AFRICAN AMERICAN NON-NURSING SCIENCE MAJORS’ PERCEPTIONS
OF NURSING IN THE CONTEXT OF CAREER IDEALS

by
Robbi K. Alexander

A dissertation submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Nursing Science

Spring 2015

© 2015 Robbi K. Alexander
All Rights Reserved
AFRICAN AMERICAN NON-NURSING SCIENCE MAJORS’ PERCEPTIONS
OF NURSING IN THE CONTEXT OF CAREER IDEALS

by

Robbi K. Alexander

Approved: ________________________________
Kathleen A. Schell, Ph.D.
Chair of the School of Nursing

Approved: ________________________________
Kathleen S. Matt, Ph.D.
Dean of the College of Health Sciences

Approved: ________________________________
James G. Richards, Ph.D.
Vice Provost for Graduate and Professional Education
I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Philosophy.

Signed: ____________________________
Cynthia Diefenbeck, Psy.D.
Professor in charge of dissertation

I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Philosophy.

Signed: ____________________________
Paula R. Klemm, Ph.D.
Member of dissertation committee

I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Philosophy.

Signed: ____________________________
Judith W. Herrman, Ph.D., RN, ANEF, FAAN
Member of dissertation committee

I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Philosophy.

Signed: ____________________________
Elizabeth Higginbotham, Ph.D.
Member of dissertation committee
ACKNOWLEDGMENTS

So many people have supported me in this scholarly endeavor and have wished me well. There are so many to thank.

I acknowledge, with much gratitude, Dr. Veronica F. Rempusheski, Chair of the University of Delaware School of Nursing’s PhD program, and Dr. Kathleen A. Schell, Director of the University of Delaware School of Nursing, for their investment in my education and my development as a scholar. Thank you to the nurse members of my dissertation committee, Dr. Judith Herrman and Dr. Paula Klemm, for your invaluable assistance in this process and for modeling the best that nursing education has to offer. I thank my committee member from sociology, Dr. Elizabeth Higginbotham, PhD, for taking an interest in me and for expanding my world view. And to my dissertation chair, Dr. Cynthia Diefenbeck, for whom I have the utmost respect and admiration, I owe a debt of gratitude for the many years of unconditional personal and professional support; ours has been an amazing partnership.

Many thanks to the students who participated in this research. I appreciate your willingness to engage with me, and I wish you Godspeed in your career endeavors.

And finally, I dedicate this work to my late parents, Richard H. and Jacqueline E. Kelly, my daughters, Jacqueline Kelly Alexander and Jordan Everett Dixon, and the rest of my family, all of whom love without limits.
TABLE OF CONTENTS

LIST OF TABLES .............................................................................................................. xi
LIST OF FIGURES .......................................................................................................... xii
ABSTRACT ....................................................................................................................... xiii

Chapter

1 INTRODUCTION ........................................................................................................... 1

Problem Statement......................................................................................................... 2

Social Determinants of Health and Health Disparities ................................................. 3
Nursing Workforce Diversity in the U.S. .......................................................................... 4
Diversity: The U.S. Nursing Student Body ........................................................................ 6
Nursing Education Strategies to Address Diversification .............................................. 7

The Future of Nursing Report ......................................................................................... 8
National League for Nursing ............................................................................................ 9
American Association of Colleges of Nursing (AACN) .................................................. 9
Health Resources and Services Administration: Healthcare Workforce Diversity ......... 10

Attitudes Toward Nursing as a Career ........................................................................... 11

Purpose and Research Questions ...................................................................................... 12
Summary ............................................................................................................................ 14

2 REVIEW OF LITERATURE .......................................................................................... 15

Social Cognitive Career Theory ......................................................................................... 15

Theoretical Assumptions of SCCT .................................................................................... 16
Key Theoretical Constructs of SCCT ................................................................................. 17

Cultural Influence on Career Behavior ........................................................................... 19

Cross-Cultural Career Development Theory .................................................................... 19
Fouad and Bingham: Culturally Appropriate Career Counseling Model... 20
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Development: African American Students and Millennials</td>
<td>20</td>
</tr>
<tr>
<td>African American Parents</td>
<td>21</td>
</tr>
<tr>
<td>African American Students</td>
<td>22</td>
</tr>
<tr>
<td>Exemplar: African American Medical, Dental and Pharmacy Students</td>
<td>23</td>
</tr>
<tr>
<td>Millennials</td>
<td>24</td>
</tr>
<tr>
<td>Perceptions of Nursing: Internal Influences</td>
<td>26</td>
</tr>
<tr>
<td>Person Inputs</td>
<td>26</td>
</tr>
<tr>
<td>Age</td>
<td>26</td>
</tr>
<tr>
<td>Gender</td>
<td>27</td>
</tr>
<tr>
<td>Personal Goals and Values</td>
<td>27</td>
</tr>
<tr>
<td>Student Perceptions of Nursing Education and Nursing Careers</td>
<td>28</td>
</tr>
<tr>
<td>Race and Ethnicity</td>
<td>29</td>
</tr>
<tr>
<td>Perceptions of Nursing: External Influences</td>
<td>30</td>
</tr>
<tr>
<td>Popular Media</td>
<td>31</td>
</tr>
<tr>
<td>Formal Avenues of Career Information</td>
<td>33</td>
</tr>
<tr>
<td>Experience with Nurses and Nurse Role Models</td>
<td>33</td>
</tr>
<tr>
<td>Other External Influences on the Perception of Nursing Careers</td>
<td>34</td>
</tr>
<tr>
<td>Nurse-Physician Comparisons</td>
<td>35</td>
</tr>
<tr>
<td>Pilot Research</td>
<td>36</td>
</tr>
<tr>
<td>Summary of Current Knowledge</td>
<td>37</td>
</tr>
<tr>
<td>3 RESEARCH DESIGN AND METHODOLOGY</td>
<td>39</td>
</tr>
<tr>
<td>Study Frame of Reference</td>
<td>39</td>
</tr>
<tr>
<td>Qualitative Description and Naturalistic Inquiry</td>
<td>40</td>
</tr>
<tr>
<td>Career Development Theory</td>
<td>41</td>
</tr>
<tr>
<td>Research Questions</td>
<td>42</td>
</tr>
<tr>
<td>Human Subjects</td>
<td>43</td>
</tr>
<tr>
<td>Informant-Researcher Relationship</td>
<td>44</td>
</tr>
<tr>
<td>Method</td>
<td>44</td>
</tr>
<tr>
<td>Sample and Setting</td>
<td>44</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>49</td>
</tr>
<tr>
<td>Data Collection and Management</td>
<td>50</td>
</tr>
<tr>
<td>Analysis: Data Coding Processes</td>
<td>51</td>
</tr>
</tbody>
</table>
Data analysis: First Cycle Coding .................................................. 52
First Cycle Coding: Phase 1 ............................................................ 52
First Cycle Coding: Phase 2 ............................................................ 54

Data Analysis: Second Cycle Coding .............................................. 55

Member Checks ........................................................................... 57

4 RESULTS .................................................................................... 60

Theme 1: Career Development: Internal and External Contributions ....... 61

Internal Contributions: Career Fit and Cognitive Processes ................. 61
- Person Inputs ........................................................................... 61
- Health Status .......................................................................... 62
- Race and Ethnicity ................................................................. 62
- Gender ..................................................................................... 63
- Personal Attributes and Beliefs ................................................ 64
  Cognitive Processes: Internalized Messages ................................ 68

Internal Contributions: Summary .................................................. 72
External Contributions to Career Behavior ........................................ 73
- Parents ..................................................................................... 74
- Parents: Direct Messages .......................................................... 74
- Parents: Indirect Messages ....................................................... 75
- Parental Support: Adult-Sponsored Mobility .................................. 78
- Limits to Parental Support: Child-Secured Mobility ...................... 82
- Learning Experiences: Illness and Healthcare .............................. 85

External Contributions: Summary .................................................. 89

Theme 2: The Ideal Career: Profession with Power ................................. 89

Image of Medical Doctor: Universally Powerful ................................ 90
- Power: Autonomy and Lifestyle Freedom ..................................... 93
  Autonomy ................................................................................ 93
  Lifestyle Freedom ................................................................. 94
- Power: Help Others and Affect Change ....................................... 94
- Power: Role Models ............................................................... 96
- Power: Contradicting Stereotypes .............................................. 97
- Career Ideals: Summary ......................................................... 101
Theme 3: Perception of Nursing: A Limited Profession

Respect for Nursing: Limited by Stereotypes

Limited Respect
Limited Visibility: Television
Perception of Limited Opportunities
Role Confusion
Image of MD Eclipses Nursing
Experiences with Nurses: Improves Visibility and Counters Negative Images

Power: Perceptions of Nursing

Nurse-Patient Relationship
Perceptions of the Nurse’s Power to Affect Change
Nurse-Doctor Comparisons: The Medical Hierarchy
Perceived Limits of Autonomy and Lifestyle Freedom

Perceptions of Nursing: Task-Oriented
Perceptions of Nursing: Limited Location
Perceptions of Nursing: Limited Financial Compensation
Perceptions of Nurses’ Schedules: Limited Flexibility

Desirability: Nursing Careers

Participants’ Perceptions: Desirability of Nursing Careers for Self
Parent Perceptions of the Desirability of Nursing Careers for Their Children
Path to Professionalization for Some
Reverse Career Momentum for Others
Experience with Nurses: Helps or Hinders Desirability?
Perceptions of Nurses: Limited Effectiveness as Role Models

Summary: Perceptions of Nursing

Member Checks

Discussion of Results

SUMMARY AND DISCUSSION

5
Theme 1: Career Development: Internal and External Contributions ...... 137

Internal Contributors: Age, Gender, Race/Ethnicity, Personal Attributes, Spirituality ................................................. 138
External Contributors: Parents and Learning Experiences .......... 141
Career Development: Relevance of Findings to the Profession ...... 143

Theme 2: The Ideal Career: Profession with Power ..................... 145

Image of the Physician: Universally Powerful ........................................ 146
Discussion of Pilot Research: Power ................................................. 147
RN-MD Comparisons: Power ......................................................... 148
Power and Role Modeling ............................................................. 149
Ideal Careers: Relevance of Findings to Nursing Profession 150

Theme 3: Perception of Nursing: A Limited Career ..................... 150

Respect and Power ..................................................................... 151
Nurse Caring: Respected Profession or Service Occupation? .... 152
Nursing: Losing Ground on Prime Time Television .................. 153
Nurse Role Models ................................................................. 155
Desirability ..................................................................................... 155
Nursing: Step Up, Safe Haven, or Step Backward ................. 156
Perception of Nursing: Relevance of Findings to the Profession 157

Power, Culture and Careers: Implications for Nursing ............. 158

Recruitment to Nursing: Addressing Perceptions of Nursing Power 159

Limitations .................................................................................. 160
Future Research .......................................................................... 161
Contributions of This Study ......................................................... 162

REFERENCES .............................................................................. 163

Appendix

A SOCIAL COGNITIVE CAREER THEORY ......................................... 175
B CULTURALLY APPROPRIATE CAREER COUNSELING MODEL .... 176
D INTERVIEW GUIDE .................................................................. 178
E CODE DICTIONARY .................................................................. 181
F MEMBER CHECK GUIDE ........................................................ 190
G DATA DISPLAY: PATTERN CODING DIAGRAM ....................... 191

ix
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Percentage of Students Enrolled in Basic RN Programs</td>
<td>7</td>
</tr>
<tr>
<td>Table 2</td>
<td>Participant Demographics</td>
<td>47</td>
</tr>
<tr>
<td>Table 3</td>
<td>First Cycle Coding: Six Descriptive Master Codes Defined</td>
<td>54</td>
</tr>
<tr>
<td>Table 4</td>
<td>Orientation to Study Findings</td>
<td>60</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

Figure 1  Member checks: Participants' responses to themes .......................... 129
ABSTRACT

The racial/ethnic distribution of the Registered Nurse workforce (African Americans 5.4%) differs substantially from the United States population (African Americans 13.1%), contributing to ongoing health disparities. Much of the nursing education literature that addresses the recruitment of nursing students from underrepresented minority groups focuses on the support and retention of disadvantaged and academically underprepared students. It has been suggested that a career in nursing is not the path to upward social and professional mobility that it once was for African American women, and it is unknown how a career in nursing is perceived by African American students with science interest and aptitude. A qualitative descriptive study was employed to explore the perceptions of nursing held by African American undergraduate non-nursing science majors within the context of their career ideals. Individual semi-structured interviews were conducted with a convenience sample of 20 African American undergraduate non-nursing science majors. Qualitative data collection techniques and three interactive processes of analysis (data condensation, data display, drawing and verifying conclusions) were employed. Results indicate that for this group of STEM (science, technology, engineering, and math) oriented African American non-nursing science majors, the most desirable career is physician. They view this career as offering one the power to (a) live and work with a high degree of
choice and autonomy, (b) help others and personally affect change, (c) be a positive role model of African American culture and (d) disprove negative stereotypes about African Americans. The participants in this study generally indicated that they value nurse caring and the nurse-patient relationship; however, they perceived nursing, in comparison to their ideal careers, to be a profession with limited respect, power, and desirability. Participants do not view nurses as role models with enough power to contradict negative stereotypes of African Americans and Black culture. Strategies to recruit African American students to nursing should include improving the visibility of the profession, delineating the role of registered nurses from those of other healthcare providers, highlighting advanced practice and leadership roles, and demonstrating the profession’s power to affect change.
Chapter 1
INTRODUCTION

Favorable health varies by race and ethnic group in the United States. Compared to other groups, African Americans experience some of the highest rates of health disparities (CDC, 2013; Scott, 2012). Overall, the life expectancy for the average African American in the U.S. is 3.5 years less than that of the average Caucasian (CDC, 2013). Therefore, efforts must be made to identify and take corrective actions to address the factors that lead to health disparities for certain groups, especially African Americans (CDC, 2013). Scholars suggest that the problem of health disparities might be addressed, in part, through diversification of the healthcare workforce (Institute of Medicine (IOM), 2004; 2011). Enhanced racial and ethnic diversity of healthcare providers and provider-patient race concordance leads to stronger provider relationships with patients in non-White communities (IOM, 2004, 2011; Saha, Komaromy, Koepsell, & Bindman, 1999). To this end, there are increasing efforts within nursing education to recruit and retain African American students, as well as students from other underrepresented minority groups, including Hispanics and Native Americans.

Much of the literature about diversification of the nursing student body focuses on preventing failure and attrition of students from underrepresented racial and ethnic groups. Nurse educators suggest that many of the students who are recruited from
underrepresented racial and ethnic groups, especially those who are disadvantaged, struggle with college-level courses (Childs, Jones, Nugent, & Cook; 2004; Nugent, Childs, Jones, & Cook, 2004), particularly math and science (Nnedu, 2009). There are similar efforts to recruit and retain students from underrepresented racial and ethnic groups in other scientific fields. Unknown is how African American college students enrolled in non-nursing science majors view nursing as a profession and potential career. The perceptions of those African American students enrolled as science, technology, engineering and math (STEM) majors, who demonstrate proficiency in math and science, may offer insight about strategies to attract similarly prepared students to a career in nursing science.

The focus of this chapter is to describe the problems underlying the proposed study, including social determinants of health and health disparities in the U.S., lack of diversity of the current U.S. registered nursing workforce, and some of the driving forces within nursing education that seek to address diversification of the nursing student body. The chapter will conclude with the purpose, research questions, and significance of the proposed research study.

**Problem Statement**

The conceptualization of this study was influenced by a growing understanding of the synergistic interaction of social determinants of health (SDH), health disparities, nursing workforce diversity, and related initiatives in nursing education. Our nation’s heightened efforts to improve health outcomes, combined with the nursing
profession’s charge to enhance workforce diversity to meet the demands of a changing demographic, make the study of the perceptions of nursing and the career behavior of African American non-nursing science majors particularly timely.

