (Smedley et al., 1993). Liang, Li, & Kim (2004) and Greer and Brown (2011) reported a high internal consistency of the MSS scale (Cronbach's  $\alpha = 0.93$ ). The

37-item, six-point Likert scale has five subscales: achievement stress, inter-racial stress, racism and discrimination stress, social climate stress, and within-group stress. Responses range from 0 (does not apply) to 6 (extremely stressful), with high scores indicating low non-persistence decisions or attitudes. High total scores indicate high levels of minority stress where the range of total scores is from 0 to 185.

**Persistence or voluntary dropout decision scale.** Persistence attitudes of college students were measured by the persistence or voluntary dropout decisions scale (PVDD) scale (Pascarella & Terenzini, 1980). The 30-item, five-point Likert scale has five subscales—Academic and Intellectual Development, Faculty Concerns for Student Development and Teaching, Interactions with Faculty, Institution and Goal Commitments, and Peer-Group Interactions. Responses range from 1 (strongly disagree) to 5 (strongly agree), with high scores indicating positive persistence decisions or attitudes. The tool has been validated to distinguish between nonpersistent and persistent college students, 75% and 79% of the time, respectively (Pascarella & Terenzini, 1980). Furthermore, Peart-Forbes (2004) determined the PVDD scale's ability to differentiate between nonpersistent and persistent college students. The internal consistency of the scale is high as the reported Cronbach's alpha for African American students was 0.86 (Gloria, Robinson-Kurpius, Hamilton, & Wilson, 1999), 0.79 for American Indian students (Gloria & Robinson-Kurpius, 2001), 0.71 for Asian American students (Gloria & Ho, 2003), 0.81 for Caucasian students (Rigali-Oiler & Robinson-Kurpius, 2013), and 0.83 (Castillo et al., 2006) and 0.81 (Delgado-Guerrero & Gloria, 2013) for Latina students.

## **Pilot Testing the Survey Packet**

Upon approval from the University of Missouri-Kansas City Institutional Review Board (IRB), the researcher pilot tested the survey packet with 46 BSN students. All participants were in their junior year of study. For this study, the sample was classified into two groups, White ( $n = 18$ ) and Non-White ( $n = 28$ ). Participants consisted of 35 (76.1%) female students and 10 (21.7%) male students. One student did not report their sex (2.2%). The mean age of students was 24.17 years ( $SD = 6.49$ , range: 20-49). Thirty-four participants (71.7%) reported they were single while 12 reported living in a committed relationship or marriage. Forty-one participants (89.1%) reported living off-campus, while five students (10.9%) lived on campus. When asked about generational status, ten students (37%) indicated that they were first-generation. In terms of parental income, 10 students (21.7%) reported income of \$0,000-\$25,000, seven students (15.2%) reported \$25,000-\$39,000, five students (10.9%) reported \$40,000-\$49,000, eight students (17.4%) reported \$75,000-\$99,000, and 12 students (26.1%) reported over \$100,000. The demographic characteristics of the sample are outlined in Table 1.

**Procedure.** Participants were recruited from two junior-level undergraduate nursing courses. Information about the study was posted on course Blackboard sites and sent to students electronically. Survey packets were administered in the paper-pencil format during class time. Blank surveys and manila envelopes (to protect participant confidentiality) were distributed to interested students. Completed instruments were placed back into the manila envelope and returned to the researcher. The average completion time of the survey packet was approximately 20 minutes.

**Data analysis.** Study data were collected and managed using REDCap electronic data capture tools. Research Electronic Data Capture (REDCap) is a secure, web-based application designed to support data capture for research studies, providing 1) an intuitive interface for validated data entry; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to standard statistical packages; and 4) procedures for importing data from external sources. Survey data was then exported to IBM® SAS Studio 3.6. Total stress scores and persistence attitudes were obtained from each completed measure. Pearson's chi-square was used to determine a statistically significant relationship between Non-White and White students on categorical demographic variables and independent *t*-tests to determine differences between Non-White and White students on perceived stress, minority status stress, and persistence or voluntary dropout decisions at a 0.5 level of significance.

**Results.** There were significant differences between non-White and White groups on parental income and marital status (see Table 2). Among Non-White students, 62.5% of parental income was less than \$50,000, while White students only had 37.5% at this level; 13.6% of Non-White students had parental incomes higher than \$50,000 while 86.4% of White students had parents at this income level. More White students were married or living with a partner than Non-White students (91.7% vs. 50%,  $p = .011$ ).

Table 1.

*Demographics of the pilot sample*

Sample	<i>n</i>	Race		<i>p</i>
		Non-White	White	
Gender				
Female	35	14 (40.0%)	21(60.0%)	1.0
Male	10	4 (40.0%)	6 (60.0%)	
Age				
20-22	28	10 (35.7%)	18 (64.3%)	.554
23-50	18	8 (44.4%)	10 (55.6%)	
Housing				
Campus housing	5	3 (60.0%)	2 (40.0%)	.311
Off campus	41	15 (36.6%)	26 (63.4%)	
Parental Income				
≤ \$49,000	24	15 (62.5%)	9 (37.5%)	.001
≥ \$49,000	22	3 (13.6%)	19 (86.4%)	
First generation <sup>2</sup>				
No	29	9 (31.0%)	20 (69.0%)	.142
Yes	17	9 (52.9%)	8 (47.1%)	
Marital status				
Married/living with partner	12	1 (8.3%)	11 (91.7%)	.011
Single	34	17 (50.0%)	17 (50.0%)	

Table 2.

*Descriptive Statistics of Pilot Study Variables*

Measure	Range	Non-White			White			<i>p</i>
		<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	
<b>Perceived Stress Scale</b>	0-40	18	32.22	6.39	28	30.25	7.90	.821
<b>Minority Status Stress Scale</b>	0-185	17	115.76	34.50	27	68.89	19.49	.002
<b>Perceived/Voluntary Drop out Decision Scale</b>	30-150	18	113.44	10.31	28	120.93	11.71	.504

The mean stress score of all students was 31.02 (range: 10-40, *SD* = 7.33), suggesting high levels of stress. Females had higher stress scores (33.14) than males (23.70, *p* = .001), and non-White students had significantly higher stress scores (32.22) than Whites (30.25, *p* = .821).

The mean minority stress score for the sample was 87 (range: 38-192,  $SD = 34.72$ ). Mean scores for non-Whites students were 115.76 ( $SD = 34.50$ ). As anticipated, White students had lower scores on the MSS, suggesting that their race or ethnicity was not a source of stress.

Mean persistence scores for the sample were 118.00 (range: 90-137,  $SD = 1.71$ ), reflecting positive persistence. Non-White students had significantly lower mean scores (113.44) than Whites (120.92,  $p = .504$ ).

**Discussion.** The results of this study provided three significant findings related to stress and persistence in BSN students. First, perceived stress levels were higher for female than male BSN students. This finding was consistent with previous studies regarding perceived stress levels for BSN students (Goff, 2011; Shaban, Khater, & Akhu-Zaheya, 2012; Singh, et al., 2013). According to the American Psychological Association (n.d.), females are more likely than males to report stress as well as the emotional and physical signs of stress. High levels of stress for females may also be attributed to managing various social roles and responsibilities such as caretaker, homemaker, and professional (Janssen, et al. 2012), roles that were not considered in this study.

Second, parental income was significantly higher for Whites reflecting the growing U.S. wealth disparity. A Pew Research Center study found that the median wealth of White families in 2013 was 13 times higher than Black households and more than ten times that of Hispanic households (Kochhar & Fry, 2014). Socioeconomic status, as indirectly measured by income, is also directly correlated to wellbeing, academic success, and achievement (Turner & Smith, 2015; Merritt & Buboltz, 2015). Socioeconomic status signifies one's ability to access essential social, educational, and

economic resources available to families and is a demographic factor that profoundly impacts cognitive abilities (Tucker-Drob & Harden, 2012).

Third, this study detected a significant relationship between Non-White students and minority status stress (Table 2). Independent *t*-test results indicated higher MSS mean scores for Non-White students. This outcome was consistent with other studies regarding unique forms of stress minority students face that impede their ability to adapt and integrate into colleges and universities (Wei et al., 2010; Wei et al., 2011; Greer, & Brown, 2011).

### **Study Procedures and Data Collection Methods**

The investigator began data collection procedures following IRB approval in August 2016. The primary method of data collection was online self-administered questionnaires. A survey packet comprising an invitation letter (see Appendix A), informed consent form, demographic questionnaire, and three anonymous surveys (MSS Scale, PSS, and PVDD) was administered online via REDCap, an electronic data capture tool. REDCap is a secure, web-based application designed to support data capture for research studies, providing 1) an intuitive interface for validated data entry; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to standard statistical packages, and 4) procedures for importing data from external sources (Harris et al., 2009).

The researcher met with nursing school administrators and faculty who teach or supervise undergraduate nursing courses at the proposed study sites to discuss the study. During the meeting, identified administrators and faculty received a copy of the survey packet and student information letter. The researcher asked administrators or faculty to



confirm, in writing, their approval that their classes would be used as potential participants for the study. Confirmation letters were sent via e-mail to the investigator. Once letters were received, the researcher electronically sent identified faculty the student information letter and study recruitment flier (see Appendix E) with a survey link to post on their course Blackboard site or via e-mail directly to students announcing the date, time, and location of study. The researcher was onsite to facilitate data collection. A link to the online survey was provided to students to access via their course Blackboard site, smartphone, or tablet. To thank survey participants, the researcher provided donuts, bagels, and fruit.

For students unable to complete the online survey on the date of data collection, a reminder message with the survey link was posted one week after the initial data collection date (see Appendix F). The reminder message thanked students who completed the survey and requested those who did not have the opportunity to complete the survey to do so within the next week. Potential participants were reminded of the \$100 Amazon gift card raffle. The survey closed two weeks after its original posting.

Students interested in participating in the study were directed to an electronic consent form after clicking the “Consent form” link. The consent form outlined the study purpose, type of data to be collected, study procedures, time commitment, potential risks and benefits, compensation, confidentiality, their right to withdraw from the study at any time, and researcher contact information. This document explicitly stated the voluntary nature of student participation. Participants were informed that results from the study might be published, but data would be presented in aggregate form, thereby protecting their anonymity. After reading the consent form and clicking the “I agree” link, students

were directed to the electronic version of the survey. Students who elected not to participate in the study, by clicking the “Do not agree” link, received a thank you message for their time. The researcher assumed that participating students had the requisite English skills necessary to complete the survey packet as the instruments and directions were written in English.

Participants who completed the online survey submitted their responses by clicking the “Submit form” link at the bottom of the electronic form. Upon submission of the electronic form, a new window opened, inviting students to participate in a raffle for a \$100 Amazon gift card. Participants who clicked the “Yes” link were directed to a new window, which opened for individuals to provide their name, e-mail, and phone number. These contacts were kept separate from the collected data. Once the raffle was over, the contact information was deleted. Upon completion of the survey, participants clicked on the “Submit” button to return survey data to the researcher. Survey data was exported to SAS Studio 3.6.

### **Data Analysis**

All data were coded and entered SAS Studio 3.6. The researcher used descriptive statistics to address the first research question, which explored the differences in perceived stress levels between URM and White BSN students. At the univariate level, all variables of the survey packet were examined. Categorical data such as ethnicity, gender, future academic plans, and generational status were reported as frequency and percentage. Continuous variables within the survey packet, such as perceived stress, MSS, and academic persistence were reported using mean, standard deviation, and range. To answer the second research question regarding the relationship between MSS and the

persistence attitudes of URM BSN students, at the bivariate level, the independent variables perceived stress and MSS were tested for their association with the dependent variable, academic persistence in a separate Pearson's correlation. T-tests and ANOVA tests were conducted to examine demographic differences among study variables and examine mean differences by the institution for perceived stress, MSS, and academic persistence outcomes. Regression analysis tested the impact of MSS on PVDD and the additive impact of MSS among minority students. Possible contingency tables of study results are listed below in

Tables 3.

*Proposed characteristics of the study sample*

Sample	n	Race		p
		Non-White	White	
Gender				
Female				
Male				
Age				
20-22				
23-50				
Housing				
Campus housing				
Off-campus				
Parental Income				
≤ \$49,000				
≥ \$49,000				
First generation <sup>2</sup>				
No				
Yes				
Marital status				
Married/living with a partner				
Single				

Table 4.

*Proposed correlational shell table of study variables*

	Perceived Stress	Minority Status Stress	Persistence or Voluntary Drop out Decisions	Race or ethnicity	Income	Parents Education level	Generation Status
Perceived Stress							
Minority Status Stress							
Persistence/Voluntary Drop out							
Race or Ethnicity							
Parents' education level							
Generation status							

In summary, this study examined the prevalence of perceived stress and minority stress levels among undergraduate nursing students as well as the relationship between those scores and academic persistence. Study data were analyzed to determine if differences existed by the institution when examining perceived stress, MSS, and academic persistence outcomes. The methodology described in this chapter permitted the researcher to address the research questions that guided this study.

## CHAPTER FOUR: RESULTS

This chapter will present findings from this dissertation study. The chapter will review a description of the study purpose, research questions, analytic methods, and a description of the sample. Lastly, research questions are addressed, and an analysis of each item, as well as the findings are presented.

The purpose of the study was to describe and explore the prevalence of perceived stress and minority status stress levels among BSN students and the relationship of these two variables to academic persistence attitudes. The researcher also examined whether demographic indicators (i.e., age, sex, generational and marital status, housing, and parental income) resulted in differences in academic persistence attitudes. Further, this study investigated whether differences existed by study site when examining perceived stress, minority status stress, and persistence, or voluntary drop-out decision attitude outcomes.

For this study, the following research questions were addressed:

1. What were the differences in perceived stress levels between underrepresented minority and White BSN students?
2. What is the relationship between minority status stress and the persistence attitudes of underrepresented minority Bachelor of Science in nursing students?

This study employed a cross-sectional survey design to collect data at three predominately White, traditional, four-year, urban, BSN programs in the Midwestern region of the U.S. The data were collected from enrolled, full-time, junior level, traditional BSN students in accredited BSN programs.

Data analysis was performed using SAS Studio 3.6. Totals and percentages of continuous and categorical sample characteristics across BSN programs were calculated with univariate procedures and tabulate procedures, respectively. Bivariate analyses and chi-square test statistics were used to determine associations between dependent (i.e., minority status stress, perceived stress, and persistence or voluntary drop-out) and independent variables (i.e., age, ethnicity, generation status). If 25% of contingency table cells had expected counts less than five, then the likelihood ratio chi-square test statistic determined significant associations.

Questionnaires measuring minority status stress, perceived stress, and persistence or voluntary drop-out attitudes were all tested for internal consistency. Associations between the dependent variables minority status stress, perceived stress, and persistence or voluntary drop-out and independent variables, age, ethnicity, generation status, parental level of education, and sex were found using Pearson's correlations. Mean score values, standard deviations, and ranges of minority status stress, perceived stress, and persistence or voluntary drop-out were reported in Pearson's correlation table. Other selected independent variables were also included in Pearson's correlation table to determine associations among perceived stress and independent variables. These independent variables included ethnicity or race, parent income, parents' education, and first-generation status, which were all dichotomized (Results Table 3). Pearson's correlations were calculated between continuous variables, point-biserial correlations between continuous variables and binary variables, and tetrachoric correlations between binary variables.

Associations were found between dichotomized independent variables and minority status stress, perceived stress, and persistence or voluntary drop-out decision attitudes using t tests (Results Table 5-7). Separately, ANOVA examined differences in minority stress, perceived stress, and persistence or voluntary drop-out decision attitudes between BSN programs (Table 15). Finally, independent variables, race or ethnicity, parent income, parents' education, and first-generation status were added to a logistic regression model (Table 16) to test the impact of independent variables on persistence or voluntary drop-out decision attitudes. Persistence or voluntary drop-out decision attitude scores were dichotomized for logistic regression based on a median value of 118. Variables were removed from the model based on statistical significance while maintaining minority status stress score and race or ethnicity variables to obtain a final model.

### **Sample Characteristics**

The sample for this study came from three study sites, University of Missouri – Columbia (Mizzou), University of Missouri – Kansas City (UMKC), and University of Missouri – St. Louis (UMSL). Enrolled, full-time, junior level, traditional BSN students, were invited to participate in the study and 99 students agreed to participate: Mizzou ( $n = 57$ ), UMKC ( $n = 16$ ), and UMSL ( $n = 26$ ). The participation rate was not calculated because the number of students invited to participate in the study is not known. The study sites declined a request to provide the number of students enrolled in each junior class to the researcher.