Social Determinants of Health and Health Disparities

Multiple factors impact the health of individuals and populations. Some of those factors are socially determined. Individual or group factors such as socioeconomic status, education, race, ethnicity, gender, age, sexual orientation and religious preferences frequently have a bearing on health status (Braithwaite, Taylor, & Treadwell, 2009; U.S. Department of Health and Human Services, 2014). Health disparities are defined as inequities in health outcomes, or the burden of disease and mortality experienced by socially disadvantaged groups relative to either Caucasians or the general population (IOM, 2011). Socially disadvantaged groups may be defined in terms of race, ethnicity, income, gender, and sexual orientation (IOM, 2011). Some racial and ethnic minority groups experience unfavorable health outcomes compared to Caucasians. Just as the country’s wealth gap has widened over the last two decades, so has the health gap (Scott, 2012). Individuals from lower socioeconomic groups are more likely to be physically and mentally unhealthy. However, African Americans, even when socioeconomic status is equal, have worse health outcomes overall and die at an earlier age than Caucasians (Scott, 2012).

Our social choices as a nation also greatly influence health outcomes for our citizens. For example, healthcare legislation passed in 2010, the Affordable Care Act (ACA), is intended to positively impact the health gap by making health insurance available to all U.S. citizens. The ACA is expected to decrease health inequities among populations in the U.S. Healthcare scholars anticipate that it will have a
multidimensional impact on the U.S. healthcare system as a whole, and that advanced practice nurses will be called upon to “bridge the gap between insurance coverage and access to care.” (IOM, 2011, p. 23). The ACA is intended to help close the health gap by providing health insurance to the uninsured, thereby increasing access to healthcare for an estimated 32 million Americans (IOM, 2011). This expected increase in access to healthcare for many more Americans will place an increased demand on the nation’s healthcare system. Nursing is poised to assume expanded roles in the redesigned healthcare system, and much of the care given by nurses will be delivered in underserved communities where the populations of socially disadvantaged persons are the highest. From this view, the preparation of a culturally diverse, professional healthcare workforce takes on a sense of urgency.

Nursing Workforce Diversity in the U.S.

The 2012 U.S. Census indicated that 77.9% of the population is Caucasian or White, and 13.1% is African American, or Black. The racial and ethnic distribution of the registered nurse (RN) workforce does not mirror the population as a whole. Only 16.8% of RNs identify as non-white; of this number, African Americans comprise only 5.4% of the total workforce of RNs (U.S. Department of Health and Human Services, 2010). Scholars have suggested that increasing the diversity of our nation’s healthcare workforce will have a positive effect on health outcomes for minority populations (Allen & Easley, 2006; IOM, 2011; U.S. Department of Health and Human Services, 2010). “A diverse workforce is vitally important to ensuring our nation has accessible, affordable, and quality health care.” (U.S. Department of Health and Human Services, 2014, p.2). According to the American Association of Colleges of Nursing (AACN) Fact Sheet: Enhancing Diversity in the Nursing Workforce
All national nursing organizations, the federal Division of Nursing, hospital associations, nursing philanthropies, and other stakeholders within the health care community agree that recruitment of underrepresented groups into nursing is a priority for the nursing profession in the U.S.” (p. 2).

Enhanced racial and ethnic diversity among healthcare providers is necessary to decrease systematic biases (IOM, 2011) and improve relationships with patients from non-White communities, which nursing will be increasingly called upon to serve. The IOM (2004) report, “In the Nation’s Compelling Interest: Ensuring Diversity in the Health Care Workforce,” noted that there is scientific evidence to support that enhanced diversity of health professionals is “associated with improved access to care for racial and ethnic minority patients, greater patient choice and satisfaction, better patient-provider communication, and better educational experiences for all students while in training.” (p.5). For example, research demonstrates that given the choice, patients from underrepresented racial and ethnic groups in the U.S. are more likely to select physicians of their own background and report higher satisfaction with the care received from racially concordant physicians (Saha et al., 1999; Saha, Taggart, Komaromy, Bindman, 2000; LaVeist, & Nuru-Jeter, 2002). By adjusting the demographic composition of its workforce, the nursing profession has the opportunity to reduce health inequities and change the face of healthcare in America (IOM, 2011).
Diversity: The U.S. Nursing Student Body

Despite an approximate 25% increase in the minority population of the U.S. over the past decade, the ethnic composition of the nursing workforce is virtually unchanged. Nursing education programs are not graduating sufficient numbers of racially and ethnically diverse nurses, leading researchers to predict that this gap will widen (IOM, 2011; Evans, 2007; Evans 2008; Leonard, 2006; Swinney & Dobal, 2008; Lowe & Archibald, 2009). The diversity of the U.S. population is outpacing nursing education’s efforts to increase the supply of registered nurses from diverse backgrounds. The AACN fact sheet, “Enhancing Diversity in the Nursing Workforce” (2014) noted that there is a significant connection between a culturally diverse nursing workforce and the provision of culturally congruent care and stated that although nursing has made strides in graduating nurses from diverse backgrounds, more needs to be done before the nursing workforce adequately mirrors the diversity of the U.S. population. As such, there are efforts within the nursing education to increase the number of nurses from underrepresented groups in nursing, specifically individuals from African-American, Hispanic, Native American, and Alaskan Native backgrounds (AACN, 2014).

According to AACN’s report, “2012-2013 Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing,” students from underrepresented racial and ethnic groups comprise 28.3% of baccalaureate students, 29.3% of master’s students, and 27.7% of students in research-focused doctoral programs (AACN, 2014), numbers which are lower than the total number of individuals from racial and ethnic minority groups in the U.S. (i.e., 37%) (U.S. Census Bureau, 2012). Although these numbers represent a 10% increase in nursing students from underrepresented groups over the past 10 years, the AACN stated “… more must be done before equal
representation is realized” (AACN, 2014, p.2.). As noted in Table 1, statistics from the National League for Nursing (NLN) indicate that African American students are underrepresented in baccalaureate and associate degree programs and overrepresented in diploma programs (2012). More must be done to increase the enrollment of diverse students in our nation’s baccalaureate nursing programs.

Table 1 Percentage of Students Enrolled in Basic RN Programs

<table>
<thead>
<tr>
<th>Race</th>
<th>Baccalaureate</th>
<th>Diploma</th>
<th>Associate Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>12%</td>
<td>30%</td>
<td>9%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>67%</td>
<td>27%</td>
<td>73%</td>
</tr>
</tbody>
</table>

Nursing Education Strategies to Address Diversification

All nurses should have the skills to offer culturally congruent care; care that considers the various cultural domains that their clients bring to healthcare encounters (Schim & Doorenbos, 2010). Therefore, all nursing programs should include coursework and training focused on cultural competence, or the development of skills and knowledge that prepare nurses to respond to the demands of cultural diversity, awareness and sensitivity (Schim & Doorenbos, 2010). However, our sense of cultural humility informs us that no one person can possess a comprehensive understanding of every culture. To this end, scholars suggest that a nursing workforce whose demographic characteristics more closely mirror those of the U.S. population could promote optimal communication and care (IOM, 2011). Efforts to increase the number of professional nurses from diverse backgrounds are essential to ensure culturally and linguistically concordant patient care. Four driving forces from leading
stakeholders within the nursing profession that have targeted the enhancement of nursing student body diversity are summarized next.

**The Future of Nursing Report**

In 2008, the Institute of Medicine (IOM) partnered with the Robert Wood Johnson Foundation to create the Robert Wood Johnson Foundation Initiative on the Future of Nursing. An 18-member committee of nursing leaders and other healthcare professionals, chaired by the U.S. Secretary of Health, was formed from this partnership. The committee’s charge was to examine the capacity of the current nursing workforce to meet the challenges and increasing demands for high-quality care in the face of healthcare reforms and the changing healthcare system. The committee’s vision was to produce a future healthcare system that “makes quality care accessible to the diverse populations of the U.S.” (IOM, 2011, p.2), promotes disease prevention and wellness, improves health outcomes, and provides compassionate care across the lifespan (IOM, 2011).

A report emerged from this initiative, *The Future of Nursing: Leading Change, Advancing Health*, which made recommendations for transforming nursing practice, education, and leadership. The IOM report provided eight recommendations, which if synergistically implemented as a whole, are intended to transform the nursing profession to lead change and improve the health of the nation (IOM, 2011). The second part of Recommendation 4: “Increase the proportion of nurses with a baccalaureate degree to 80 percent by 2020,” suggests that academic nurse leaders must work with various stakeholders to increase the number of nursing students from diverse backgrounds to “…create a workforce prepared to meet the demands of diverse populations across the lifespan” (IOM, 2011, p. 281). Initiatives spawned
from this report urge academic nurse leaders to partner with healthcare and community organizations as well as primary and secondary school systems to recruit and cultivate a diverse nursing student body.

**National League for Nursing**

Founded in 1893, the National League for Nursing (NLN) was the first nursing organization in the U.S. (NLN, 2013). Currently, the NLN, whose members include nurse educators and, healthcare institutions, serves to advance the science of nursing by promoting evidence-based nursing education and the scholarship of teaching (NLN, 2013). The NLN, whose mission it is to foster and promote excellence in nursing education, seeks to build diversity in the nurse educator workforce and NLN membership through “comprehensive, inclusive and aggressive methods” (NLN, 2013, p.1). The NLN has declared its commitment to diversity by developing and supporting excellence initiatives to cultivate a diverse nursing faculty of researchers and scholars who would serve as role models for nurses from all backgrounds. The NLN has invested considerable resources for the development of culturally competent nursing faculty and nursing education through research, scholarships, grants, educational opportunities, and publications.

**American Association of Colleges of Nursing (AACN)**

The AACN, representing over 700 schools of nursing, is a national organization that sets quality standards for baccalaureate and graduate nursing education. The Commission on Collegiate Nursing (CCNE), an independent arm of AACN, is an accrediting agency for schools of nursing that assesses and identifies programs that engage in best educational practices. The mission of the AACN is to
advance nursing education, research and practice (AACN, 2014). One of AACN’s core values is respecting diversity of opinion, experience, and culture. Several AACN objectives are focused on the implementation of initiatives to recruit and develop a diverse membership and workforce of nursing students and faculty. The AACN recommends that nursing leadership “accelerate the inclusion of groups, cultures, and ideas that have been traditionally underrepresented in higher education” by providing an inclusive environment in which students and faculty from all groups in society participate fully in the educational process (AACN, 2014). The AACN’s goal to increase nursing workforce diversity depends on expanding the pool of qualified student and faculty applicants by ensuring that admissions and hiring practices encompass the principles of equal opportunity (AACN, 2014).

**Health Resources and Services Administration: Healthcare Workforce Diversity**

The Health Resources and Services Administration (HRSA) is the primary Federal agency of the U.S. Department of Health, concerned with improving access to healthcare for individuals from underserved groups (U.S. Department of Health and Human Services, Health Resources and Services Administration, 2010). Part of HRSA’s mission is to strengthen the entire healthcare workforce of the U.S. and improve health equity. HRSA is a major funder of colleges and universities, offering health professions grants to address some of our nation’s most pressing health needs. One of HRSA’s major aims is to increase the number of clinicians from underrepresented racial and ethnic minority groups in numbers that begin to mirror the diversity of the U.S. population. Accredited health profession schools (i.e., colleges of nursing) compete for funds to build programs that enroll and retain diverse students,
including those from underprivileged backgrounds, to produce graduates who enter the healthcare workforce.

Attitudes Toward Nursing as a Career

The intention to study nursing is thought to be related to the perceptions individuals hold of nurses and nursing careers (Reisken & Haussler, 1994; Law & Arthur, 2003). It has been noted that youth in the general population hold negative views about nursing as a career option that contribute to the lack of RN workforce diversity (Campbell-Heider, Sackett, & Whistler 2008; Degazon & Shaw, 2007; Reisken & Haussler, 1994). High school students are less likely to pursue a career in nursing as they were in previous decades, due to their perceptions of nursing as a narrow field with limited opportunities for advancement (Campbell-Heider et al., 2008; May, Champion, & Austin, 1991). Two decades ago, researchers noted that African American and Latino females (compared to White and Asian females) had the most positive perceptions of nursing, especially in terms of nurses’ ability to make good salaries, work in safe places, and have the respect of the general public (Reisken & Haussler, 1994). During that same era, researchers noted that the perception of nursing as a vehicle for upward social mobility was eroding (May et al., 1991). More recently, Degazon and Shaw (2007) noted that urban high school students rated nursing as less favorable than their ideal career, especially in terms of power, autonomy, salary, and status. However, it has also been suggested that minority teens have had an immature understanding of the relationship between working hard and earning respect, admiration, and authority (Degazon & Shaw, 2007), and that African American teens (a) have limited awareness about allied health professions, (b) experience a lack of exposure to opportunities and role models within the health fields,
and (c) have inadequate academic preparation to pursue education in healthcare fields post-high school (Balogun, Sloan, & Hardney, 2005). Urban high school students and their parents tend to (a) view nursing as a dangerous field, (b) hold negative stereotypes about nurses and lack of opportunities in the profession, and (c) often choose two-year programs for the quick access they provide to an income, without consideration of the long-term professional benefits of a four-year education (Campbell-Heider et al., 2008).

Career development scholars have suggested that there is a multitude of internal (or self-directed) and externally imposed influences on career behaviors (Lent, Brown & Hackett, 2002). They have also suggested that individuals from racial and ethnic minority groups have different experiences that lead to “identity development processes that differ from most Euro Americans” (Fouad & Bingham, 1995, p. 335). To enable the recruitment of African American undergraduate students to nursing science, it is important to understand the processes of career interest development for students of that group.

**Purpose and Research Questions**

Given that certain racial and ethnic groups have less favorable health outcomes compared to Caucasians, especially African Americans, researchers have suggested that increasing the diversity of our nation’s healthcare workforce will have a positive effect on health outcomes for minority populations (IOM, 2011). As such, efforts to increase the number of nurses from diverse backgrounds must be maximized to a level that more closely mirrors the demographic makeup of the U.S. population in general. Much of the literature about the enhancement of the nursing student body has focused on the recruitment, support, and retention of students from underrepresented, and often
academically disadvantaged, racial and ethnic groups. The nursing education literature that addresses the recruitment and retention of underrepresented minority students often presents a deficit model, focusing on the recruitment, support, and retention of underprepared students. Nurse scholars have indicated that there is a population of underrepresented, underprivileged minority students who express interest in a nursing career but need assistance with courses such as math and science to be successful in a rigorous nursing science program (Nnedu, 2009). There is little in the literature about the perceptions undergraduate students from diverse racial and ethnic backgrounds hold about nursing, and even less information about the perceptions of nursing held by undergraduate underrepresented minority students who demonstrate academic strength in science and are interested in pursuing careers in STEM fields.

Therefore, the purpose of this study was to explore the career behaviors of and elicit the perspectives about nursing as a career held by African American undergraduate non-nursing science majors. This study sought to address the following five research questions:

1. What are the person inputs and internal, self-directed cognitive processes (i.e., values, worldviews, and self-efficacy beliefs) associated with African American undergraduate non-nursing science majors’ career behavior?

2. What are the external influences (i.e., experiences, parental support, academic preparation, background contextual affordances) associated with African American undergraduate non-nursing science majors’ career behavior?

3. What are the career ideals of African American undergraduate non-nursing science majors?
4. What perceptions do African American undergraduate non-nursing science majors hold about the nursing profession and nursing careers?

5. What strategies gleaned from the perceptions held by non-nursing science African American undergraduates about nursing could nurse educators implement to attract academically advantaged students from this underrepresented minority group to nursing?

Understanding the career behaviors of African American undergraduate non-nursing science majors and their perceptions about nursing as a career may help to inform strategies to recruit this group of academically talented students to nursing, and thereby increase the diversity of the RN nursing workforce.