The mean age of participants was 21.2 ( $SD=2.5$ ); 82.8% of students ( $n = 82$ ) were females and 17.1% students ( $n = 17$ ) were males. White students made up 76.7% of the

sample ( $n = 76$ ) and 23.2% were URMs ( $n = 23$ ). Over half ( $n = 58$ , 58.5%) of students reported working, while others ( $n = 41$ , 41.4%) did not work. Regarding marital status, 87.8% ( $n = 87$ ) students reported they were single, while 10.1% ( $n = 10$ ) reported living in a committed relationship; one student reported the status of married and another student reported the status of divorced or separated. Many students ( $n = 86$ , 86.8%) lived off campus while 13.1% ( $n = 13$ ) lived on campus. A little over 20% of students ( $n = 23$ ) were first-generation. Seventy-two percent of students ( $n = 80$ ) indicated that their mother's education level was some college or above while 68.4% of students ( $n = 76$ ) reported that their father's educational level was some college or above. In terms of parental income, 23.4% of students ( $n = 26$ ) reported income of \$75,000-\$99,000 while 28.8% students ( $n = 32$ ) reported income of over \$100,000, respectively. Funding for education costs (e.g., tuition) varied, with 68.6% of students ( $n = 68$ ) receiving family support, 59.6% of students ( $n = 59$ ) had loans, and 53.5% of students ( $n = 53$ ) had scholarships to fund their college education. Descriptive statistics by BSN program are displayed in Results Table 5.



Results Table 5.

*Comparison of Sample Demographics and Key Variables—Overall and by Recruitment Site, N=99*

<b>Variable</b>	<b>Total N (%)</b>	<b>Mizzou (N = 57) N (%)</b>	<b>UMKC (N = 16) N (%)</b>	<b>UMSL (N = 26) N (%)</b>	<b>p</b>
Age, Mean (SD)	21.2 (2.5)	20.4 (0.8)	23.1 (2.4)	21.8 (3.9)	<b>&lt;0.01</b>
Sex					0.65
Male	17 (17.1)	9 (15.7)	4 (25.0)	4 (15.3)	
Female	82 (82.8)	48 (84.2)	12 (75.0)	22 (84.6)	
Race or Ethnicity					<b>0.04</b>
African American	7 (7.0)	1 (1.7)	1 (6.2)	5 (19.2)	
White	76 (76.7)	49 (85.9)	10 (62.5)	17 (65.3)	
American Indian/Alaska Native	1 (1.0)	1 (1.7)	0 (0)	0 (0)	
Asian	6 (6.0)	3 (5.2)	2 (12.5)	1 (3.8)	
Hispanic/Latino(a)	5 (5.0)	2 (3.5)	2 (12.5)	1 (3.8)	
Multi-racial American	2 (2.0)	1 (1.7)	0 (0)	1 (3.8)	
Other	2 (2.0)	0 (0)	1 (6.2)	1 (3.8)	
Currently Working					<b>0.05</b>
Yes	58 (58.5)	28 (49.1)	13 (81.2)	17 (65.3)	
No	41 (41.4)	29 (50.8)	3 (18.7)	9 (34.6)	
Marital Status					0.06
Living in committed relationship	10 (10.1)	4 (7.0)	4 (25.0)	2 (7.6)	
Married	1 (1.0)	0 (0)	0 (0)	1 (3.8)	
Single	87 (87.8)	53 (92.9)	11 (68.7)	23 (88.4)	
Divorced or separated	1 (1.0)	0 (0)	1 (6.2)	0 (0)	
Place of Residence					0.15
Campus housing	13 (13.1)	8 (14.0)	0 (0)	5 (19.2)	
Off-campus housing	86 (86.8)	49 (85.9)	16 (100.0)	21 (80.7)	
First Generation Status					0.87
Yes	23 (23.2)	14 (24.5)	4 (25.0)	5 (19.2)	
No	74 (74.7)	42 (73.6)	12 (75.0)	20 (76.9)	
Mother's Education					0.13
Did not complete high school	6 (6.0)	1 (1.7)	2 (12.5)	3 (11.5)	
High school or GED	12 (12.1)	6 (10.5)	2 (12.5)	4 (15.3)	
Some college	34 (34.3)	19 (33.3)	3 (18.7)	12 (46.1)	
Bachelor's degree	33 (33.3)	23 (40.3)	6 (37.5)	4 (15.3)	
Advanced schooling	13 (1.3)	7 (12.2)	3 (1.8)	3 (11.5)	
Don't know	1 (1.0)	1 (1.7)	0 (0)	0 (0)	

Results Table 5 (cont'd).

*Comparison of Sample Demographics and Key Variables—Overall and by Recruitment Site, N=99*

Variable	Total N (%)	Mizzou (N = 57) N (%)	UMKC (N = 16) N (%)	UMSL (N = 26) N (%)	<i>p</i>
Father's Education					0.11
Did not complete high school	3 (3.0)	1 (1.7)	1 (6.2)	1 (3.8)	
High school or GED	19 (19.1)	7 (12.2)	3 (18.7)	9 (34.6)	
Some college	22 (22.2)	13 (22.8)	1 (6.2)	8 (30.7)	
Bachelor's degree	35 (35.3)	22 (38.6)	7 (43.7)	6 (23.0)	
Advanced schooling	19 (19.1)	14 (24.5)	3 (1.8)	2 (7.6)	
Don't know	1 (1.0)	0 (0)	1 (6.2)	0 (0)	
Parent Income					<0.01
Under \$25,000	6 (6.0)	0 (0)	2 (12.5)	4 (15.3)	
\$25,000-\$39,000	8 (8.0)	2 (3.5)	4 (25.0)	2 (7.6)	
\$40,000-\$49,000	5 (5.0)	5 (8.7)	0 (0)	0 (0)	
\$50,000-\$74,000	10 (10.1)	3 (5.2)	1 (6.2)	6 (23.0)	
\$75,000-\$99,000	26 (26.2)	18 (31.5)	2 (12.5)	6 (23.0)	
Over \$100,000	32 (32.3)	21 (36.8)	5 (31.2)	6 (23.0)	
Don't know	12 (12.1)	8 (14.0)	2 (12.5)	2 (7.6)	
College Funding (check all that apply)					
Employment	35 (35.3)	18 (31.5)	7 (43.7)	10 (38.4)	0.62
Family	68 (68.6)	44 (77.1)	11 (68.7)	13 (50.0)	0.05
Pell grant	28 (28.2)	7 (12.2)	8 (50.0)	13 (50.0)	<0.01
Scholarships	53 (53.5)	29 (50.8)	10 (62.5)	14 (53.8)	0.71
Student loans	59 (59.6)	30 (52.6)	10 (62.5)	19 (73.0)	0.21
Savings	25 (25.2)	17 (29.8)	2 (12.5)	6 (23.0)	0.35

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Only two variables were significantly different between White and underrepresented minority students: parental income ( $p = <0.001$ ) and generational status ( $p = 0.04$ ) (see Table 6). Among underrepresented minority students, 52.6% of parental income was less than or equal to \$49,000 while White students only had 47.3% at this level; 11.7% of underrepresented minority students had parental incomes higher than or equal to \$50,000 while 88.2% of White students had parents at this income level. In terms of generation status, 39.1% of underrepresented minority students were first-generation compared to 60.8% of White students.

Results Table 6.