**Summary**

The purpose of the proposed research was to begin to address one aspect of the nation’s health gap and the under-representation of African Americans in the nursing workforce, through the investigation of career behaviors and the perceptions that African American undergraduate non-nursing science majors hold about the nursing profession. The perceptions that youth hold of nurses and the nursing profession may contribute to their intention to pursue nursing as a career. Describing and understanding the career ideals and perceptions that African American undergraduate non-nursing science, or STEM majors, hold about nursing as a career may offer insights into nursing education strategies to recruit students from this academically talented and underrepresented group.
Chapter 2

REVIEW OF LITERATURE

This review of the literature focuses on the theoretical and empirical literature related to career behaviors and perceptions of nurses and the nursing profession. Social Cognitive Career Theory (SCCT) (Lent, Brown, & Hackett, 2002) served as the framework for the review of the literature. Following a brief overview of SCCT and cross cultural career development theory, the first section of the literature review focuses on the empirical literature that pertains to the career development of African American college students. An overview of the characteristics and career behaviors associated with the Millennial Generation is also provided in this section. The second section will focus on students’ perceptions of nursing in the context of external and internal influences. Lastly, a description of a pilot study that this author designed with a University of Delaware faculty member and conducted to explore the perceptions of African American and Latino non-nursing science majors about nursing careers will be presented with some preliminary findings. As Giorgi (2005) remarked,

First of all, although the environment has an impact on things, there is no evidence that such impact precipitates intentional actions that are qualitatively different from the surroundings of the thing. One can truly say that whatever happens in a thing is the effect of an internal or external cause. (p.76)

Social Cognitive Career Theory

Career choice and behavior is not simply a result of situational factors or happenstance. There are cognitive processes that contribute to career behavior.
People, who are active agents in their career behavior, are also subject to the influences of external and internal facilitators and barriers to career choice and development. This complex multitude of external and internal factors “operate(s) in tandem with people’s cognitions, thus affecting the nature and range of their career possibilities” (Lent et al., 2002, p. 256; Appendix A). External influences, or contextual factors, are defined as those factors that promote or inhibit career development in a certain direction, for example, social, economic, and environmental factors. Examples of internal influences, or “person inputs” (Lent et al., 2002, p. 269) on career development include genetic endowment, special abilities, gender, race-ethnicity, health status, and affective reactions that influence rational thought processes. SCCT, derived from Bandura’s social cognitive theory (Bandura, 1986), was developed to identify major variables and construct conceptual bridges to offer a more explanatory system of career development (Lent et al., 2002).

Theoretical Assumptions of SCCT

SCCT recognizes the fluid nature of person-environment interactions. People have the capacity to change, self-regulate and continually develop. SCCT emphasizes the interaction between self-referent thought and social processes that motivate human behavior (Lent et al., 2002). Person inputs or attributes (cognitive and emotional states and physical characteristics), external environmental factors, and overt behaviors operate as bidirectional interlocking mechanisms; they are mutual interacting influences among people, their environments and behaviors. Lent and colleagues (2002) noted that in the SCCT model, people become both “products and producers of their environment” (Wood & Bandura, 1989, p. 362).
Key Theoretical Constructs of SCCT

Three central social cognitive variables, or personal determinants, are relevant to career development: self-efficacy (beliefs about one’s own capabilities and performance); outcome expectations (beliefs about the consequences and outcomes of behaviors); and personal goals (determination to engage in particular behaviors to influence future outcomes). These social cognitive variables are the building blocks of career development. They are the mechanisms by which individuals exercise personal agency, and as Lent and colleagues noted, they “…do not arise in a vacuum, nor do they function alone in shaping interest or other vocational outcomes” (Lent et al., 2002, p. 267). There are a multitude of other person input variables related to the social cognitive variables and career development process (e.g. gender, race and ethnicity, genetic endowment or health status).

Conversely, Lent and colleagues (2002) also noted that there are limits to an individual’s free agency in making career choices, hence the importance of external contextual and environmental influences, i.e., “contextual affordances” (p. 274). The concept of contextual affordances refers to the cultural, social, physical, and material features associated with one’s environment, as well as the resources and opportunities that one perceives as being provided by his or her environment.

The concepts of SCCT, with a focus on the broad categories of external and internal influences on career development, provided the framework for this review of the literature on perceptions of nursing and cultural influence on career development. Law and Arthur (2003) researched predictors of Hong Kong students’ positive perceptions and career choices of nursing, which can be summarized as follows:
• External influences: background contextual affordances, such as previous experience with nursing activities, previous work in a hospital setting, or family income

• Internal influences: person inputs, such as gender (female) and intelligence, as expressed in high academic achievement and/or test scores

• Sociostructural features: mother’s occupation, parents, career counselors, and friends; mother or close relative is a nurse

• Learning experiences: academic achievement; high-level related coursework such as college biology classes

Viewed from the perspective of SCCT, Law and Arthur (2003) noted that students’ perceptions of nursing and the desire to enter the profession were influenced by a number of external factors, or social influences and background contextual affordances. Their study highlighted some of the internal influences, or person inputs, on an individual’s perceptions of nursing. The complex combination of external and internal factors has implications for learning opportunities and experiences, which also heavily influence career perceptions and interest.

In summary, SCCT emphasizes the manner in which individuals exercise agency in their career development, as well as the internal and external influences that promote or limit agency.
Cultural Influence on Career Behavior

The person inputs of race and ethnicity have implications for career behavior. Just as values, attitudes, and beliefs differ across cultural groups, so do the perceptions of nursing and career ideals (Reisken & Haussler, 1994). SCCT maintains that gender, race and ethnicity are “interwoven features of the person’s socially constructed world” (Lent, Brown, & Hackett, 2002, p.268) and that their relevance to career behavior is related to the socio-cultural environment and the affordance of opportunity. Cross-cultural career development theory offers a specific framework for conceptualizing the role of culture in career interest and career behavior.

Cross-Cultural Career Development Theory

Leong and Brown (1995) called for “a better accounting of the career behavior of culturally diverse persons” (p. 146), and noted that current career choice theories tend to be based on a restricted range of people and assumptions of a limited scope, and that when race and ethnicity are introduced, those terms are often confused or improperly defined. Leong and Brown noted that most career development theories are based on research conducted on White, middle-class men, and that they have not been tested with and may not have application to “cross-cultural others” (p. 146). There is a lack of empirical information about the career behavior of individuals from racial and ethnic minority groups (Leong & Brown, 1995; Fouad & Bingham, 1995). To this end, Fouad and Bingham’s Culturally Appropriate Career Counseling Model (Appendix B) and accompanying Spheres of Influence of Cultural Variables (Appendix C) were utilized to understand the influence of worldviews, cultural values, and racial identity development on career development for individuals from underrepresented racial and ethnic groups.
Fouad and Bingham: Culturally Appropriate Career Counseling Model

The central question of Fouad and Bingham’s (1995) work was “How do cultural variables influence career decisions?” (p. 350). The following three assumptions about the effective delivery of career counseling services to individuals from racial and ethnic minority groups provide the underpinning for the Culturally Appropriate Career Counseling Model: a) career counseling is delivered within the context of culture; b) career development variables differ across cultures, and c) earlier career counseling models may not adequately explain career behaviors of individuals from underrepresented racial and ethnic minority groups.

Fouad and Bingham argued that although behavior has biological determinants, there is evidence to support that an individual’s personality is also shaped by interactions in families, in racial and ethnic cultures, and in the mainstream culture. Fouad and Bingham’s Spheres of Influence of Cultural Variables (Appendix C) demonstrates the effects of cultural variables on career behaviors. The core, or innermost sphere of the model, represents the self: the biological inputs and essence of the self. The spheres surrounding the core represent “all of the sociocultural forces around the individual” (p. 350). In this model, career behavior is shaped by (a) gender role expectations, (b) family expectations and values, (c) racial and ethnic group identity and worldviews, and (d) the influence of majority or dominant culture. This model offers an additional framework to understand the effects of cultural variables on career behavior.

Career Development: African American Students and Millennials

This section of the literature review is focused on the career behaviors of a specific group of individuals, African American undergraduates, and utilizing the
SCCT framework, serves to demonstrate the contributions of the person inputs of race/ethnicity, age, and external influences of background contextual affordances such as parental support to career behaviors. Several studies were found in the literature about career behaviors and ideals specific to African American students, including medical and dental students, and those are included in this review. Lastly, information from a U.S. Chamber of Commerce Foundation Report (2014) that describes the characteristics of Millennials, or students who were born between 1980 and 1999, has been added to provide a broader picture of the general career behaviors of students in this age group.

African American Parents

Higginbotham (2001) described the strong influence that parents have on the academic success of African American students in the form of emotional, cognitive, and material support. She noted that “Parents or other adults are active in providing critical assistance that positions young people for college” (p. 143). The presence, as well as the absence, of these three types of support has implications for the academic success of African American college students. In her study of Black women in colleges during the era of integration in the U.S., the 1960s, Higginbotham noted that most families, working and middle class, were “forthcoming with emotional support” (p. 144); however, students from the middle class benefitted from a greater amount of material and cognitive support from their parents. The term “adult-sponsored mobility” (Higginbotham, 2001, p. 143) refers to the process by which parents and other adults are able to provide the needed assistance to position children for a college career. Conversely, the term “child-secured mobility” refers to the process by which students may need to be self-directed and possibly reliant upon people outside of their
families (i.e., school officials) for direction and guidance to navigate the transition from high school to college.

Blackmon and Thomas (2014) investigated the link between racial-ethnic socialization experiences, the process by which parents educate their children about protocols for interacting with the dominant culture [intergroup protocol] and African American culture [intragroup protocol], and the perceived parental support among African American college students. The authors noted that African American parents offer children specific messages about career support “through the lens of what it means to be a person of color in the working world” (p. 305). Parents who provided emotional support, modeled and encouraged opportunities to practice career behaviors, and provided messages about coping with racism and intergroup interactions were perceived by African American students as supportive of career development.

African American Students

Perceptions of occupational prestige among college students vary across ethnic groups (Walker & Tracey, 2012). In one study, Walker and Tracey noted that African American students rated social and enterprising careers as more prestigious than did their Caucasian peers, and hypothesized that African American students might be more likely to choose those types of careers based on their experiences with teachers, clergy, and business people in the community and their familiarity with the benefit those professions provide to the communities they also wish to serve. Lease (2006) reported that African American high school juniors and seniors are as equally likely to choose fields in which there are a higher number of African Americans, as well as non-representative fields, suggesting that the absence of African American employees in certain fields is not a significant deterrent to students’ interest in those fields.
Byars-Winston (2010) noted that African American students with a positive or integrated ethnic identify tend to explore career options with increased confidence.

**Exemplar: African American Medical, Dental and Pharmacy Students**

Studies about the professional motivation of African American physicians and medical and dental students revealed that this particular group of students is more motivated to serve the public and work in urban areas as compared peers of other races (Butters & Winter, 2002). Factors that influence African Americans to pursue careers in medicine include early exposure to science, mentors in the form of professors and physicians (of all races), and exposure to African American role models (Erwin, Henry-Tillman, & Thomas, 2002) and African American physicians (Rao & Flores, 2007). Barriers to a career in medicine for African American students include financial constraints, concerns about grades and scholarships, limited information about careers in medicine, little encouragement at home and in school, a dearth of African American role models and physicians, peers’ negative perceptions of academic success, fears of racism in medicine, and the perceived difficulty and time commitment of an education in medicine (Rao & Flores, 2007). A study of factors that influence students’ intentions to pursue a career in pharmacy indicated that African Americans are less likely than peers of other races to pursue careers as pharmacists and the researchers noted that “Additional studies, particularly qualitative ones, are needed to investigate factors that influence underrepresented students’ choice of major” to explore perceptions of the major (Keshishian, Brocavich, Boone, & Pal, 2010).
Millennials

Consistent with SCCT, the person input of age has a significant bearing on career behavior. A U.S. Chamber of Commerce Foundation (USCCF) report describes the Millennial Generation, those who were born between 1980 and 1999, as the most studied to date (U.S. Chamber of Commerce Foundation, 2014). Sometimes referred to as the “Entitlement Generation” (Friedman, 2010), the USCCF (2014) report noted that Millennials “are full of contradictions” (p. 3). The report ascribes the following unique traits and qualities to this generation:

- Digital natives- a wired connected world is the only one they have known; most tech savvy generation; attachment to cell phones
- Optimistic
- Overindulged by helicopter parents
- Diverse, tolerant and socially minded
- Multitaskers
- Community-oriented
- Overly confident and self-absorbed
- Masters of self-expression- online networking and photos, tattoos and body art/piercings
- Parents more influential than previous two generations
- Most educated generation in US history
- Flexible gender roles

In terms of career motivation, the USCCF report indicated that Millennials are optimistic about their career aspirations and noted that this generation of students might remain in school longer in times of weak job markets. The report stated that Millennials may have to compromise their dreams of the ideal job because more than
half of the baby boomers have delayed their retirements, thus creating a restricted job market. The report also noted that Millennials (a) are motivated to seek financial security over higher-paying jobs that are associated with financial risk; (b) demand work/life balance, with 75% noting work/life balance as a primary motivator of career choice; (c) desire close relationships with their supervisors and advisors and seek frequent feedback in the form of coaching and mentoring, and (d) possess desired skills in teamwork and analytical and technical skills. Employers of Millennials perceive the need for them to develop improved skills around communications, work ethic, and interpersonal interaction. The USCCF report noted that Millennials tend to be more tolerant of races and groups than those of older generations, and that it is the most diverse generation: 19% Hispanic, 14% Black, 4% Asian, and 3% mixed race, with 11% of Millennials being born to at least one immigrant parent.

In an editorial, *The Millennial Minority*, McKinney (2014) suggested that “Conversations inclusive of the struggles of minorities and working class young people consistently are missing for the generalizations of younger generations” (p.1). McKinney notes that it is difficult to characterize an entire generation as entitled when 37% of the children of this generation were raised in poverty.

In summary, this section of the literature review focused on the multitude of influences on career behavior and highlights the limited information about career behaviors specific to African American students, underscoring the importance of including culture in the discussion of career ideals and motivation.
Perceptions of Nursing: Internal Influences

Person Inputs

Age, gender, personal values and goals, race and ethnicity are among a number of contributors to career behavior as identified in SCCT. Often, these variables intersect.

Age

Age is a factor in career behavior and the perception of nursing. Researchers indicate that career interests form very early in life (Baldwin & Agho, 2003; Balogun et al., 2005; Hoke, 2006; Helmsley-Brown & Foskett, 1999) and that by middle school, students have narrowed their career decisions and in most cases, do not consider nursing as a career option (Helmsley-Brown & Foskett, 1999; Hoke, 2006). Young people often have a singular career focus, making them disinterested in careers other than the one on which they focus (Helmsley-Brown & Foskett, 1999). However, research also demonstrates that there may be flexibility in students’ final career choices (Lent et al., 2002; Balogun et al., 2005). Images about nursing knowledge and skill are dependent on age (May, Champion, & Austin, 1991; Helmsley-Brown & Foskett, 1999). Eighth-grade students have a more positive image of nursing than do college students (May et al., 1991), perhaps because as children age they become aware of issues related to career status and respect (Helmsley-Brown & Foskett, 1999). Helmsley-Brown and Foskett (1999) noted that in their study that 15-year-old boys were most antagonistic toward nursing and feared being perceived as non-masculine. Men tend to view caring and nursing as female work, and those who do become interested in nursing usually do so at an older age (Helmsley-Brown & Foskett, 1999). Helmsley-Brown and Foskett (1999) noted that “The medical
knowledge and skill that underpins the work of qualified RNs was beyond the grasp of virtually all young people and was ‘invisible’” (p. 1347).

**Gender**

Females are most likely to choose nursing (Law & Arthur, 2003; Hemsley-Brown & Foskett, 1999; Hoke, 2006; May et al., 1991). Males are more likely to view nursing as a feminine career (Helmsley-Brown & Foskett, 1999; Campbell-Heider et al., 2008) and to select occupations based on anticipated salary (Helmsley-Brown & Foskett, 1999). Being tied so closely to female gender may make nursing less attractive to men and young women (Seago, Keane, & Grumbach, 2006).

**Personal Goals and Values**

In two studies of career desirability and perceptions of nursing, predominantly White school-age and college students described ideal careers as those that afford respect (May, Champion, & Austin, 1991; Helmsley-Brown & Foskett, 1999), financial reward, and opportunities for leadership, decision-making, and applying knowledge (May et al., 1991). Students’ ideal career preferences frequently do not include nursing (Degazon & Shaw, 2007; Reisken & Haussler, 1994; Mendez & Louis, 1991; May et al., 1991; Tomey, Schweir, Marticke, & May, 1996; Cohen, Palumbo, Rambur, & Mongeon, 2004; Helmsley-Brown & Foskett, 1999; Cohen et al., 2004).

The main reason young people choose nursing as a career is to help people (Helmsley-Brown & Foskett, 1999). Although students tend to value the caring ethic associated with nursing careers (Cohen et al., 2004; Helmsley-Brown & Foskett, 1999), that admiration does not necessarily translate into a desire to pursue nursing as
a career (Helmsley-Brown & Foskett, 1999; Mendez & Louis, 1991; Reisken & Haussler, 1994). In fact, the notion that nurses are selfless might actually serve as a deterrent to becoming a nurse, fueling images of nurses in subordinate roles, such as the doctor’s helper (Helmsley-Brown & Foskett, 1999).

**Student Perceptions of Nursing Education and Nursing Careers**

The multiple pathways to a career in nursing (i.e., 4-year bachelor’s degree, 2-year associate degree, and diploma programs) are problematic to recruiting students to baccalaureate nursing programs. Students often see little advantage to studying baccalaureate nursing, feeling that if they attend college for four years, they need to aim for a career with more status than nursing (Helmsley-Brown & Foskett, 1999).

The manual work associated with nursing contributes to perceptions of nursing as a lower-status occupation for students, regardless of age, gender, or social class (Helmsley-Brown & Foskett, 1999). Nursing is seen as a service occupation, and the work may be viewed as unpleasant, dirty, physically difficult, and dangerous (Helmsley-Brown & Foskett, 1999; Kohler & Edwards, 1990; Seago et al., 2006; Campbell-Heider et al., 2008).

Helmsley-Brown and Foskett (1999) noted that career choices of young people were based not on salary or financial reward, but rather, their interests, desire to help people, and perceived enjoyment of the work. For young people, knowledge of the importance of job security and salaries came from external sources, i.e., the influences of parents, friends, and media, cultural and social surroundings (Helmsley-Brown & Foskett, 1999). Mendez and Louis (1991) noted that for non-nursing majors and their parents, the image of nursing does not favorably compare with the career ideals they hold. Most students are aware of the positive caring ethic associated with nursing.
(Grossman, Arnold, Sullivan, Cameron, & Munro, 1989); however, students have little knowledge of expanded roles in nursing or the opportunities for advancement in the career (Grossman et al., 1989).

Race and Ethnicity

In the early 1900s, nursing was one of the most accessible routes for African American women who desired a professional career (Hine, 1989). However, for today’s students of any racial or ethnic group, nursing is only one of many routes to professionalization, especially for women who have greater opportunities to enter traditionally male-dominated fields (Staiger, Auerbach, & Buerhaus, 2001). Nursing may not be as attractive a career option as it once was for students who are seeking upward socioeconomic mobility (May et al., 1991). D’Antonio (2004) suggested that the status of nursing has been slipping since the 1970s and the notion of nursing as a vehicle for upward social mobility for racially and ethnically diverse men and women may be eroding.

There are few articles that describe the attitudes and perceptions that minority youth hold about nursing as a career (Campbell-Heider et al., 2008). Balogun et al. (2005) noted that African American students have a limited awareness about allied health professions before high school, in part due to lack of exposure to opportunities and role models within the health fields and inadequate academic preparation. Reisken and Haussler (1994) highlighted the intersection of gender, age, and socioeconomic status in their study of urban high school students’ perceptions of nursing and noted that African American and Latino females (compared to White and Asian females) had the most positive perceptions of nursing, nursing salaries, work environments, and respect for nursing. Degazon and Shaw (2007) noted that urban
high school students rated nursing as less favorable than their ideal career, especially in terms of power, autonomy, salary and status, and noted that these students appeared to have had an immature understanding of the relationship between working hard and earning respect, admiration, and authority.

Campbell-Heider et al. (2008) invited urban high school guidance counselors to a workshop on nursing careers, where the counselors reported on some of the barriers to recruitment of students to nursing. Students and parents often view nursing as a dangerous field, hold negative stereotypes about nurses and lack of opportunities in the profession, and prefer two-year programs for the quick access they provide to an income, without consideration of the professional benefits of a four-year education. The counselors also noted that many of the students were not academically prepared for a baccalaureate education. Pool (2012) conducted a study in Australia, where the workforce is described as monocultural, with the dominant group being of European and New Zealand descent. Although this Australian study did not include African Americans, the author commented on the influence of culture, gender, parents and education on intent to study nursing, and noted that for students and parents alike, nursing is invisible as a positive career choice, and that it is important to provide culturally appropriate support and advisement about careers to parents who play a key role in the career decisions their children make.

**Perceptions of Nursing: External Influences**

Some of the external influences on the perceptions of nurses and nursing include the popular media, formal avenues for career information, experience with nurses and nurse role models, expanding career options for women, and socioeconomic status. Examples of each in the nursing literature are as follows.
Popular Media

The popular media is very influential in the creation of perceptions, and numerous studies have demonstrated the impact of the media on the public image of nursing. Nurse researchers indicate that the media can have a powerful positive educational influence that aids in the recruitment of people to nursing (Weaver, Salamonson, Koch & Jackson, 2013; Campbell-Heider et al., 2008). However, the quality of the media’s portrayal of nursing has declined (Kalisch, 1982) and at times confuses the public about the nurse’s role (McAllister, Downer, Hanson, & Oprescu, 2014; Kalisch, Begeny, & Neumann 2007). It serves to reinforce negative stereotypes (McAllister et al., 2014; Weaver, Ferguson, Salamonson, & Wilbourn, 2014) and derogatory images of nurses and the nursing profession (Weaver, Salamonson, Koch & Jackson, 2013; McAllister et al., 2014; Kalisch et al., 2007), making the recruitment of qualified people to nursing challenging (Kalisch et al., 2007). Kalisch, Kalisch, & Clinton (1982) noted that television portrayals of nursing have been increasingly negative since the 1960s, a time when nurses were depicted in their true professional roles. Since that time, Kalisch et al. (1992) noted that nurses tend to be depicted as being deficient in problem-solving skills and administrative abilities, with limited participation in expanded nursing roles and no involvement in scholarly endeavors.

Narrow and negative images of nursing and nurses have a number of deleterious effects on the nursing profession, society’s perceptions of nursing and individual nurses’ self-image (Kalisch et al., 2007; McAllister et al., 2014; Dombeck, 2003). The negative portrayal of nurses impacts the quality and volume of people who are likely to choose the nursing profession (Kalisch et al., 2007; Judkins, Barr, Clark, & Okimi, 2000; Bridges, 1990). Images play a central role in shaping beliefs which impacts the recruitment of high-caliber students to the nursing profession. Studies
demonstrate that image and status of certain professions is highly influential to high school students’ career choices (Helmsley-Brown & Foskett, 1999; Mugonzibwa, Kikwilu, & Rugarabamu, 2000).

Policymakers who enact healthcare legislation are susceptible to images of nursing, which impacts laws that determine nursing’s scope of practice and allocation of financial resources (Kalisch et al., 2007; McAllister et al., 2014). Consumers are susceptible to inaccurate or superficial images of nursing and, as a result, are often unaware of the scope and range of nursing roles and opportunities for professional growth (Kalisch et al., 2007; Grossman et al., 1989; Hemsley-Brown & Foskett, 1999; Campbell-Heider et al., 2008). Much of the media’s coverage of nursing focuses on nurses’ role at the bedside of hospitalized patients (Helmsley-Brown & Foskett, 1999; King, Hardie, & Conway, 2007) and omits coverage of nurses in other roles. Media portrayals of nursing often focus on women, and the image of men in nursing is frequently underrepresented or negative (Weaver, Ferguson, Salamonson, & Wilbourn, 2014).

Inaccurate and negative portrayals of nurses by the media have implications for nurses’ self-image (Kalisch et al., 2007). Task-oriented portrayals of nursing may exclude the image of the nurse as an educated professional and downplay the emphasis the nursing profession places on human interaction and caring (McAllister et al., 2014). The invisibility of nursing knowledge and decision making in nursing tends to reinforce views of nursing as a low-status career (Helmsley-Brown & Foskett, 1999; Cohen, et al., 2004). McAllister and colleagues (2014) noted that “While news media about nursing is volatile, political, and appealing to the mainstream, images of nursing are products that once made are permanent artifacts” (p. 152). Helmsley-Brown and
Foskett (1999) noted that beliefs about image and prestige, i.e., knowledge of salary, job security and status, are influenced externally, by students’ cultural and social surroundings and by friends, family and media images, especially television. Images of nursing play a central role in shaping public perception, which impacts the recruitment of high-caliber students to the nursing profession.

**Formal Avenues of Career Information**

Students also receive information about nurses and the nursing profession through formal avenues and learning experiences such as career advisors, guidance counselors, summer camp programs, and career education programs at school. The effects of advisement and formal programs on the perception of nursing vary. Career advisers and guidance counselors often fail to recognize the complexity of nursing careers (King et al., 2007; Blasdell & Hudgins-Brewer, 1999; Degazon & Shaw, 2007), the range of opportunities in nursing (King et al., 2007), and the academic preparation necessary for students to succeed in baccalaureate nursing programs (Blasdell & Hudgins-Brewer, 1999). One study suggested that career advisers rate caring and other-centeredness over leadership traits and academic aptitude when asked about qualifications necessary for nursing students (Blasdell & Hudgins-Brewer, 1999), while another indicated that career advisers do not actively promote nursing as a career choice (King et al., 2007).

**Experience with Nurses and Nurse Role Models**

Experience with healthcare professionals may be the most efficacious way to positively impact students’ attitudes toward nursing. Shadowing programs (Porter, Edwards, & Granger, 2009), visits with undergraduate and practicing health
professionals (Alexander & Fraser, 2001), and career awareness programs that expose students to healthcare and nursing professionals (Balogun et al., 2005; Bumgarner, Means, & Ford, 2003; Hoke, 2006; Tomey et al., 1996) have been demonstrated to increase students’ interest in the profession, clear up misperceptions about the role of nurses, and raise the profile of nursing in general. Baldwin and Agho (2003) demonstrated that information from health care professionals was the single most influential initial source of information for students who chose careers in allied health programs.

Exposure to nurse role models can significantly impact students’ desire to enter the nursing profession (Grossman et al., 1989; Mendez & Louis, 1991; Kersten, Bakewell, & Meyer, 1991; Kohler & Edwards, 1990; Cohen et al., 2004). Young people who have had exposure to hospitals, healthcare settings, and family and friends who are nurses may have a more accurate and favorable perception of nursing (Law & Arthur, 2003). A study by Degazon and Shaw (2007) did not show an increase in favorable ratings of nursing related to hospital experiences with ill family members, causing the researchers to speculate that the environment and experiences of hospitals in urban environments may be uninspiring.

Other External Influences on the Perception of Nursing Careers

Campbell-Heider et al. (2008) and Cohen et al. (2004), offered examples of sociocultural influences on the recruitment of students to nursing and noted that the (a) increase in career options for women has created a declining interest in nursing, (b) decrease in the number of teens in this current generation as compared with those in the baby boomer generation has decreased the pool of nursing school applicants, and (c) falling nursing wages between 1994 and 2000 make nursing a less desirable career
option (Buerhaus, Donelan, Norma, & Dittus, 2005). One’s socioeconomic status has a bearing on perceptions of nursing. May et al. (1991) noted 20 years ago that adults with a high school education had more positive perceptions of nursing than those with a college education, and noted that nursing is “now drawing persons from lower socioeconomic levels” (p. 209), supporting the claims of more current researchers that nursing is no longer as desirable a career choice for women as it once may have been (D’Antonio 2004).

Nurse-Physician Comparisons

Physician-nurse comparisons, born of the long-standing physician–nurse relationship, which at times has been historically negative, continue to erode perceptions of nurses’ power, status, financial attainment, autonomy, and prestige (Seago et al., 2006; Helmsley-Brown & Foskett, 1999; Degazon & Shaw, 2007). Positive reinforcement from family, friends, and counselors influences students’ choice of nursing as a career (Law & Arthur, 2003; Mendez & Louis, 1991). Educational experiences (e.g. academic proficiency in science) have a positive impact on the decision to enter nursing (Law & Arthur, 2003).

In a study that investigated cross-cultural images of nurses and physicians, researchers concluded that the most significant findings were related to the perceived power differential associated with the professions (Champion, Austin, & Tzeng, 1987). Champion and colleagues concluded that while people of all cultures were generally positive about both groups of professionals, physicians were highly correlated with knowledge and independence, while nurses were correlated with kindness. The image of nursing as having limited power and influence on health care decision making was noted. It was also noted that the image of nursing for a particular
society was closely aligned with that culture’s image of women in general. In this study, nurses were viewed, cross-culturally, as virtuous and active, albeit subordinate, to physicians who were perceived as knowledgeable and powerful.

**Pilot Research**

A descriptive pilot study, *Perceptions of African American and Latino Non-nursing Majors About Nursing as a Career Option*, was conducted by this researcher and a faculty member to explore the perceptions of African American and Latino non-nursing undergraduate science majors about nursing as a career option. The purpose of the research was to elicit perceptions of African American and Latino undergraduates to help inform strategies that nurse educators could employ to address the underrepresentation of African American and Latino registered nurses (RN) in the nursing workforce. Eight female non-nursing science majors participated in semi-structured face-to-face individual interviews and completed an adapted version of the Nursing Profession Instrument (NPI) (adapted from Grossman et al., 1989). Simultaneous data collection and analysis occurred, aiming for saturation. The interviews were transcribed verbatim, verified against recordings, and re-coded and analyzed for emergent themes. The NPI item responses were tallied and triangulated with the themes. Five themes emerged from the pilot data:

- **Blind to Nursing as a Career Option: Image of Medical Doctor (MD) Eclipses RN**. The singular focus on attaining a career as a physician seemed to render the four pre-med majors in this study fairly unaware of other career options. None of the pre-med majors in the study had considered nursing as a career prior to entering college. Some were unaware of the existence of a college nursing major.
• **Nursing Exists Within a Medical Hierarchy/Continuum.** The term “medical profession” was often used to encompass nursing. Students frequently described nurses and their roles in relationship to those of doctors, as if nursing was on the same continuum as medicine and not a distinct profession.

• **Dependence/Independence Dichotomy: Nurse Practitioner as the Bridge.** Students viewed nursing as a dependent career lacking in autonomy. Those with an awareness of the role of nurse practitioner (NP) viewed the position of NP as having more autonomy than that of a registered nurse, and a few thought of it as an acceptable alternative to becoming a Medical Doctor (MD).

• **Science as a Vehicle to a Career.** Study participants did not view nurses as scientists despite being aware of nursing majors in their science classes. Students frequently regarded the science coursework for both nursing and medicine as something to be endured to obtain a terminal professional degree.

• **External Motivators of Career Choice.** Parental influence, positive and negative, was frequently apparent in students’ career choices.

**Summary of Current Knowledge**

Students’ perceptions of careers are of vital importance. Positive perceptions of a given career are thought to influence the intention to enter that career field. There are a multitude of internal and external influences on learning experiences and cognitive states that ultimately affect career behavior. The person input of race/ethnicity interacts with other career influences and determinants, warranting special consideration for the investigation of career perceptions and choice behavior for individuals from underrepresented racial and ethnic groups.
There is much in the literature about student perceptions of nursing careers, however there is little about minority students’ perceptions of nursing, and none that could be identified specific to the perceptions of African American undergraduates. Much of the literature that addresses students from underrepresented racial and ethnic groups in nursing focuses on the recruitment and retention of individuals from economically and academically disadvantaged groups. No research was identified in the literature about the perceptions that African American undergraduate non-nursing science majors hold about nursing, or strategies to recruit culturally diverse academically talented STEM majors to the profession.
Chapter 3
RESEARCH DESIGN AND METHODOLOGY

This qualitative descriptive research study was designed to explore and describe African American undergraduate non-nursing science majors’ career behavior and perceptions of nursing as a career. Undergraduate students from a population of African American non-nursing science majors were interviewed for the study utilizing a semi-structured interviewing approach. Lincoln and Guba’s (1985) Naturalistic Paradigm and criteria for trustworthiness guided the development and implementation of this research. Social Cognitive Career Theory (Lent et al., 2002) provided the frame of reference for the review of the literature, was utilized to inform some of the study interview guide prompts, and informed the deductive codes in the earliest stages of analysis. The study was conducted utilizing the approaches of fundamental qualitative description (Sandelowski, 2000, 2010) which included purposeful/maximum variation sampling, individual semi-structured interviews for data collection, and a variant of qualitative content analysis (Miles, Huberman & Saldaña, 2014)

Study Frame of Reference

“Qualitative descriptive studies are not atheoretical” (Sandelowski, 2010, p. 79). Sandelowski and Barosso (2002) noted that a frame of reference may have influenced a study from design through interpretation of findings, or that it may enter the study during data analysis and collection. Sandelowski (2010) noted that the
words ‘methods’ and ‘methodological’ imply a theoretical or philosophical orientation to inquiry, and that “no study of any kind could ever be so conceptually naked. There is no such thing as a view from nowhere” (p. 79-80). Thorne (2008) noted the importance of clarifying the theoretical framework of a study to locate the researcher’s theoretical allegiances, discipline, and relationship to the ideas one holds in an effort to ensure that the products generated by one’s research are true to the study purpose and “become meaningful empirical contributions” (p. 64). Miles, Huberman and Saldaña (2014) noted that a conceptual framework explains the main things to be studied, and serves as the researcher’s map of territory to be investigated. Following is a description of the “theoretical sensitivities” that influenced this study from its inception (Sandelowski & Barosso, 2002, p.96).