*Sample Characteristics for BSN Students– MIZZOU, UMKC, UMSL, N = 99*

Sample Characteristics	Overall		Race		<i>p</i>	<i>OR</i> <sup>a</sup>
	<i>N</i> (%)	URM <i>N</i> (%)	White <i>N</i> (%)			
<b>Perceived Stress Score</b>						
≥30	50 (50.5)	8 (34.7)	42 (55.0)		0.08	0.43
<30	49 (49.4)	15 (65.2)	34 (44.7)			
<b>Minority Status Stress Score</b>						
≥70	**	20 (86.9)	**		**	**
<70	**	3 (13.0)	**		**	**
<b>Persistence or Voluntary Drop-Out Decision Score</b>						
≥118	50 (50.5)	5 (21.7)	45 (59.0)		<b>0.001</b>	0.19
<118	49 (49.4)	18 (78.2)	31 (40.7)			
<b>Sex</b>						
Female	82 (82.8)	18 (21.9)	64 (78.0)		0.51	0.67
Male	17 (17.1)	5 (29.4)	12 (70.5)			
<b>Age</b>						
20-22	74 (83.1)	16 (21.6)	58 (78.3)		0.34	1.81
23-50	15 (16.8)	5 (33.3)	10 (66.6)			
<b>Housing</b>						
Campus housing	13 (13.1)	1 (7.6)	12 (92.3)		0.11	0.24
Off-campus housing	86 (86.8)	22 (25.5)	64 (74.4)			
<b>Parental income</b>						
≤\$49,000	19 (21.8)	10 (52.6)	9 (47.3)		<b>&lt;0.001</b>	0.12
≥\$49,000	68 (78.1)	8 (11.7)	60 (88.2)			
<b>First generation?</b>						
No	74 (76.2)	14 (18.9)	60 (81.0)		<b>0.04</b>	2.75
Yes	23 (23.7)	9 (39.1)	14 (60.8)			
<b>Marital status</b>						
Married/living with a partner	11 (11.2)	2 (18.1)	9 (81.8)		0.71	0.74
Single	88 (88.7)	20 (22.9)	67 (77.0)			

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## descriptive Statistics of Study Variables

### Research Question One

What were the differences in perceived stress levels between underrepresented minority and White Bachelor of Science in nursing students?

**Perceived stress scale.** The mean perceived stress scale score of all students was 29.0 (range = 10-40, *SD* = 7.7), suggesting high levels of stress (Results Table 7). Mean scores for underrepresented minority and White students were not statistically significant ( $t = 1.32, p = 0.19$ ). Bivariate analyses showed that academic persistence scores differed significantly by race.

Results Table 7.

*Comparison of Stress and Persistence Scores by Race N = 99*

	Total Sample N=99	White Students N (%)	URM Students N (%)	<i>p</i>	OR
<b>Perceived Stress Score</b>					
$\geq 30$	50 (50.5)	42 (55.0)	8 (34.7)	0.08	0.43
$< 30$	49 (49.4)	34 (44.7)	15 (65.2)		
<b>Minority Status Stress Score</b>					
$\geq 70$	**	**	20 (86.9)	**	**
$< 70$	**	**	3 (13.0)	**	**
<b>Academic Persistence Score</b>					
$\geq 118$	50 (50.5)	45 (59.0)	5 (21.7)	<b>0.001</b>	0.19
$< 118$	49 (49.4)	31 (40.7)	18 (78.2)		

**Minority status stress.** The mean minority status stress score for underrepresented minority students was 102.8 (range = 38-192, *SD* 25.47), indicating high levels of minority status stress. Underrepresented minority students whose parents' income was less than or equal to \$49,000 had higher minority status stress scores than students whose parents' income was more than or equal to \$50,000. Additionally, underrepresented minority students had higher minority status stress scores if their mothers had a high school education or less, and if they were first-generation students (Results Table 8).

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Results Table 8:

*Relationship between Demographic Variables and Perceived Stress, Minority Status Stress, and Academic Persistence or Voluntary Drop-Out*

	Perceived Stress N=99	<i>p</i>	Academic Persistence and Voluntary Drop- Out N=99	<i>p</i>	Minority Status Stress n=23	<i>p</i>
Race or Ethnicity						
White	76 (76.7)	0.19	76 (76.7)	<b>&lt;0.01</b>	**	**
Underrepresented minority	23 (23.2)		23 (23.2)		**	**
Parent Income						
≤\$49,000	19 (21.8)	0.88	19 (21.8)	<b>&lt;0.0001</b>	10 (43.4)	0.55
≥\$49,000	68 (78.1)		68 (78.1)		8 (34.7)	
Mother's Education Level						
High School or Less	18 (18.3)	<b>0.04</b>	18 (18.3)	0.08	7 (30.4)	0.37
More than High School	80 (81.6)		80 (81.6)		15 (65.2)	
Father's Education Level						
High School or Less	22 (22.4)	0.28	22 (22.4)	0.21	11 (47.8)	0.62
More than High School	76 (77.5)		76 (77.5)		12 (52.1)	
First Generation Status						
No	74 (76.2)	0.38	74 (76.2)	0.11	14 (60.8)	0.70
Yes	23 (23.7)		23 (23.7)		9 (39.1)	

**Persistence or voluntary drop-out decision scale.** The overall sample mean persistence or voluntary drop-out decision score was 119.1 ( $SD = 14.6$ ), indicating positive persistence attitudes. A significant difference in scores was seen for UMKC when compared to Mizzou and UMSL ( $F = 9.5, p < 0.001$ ). UMKC had a lower mean persistence or voluntary drop-out decision score than the other two schools, indicating high drop-out decision attitudes, but it also had a smaller sample size ( $n = 16$ ) (Results Table 9).

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Results Table 9.

*Comparisons between BSN Programs on Minority Status Stress, Perceived Stress, and Persistence or Voluntary Drop-Out Decision Attitudes*

School	Mean	<i>n</i>	Sum of Squares	Mean Square	<i>df</i>	<i>F</i>	<i>p</i> -value
Perceived Stress							
Mizzou	31.0	57	582.0	291.0	2	5.23	<0.01
UMKC	28.3	16					
UMSL	25.3	26					
Minority Status Stress							
Mizzou	104	8	59.3	29.6	2	0.04	0.95
UMKC	100.1	6					
UMSL	103.4	9					
Persistence or Voluntary Drop-Out							
Mizzou	123.6	57	3495.8	1747.9	2	9.5	<0.001
UMKC	107.6	16					
UMSL	116.3	26					

### Research Question Two

What is the relationship between minority status stress and the persistence attitudes of underrepresented minority Bachelor of Science in nursing students?

The overall sample mean for academic persistence or voluntary drop-out decision score was 119.1 (SD = 14.6) (Results Table 7) indicating positive persistence attitudes. A significant difference ( $t = 3.26, p < 0.01$ ) was observed based on race, with URM students had lower academic persistence or voluntary drop-out decision scores ( $M = 110.8, SD = 11.6$ ), indicating high voluntary drop-out attitudes, than White students ( $M = 121.7, SD = 14.6$ ). Another significant difference was seen based on parental income ( $t = -4.09, p < 0.0001$ ). Students whose parents' income was \$50,000 or more had a higher persistence or voluntary drop-out decision score ( $M = 123.1, SD = 13.2$ ) indicating high academic persistence attitudes than students whose

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parents' income was \$49,000 or less ( $M = 109.3$ ,  $SD = 11.8$ ). There were no other significant differences seen among independent variables.

A logistic regression model examined the effect of the independent variables of minority status stress and parental income on academic persistence attitudes. The results from the logistic regression model (Results Table 10) indicates academic persistence or voluntary drop-out decision attitudes were significant ( $\chi^2 = 21.76$ ,  $p < 0.0001$ ), and with minority status stress and race maintained in the model, students with a parent income of \$50,000 or more were more likely to have an academic persistence attitude score of 118 or more ( $OR = 7.28$ ,  $95\% CI (1.84, 28.83)$ ,  $p < 0.004$ ). In other words, students with a lower parental income had lower persistence. Higher-income is predictive of positive academic persistence attitudes (i.e. remaining in school) ( $p=.004$ ,  $\beta = 1.98$ ). Minority status stress and parental income combined were important predictive power separately and when put in the model. While both variables were significant, parental income was a more robust indicator of persistence. Additionally, lower minority status stress indicated positive academic persistence attitudes ( $p=.01$ ,  $\beta -.02$ ).

Results Table 10.

### *Logistic Regression Model for Academic Persistence Attitudes among BSN*

<b>Independent Variable OR (95% CI)</b>	<b>B</b>	<b>SE</b>	<b><math>\chi^2</math></b>	<b><i>p</i>-value</b>
Minority Status Stress Score 0.97 (0.95, 0.99)	-0.02	0.01	6.34	0.01
Parent Income 7.28 (1.84, 28.83)	1.98	0.70	8.01	0.004
Model $\chi^2 =$	21.76			
<i>P</i> -value =	<0.0001			

## CHAPTER FIVE: DISCUSSION

This chapter presents a summary of the study, its significant findings, and implications for social work practice and research, nursing education, nursing practice, and nursing research. Limitations of the study are addressed. Conclusions and recommendations for ongoing education regarding minority status stress, which stemmed from this study, are also discussed.

### **Study Summary**

**Methodology.** A cross-sectional study was conducted to identify and evaluate the impact of perceived stress and minority status stress upon academic persistence. The study population was comprised of a convenience sample of junior-level students attending three Bachelor of Science in Nursing (BSN) programs. Data were obtained from full-time junior-level BSN students using online self-administered questionnaires. The response rate was not calculated because the study sites declined the researcher's request to provide the total number of students in each junior class. A total of 99 participants completed the questionnaires. Descriptive statistics were used to analyze data, and the significance of the relationships between variables was examined using Pearson's correlation, *t* tests, ANOVA, and regression analysis (*p* value of 0.05).

**Study purpose.** This cross-sectional study examined relationships between perceived stress and minority status stress and academic persistence through the application of the Model of Stress and Coping Process of African-American Students (MSCPAAS).

**Research questions and hypotheses.** The research questions and hypotheses that guided this study were:

(R1) What are the differences in perceived stress levels between underrepresented minority and White BSN students?



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(R2) What is the relationship between minority status stress and the persistence attitudes of underrepresented minority BSN students?

The findings for each research question and hypothesis are discussed as follows:

**Research question one:** *What are the differences in perceived stress levels between underrepresented minority and White BSN students?* The first research question sought to identify differences in perceived stress levels between URM and White BSN students. No significant differences in levels of perceived stress among URM and White BSN students were found. Several explanations may account for the lack of a significant differences in levels of perceived stress. First, data were collected during the first two weeks of the spring semester. It is plausible that the junior-level students participating in this study may not have experienced significant forms of stress at this early stage in the semester. During this early semester period, students are typically still familiarizing themselves with course content, faculty teaching styles, and assignments.

Further, there was the possibility that junior-level BSN students already had a strong commitment to the nursing major and had already learned the coping skills necessary to manage work, home, and school conflicts. Additionally, perhaps, junior-level students were likely already familiar with and had accessed campus resources (e.g., financial aid, academic advisement, and counseling), which led to reduced stress. Lastly, it is possible that the perceived status stress questionnaire was not sensitive to the unique experiences that URM students encounter at predominately white institutions (Lipsey & Hurley, 2009).

**Barriers to success.** This study indicated that two variables were significantly different between URM and White students: parental income and generation status. The parental income for URM students was less than or equal to \$49,000, indicating that the URM students in this

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study were from low-income backgrounds. It is reasonable to assume that socioeconomic status can impact students' academic persistence attitudes. Other research studies have shown that low parental income and generational status can be an obstacle for URM college students (Bradbury, Corak, Waldfogel, & Washbrook, 2014). Parental income is an indicator of family income and is, thereby, a proxy of social class (Erola, Jalonen, & Lehti, 2016). This significant finding concerning parental income supports previous research findings, which assert that college students from low socio-economic backgrounds experience high attrition rates (Chang, Sharkness, Hurtado, & Newman, 2014). Underrepresented minority college students are less likely to persist through graduation in comparison to their White counterparts (Chaplot, Cooper, Johnstone, & Karndjeff, 2015). A lack of financial resources may impede a college student's ability to fully engage in their studies due to a focus on how to pay for courses, textbooks, and housing; thereby creating a source of stress (Fuse, 2018). As a result, low-income college students are more inclined to work while in school to supplement their income. As a result, less time is spent studying and participating in campus student success programs.

Many first-generation college students are from low-socioeconomic backgrounds (Blackwell & Pinder, 2014). The results of this dissertation study showed that one-third of URM study participants were first-generation students. This finding of first-generation status was consistent with previous research that showed that URM students are more likely categorized as first-generation compared to White students (The Postsecondary National Policy Institute, 2018). Underrepresented minority students often come from families who have experienced barriers to a college education such as financial challenges, insufficient academic preparation, lack of campus resources, and insufficient peer counseling (Blackwell & Pinder, 2014). These barriers can also place URM students at higher risk of failing or dropping out of college.

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First-generation college students tend to borrow more money from the federal government to cover tuition and living expenses. Additionally, URM first-generation college students often lack adequate emotional support from family members and are unable to benefit from parent's college experience, a valuable resource that has previously been shown to help students navigate college (Longwell-Grice, Adsitt, Mullins, Serrata, 2016).

**Significance of mother's education level.** Results from this study showed a significant relationship between perceived stress and mother's level of education. The mean score for perceived stress was higher for students whose mothers had a high school education or less. Meaning, students whose mothers were less educated reported feeling more stressed than those with more educated mothers. The results of the current study aligned with previous research, which asserted that parental level of education, especially a mother's education level, is critical to an individual's academic success (Kim & Hill, 2015). It is reasonable to conclude that URM students whose mothers' education level was more than high school had lower perceived stress scores than mothers with an educational level of high school or less. One explanation that may account for these results is many of the students participating in this dissertation study (81%) had a mother with more than a high school education.

**Research question two:** What is the relationship between minority status stress and the persistence attitudes of underrepresented minority Bachelor of Science (BSN) in nursing students? The second research question explored the relationship between minority status stress and persistence attitudes of URM BSN students. Results from this study indicated a negative correlation between these two variables; however, the relationship was not significant. Meaning, as minority status stress increases positive academic persistence attitudes decreases, perhaps leading to attrition. The findings from this study echoed similar results discovered by Arbona

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(2016); however, they also contradicted other research (Wei et al., 2011), which found a significant negative relationship between minority status stress and persistence attitudes for Asian American and Latino college students. However, in the current study, analysis by racial/ethnic subgroup was not possible due to the small number of study participants from underrepresented minority groups.

Results from the current study indicated a significant, positive relationship between low parental income and persistence/voluntary drop out. Simply put, students from families with parental income less than or equal to \$49,000 had lower persistence and higher voluntary drop out scores than students from families with parental income greater than or equal to \$49,000. Other researchers have concluded that college students from higher socio-economic backgrounds appear to have higher persistence attitudes, which may lead to academic success (e.g., graduation; Seidman, 2018). This significant relationship between parental income and persistence may aid in understanding the limited contribution of minority status stress to persistence attitudes in this sample ( $n = 23$ ) of URM BSN students.

This study's results indicated a significant difference between persistence and voluntary drop out scores between URM and White students. Underrepresented minority students had lower persistence and higher voluntary drop out scores than White students. A potential explanation for this association is the high attrition rates of URM students in BSN programs across the United States (Toretzky, Mutha, & Coffman, 2018). In recent decades, enrollment of URM students in BSN programs has increased (AACN, 2017). However, URM BSN students experience disparities in degree attainment (Murray, 2015). Moreover, this study indicated a moderate positive relationship between race and minority status stress. In other words, minority

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status stress suggests that URM BSN students experience stress specific to their racial or ethnic status at predominately White colleges or universities.

***Study hypothesis one.*** Results from this study indicated that URM BSN students experience minority status stress. This finding supports the current study's first hypothesis that URM BSN students experience stress related to their minority status. Findings from this dissertation study supported published research that among URM BSN students enrolled at PWIs, minority status stress is a unique source of stress associated with persistence attitudes (Arbona, Fan, & Olvera, n.d.). These findings were consistent with previous research, which affirmed that minority students are more likely to experience minority status stress while attending a predominately White college or university (Cokley et al., 2017; Arbona, 2016; McClain et al., 2015).

***Study hypothesis two.*** Findings did not support this study's second hypothesis that the additive nature of minority status stress to perceived status stress would be significantly related to academic persistence attitudes. It was hypothesized that URM BSN students encounter two distinct forms of stress, perceived status stress, and minority status stress, which may significantly impact persistence attitudes. While URM BSN students did experience minority status stress, there was no significant statistical relationship to suggest that these students also encounter perceived status stress; therefore, negating additive levels of stress. These findings are inconsistent with other studies which affirm minority status stress is an added burden that minority students encounter together with the typical stressors that all college students confront (Vosvick & Stem, 2019; McClain et al., 2015; Smedley et al., 1993). Perhaps an explanation for this finding is that the perceived stress scale may not account for stress related to one's race or ethnicity.