Qualitative Description and Naturalistic Inquiry

Sandelowski (2000, 2010) noted that the theoretical location of qualitative descriptive studies is naturalism. Lincoln and Guba’s (1985) axioms of naturalistic inquiry guided the design and implementation of the study:

1. Axiom 1: The nature of reality. There are multiple constructed realities; predictability and control are not likely outcomes of the inquiry, however some level of understanding can be gained.
2. Axiom 2: The relationship of the knower to the known. The inquirer and the participant interact and influence one another; the two are inseparable.
3. Axiom 3: The possibility of generalization. The aim of inquiry is to develop or add to the body of knowledge.
4. Axiom 4: The possibility of causal linkages. It is not possible to establish cause and effect in naturalistic inquiry, as the process allows for “mutual simultaneous shaping” (p. 38).

5. Axiom 5: The role of values in inquiry. Inquiry is value-laden and value-bound; the values of the inquirer are expressed throughout all phases of the study, from the choice of problem to study and the conceptual framework of the study to the study design; the options chosen for the study must be value congruent, or “value-resonant” (p. 38).

While career development theory provided the theoretical framework for the investigation of perceptions of nursing in the context of African American undergraduate students’ career behavior, the values of naturalistic inquiry provided the underpinning of this qualitative descriptive study.

Career Development Theory

Lent, Brown and Hackett’s Social Cognitive Career Theory (2002) served as the conceptual framework for the review of the literature, helped to formulate the study’s research questions, and informed some of the interview guide prompts. Lent et al. (2002) suggested that there is a multitude of internal (or self-directed) and externally imposed influences on career behaviors. Other career development scholars suggest that individuals from racial and ethnic minority groups have different experiences that lead to “identity development processes that differ from most Euro Americans” (Fouad & Bingham, 1995, p. 335). The knowledge of these career development theories, as described, informed the study interview guide prompts in such a way that affords a more in-depth exploration of internal and external influences of career interests and behavior. For example, participants were asked to respond to
the following two-part question: “How good of a ‘fit’ is your career choice with your gender, personal values, family values, and cultural values? How would those attributes fit with a nursing career?” This question was designed to elucidate internal (or person inputs) (Lent et al., 2002) and external influences on career perceptions and choice. This question also took Fouad and Bingham’s Spheres of Influence of Cultural Variables Model (1995) into consideration, which suggests that gender and values (individual, family and cultural) play a significant role in career interest development, especially for students from diverse racial and ethnic minority backgrounds.

Research Questions

Miles, Huberman and Saldaña (2014) noted that research questions may be “general or particular, descriptive or explanatory” (p. 25), and that they may have been formulated with the development of a conceptual framework. Thorne (2008) noted that research questions must be products of a reflective process. The following descriptive and explanatory research questions were developed concurrently with the identification of the study’s conceptual framework and review of the literature:

1. What are the person inputs and internal, self-directed cognitive processes (i.e., values, worldviews, and beliefs) associated with African American undergraduate non-nursing science majors’ career behavior?

2. What are the external influences (i.e., parental support, community, environment, culture and learning experiences) associated with African American undergraduate non-nursing science majors’ career behavior?

3. What are the career ideals of African American undergraduate non-nursing science majors?
4. What perceptions do African American undergraduate non-nursing science majors hold about the nursing profession and nursing careers?

5. What strategies gleaned from the perceptions of nursing held by non-nursing science African American undergraduates could nurse educators implement to attract students from this underrepresented minority group to nursing?

**Human Subjects**

Approval for the study was granted by the University of Delaware’s Institutional Review Board (IRB) prior to the initiation of the study. An amendment was sought to expand on the sampling plan of the original design. Study participants were advised with respect to who would see the data, how the data were intended to be used, and the measures taken to protect their confidentiality. No information provided by participants was reported in a manner that identified them. All collected information was de-identified and given a participant identification number. For ease of reading the study results, each participant was assigned a fictitious name. The list of participants’ names, identification numbers, and fictitious names were stored in a password-protected file on the researcher’s computer and password-protected USB drive. Audiotaped interviews were digitally recorded, assigned the participants’ identification number, and stored in password-protected files on the researcher’s computer and password-protected USB drive. The interviews were transcribed verbatim by a professional transcription service and stored in password protected electronic files. The participants’ demographic information may have been disguised in some cases to safeguard their identities as needed. All participants signed an IRB-approved informed consent which outlined their rights and protections as study participants.
Informant-Researcher Relationship

The informant-researcher relationship describes that of the knower to the unknown (Lincoln & Guba, 1985). In a face to face interview, it is inevitable that the researcher and informant shape one another’s behaviors and responses, and create the data of the research together. The inquirer and the participant interact and influence one another; the two are inseparable. The participant’s awareness of the researcher as a Caucasian registered nurse and the potential implications of that knowledge will be discussed in the Limitations section.

Method

“All methods become what they are in the hands of the user” (Sandelowski, 2010, p. 78). Qualitative description is not one particular method or bounded entity (Sandelowski, 2010), but rather, a methodological approach to qualitative research. The researcher utilizing the methods of qualitative description must still describe the combination of methods utilized for sampling, data collection, and data analysis, with appropriate references to support the choice of techniques. The goal of qualitative description is to yield “detailed and nuanced interpretive products” (p. 78).

Sample and Setting

The topic of this research necessitated the strategic selection of a purposive sample of students with an interest in science (other than nursing science), from a specific racial and academic group. Therefore, the opportunity to participate in the study was initially offered to students who met the following criteria:

- Current undergraduate non-nursing science majors,
- 18 years of age or older,
- Who self-identify as African American,
Enrolled at the University of Delaware (UD).

The invitation to participate was initially sent via an electronic announcement through University of Delaware’s Network of Undergraduate Collaborative Learning Experiences for Underrepresented Scholars (NUCLEUS) program, a program that provides support and mentorship for students who are from underrepresented racial and ethnic backgrounds. After the initial invitation was extended and the first interviews were scheduled, the network of potential participants expanded rapidly, or snowballed. Powers and Knapp (2011) described snowball sampling as “a type of non-probability sampling in which subjects initially selected recruit other subjects” (p. 172). In their discussion of qualitative sampling, Miles et al. (2014) noted that samples frequently evolve once fieldwork begins.

In this study, one of the first participants from UD was able to refer a number of her peers who were studying with her at a summer program for pre-med students from underrepresented racial and ethnic groups. In order to be able to expand the study’s sampling parameters to take full and timely advantage of this network of potential participants, an amendment was filed with and approved by UD IRB that allowed the following revisions to be made to the original study proposal:

- Undergraduate non-nursing science majors from colleges and universities outside of UD became eligible to participate;
- Participants could be interviewed at a location of their choice, or digitally (e.g. Skype) where distance prohibited in-person interviews;
- The digitally recorded audio interviews could be sent to an online service for transcription.
Table 2 provides the demographics of the study sample. The names of the participants’ affiliated school have been assigned pseudonyms to preserve confidentiality.
<table>
<thead>
<tr>
<th>Participant ID# and Pseudonym</th>
<th>Age</th>
<th>Major</th>
<th>School</th>
<th>Generation College</th>
<th>Birthplace</th>
<th>Self-reported GPA</th>
<th>Intended Career</th>
</tr>
</thead>
<tbody>
<tr>
<td>301 Michael</td>
<td>18</td>
<td>Biology</td>
<td>Northeast U</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>Ghana</td>
<td>3.4</td>
<td>Medicine</td>
</tr>
<tr>
<td>302 Leah</td>
<td>19</td>
<td>Biology/ Public Policy</td>
<td>Northeast U</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>U.S.</td>
<td>3.4</td>
<td>Medicine</td>
</tr>
<tr>
<td>303 Faith</td>
<td>18</td>
<td>Behavioral Neuroscience</td>
<td>Mid-Atlantic U</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Nigeria</td>
<td>3.3</td>
<td>Medicine</td>
</tr>
<tr>
<td>304 Ines</td>
<td>19</td>
<td>Behavioral Neuroscience</td>
<td>Mid-Atlantic U</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>U.S.</td>
<td>3.3</td>
<td>Medicine</td>
</tr>
<tr>
<td>305 Adessa</td>
<td>19</td>
<td>Biology</td>
<td>Penn. U</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>U.S.</td>
<td>3.5</td>
<td>Medicine</td>
</tr>
<tr>
<td>306 Arielle</td>
<td>18</td>
<td>Biology/Nutrition</td>
<td>New Jersey State</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>U.S.</td>
<td>4.0</td>
<td>Medicine</td>
</tr>
<tr>
<td>307 Therese</td>
<td>19</td>
<td>Physiology/ Psychology</td>
<td>West U</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>U.S. 1&lt;sup&gt;st&lt;/sup&gt; generation Haitian</td>
<td>3.5</td>
<td>Medicine</td>
</tr>
<tr>
<td>308 Beth</td>
<td>20</td>
<td>Psychology/Spanish</td>
<td>Bay State U</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>U.S. 1&lt;sup&gt;st&lt;/sup&gt; generation Nigerian</td>
<td>3.4</td>
<td>Medicine</td>
</tr>
<tr>
<td>309 Jeremiah</td>
<td>22</td>
<td>Biology/Chemistry</td>
<td>Central U</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>U.S.</td>
<td>3.4</td>
<td>Medicine</td>
</tr>
<tr>
<td>310 Candace</td>
<td>20</td>
<td>Health Sciences</td>
<td>Central U</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>U.S.</td>
<td>3.3</td>
<td>Medicine</td>
</tr>
<tr>
<td>311 Cara</td>
<td>21</td>
<td>Environmental Science/ Chemistry</td>
<td>Central U</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>U.S.</td>
<td>2.8</td>
<td>Medicine / Homeopathic Nutrition</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Age</td>
<td>Major</td>
<td>University</td>
<td>Year</td>
<td>U.S.</td>
<td>GPA</td>
</tr>
<tr>
<td>-----</td>
<td>--------</td>
<td>-----</td>
<td>------------------------</td>
<td>--------------------</td>
<td>------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>312</td>
<td>Cayla</td>
<td>20</td>
<td>Biochemistry</td>
<td>Northeast U</td>
<td>3rd</td>
<td>U.S.</td>
<td>Declined to answer</td>
</tr>
<tr>
<td>313</td>
<td>Amy</td>
<td>20</td>
<td>Biology/Anthropology</td>
<td>Northeast U</td>
<td>3rd</td>
<td>U.S.</td>
<td>3.0</td>
</tr>
<tr>
<td>314</td>
<td>Dominique</td>
<td>19</td>
<td>Health Sciences</td>
<td>New York C</td>
<td>1st</td>
<td>U.S.</td>
<td>3.0</td>
</tr>
<tr>
<td>315</td>
<td>Winston</td>
<td>22</td>
<td>Biology</td>
<td>Central U</td>
<td>1st</td>
<td>U.S.</td>
<td>3.4</td>
</tr>
<tr>
<td>316</td>
<td>Toni</td>
<td>20</td>
<td>Cognitive Neuroscience/Psychology</td>
<td>Central U.</td>
<td>2nd</td>
<td>U.S.</td>
<td>3.2</td>
</tr>
<tr>
<td>317</td>
<td>Eden</td>
<td>19</td>
<td>Biology/Neuroscience</td>
<td>Northeast U</td>
<td>2nd</td>
<td>U.S.</td>
<td>&lt;3.0</td>
</tr>
<tr>
<td>318</td>
<td>Ryan</td>
<td>20</td>
<td>Neuroscience</td>
<td>Central U</td>
<td>2nd</td>
<td>U.S.</td>
<td>3.789</td>
</tr>
<tr>
<td>320</td>
<td>Lauren</td>
<td>19</td>
<td>Biology</td>
<td>Northeast U</td>
<td>3rd</td>
<td>U.S.</td>
<td>Declined to answer</td>
</tr>
</tbody>
</table>
The face-to-face interviews with UD students took place at University of Delaware School of Nursing (UDSON) McDowell Hall, at a time that was convenient to the participants. For those students who were unable to travel to Delaware for the interview, arrangements were made to meet with them at a location of their choice, or if distance precluded an in-person interview, the interviews were conducted via online technology, i.e., Skype. A $25 gift card was provided at the completion of the study as an incentive for the recruitment of participants.

Instrumentation

The study’s research questions, the review of the literature, and career development theory informed the development of the study interview guide (Appendix D). The interview questions were developed in consultation with content experts. Faculty members with expertise in the areas of qualitative research, undergraduate education, and race theory suggested edits to the interview guide and a professional counseling psychologist with expertise in career development offered input. The interview questions were open-ended and comments from the researcher were limited to requests for clarification, elaboration, or reflection on content the participant offered.

The following section describes in detail the procedures for data collection and analysis. Participants were asked to consent to an audiotaped, semi-structured in-person interview. Data collection and analysis occurred simultaneously, aiming for saturation.
Data Collection and Management

Data analysis started with the first interview; memos were generated post-interview and during all phases of transcript verification and analysis to enhance the researcher’s thought process, provide direction for ongoing research, and to refine broad questions as the research progressed. The raw data from the interviews, field notes, and memos were maintained in such a way that they were able to be read and coded. The goal of the analysis was to conceptualize findings (Morse, 1994) in a manner that developed a comprehensive thematic description and re-presentation of the data (Sandelowski, 2010).

Semi-structured, individual interviews were conducted with participants. The interview questions were open-ended and comments from the researcher were limited to requests for clarification, elaboration, or reflection on content the participant offered. Although the questions were generally asked in sequence, there was some liberty taken with regard to the order in which the questions were asked, to allow for interpersonal connection and the adaptation of sequencing to each participant’s narrative and train of thought. Polit and Beck (2008) discussed the importance of balancing the need for gathering information with allowing participants to freely tell their story. Flexibility of question sequence was maintained; however, all of the participants were asked to offer responses to each of the questions on the interview guide over the course of the interview.

A master list of each participant’s name, pseudonym, and corresponding ID number was maintained in a password-protected file on the researcher’s computer and also stored on a password-protected USB drive. All interviews were digitally recorded, assigned an identification number, and transcribed verbatim by an online professional transcription company, which returned each completed transcription
within 24 to 48 hours of its receipt. On return, each transcript was checked for accuracy by the principal investigator against the audio recording prior to the completion of the next interview. The original audio recordings, each returned transcript, and the verified versions of each transcript were stored in password-protected files on the researcher’s computer and also stored on a separate password-protected USB drive. Observations made by the researcher and any theoretical ideas that were stimulated during the interview and data collection process were recorded in handwritten field notes and placed in paper files that were identified with the participants’ ID numbers and maintained in a locked file drawer. The field notes were included in the analysis of each interview transcript.

Analysis: Data Coding Processes

Miles, Huberman and Saldaña’s (2014) coding processes for qualitative analysis were utilized in this study. The data coding was divided into two main stages: First Cycle coding and Second Cycle coding. First Cycle coding entailed assigning initial codes to data chunks to make a preliminary summary of data segments or broad master codes. The number of broad master codes evolved as field experience continued. During First Cycle coding, a larger number of “second-order” (p. 80) codes were identified in the data and each was assigned a subcode. Second Cycle coding, or pattern coding, involved grouping the data from the First Cycle coding into more refined categories, themes, and constructs. Pattern coding functioned to pull together the data from the First Cycle coding into “more meaningful and parsimonious units of analysis” (Miles et al., p. 86). A code list was developed, refined, and maintained throughout the coding process (see Appendix E). The code
list contains the definition for each code and subcode that was identified, and each entry is accompanied by an exemplary quote.