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Additionally, coping behaviors such as problem-focused coping may buffer the effects of perceived status stress (Enns, Eldridge, Montgomery, & Gonzalez, 2018). However, these same strategies are not as helpful in mitigating the emotional effects of prejudice and discrimination, which are perceived as persistent and pervasive (Franklin, 2016) and out of one's ability to control. As a result, URM BSN students may find it challenging to thrive in environments that they perceive as hostile and uncomfortable, resulting in elevated levels of minority status stress.

### **Recommendations for Future Research**

The MSCPAAS describes the academic and psychological functioning of African-American college students attending PWIs. The model includes four components: (1) background variables; (2) sociocultural orientation; (3) minority status stress; and (4) academic and psychological adaptation (Smedley et al., 1993). The MSCPAAS model, as adapted by Smedley et al. (1993), suggests that an individual's sociocultural orientation influences academic success and psychological adaptation to campus climate (Cokley et al., 2013; Arbona & Jimenez, 2014).

In this study, minority status stress and sociodemographic status most closely linked with two factors of the MSCPAAS: background variables and stress related to one's race or ethnicity. The results of this study aligned with Smedley's (1993) adaptation of the MSCPAAS, which suggested that academic achievement is influenced by various individual and sociocultural factors as well as coping strategies. The combination of these factors is essential to minority student college achievement. Results of this study confirmed that generation status, parental income, mother's level of education, and minority status stress influence academic persistence attitudes. Background variables and one's perception of prejudice and discrimination are factors that influence persistence attitudes, consistent with Smedley's framework (1993).

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When comparing this study's results with Smedley's (1993) MSCPAAS, some differences exist. Smedley asserted that experiences related to minority status stress are separate and additive to the general stressors that all college students encounter. This study's results suggested that URM students experience minority status stress and no significant levels of perceived status stress, which contradicts Smedley's (1993) assertion. Differences in study design could have caused the results of this study to differ from the 1993 study. For example, Smedley's (1993) study sample was comprised of 1,096 participants, of whom were 56% White and 44% URMs. Conversely, 99 students participated in this study; 77% of whom were White while only 23 were URMs. Hence, the fact that less than 25% of participants in this dissertation study were underrepresented students could have skewed the results.

Smedley's (1993) MSCPAAS model was appropriate for examining the relationship between minority status stress and the persistence attitudes of URM BSN students. It is crucial to conceptualize the phenomenon of minority status stress through a culturally-informed lens such as the MSCPAAS because it accounts for the unique, culturally-relevant stressors which may coalesce to inform academic persistence attitudes.

Finally, the present study attempted to give insight into factors influencing the relationship between minority status stress and academic persistence attitudes. This was a cross-sectional study that used only quantitative methods. However, qualitative methodology, such as interviews, should be considered to bring an in-depth analysis of how URM BSN students perceive and assign meaning to race-related stress and coping strategies. A mixed-methods study could also be considered toward this same objective.

Results from this dissertation study underscore that more research is needed to better understand the impact of minority status stress upon the well-being, academic persistence, and

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graduation rates of URM BSN students. A longitudinal study design, with a larger number of participants that examines minority status stress levels and persistence attitudes over time, could inform future interventions that aim to diversify the nursing workforce in this county.

### **Implications for Social Work Practice**

Results from the current study offer evidence that URM BSN students encounter minority status stress, which may pose a barrier to the academic success and retention for this group of students. Social workers who interact with college students, specifically URMs, must recognize the signs and symptoms of both general stress and minority status stress, and be familiar with resources that will enhance a student's ability to be academically, emotionally, and socially successful. As a result, it is crucial that social workers remain up-to-date on academic research that outlines practice and policy strategies to address minority status stress. Moreover, this study offers insight into the unique stressors that URM BSN students encounter. Findings can be used to inform programs to enhance the cultural competency of social workers, nursing school administrators, student affairs personnel, and educators.

This study's results add to the body of existing knowledge. This study examined a novel strategy of measuring the stress levels of URM BSN students, as well as examining ways in which minority students cope with minority status stress. Research findings also suggest a need for social workers to work within academic units to offer individual and group interventions to promote URM student's persistence and emotional well-being. Strengths-based biopsychosocial interventions focusing on stress management have proven effective in decreasing anxiety and stress (National Association of Social Workers, n.d.)

Within nursing programs, faculty can have a significant impact on how URM BSN students experience the program. Faculty who work effectively with URM BSN students create



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cooperative, engaging, and safe classroom environments, which assist students in the development of active faculty and student relationships. The role faculty play in affirming students' experiences is critical. Social workers can design and implement interdisciplinary faculty development opportunities addressing cultural competence and unconscious biases.

Institutional change agents, such as social workers, can aid URM students to navigate the campus culture and adopt a sense of belonging on campuses. Social workers can also connect students to campus resources, legitimize students' cultural and racial identities, and provide supportive environments in which these students can flourish.

One avenue for further study is continued research that encompasses practices, which help advance diversity and inclusion on college campuses such as diversity across all levels of the campus (e.g., diverse faculty), supportive services for students, and inclusive campus climate. Institutional and departmental commitments to diversity and inclusion are essential. Institutions that foster a safe and inclusive campus environment for all students, especially minorities, are more likely to create stronger academic persistence attitudes, and increased levels of student performance are thereby increasing the number of minority graduates entering the workforce (U.S. Department of Education, 2016).

### **Limitations**

*Study design.* A limitation of this research study was the cross-sectional survey design. This design only captures a phenomenon at one point in time. Study results might have differed with a longitudinal approach. Additionally, it is difficult to infer causation or identify a sequence of events or to determine whether risk factors occurred before, during, or after the onset of the study outcome with a cross-sectional design. While cross-sectional studies can assert that two variables are related somehow, they cannot conclude if one affects the other.

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***Selection and self-report bias.*** Individuals who self-select to participate in cross-sectional surveys pose a selection problem. As participants are not randomly selected to participate, volunteers may self-select to participate in the study due to a vested interest in issues related to minorities. Furthermore, researchers who use self-report questionnaires rely upon the honesty of study participants. As a result, participants may select the socially acceptable response rather than a truthful response.

***Demographic limitations.*** The data in the current study were gathered in an urban area with a small sample of URM BSN students. Hence, the results are not generalizable to other U.S. college populations. The researcher chose these sites because the nursing schools are all part of a more extensive system, the University of Missouri. The researcher aimed to explore perceived status stress and minority status stress among BSN students within this system. A drawback of this approach was the limited number of URM BSN students within the population. The URM makeup of the entire student body at the three study sites was low; University of Missouri-Columbia, 17%; University of Missouri-KC, 26%; and the University of Missouri-St. Louis, 25% (University of Missouri System, 2017). Within the colleges of nursing, the number of URM nurses is even lower (Lin, 2018). Future studies should consider using strategies to diversify the sample. Such strategies might include recruiting universities with more significant numbers of URM students or adding more study sites overall to obtain a larger number of underrepresented minority students in the sample.

***Recruitment.*** The greatest challenge of this study was the recruitment of URM BSN students. The study sites were three predominately White, four-year, urban BSN programs in the Midwestern region of the United States. Because nursing in the United States continues to be a predominantly White, female discipline (Hunt, 2017), challenges exist about accessing and

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recruiting a diverse sample. In this study, after obtaining ethics approval, advertising the study across the recruitment sites was also a challenge. The study sites-imposed restrictions on recruitment. The distribution of information about the study was limited to posting on course websites. The researcher was not allowed to post recruitment flyers. No other type of announcements about the study, such as verbal announcements or email information, was allowed. Additionally, site administrators would not disclose demographic information regarding junior level students, such as a total number of students and the racial/ethnic composition of the junior student body. Hence, the study sample was small ( $N=99$ ), and only 23% of the total sample comprised URM students.

### **Policy Implications**

In line with this study's conceptual framework, the Model of Stress and Coping Process of African-American students (MSCPAAS), policies should be designed to limit the impact of minority status stress (MSS) among BSN students. The MSCPAAS was established to improve the understanding of factors related to the unique stressors that underrepresented minority (URM) students encounter while attending predominantly white institutions (PWIs) (Smedley et al., 1993). As a result, it is imperative for PWIs to foster inclusive and diverse environments. Social workers can encourage change at the macro, mezzo, and micro levels.