**Data analysis: First Cycle Coding**

Data collection and analysis occurred concurrently. In most cases, the initial phase of First Cycle coding of each interview had been done prior to the completion of the next interview. Working in this manner allowed for reflection on the existing data and enabled the development of new strategies to elicit richer data in subsequent interviews. For example, upon reflection on the field notes and the transcript from the first interview (301: Michael), the researcher recalled in hindsight that the participant was prominently wearing a large gold cross, and that questions about religion and spirituality needed to be asked (and added to the interview guide) if not brought up by the participant, in order to gain a comprehensive view of the internal and external influences on career behavior. Miles et al. (2014) described this type of happenstance and noted that the interweaving of data collection and analysis “… can be a healthy corrective for built in blind spots” (p. 70). Creswell (2007) noted that data analysis is “not off the shelf, rather it is custom built and revised…” (p.150). First Cycle coding in this study was accomplished in two phases, and involved two separate analyses of each transcript.

**First Cycle Coding: Phase 1**

The first phase of First Cycle coding began with a deductive coding approach, which employed four “lightly held” master codes (Miles et al., 2014, p. 81). The term “master code” in this study is defined as a word or short phrase that takes the form of a descriptive label. The descriptive master codes utilized in this study correlated with
the subject matter of the first four research questions. The four descriptive master codes, derived from the first four research questions of the study included: *internal influences, external influences, career interests,* and *nursing.* These four codes enabled the categorization of data around the research questions and some of the constructs of SCCT, the study’s conceptual framework. Miles et al. (2014) endorsed this technique of deductive coding as one possibility to the beginning of the First Cycle coding process, and noted “We think that conceptual frameworks and research questions are the best defense against [data/information] overload” (p.73).

Each of these descriptive master codes functioned to assign labels to data segments, words, and phrases, to provide a general inventory of topics to be analyzed further in the second coding phase. Also during this first phase of First Cycle coding, notes and jottings were made in the margins on each transcript about the possible subcodes that could be assigned to various data segments during the second phase of First Cycle coding. In addition, memos were written in a separate notebook throughout both phases of First Cycle coding. The memos included thoughts about continuing data collection and analysis, and some reflections on the raw data and data segments as they occurred to the researcher.

The number of descriptive master codes evolved from four to six as more information and insights were generated during First Cycle coding of the first five interview transcripts. The codes *learning experiences* and *culture* were added as analysis of the data continued to accommodate data segments that did not fit within the four original master codes. A list of the six descriptive master codes and a definition for each is outlined in Table 3.
Table 3  First Cycle Coding: Six Descriptive Master Codes Defined

<table>
<thead>
<tr>
<th>Master code</th>
<th>Code definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Influence</td>
<td>Describes the person inputs, values and beliefs that are associated with career behaviors</td>
</tr>
<tr>
<td>External Influence</td>
<td>Background contextual affordances, people, and environmental factors associated with career behaviors</td>
</tr>
<tr>
<td>Career Ideals</td>
<td>Characteristics, descriptions, attributes of careers, career aspirations and ideals as described by participant</td>
</tr>
<tr>
<td>Nursing</td>
<td>Any reference to nurses or nursing: Knowledge, observations or perceptions of nurses/nursing careers</td>
</tr>
<tr>
<td>Learning Experiences</td>
<td>Experiences associated with the development of values, self-efficacy beliefs, career motivation and career behaviors</td>
</tr>
<tr>
<td>Culture</td>
<td>Any reference to culture including participant’s heritage; any discussion of race or ethnicity as it relates to experiences and career behaviors, including externally imposed values/norms and the internalization of same</td>
</tr>
</tbody>
</table>

**First Cycle Coding: Phase 2**

Transcripts were reviewed a second time to identify and assign subcodes to the broadly coded data. Miles et al. (2014) noted that subcoding allows general code entries to be indexed and categorized for “nuanced qualitative analysis” (p. 80) and that subcoding is generally employed after broad coding schemes. The following is an example of a subcode nested within the descriptive master code, *external influences*, taken from a transcript where the participant describes the career desires her father holds for her:

302: Leah: My dad wants the same thing. My dad … I can’t … I don’t think … he (laughs)… he wants me … like, I was on the phone the other day, and he’s like … “I want … You cannot be anything else but a doctor.” He wants me to be the first doctor in our family. He is … He wants me … He doesn’t care if I major in philosophy, I just have to go to med school. He wants me to go.
The subcode for this data segment then became *external influences: parental influence*. See Appendix E for the phase two code list, definitions and exemplary quotes.

In summary, First Cycle coding occurred in two phases in this study. The first phase of the analysis began with four deductive master codes which evolved to become six broad coding categories. In this early phase, large segments of data that were relevant to the constructs of SCCT and the research questions of the study were identified. Next, these segments, or data chunks, were condensed into analyzable units (i.e., subcodes) in the second phase in preparation for Second Cycle coding.

Data Analysis: Second Cycle Coding

As noted in Miles et al. (2014), the second step of coding is referred to Second Cycle, or Pattern coding. During this coding step, the large lists of subcodes were condensed into smaller parsimonious units (i.e., constructs and themes). In Second Cycle coding, selected First Cycle codes were arranged in clusters, or patterns, and given a summarizing theme. The development of Theme 3: *Perception of Nursing: A Limited Profession* was based on the definition of the code, *nursing* as “any reference to nurses or nursing: knowledge, observations, or perceptions of nursing care.” Cluster 1, the construct: *Respect* employed the following subcodes and their definitions:

- **N:P**—Perceptions, any idea or impression participants express about nurses or nursing
- **N:S**—Status, participants’ perceptions of the image or status of nursing
- **N:M**—Media, portrayal of nursing in media: TV, news, advertisements
- **N:R**—Respect, participants’ comments about respect for nurses
• N:V—Value, comments participants make that convey thoughts about the value of nursing

• N:SR—Scientific Rigor, participants’ perceptions of nursing science; nurses as scientists

Cluster 2, the construct: Power employed the following subcodes and their definitions:

• N:POW—Power, participants’ comments that convey their perceptions of power associated with nursing

• N:A—Autonomy, participants’ comments that convey the degree of professional independence of nursing

• N:CM—Career Mobility, participants’ perceptions about opportunities to advance in nursing

• N:WE—Working Environment, participants’ perceptions of the environments that nurses work in

• N:FIN—Financial, participants’ perceptions of nurses’ salaries

• N:STEREO—Stereotypes, comments participants offer that suggest stereotypes of nursing

• N:EDU—Education, comments about level of education of nurses

• N:T—Tasks, describes nursing through tasks; identifies nursing tasks

• N:AWARE—Awareness, comments that convey an understanding or lack thereof about the scope of professional nursing

Cluster 3, the construct: Desirability employed the following subcodes and their definitions:
• N:EXP—Experience, any experience the participant shares that involves interaction with nurses
• N:DO—Direct Observation, comments that participants make about first-hand observations of nurses
• N:F—Family, participants’ comments about nurses in family
• N:I—Information from Others, information about nurses and nursing careers gleaned from others
• N:CON—Considered, comments participants offer about whether or not they have considered or would consider a career in nursing
• N:PARENTS—Parents, parents’ perceptions of nursing and or desirability as career choice for their children

The diagram in Appendix G illustrates the manner in which all of the study themes were combined to describe and illustrate the lens through which participants viewed ideal careers and careers in nursing.

**Member Checks**

During Second Cycle coding, emergent themes were identified that were largely descriptive, requiring little interpretation. However, other themes were identified that involved a degree of interpretation beyond pure description, some of which dealt with potentially sensitive material. Feedback from each of the study participants was sought in the form of member checks during the final stages of analysis.

The goal of member checks is to provide the opportunity for the researcher to offer feedback to study participants about emergent themes in the data in order to obtain the participants’ reactions to the researcher’s representation of their realities.
Polit and Beck (2008) noted that there are multiple schools of thought about the value of member checks as a validation strategy in qualitative research. Miles et al. (2014) commented little on the utilization of member checks, and noted that while member checks can improve the quality of the data, that they may also serve to truncate or distort the data in cases of disagreement between the researcher and participant. However, Lincoln and Guba (1985), whose axioms of naturalistic inquiry provided part of the underpinning of this study, considers member checking to be “the most crucial technique” toward the establishment of the credibility of qualitative data (p. 314).

In the current study, member checking was utilized as a validation strategy to offer participants the opportunity to provide critical feedback about the accuracy of descriptions and interpretations. In order to be respectful of and sensitive to the fact that this researcher is neither a race scholar nor a member of an underrepresented racial and ethnic group, it seemed imperative to check the identified themes with as many of the participants as possible, especially those themes that concerned interpretations about the influence of race and culture on career behavior. To that end, an individual electronic message was sent to all participants, requesting a face-to-face meeting or Skype call to review themes and solicit their comment on the accuracy of interpretations.

Eighteen of the twenty study participants indicated that they would be available to discuss the study findings by Skype or in person and 15 completed the process. Three member checks were completed face to face with participants, while the remaining 12 were completed as Skype sessions. There were four cases where Skype sessions failed (the participant did not have access or technological problems
were encountered during the interview), and in those cases, the member checks were completed over the telephone. A member check discussion guide (Appendix F) was utilized to elicit the participants’ reactions to each theme and direct the conversation in a methodical manner. Notes were taken during each member check and the participants’ comments were digitally recorded and maintained in password protected electronic files. The member check audio recordings were transcribed verbatim by a professional transcription service and each transcript was reviewed for accuracy by the researcher. The member check sessions lasted between 15 and 30 minutes each. Details and excerpts from member check conversations are included in the Results section.
Chapter 4

RESULTS

The study findings and themes will be presented in the same order as the study’s research questions. Research questions one through four will be addressed in this section and are repeated for ease of reading. Table 4 provides an overview of the findings which will serve to orient the reader to the study results.

Table 4  Orientation to Study Findings

<table>
<thead>
<tr>
<th>Theoretical Construct/Construct</th>
<th>Research Question</th>
<th>Sub-theme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theme 1: Career Development: Internal and External Contributions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person Inputs: Health, race/ethnicity, gender</td>
<td>“What are the person inputs and internal, self-directed cognitive processes associated with African American undergraduate non-nursing science majors’ career behavior?”</td>
<td>Internal Contributions: Career fit and cognitive processes</td>
</tr>
<tr>
<td>Predispositions: Personal attributes and spirituality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Processes: Internalized messages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Background Contextual Affordances: Parents</td>
<td>“What are the external processes associated with African American undergraduate non-nursing science majors’ career behavior?”</td>
<td>External Contributions: Parents and learning experiences</td>
</tr>
<tr>
<td>Learning experiences</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Theme 2: The Ideal Career: Profession with Power</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career Interest</td>
<td>“What are the career ideals of African American undergraduate non-</td>
<td>Perceptions of the ideal career:</td>
</tr>
<tr>
<td></td>
<td>nursing science majors’ career behavior?”</td>
<td>Autonomy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lifestyle freedom</td>
</tr>
</tbody>
</table>
Theme 1: Career Development: Internal and External Contributions

Internal Contributions: Career Fit and Cognitive Processes

The first research question of this study was, “What are the person inputs and internal, self-directed cognitive processes associated with African American undergraduate non-nursing science majors’ career behavior?” The findings that follow are not intended to be an exhaustive account of internal motivators of the participants’ career behaviors, but rather, are offered to provide insight into the career development of this group of students and a context or lens through which their perceptions of nursing careers may be viewed. In their narratives about career development, participants shared some of their personal attributes, beliefs, values and convictions and described how those elements of their being fit with their career of choice.

Person Inputs

In the following quotes, participants describe how their person inputs fit with the career path they have chosen. In this study, person inputs are defined as gender, race, ethnicity, and health status. All participants described person inputs that they
believe were directly related to their career motivations. Below are several examples of how person inputs such as participants’ health status, gender, and ethnicity relate to career motivation.

**Health Status**

Four participants mentioned how their own health status and experiences with illness or injury related to their career aspirations. Following is one example of the manner in which health status contributes to career behavior.

312: Cayla- I'm also considering going to, um, ND school not MD. Um, N like Nancy. That's, um, actually for naturopathic, um, doctors. It's a separate program that they have. Um, and I have like a few stomach disorders, problems, blockages, um which is pretty much been chalked up to an enzyme deficiency but it caused a lot of other problems. I also have a very strong reaction to a lot of medicines. So I am very much into, you know, not the homeopathic side…

**Race and Ethnicity**

Below are significant statements by participants that describe the ways that race and ethnicity have related to their career development. Faith describes the impact of negative racial stereotypes on her motivation to succeed academically and professionally. Like most of the other participants, she acknowledged a desire to succeed in a manner that will not only be rewarding to her, but in such a way to contradict negative stereotypes of African Americans and serve as a role model.

303: Faith- So, even before people get to know you, it comes down to …Color. Because like people always see … like, in high school, like it always blew my mind that like, “There’s a Black in AP classes?” Like …so it’s like, just like the Black just keep breaking that stereotype. Like, it gives me hope that other people will follow.
Michael’s and Beth’s comments below were typical of participants whose families had immigrated from Africa and Haiti. They and the other five participants (male and female) whose families had moved to the U.S. for greater opportunities noted the importance of the status associated with certain careers. Careers in medicine, law, and engineering were viewed most favorably.

301: Michael—… but being in an African household, Africans are always “You have to do it just like this…”, career path, you have to … Most Africans either want your kids to be doctors or lawyers or pilots, just like really nice career fields, so they just want the best for you.

308: Beth- Uh, well, being African, in some households like you’re either a doctor, lawyer or engineer.

**Gender**

In this study, gender had implications for whether or not individuals would consider a career in nursing. When asked had they ever considered a career in nursing, three of the four male participants were very clear that they would not choose a career in nursing because the perception that nursing is stereotyped as a career for women. Below are the responses of two male participants that illustrate the reluctance of these young men to consider a career in nursing:

Member Check 309: Jeremiah- The first thing…It's like this in some traditions, if you're a woman, be a nurse. If you're a man, be a doctor.

315: Winston- Um, for some reason, I don't know what it is [that stops him from considering nursing]. I don't know, maybe I'm following the norm, or what I think was the norm, or something. I kind of feel like that's [nursing] more for a female to do, I don't know. My sisters are kind of following that path, but I don't really see me doing that. I feel like my uncle's a physician, I feel that's more my route, so forth…I have most of my aunts are within the nursing field, and I feel like maybe the guys are more like, my uncle's, you know, a physician, I feel like that's, you know, more where I should go.
Several female participants made similar comments about the negative stereotype of men in nursing. Below are two examples of significant statements from female participants about men in nursing:

317: Eden- Um, especially I think like men nurses, like male nurses like, they like, I’ve heard some people like, “Yeah I’m a nurse, like a man nurse or a ‘murse,’ ” whatever they call it. (laughs). And just they kind of laugh it off because they know it’s like not as respected as like women being nurses.

308: Beth- That would fit with what people expect [for her to become a nurse] because they expect nurses to be female. Rather than if I was a man, they're like, "Oh, you're a male nurse.” I've never ... I mean, I feel like in Africa they would be a little bit okay with it but in America to say you're a male nurse like would rub people the wrong way like, “Isn't that what girls do?” … or something like that.

This comment by Arielle summarizes how gender, race, and ethnicity fit with her career choice, medicine:

306: Arielle- I would say it all fits [gender, race, ethnicity with a career in medicine] because like I said, going back to, you know, being the role model for females, for African Americans, um, you know, you kind of get to do what you love and inspire others too ... By being in that position and helping them and mentoring them, so I think that really ties it all together.

**Personal Attributes and Beliefs**

In the following exemplary quotes, participants describe the fit between their self-identified unique personal attributes and traits and the career paths they have chosen in medicine and research. In this study, personal attributes are defined as any characteristic or trait that an individual believes he or she possesses.

303: Faith- Just because I’ve always been good with science and math stuff so it was the degree to go with [neuroscience/pre-med] and also I like helping people. I like being in the hospital. Some people go to the
hospital and they don’t really like being in the hospital but I just think it’s fun trying to give people the help that they need.

301: Michael- I hate to see people in distress, like pain so I want to relieve … If I could help them in any way, that would be great. I know like when I’m walking down the street and I see people that are disabled people or people that … just some type of deformity, just like, it’s something that really irks me and I wish I could help them in some way. That’s part of the reasons why I want to go into this field [medicine] just because seeing them, I wish I could be of help.

312: Cayla- I’ve always been very giving, very gracious and caring for other people. Um, regardless of any sort of status or anything. Just … I don’t know, it just kind of comes naturally to me. I haven’t really … It’s not something I really think about … It’s just like…it feels like it's wired or I’m sure it came from somewhere but I can't pinpoint where.

306: Arielle- Honestly, I’ve just, I, I’m very self-motivated. I, I realized very early on if you want something you have to do it and no one else is going to do it for you...I don’t really need other people to tell me what I have to do. I have a goal and I’m going to do whatever I have to do to get to that end.

For many of the participants, career development had a spiritual dimension. Over half of the participants in this study shared being raised in religious families. The statement below by Winston is fairly typical of the hierarchy of priorities that participants described as being central to religious families and demonstrates the general influence of religion on career development:

315: Winston- Before, I forgot to mention this when I said education was a big part of my family, but before it, the first one is, um, is religion. We use some principles, and that's like, number one…it's God first, um, then family, then your education, kind of pyramid…growing up, that was a great part, um, in getting involved [with pre-med] as well.

More than half of the participants volunteered, or acknowledged when asked, the role of religion or spirituality in their lives and choices. The Christian value of helping others regularly arose in conversations with the participants. Some expressed
diffuse ideas such as “everything happens for a reason,” while others were very specific about the role of religion and spirituality in their career development. Some participants described their tendency to pray to God for direction, while others shared their distinct conviction that a specific career, if not preordained, was something that God wanted them to pursue. Several participants shared the belief that a career spent helping others, and careers in medicine, are how they desire to serve God and do His work on earth. This sentiment was found among both women and men. Following are several examples of participants’ statements and stories from the data that suggest the different ways in which their spiritual beliefs and convictions relate to the development of their career interests and pursuits.

307: Therese- I think religion [as an influence] definitely ‘cause um, that's kind of like the big thing part of my life just um, just because I feel like it kind of like guides me a little bit just when I make decisions and that you know, I can't figure out whether to do this or do that, I think um, I pray a lot. Um, I think it kind of acts as a guiding force. It's kind of like the perfect thing to do because they always ask you like “When you die like what do you wanna tell God like you did with your life?” I wanna say that that I put all my energy and effort into trying to fix someone else, um, that's like kind of the important thing of me in medicine.

303: Faith- Like it makes me feel happier [religion], and like, I don’t know if this sounds cocky to say, but it’s like, I know I’m going to get into med school, because it’s like, I know who I’m serving … God in medicine. Because I know these are what God’s plans for my life are. It’s not just like my own desires.

309: Jeremiah- And I would say at a point in time I could do like football, and NFL, I mean I was going actually to uh, another university at the time, and uh, I was like okay, basically told them “No, I'm not gonna go through orientation.”, I told them “No, God told me not to do this” basically, “I'm not gonna go play football”. God said told me like “No.” Clear as I'm speaking to you right now. I just heard a “No”, and I said “Okay.” I called my Dad and I told him “No.” …we're all put on this Earth to serve others more so. …anything that people do; being a
nurse, being a bus driver, being a CEO of a company, the objective goal is to, to serve others.

In addition to serving God, students also shared seeking God’s reassurance and comfort about their career choices and seek his strength to overcome obstacles and stay their academic course. Faith played a role in almost all of these students’ desire to become physicians, and in their motivation to persist in their studies despite obstacles, fears about their success, and at times, messages of discouragement.

308: Beth- I’m the type of person where I like to know what I’m supposed to be doing. Something like…I just have that feeling like of comfort, where like this is what I’m meant to do [pursue a career in medicine], almost like a sign or something… like some religious sign. So I prayed about it a lot. I was like “God, if I, if I like this program [AMDPP: summer program for pre-med students from underrepresented groups], if I like what I see then I will take it as a sign that I am supposed to do it.”

306: Arielle- When things get hard, it’s like you know, “I can do this!” You know, you like read the Bible and stuff like that for like encouragement and, and um, I trust that God has a plan and everything happens for a reason, so you know, a reminder when things don’t go my way or maybe it feels like a step back towards my ultimate goal, you know, everything happens for a reason- that really like consoles me.

Three participants noted the challenge of coming from a religious background and being a science major. These participants noted the need to reconcile their spiritual beliefs with being a science major.

303: Faith- …when you go to college and, like, you take your Bio classes, like, mostly all professors in the science department, not all, like, the majority of them are all atheist. And, like, like I understand not believing in a god, but, like, but, like, I feel, like, you owe your students who do some respect… That's why I even hated biology even more than I do! I wasn't ashamed of my faith, but if I said I believed in God, what would…how would they, like, because…like, all my biology professors liked me, like, how would they change their opinion of me? …like, some people just don't get the God thing, and all I ask
for is that you respect what I believe. I respect you, I respect you not believing in a god. Just give me the same respect.

314: Dominique- So, it [religion] kind of like affects what kind of career you want to take because religiously I am not supposed to be in a science major. You are not supposed to be in a science major because it goes against all of what you are learning religiously. Because in science they tend to… people like…my religion they feel like scientists, they find ways to say God is not real. So my pastor explained to me... he was still kind of disappointed that I still wanted to take my science major. But as you go on you start to understand everything. You can still go for your science major and still keep your religion.

And finally, this comment by Cayla represents the way in which she reconciled the conflict between science and religion in order to pursue a career in medicine:

312: Cayla- I think a lot of people assume that when you are doing something within the sciences that everything is very, you know, black and white and if it doesn't fit into the science text book that you can’t … you know, back it up. Where for me, I think that the two actually complement each other quite beautifully. I think that the things that aren’t explained through science are very well explained through faith and you know, vice versa. I think the two actually help each other, help to explain the actual beauty of the world and body and genetics and things like that. …I am absolutely proud to be Christian and have that sort of intertwining label thing.

Cognitive Processes: Internalized Messages

As noted, personal beliefs, values, and convictions interact with career behavior. External processes have an impact on the formation of personal values, attitudes, and convictions, including beliefs about one’s ability to be successful (Lent et al., 2002; Bandura, 1986). Many of the personal attributes, beliefs, and convictions that participants shared as having relevance to their career choices were based on, to some degree, messages they have received from external sources and subsequently adopted and internalized.
Although the next section describes the external contributions to career behaviors, the following stories of the evolution of three participants’ career interests succinctly illustrate the association between the internalization of messages from external sources and experiences and the development of career interests.

These excerpts from the participants’ narratives provide examples of the interplay between culture, messages from parents and learning experiences, and how each becomes internalized to affect the development of career interests.

In this first example, Faith noted the role of African culture in her career development and offered insights into some of the ways in which messages from parents influence career behavior. In this case, Faith received clear verbal direction, but also powerful non-verbal messages about career expectations from her parents.

303: Faith- Okay, because there’s like, there’s this enigma in like an African household, like you … like your parents like are sacrificing everything they have, and it’s like, it’s not that they don’t want you to do what you love, it’s like they’re living and working their butts off for you to make a living in this world, so like they want you to do the best of the best. And because they believe in me more than I believe in myself, so like, whenever I’m like, “I don’t want to … I don’t want to be a doctor anymore.” They’re like, “This is what you’re meant to do. You’ve always … You wanted to do this.” But it’s like, they basically said, “You’re either going to be a lawyer, a doctor or an engineer. Those are your three choices.” and like … I think, at first, it was an imposition. It’s like, there’s this pressure to do well. …even if brought them an A, “You could do better.” It’s always, “You could do better.” … they pushed the potential out of me. So now I see it as a good thing. … it’s, yeah, becoming one of my values. It’s like, if you can have the opportunity to succeed, why not take it?

Therese had similar career aspirations to those of Faith, and described in more detail some of the other influences on her career development beyond culture and parents, particularly her own developing values and a class she had taken in high school. Others described similar processes. Therese at one point during her career
interest development said “Well, I’m gonna be a doctor…” if only to satisfy others, and eventually ended up adopting that dream as her own.

307: Therese- Well, it's kind of a long story. So, when I was little, I said I want to be a judge. I was dead set on it and I was like, "This is what I wanna do for the rest of my life." And my parents used to always be like, "Oh, but doctors make so much money," because especially abroad, a lot of people like have this, uh, perception that doctors are rich and they ... everyone should like want their kids to be a doctor. So like, a lot of Haitians are really, really pushing their children into being a doctor, but I was always saying that like I didn't want to do something because they wanted me to do it. So, I decided that I was like, "Well, I'm gonna be a lawyer."

And then, I got some experience...it was just like government class I took and I just learned so much and I realized that I have a very like strict political views and sometimes, I don't really agree with the law and I don't really know if I would be able to kinda like sacrifice my own opinion, like sacrifice my own beliefs even for the law 'cause it's like for the good of everyone ...So, you can't really like pick and choose with the law. So, I figured that that wasn't gonna work for me 'cause I, I would just end up being upset and kind of like put me in a turmoil.

So then, I was trying to pick my major before college and I was sitting there, and I was sitting there. I was like, "Okay. So, the only thing I really, really, really liked in high school was biology." When I started my major, people kind of asked me, "What are you doing with your life? What are you doing to your life?" And I was like, "I don't know. I'm a Physiology major, trying to figure it out." And then, it just became a thing where I was like, "Well, I'm gonna be a doctor or whatever," just to fill in the ... Just to fill in all the questions.

When I started looking into it and I got into it and then, eventually I just like sat down. I was like, "I think I'm actually going to become a doctor!"

While the comments about African values and households are unique to those recently emigrated from African countries, participants born and raised in the U.S. shared similar processes. Leah had and still maintains a strong interest in studying
law, but is pursuing a career in medicine for a variety of reasons. For Leah, her father’s strong desire for her to become an MD, and the struggles of her friend, her father’s family, and a homeless man fueled her desire to become a physician. Knowledge of the current and historic struggles of her family members, friends, and others motivated Leah to combine her love of politics and science to serve others through a career in medicine and public policy.

302: Leah- I am a neuroscience and public policy- double major. So, originally, I chose neuroscience because I do like science, but I didn’t want to go straight biology route. Um, I was … I looked for majors, and I saw neuroscience, and I was always interested in neuroscience because my uncle died of a brain tumor, and my best friend had a cardiac arrest, and he lost oxygen to his brain. And so I would watch … go to the hospital and watch him recover, um, and learned … started learning about, uh, neural rehabilitation, and that got me interested in neuroscience.

Public policy, I was always … I’ve always loved going … me and my dad are political junkies. Um, we would always debate and argue, so … the first time, I remember because I came home … it was like third or fourth grade, and we learned about Abraham Lincoln and how … well, now we know that the Emancipation Proclamation didn’t free the slaves, but I remember he was a Republican. So my dad asked me, “Are you a Republican or a Democrat?” I said, “A Republican,” and my dad was like, “You’re what?” And ever since then, he like taught me what … so what the beliefs are of that, how you can cross lines; you shouldn’t focus on your own political party. Ever since then, we would like discuss politics … so, yeah.

My dad … I can’t … I don’t think … he (laughs)… he wants me … like, I was on the phone the other day, and he’s like … “I want … You cannot be anything else but a doctor.” He wants me to be the first doctor in our family. He is … He wants me … He doesn’t care if I major in philosophy, I just have to go to med school. He wants me to go. He’s like, “Don’t come back being a lawyer,” because he knows I like law, too. He says, “Don’t come back telling me you want to be a lawyer.” Um, I remember … he like … he would tell me stories, he grew up poor, like all … he would tell us all the time, me and my brother. And we’re like, “These are sad stories.” He would be hungry,
he didn’t have his own house. When his dad died, that’s when it started to go down. So, he wants me … he said … he always says, “I want you to make more money than we did,” so … “Or be more well-off than we did,” so …

But I remember my dad would drive me [to pre-school], in our mini-van that we had back then. And there was a homeless man, like um, that my … my dad like … we saw … we saw him all the time, and he was sick, because he had … he always had crutches. He would always be coughing, like one time I saw him spit out blood. And I remember seeing him every day, and I would look for him on our way to day care. So one day he wasn’t there, and I … Oh, my mind like went to the worst, and I never saw him ever again, so I assumed the worst, like um … and I remember asking my dad one day, while we were driving, “Can we give him some medicine? Can we take him to the hospital?” or something like that. I don’t even remember if he said we can’t. It probably was we can’t, because we didn’t do anything. And so I couldn’t remember, like what could we have done to help that man? Like, I never stopped thinking, what could have happened if somebody had helped him? And so I guess that’s the same thing, like as a physician, like the Hippocratic oath; you connect that to that. Um, you can’t pass by someone in need of help or medical care.

So I see myself as a physician, either neurosurgeon if I have time … neurosurgeon or neurologist … but then I want to work with government officials to get policies changed, because you can’t improve medicine, I feel like, if you don’t change the policies.

Internal Contributions: Summary

Utilizing SCCT as a framework for the interview guide, questions posed to participants elicited comments about person inputs, such as health status, gender and race, which led them to describe some of their own personal attributes that have a bearing on career fit and development. Messages about their unique person inputs and personal attributes resulted in cognitions that had implications for career behavior. Most notably, messages about and thoughts related to the participants’ gender, race and ethnicity had an effect on their tendency to (a) aim high, (b) pursue advanced
degrees, (c) choose respected higher-status careers, and (d) endeavor to contradict racial stereotypes. Furthermore, more than half of the participants in this study described their desire to serve others, and believed that there is a spiritual dimension, or higher calling which motivated their career choice and sustained their efforts to pursue their career goals.

External Contributions to Career Behavior

The second research question of this study was, “What are the external processes associated with African American undergraduate non-nursing science majors’ career behavior?” In the most general terms, parents and learning experiences, especially experiences connected to illness and healthcare, were strongly associated with the participants’ career behaviors. These findings are not intended to be an exhaustive account of the external motivators of career behaviors, but rather serve to highlight the most commonly cited external influences, provide insight into the participants’ career development processes, and provide the context or lens through which their perceptions of nursing careers may be viewed.

Parents and experiences with illness and healthcare were prominent in shaping the participants’ career behaviors. Sources of career-related messages fell under three broad categories; a) parents and guardians, b) learning experiences, and c) the community. Influential teachers or school officials were mentioned infrequently; the occurrence was not regular enough to warrant an in-depth discussion. The contributions of parents (and family), and memorable learning experiences, specifically experiences with healthcare, are presented to illustrate the contributions of each to the career development of the participants.
Parents

The majority of participants spent a considerable amount of time talking about the role of parents and other close family members in shaping their career aspirations and decisions. Sixteen of the twenty participants were raised in two parent households, three were raised by their mothers, and one participant was raised by her grandmother since age 13 after the death of her mother. Although the amount and type of support parents and guardians could offer varied, all participants described them as influential in their career development. Career messages from parents were at times very direct, taking the form of verbal direction and coaching, but subtle and less direct parental influence was also noted in the participants’ narratives. The majority of the participants were able to describe in detail the career aspirations that their parents held for them.

Parents: Direct Messages

As mentioned in the previous section, participants received direct messages about career development from their parents throughout the course of their lives. All of the participants indicated that their parents, regardless of country of origin, wanted a college education and financial security for their children. The following exemplary quotes highlight the specific nature and content of direct messages from parents and other family members about the career aspirations they hold for their children:

311: Cara- So, extending back to even when I was in junior high my mom had this entire layout of what my life was supposed to do ...or how it's supposed to be. She made me repeat it back to her….She'd say, "Cara Johnson, you’re gonna graduate junior high with high honors. You're gonna to go to high school and graduate National Honor Society, get accepted into college, graduate cum laude and have a very nice job. You'll be wealthy and successful and then you can get married and have kids." I think it stems from just her wanting me to do better not to struggle [mother has struggled]...
307: Therese- From the age of one, my mom has always been like, "You know, I'd always want my kids to be a doctor. I have this dream that my kids are doctors." My grandma says the same thing. My dad doesn't really pressure as much but he's thrown it out there once or twice like, "Oh, you know, your cousin just graduated medical school. He's really happy."

319: Chiamaka- I'm the first, I feel like they expect so much from me so. If anyone in the family out of us it's going to be a doctor, it's gonna be me. They're gonna expect me to be it. ...I don't know if they used to whisper in my ear that “You're going to be a doctor, you're going to be a doctor...” and it kind of stuck with me, but I feel like they already knew. Like, I remember my dad used to call people all the time. Like “Yeah, she's gonna go to med school, when she gets to college.” Like when I was younger I remember like him, like saying things like that so. I know that is kind of something that has kind of stuck with me too.