**Macro.** Understanding the factors which influence minority status stress among URM BSN students can refine the types of policies needed to moderate this form of stress (McClain et al., 2015). Study findings indicate a need to moderate the effects of MSS. Colleges and universities can improve the recruitment and retention policies of minority faculty at PWIs to improve the overall well-being of URM students (Benitez, James, Joshua, Perfetti, & Vick, 2017). Research studies document the importance of diverse faculty and its importance to

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fostering an inclusive campus climate (Mwangi, Thelamour, Ezeofor, & Carpenter, 2018; Kelly, B., Gayles, J., Williams, C., 2017) to enhance the retention of URM students.

**Recruitment.** Specifically, colleges and universities can institute a directive to hire a proportionate percentage of minority faculty and ensure that faculty search committees are diverse (Gasman, Abiola, & Travers, 2015).

### **Mezzo.**

**Retention.** It is essential to offer peer support programs for new and tenure track minority faculty in addition to a leadership training program for minority faculty (Zambrana, et al., 2015).

**Micro.** At the individual level, institutions of higher learning can institute directives to design, implement, facilitate, and evaluate cultural diversity and inclusive training on unconscious bias and micro-aggressions (Applebaum, 2019), which faculty, staff, and students are required to attend.

These social policies can contribute to reducing discrimination and prejudice resulting from institutional bias and racism. This action may encourage change in social contexts, which are often oppressive for URM students (Greer, Ricks, & Baylor, 2015). Amid an increase in student-led protests around the country related to diversity and inclusion, (Byrd, Luney, Marie, & Sanders, 2019; Mahler-Rogers, 2017; Hoffman & Mitchell, 2016; Rhoads, 2016) it is essential for colleges and universities to foster a welcoming environment of cultural inclusiveness, which may lead to higher retention rates and enhanced well-being of URM students.

Diversity in nursing is essential so that the discipline can provide quality care to individuals from all segments of society and embrace cultures other than one's own. The demographic make-up of the United States is changing. Thus nursing, and other health care disciplines, must change with it. Future studies that aim to enhance diversity in the nursing

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workforce must use novel strategies to recruit a representative sample of diverse nursing students (i.e., African American, Hispanic) in order to thoroughly examine the impact of minority status stress levels on underrepresented nurses. Such an understanding is needed in order to develop successful intervention programs that will lead to a diverse nursing workforce.

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<http://search.ebscohost.com.proxy.library.umkc.edu/login.aspx?direct=true&db=edsdoj&AN=edsdoj.95168baeceb4073892e329417213841&site=eds-live&scope=site>

# STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

## Appendix A: Invitation Letter

August 2016

Dear Student:

My name is Eve McGee. I am a doctoral candidate in the Department of Social Work at the University of Missouri-Columbia. I am requesting your help for a research study I am conducting to explore the prevalence of stress among junior level undergraduate nursing students. I would like to invite you to participate.

Students who participate in the study will have the opportunity to have their names entered in a drawing to win a \$100 Amazon gift card. Once you submit your survey packet, you will receive information on how to enter the drawing. If you decide to participate in this study, you must complete a consent form (hyper link to consent form). Please cut and paste URL into your web browser if the link does not work. At the bottom of the consent form, there will be a link to the electronic survey packet. Completion of the survey packet and consent form should take approximately 20 minutes.

Any information gathered will remain confidential and only used for this research study. Data will be collected and presented in summary form. Individual information or details will not be reported.

Thank you for your consideration to participate in this study. I look forward to receiving your completed survey packet.

Sincerely,

Eve J. McGee, MSW  
Doctoral Candidate  
University of Missouri-Columbia

# STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

## Appendix B: Informed Consent Letter

### **Title of Research**

Stressed Out! Implications of Minority Status Stress

### **Principal Investigator**

Eve McGee, MSW

### **Purpose of Research**

The purpose of this study is to identify and evaluate the impact of stress for junior level undergraduate nursing students. If you agree to participate, you will be asked to complete an online survey packet about your encounters with stress during your time in the nursing program. In addition to examining how students rate their stress, academic persistence will be studied to determine if there is a relationship between stress and academic persistence.

### **Anonymity and Confidentiality**

Any information gathered will remain confidential and only used for this research study. Data will be collected and presented in summary form. Individual information or details will not be reported. Data will be stored securely and only available to the researcher.

### **Risks and Benefits/Voluntary Participation**

Participation is voluntary. You can withdraw from the study at any time. If you chose not to participate or withdraw, your course grade will not be affected. Should you wish to withdraw, close your web browser to discontinue the survey.

There are minimal risks related to this study. We ask that you try to answer all questions; however, if there are any items that make you uncomfortable or that you would prefer to skip, please leave the answer blank.

By clicking the “I agree” button below, you voluntarily agree to participate in this research study and acknowledge you have read and understand the above information. If you have any questions or concerns prior to completing the survey packet, feel free to contact:

Eve McGee

University of Missouri

730 Clark Hall

(573) 882-6206

[ejm594@mail.umkc.edu](mailto:ejm594@mail.umkc.edu)

Dr. Marjorie Sable

University of Missouri

730 Clark Hall

(573) 882-6206

[sablem@missouri.edu](mailto:sablem@missouri.edu)

MU Institutional Review Board

Office of Research

University of Missouri

190 Galena Hall DC074

(573) 882-3181

**I AGREE / I DO NOT AGREE**



# STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

## Appendix C: Demographic Information

Age: \_\_\_\_\_

Gender:  F  M  Transgender

Level in nursing program

- Sophomore
- Junior
- Senior

Current G.P.A. \_\_\_\_

Which race/ethnicity best describes you?

- African American/Black
- American Indian or Alaska Native
- Asian
- Caucasian/White
- Hispanic/Latino
- Multi-racial American
- Native American
- Other (please specify) \_\_\_\_\_

If an International student, please indicate your country of origin? \_\_\_\_\_

What year did you arrive to the United States? \_\_\_\_\_

What year did you begin taking courses at the School of Nursing? \_\_\_\_

What is your native language? \_\_\_\_\_

Marital status:

- Divorced/Separated
- Living in a committed relationship
- Married
- Single

Place of residence

- Campus housing
- Off campus housing
- With friends
- With family
- Live alone

Zip code: \_\_\_\_\_

Are you a first-generation student?  Yes  No

## STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

What is your mother's highest level of education?

- Did not complete high school
- High school/GED
- Some college
- Bachelor's degree
- Master's degree
- Advanced graduate work or Ph.D.
- Not sure

What is your father's highest level of education?

- Did not complete high school
- High school/GED
- Some college
- Bachelor's degree
- Master's degree
- Advanced graduate work or Ph.D.
- Not sure

How many people in your immediate family (grandparents, parents, brothers, sisters, both living and deceased) attended college? \_\_\_\_\_

Are you currently employed?

- Yes  No

If so, how many hours do you usually work each week?

- 1-5
- 6-10
- 11-15
- 16-20
- 21-30
- 31-40
- 41-50
- 51-60

What would you say is your parent's yearly income?

- Under \$25,000
- \$25,000 - \$39,000
- \$40,000 - \$49,000
- \$50,000 - \$74,000
- \$75,000 - \$99,000
- Over \$100,000
- Not sure

## STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

How is your college education being financed? Select all that apply?

- Employment
- Family
- Pell grant
- Scholarships
- Student Loans
- Savings

Do you plan to attend the School of Nursing next semester?

- Yes
- No
- Not sure

# STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

## Appendix D: Study Measures

### Perceived Stress Scale

#### Instructions:

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate your response by placing an “X” over the circle representing HOW OFTEN you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer quickly. That is, don’t try to count the number of times you felt a way, but rather indicate the alternative that seems like a reasonable estimate.

	Never	Almost Never	Sometimes	Fairly Often	Very Often
1. In the last month, how often have you been upset because of something that happened unexpectedly?					
2. In the last month, how often have you felt that you were unable to control the important things in your life?					
3. In the last month, how often have you felt nervous and “stressed”?					
4. In the last month, how often have you dealt successfully with day to day problems and annoyances?					
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?					
6. In the last month, how often have you felt confident about your ability to handle your personal problems?					
7. In the last month, how often have you felt that things were going your way?					
8. . In the last month, how often have you found that you could not cope with all the things that you had to do?					
9. In the last month, how often have you been able to control irritations in your life?					
10. In the last month, how often have you felt that you were on top of things?					
11. In the last month, how often have you been angered because of things that happened that were outside of your control?					
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?					
13. In the last month, how often have you been able to control the way you spend your time?					

## STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?					
--	--	--	--	--	--

### Scoring:

Seven out of the fourteen items of PSS-14 are considered negative (1, 2, 3, 8, 11, 12, 14) and the remaining seven as positive (4, 5, 6, 7, 9, 10, 13), representing perceived helplessness and self-efficacy, respectively. Total scores are calculated after reversing positive items' scores and then summing up all scores. Total scores for PSS-14 range from 0 to 56.

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### Minority Status Stress Scale

	N/A	Not at all stressful	A little stressful for me	Somewhat stressful for me	Very stressful for me	Extremely stressful for me
1.						
2.						
3.						
4.						
5.						
6.						
7.						

STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

	N/A	Not at all stressful	A little stressful for me	Somewhat stressful for me	Very stressful for me	Extremely stressful for me
8. Maintaining my ethnic identity while attending the university						
9. The lack of unity/supportiveness among members of my race at the university						
10. Being treated rudely or unfairly because of my race						
11. Being discriminated against						
12. Others lacking respect for people of my race						
13. Attitudes/treatment of faculty toward students of my race						
14. Having to “prove” my abilities to others (i.e. working twice as hard)						
15. Pressures to show loyalty to my race (e.g. giving back to my ethnic group community)						

STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

	N/A	Not at all stressful	A little stressful for me	Somewhat stressful for me	Very stressful for me	Extremely stressful for me
16. White students and faculty expect poor academic performance from students of my race						
17. Pressures from people of my same race (e.g. how to act, what to believe)						
18. People close to me thinking I'm acting "White"						
19. Feeling others do not respect my intelligence						
20. Having White friends						
21. Relationships between different ethnic groups at my university						
22. Having to always be aware of what White people might do						
23. White-oriented campus culture at my university						
24. Wealthy campus culture at my university						
25. The university is an unfriendly place						



## STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

	<b>N/A</b>	<b>Not at all stressful</b>	<b>A little stressful for me</b>	<b>Somewhat stressful for me</b>	<b>Very stressful for me</b>	<b>Extremely stressful for me</b>
<b>26.</b> Having to live around mostly White people						
<b>27.</b> Tense relationships between Whites and minorities at the university						
<b>28.</b> Few courses involve issues relevant to my ethnic group						
<b>29.</b> Racist policies and practices of the university						
<b>30.</b> My university lacks concern and support for the needs of students of my race						
<b>31.</b> The university does not have enough professors of my race						
<b>32.</b> Few students of my race are in my classes						
<b>33.</b> Seeing members of my race doing low status jobs and Whites in high status jobs on campus						

## STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

	<b>N/A</b>	<b>Not at all stressful</b>	<b>A little stressful for me</b>	<b>Somewhat stressful for me</b>	<b>Very stressful for me</b>	<b>Extremely stressful for me</b>
<b>34.</b> My family having very high expectations for my college success						
<b>35.</b> Pressure that what “I” do is representative of my ethnic group’s abilities, behavior, and so on						
<b>36.</b> Feeling less intelligent or less capable than others						
<b>37.</b> Relationships between males and females of my race (e.g. lack of available dating partners)						

STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

**Academic Decision**

	SD	D	N	A	SA
1. Since coming to this university, I have developed close personal relationships with other students.	1	2	3	4	5
2. The student friendships I have developed at this university have been personally satisfying.	1	2	3	4	5
3. My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.	1	2	3	4	5
4. My interpersonal relationships with other students have had a positive influence on my intellectual growth and interests and ideas.	1	2	3	4	5
5. It has been difficult for me to meet and make friends with other students.	1	2	3	4	5
6. Few of the students I know would be willing to listen to me and help me if I had personal problems.	1	2	3	4	5
7. Most students at this university have values and attitudes different from my own.	1	2	3	4	5
8. My classroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.	1	2	3	4	5
9. My non-classroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas career goals and aspirations.	1	2	3	4	5
10. My non-classroom interactions with faculty have had a positive influence on my career goals and aspirations.	1	2	3	4	5
11. Since coming to this university, I have developed a close, personal relationship with at least one faculty member.	1	2	3	4	5
12. I am satisfied with the opportunities to meet and interact informally with faculty.	1	2	3	4	5
13. Few of the faculty members I have had contact with are generally interested in students.	1	2	3	4	5
14. Few of the faculty members I have had contact with are generally outstanding or superior teachers.	1	2	3	4	5

## STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 15. Few of the faculty members I have had contact with are willing to spend time outside of the classroom to discuss issues of interest and importance to students. | 1 | 2 | 3 | 4 | 5 |
| 16. Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas.   | 1 | 2 | 3 | 4 | 5 |
| 17. Most faculty I have had contact with are genuinely interested in teaching.  | 1 | 2 | 3 | 4 | 5 |
| 18. I am satisfied with the extent of my intellectual development since enrolling in this university.   | 1 | 2 | 3 | 4 | 5 |
| 19. My academic experience has had a positive influence on my intellectual growth and interests in ideas.   | 1 | 2 | 3 | 4 | 5 |
| 20. I am satisfied with my academic experiences at this university.   | 1 | 2 | 3 | 4 | 5 |
| 21. Few of my courses this year have been intellectually stimulating.   | 1 | 2 | 3 | 4 | 5 |
| 22. My interest in ideas and intellectual matters has increased since coming to this university.  | 1 | 2 | 3 | 4 | 5 |
| 23. I am more likely to attend a cultural event (concert, lecture, movie, or art show) now than I was before coming to this university.                             | 1 | 2 | 3 | 4 | 5 |
| 24. I have performed academically as well as I anticipated I would.   | 1 | 2 | 3 | 4 | 5 |
| 25. It is important for me to graduate from college.  | 1 | 2 | 3 | 4 | 5 |
| 26. I am confident that I made the right decision in choosing to attend this university.  | 1 | 2 | 3 | 4 | 5 |
| 27. It is likely that I will register at this university next term.   | 1 | 2 | 3 | 4 | 5 |
| 28. It is not important to me to graduate from this university.   | 1 | 2 | 3 | 4 | 5 |
| 29. I have no idea at all what I want to major in.  | 1 | 2 | 3 | 4 | 5 |
| 30. Getting good grades is not important to me.   | 1 | 2 | 3 | 4 | 5 |

Appendix E: Study Recruitment Flyer



How has stress impacted your nursing school journey?

Help us help you! Participate in an upcoming study

**Purpose of study?**

- To describe undergraduate nursing students knowledge and attitudes about stress
- To identify of sources and manifestations of stress among undergraduate nursing students
- To understand the impact of stress upon academic persistence

**What do I have to do if I agree to participate?**

- Click this link – Insert survey URL
  - Completion of survey packet should take approximately 20-30 minutes

**Taking part in the survey is voluntary**

**All information is confidential**

**Enter your name into Raffle (\$100 Amazon gift card)**

**No identifying personal information required**

**Nonparticipation or participation does not impact course grade**

**Questions:**

Eve McGee, MSW  
ejm594@mail.umkc.edu

Or

Dr. Marjorie Sable  
sablem@missouri.edu

## STRESSED OUT! IMPLICATIONS OF MINORITY STATUS STRESS

### Appendix F: Reminder Letter

August 2016

Dear Student:

Last week, you received an e-mail from me inviting you to participate in a research study I am conducting. If you have not already done so, please follow the below link to participate in this study. If you have already completed the online survey, thank you and disregard this message.

Link to consent form

Again, thank you for your time. Your participation in this research study is greatly appreciated.

Sincerely,

Eve McGee, MSW

**CURRICULUM VITAE**

Eve McGee has a strong background in social work administration and working with underrepresented minority and economically disadvantaged students to enhance and assure their successful completion of undergraduate nursing coursework. She has a master's degree in social work administration and is the coauthor of Retaining Hispanic nursing students in BSN programs. In A. Villarruel and S. Torres (Eds.). *Hispanic Voices: Progreso, poder, Y Promesa* (pp.55-70). New York, NY: National League for Nursing.