Parents: Indirect Messages

More than half of the participants noted that in part, their career aspirations were driven by witnessing the hardships that their parents had endured and their sense of duty to make their parents’ efforts and sacrifices worthwhile. In some cases, participants were determined not to struggle as others in their family had, and some specifically described wanting to overcome the problems of years gone by. For those who had struggled, they thought that title ‘doctor’ would allow them and their family members to move beyond difficulties of the past. The participants and their parents perceived that an advanced degree, especially a career in medicine, would afford a more secure and comfortable existence.

Michael described his strong desire to honor the struggles of his single mother through his academic success and graduation from medical school. His comment was typical of other participants who want to make their parents’ efforts count for something greater.
301: Michael- Well, personally, my mom, she didn’t get the chance to even go to high school or even go to college because she had to … Her mom died at a … When she was really young so she had to try to cater for her siblings and everybody…she had always wanted to be somewhere in the health field if she could. I have to not be like the rest of my family members, just seeing my mom and how much she works every day trying to make sure we have what we need and the stress, getting up early, doing all that stuff. It’s just like that’s part of the reason why I just keep my head straight and keep chasing my dreams …

Leah’s awareness of her father’s hopes for her, as well as his traumatic past, have motivated her to comply with his wishes for her to pursue a career in medicine, even though she feels better suited to a career in law and public policy.

302: Leah- So my dad’s like … he wants me to make over $100,000. That’s … that would be … that’s his goal. Higher … he wants 6 figures. Like, he [father] was 11 years old. So um … so he … so that’s when my grandma … at first she wasn’t … she was a stay-at-home mom and that’s when … oh, that’s when everything started to go down [death of grandfather at an early age]. They were struggling. They didn’t own their house. They had … he [participant’s father] had to go to foster care for a little bit, and that was … being away from his mom, when they were such a close family, that like changed everything. …they were never the same after that. So he would start working as soon as he could work; help pay her bills. He didn’t want that for me.

Faith’s comments about honoring the great lengths her parents went to position their children for prestigious careers was echoed by other participants whose parents had emigrated to the U.S. to secure opportunities for their children.

303: Faith- Like, every … like every literally every African kid. It’s like, “You’re going to be a doctor. You’re going to be a dentist. You’re going to be this.” Like, they want you to succeed because they … you … they gave … they brought you to this country where it’s a chance to succeed, so like, it’s like it’s almost a slap in their face if you don’t. Do you know what I mean?
Other participants witnessed the struggles of family members and were motivated to pursue advanced degrees, especially careers in medicine, not only to insure a more secure lifestyle for themselves, but to help others move beyond poverty.

308: Beth- Um, I started actually looking into it [career in journalism] and like they don't make a lot of money, and like I was really like family oriented and I saw the way that my parents were struggling with not having money because they didn't have good education so I felt like if I was to get good education and to still struggle… so I just put it to the side and thought, "Oh, I can write as a hobby or like do it with whatever occupation [pre-med student] I want to do later in life."

310: Candace- Well, I just would say that I really wanna work in like low income areas and um…My parents came from low income areas so I still have family members who are still in those areas…And I’ve seen how certain decisions they’ve made impacted their livelihood and it’s affected me secondarily …It’s my way [career in healthcare] of like relating what I know to like help people in that, in those situations.

This comment by Winston summarizes the participants’ desire to honor the struggles and sacrifices of supportive family, and adds another dimension that several participants also mentioned; that is, the desire to move beyond problems of the past.

315: Winston- I guess, um, listening to my mother's stories, my parent's stories, their struggles, and my grandmother, when she had to put my uncle [MD] through school, um, put all of them [MDs and RNs] through school … you know, she didn’t have anybody give her a loan. She's just a house keeper at a hospital, and, you know, she had to fi - you know, get credit, get loans, and so forth. Just listening to their story had a mot - a kind of motivation for me. If they're able to achieve this, what makes - you know, why can't I achieve it? And I'm being provided with, um, these opportunities. Going to great institutions, great schools, um, I don't have to work, um, they're providing food for me and so forth. What, um, what's keeping me from achieving these sort of goals, you know? … I want to, it's, it's like you know, at the end of the day, I just want to, um, wanted to let them [family] know that nothing went to waste, and, you know, they may have struggled, but, um, yeah. I've learned from it. I've seen, I've heard their stories. I became, like, a motivation for, like, an inspiration, you know, if they're still able to stand and be able to, um, acquire certain things, uh, you
know, after the years of struggles they went through. You know, they want me to have a better life of course, you know. I just want to take that in and try to, you know, that, I don't know, I don’t want no one to kind of tell me, or define who I am, based on, um, I guess the past.

**Parental Support: Adult-Sponsored Mobility**

In addition to instilling expectations, parents also helped with material, cognitive and emotional support. The presence as well as the absence of, the unlimited as well as the limited support from parents was acknowledged and described by the participants. The range of emotional, material, and cognitive support that parents were able to give varied, and the degree to which these types of support were present or absent affected participants’ career interests and goals.

All of the participants indicated that they had always been aware of their parents’ aspirations for college educations and stable careers for their children. All 20 participants, men and women alike, indicated that there was never a question in their minds, or those of their parents, that they we going to college after high school. Following is just a sampling of the 20 quotes that illustrate the desire of parents to see their children attend college and work in professional careers.

313: Amy- Yeah. I mean I wasn’t even, like not going to college wouldn’t even be an option. Just because it was just so like instilled into my head that I had to go to college, and it wasn’t an option not to ‘cause like you have to go to college to be successful.

318: Ryan- It was kind of a given [college education]. My mom pushed for it and said there was no way I wasn't going to.

319: Chiamaka- No, like even before I was born my parents started saving up for college. Even before I was born. There is no option other than college. Um, they have instilled that. That, that's all I've known. That's what they've instilled in me.
In this study, all participants had at least one parent or guardian who they counted on for emotional support. Most frequently, this group of students mentioned their mothers as filling this need. In the following exemplary quotes, the participants describe the importance of emotional support from parents as being critical to staying on their ideal career path.

312: Cayla- I absolutely admire that anytime there is a negative thing that could be said. She'll [mother] twist it to the positive, if there's a down point she’ll be the motivator, I mean the person to speak up for me or to cheer me up to send me a Bible verse, to send me song lyrics, to send me a care package. She is just very supportive and loving and just gives her guts out of herself. My Mom’s a supermom.

304: Iñes- She [mother] just wants me, she definitely wants me to be the OB, but she wants me to be like happy, so she definitely wants like, when I'm like, "Mom I can't do it." She says “Iñes, you can do it. I'll get you a tutor." Yada, yada, yada, but she's always the one like if I get discouraged she's like, "No, you're gonna keep going, like I believe in you." (Laughs) I mean I've had no one that really competes with my mom [in terms of support].

318: Ryan- Number 1, I would have to say my mom. She's influenced a lot of my decisions and, um, I've, kind of, she's always showed me what not to be and what to be. And has, kind of, guided me, showed me the basic things in life. And just kind of always just never gave up on my dreams and that I can, kind of like a cliché, like, never give up on your dreams you can be anything you want. My mom just always stressed that because she's always seen potential in me, she said. And so, she just always wanted to give me that push and so that was one of the major influences. I mean she is there for my freak out moments at 1 o'clock in the morning, that I'm going to fail my exam tomorrow. Um, she will randomly come, because I'm only like a 35 minutes’ drive from the suburbs ...She'll come, like, take me out for dinner and tell me to stop studying, “You've studied enough.” She, she is amazing when it comes to support, so...

In terms of material support from parents and guardians, the participants described that their parents did what they could within the limits of their resources to
position their children for a better life and clear their path to professional careers, whether it involved moving to a new community or country to provide better opportunities or the provision of total financial support. Following are some exemplary quotes that illustrate this point:

301: Michael- Yeah, my mom, yeah, she was already … Initially she traveled to Europe and then she moved to the United States. …came here to look for a better life for us before she could send for me so, yes, I was in Ghana until I was 14 and then I moved here. It’s better education, better chances of going to college and getting your degree and all that stuff, so yeah, it’s great. She was making sure she sets the foundation for us to be able to go to school, get a better life because she didn’t get the chance to…

318: Ryan- I, luckily my mom … because I used to live in the neighborhood they did [cousins] and my mom when she divorced my dad, um, she said “There is no way I can raise my kid here.” My mom was just like, “I don't see my kid having a chance of becoming a doctor or a lawyer or anything." You know? So we moved to the suburbs, um, and I’m glad she made a decision like that because I think, I hope, it’s paying off.

303: Faith- I’m not allowed to have a job. Because they feel like school’s my job. I shouldn’t have to worry about, “Oh, I need money for this, money for that.” It’s like, let us worry about the money part.

Participants recounted times where their parents provided the cognitive support necessary to help them navigate school and coach not only their career development but also their academic and personal success. Fathers figured prominently in these discussions. Some coaching from parents could be categorized as sound advice for living:

309: Jeremiah- My Dad always uses a saying, "If you don't plan, basically, you plan to fail." If you don't plan, so you know, so, it's now I kinda understand it a little more. I'm not saying I got it all together, but I think that.
While other parents took an active role in advocating for their children in specific, high-stakes situations:

318: Ryan- And they wanted to put me in slow classes [in high school]. I was like, "I'm not slow, I just don't like those tests. I can't sit there and take those. I can't read a passage in 40 minutes and answer like 45 questions. I just don't feel like it!" They were like, "You need to take everything seriously." I'm like, "I will, sign me up for AP classes. I'll prove you wrong!" They wouldn’t. My mom had to fight them and everything. I had to petition just to sign up for two AP classes. So, they finally got ... I finally got into them. I actually aced them. My cumulative GPA for junior year was a 4.5 and they were shocked.

Another student noted that as a Certified Public Accountant, her father was able to set a strong foundation for her own professional socialization by introducing her to his peers in the medical field and helping her to develop her own networking skills:

306: Arielle- I did want to do surgery at first, but um, through shadowing surgeons [father arranged through his professional peers], I realized, you know, maybe this isn’t for me and I always seemed to be more interested in what was going on with the anesthesiologists, so I finally got to shadow one um a couple weeks before I came down here and I absolutely loved it, so. …it’s all about, you know, making your connections and following up with people, because …I mean, my Dad is very um, has like, had a good influence on my life and like, really showing me what you need to do to be successful. Um, you know, if when I was younger in high school, if I’d met somebody, he’d be like, “Hey, look, you need to follow-up with them.” You know, “Hey,” like, “Come on,” like “This is your reputation…,” like, “You don’t know what opportunities you’re missing…”

Candace not only mentioned the role her father played in coaching her academic success but also noted the association between her confidence and the presence of strong male figures in the family:

310: Candace- My Dad…Without my dad I wouldn’t be where I am. Without my dad, then I feel like I would be lacking confidence. I think a strong male influence, as much, I can see myself doing this, I don’t
wanna say that, you know, women need men for anything but I do think without my dad I wouldn’t be where I am. Easy. Absolutely. So I think, you know, a strong male figure in the household is definitely something that, you know, will be… needs to be taken into consideration…”

All of the participants in this study had aspirations for careers in racially non-diverse fields (i.e., medicine and research). Several participants described parental coaching on intergroup communication which they felt had relevance for their academic and career development, preparing them for entry into White-dominated fields. Some participants commented on parents, relatives, and family friends who role modeled success in the fields to which they also aspire:

306: Arielle- We’ve um, always grown up with like a really close set of family friends that like we consider them our aunts and uncles and stuff and they’re all very successful people …Um, so I think just being around people who are successful, minorities who are successful. Um, really they served as a role model to all of us …

Many participants, those who had emigrated from other countries and those who were raised in the U.S. alike, were aware of their parents’ desire for them to portray a positive image of African and African American culture and to contradict or distinguish themselves from negative racial stereotypes.

302: Leah- Yeah, my … my dad taught me that, too. Yeah, he’s like, “People, like, defy stereotypes.” I know like people think that black people show up late for things. …he was just like, “You have to show up 30 minutes early for everything, so you won’t be …”, “and You’ve got to out-dress … when you go to interviews, out-dress. Wear a suit; if people are wearing khakis, wear a suit!” every … like, it’s all ….to go … go above and beyond, for sure. I was brought up with that.

Limits to Parental Support: Child-Secured Mobility

All of the participants had at least one parent or guardian who wanted a college education for their children. However, not all families had the resources to provide
cognitive and material support, which also had implications for career development. For example, Iñes and Adessa, less-advantaged students, wanted to pursue degrees in medicine to be able to give back to underprivileged communities similar to the ones in which they were raised:

304: Iñes- Especially people of like minorities [population she wants to treat as an MD] that are struggling from healthcare and for prescriptions, 'cuz like I've been there, done that. I definitely wanna like help people, you know?

305: Adessa- Um, I haven’t really thought about I mean I haven’t really thought about like the money side of nursing. Um even with being a physician um I always said I wanted to work in a clinic. Um I’m fine if I come out of school making $60,000 I know that’s probably on the lower side, but like… being that I’m used to working with such a lower a lower income [mother deceased, father estranged, being supported by retired grandmother]. I don’t mind as long as I’m really hands on with my patients. …like sometimes we don’t go to the doctors because it’s like a $100 for a visit or you have to pay for the prescription so we don’t end up gettin’ the prescription because it’s too much …And it’s just from um like someone could be dying, like you couldn’t take the proper medication because you couldn’t afford it …

Four participants described how the lack of material support and financial resources became an impediment to their ability to confidently pursue their career ideals. Adessa and Beth noted the impact of family hardships on their career endeavors:

305: Adessa- …like here [AMDPP: summer program for pre-med students from underrepresented groups] they were telling us about like the GPA requirements [for med school] …And I’m just lookin at them like I don’t know I guess some students get it, but it’s that’s something hard to… it’s hard to accomplish, but it’s not… it’s doable, but when you got so much… when you have life happening …Um my mom died when I was young…like when she died she was in debt. So that debt just rolled over to my grandmother and so in the past couple years we’ve had like the Sheriff coming to our house trying to take the house away and she’s [grandmother] trying to get it put in our names, but the
lawyer who is supposed to be getting the deed switched over...he’s playing games. ...the biggest problem has been with financial stuff and then just family stuff like I know family’s family, but even sometimes family can drag you down. And um it’s just dealing with having to put money to the side like I always have that in the back of my mind ...And it limits what I can do then you got to worry about being as competitive as possible, but you got to make yourself well rounded and it’s just, it’s hard.

308: Beth- Well my, my senior year of high school, my mom developed schizophrenia. And then she had to move to Nigeria so it's literally just me as the only female in the house, so then when I started going to college I was living at home at the same time so it was hard for my dad to take care of my brothers on his own, so like him and like the rest of my, like extended family was like, "Oh, you should just go stay in school for two years then go to nursing school, then you'll be out soon and you can take care of your family." Everyone was like pressuring me to do that and I was like ... Like I was considering it but to only be... I'm an undergrad for two years, like I felt pressured [to leave pre-med path].

The lack of material, emotional, and cognitive support was also a factor in career development in terms of whether or not students had the direction and confidence necessary to meet the challenges of an advanced degree or pre-med program. In this study, there were participants, especially first-generation college students from working class families, who were lacking material and cognitive support from parents.

The following quotes describe the process by which students with fewer resources found other people and avenues for support and validation:

308: Beth- I'm kind of roughing it because no one really around me has gone into college so it's like, like I’m the first one (voice frequently trails off to almost a whisper). Um, it's been a little difficult because I don't ... think they graduated from high school or maybe they did. I don't know what secondary school is. Do you know? I don't know if that's high school. ...so when I'm like going to school and I need help with things in school, they can't really help me so I'm doing it by myself. Or if I'm applying to college, they can't help so I'm doing it by
myself, have to go to all these random strangers and do like, "Oh, can you help me? I'm applying for this, applying for scholarship," because my parents don't have money and I don't know how to apply for like loans and stuff so I was doing everything by myself pretty much. I was like, "You know what? I'm just going to figure this out on my own." I know everything that it entails to become a doctor but I'm scared…It's back and forth all the time so I just really needed a program like this [AMDPP: summer program for pre-med students from underrepresented groups] to make the entire perspective more clear.

314: Dominique- I needed something as close as possible to biology and I didn't really have much guidance because my mom she didn't go to college so I pretty much had to feed off of everybody else and ask them how's it like in college and everybody gave me their perspective. I had to like to seek out the help and I had needed a mentor and a counselor to help me. It was a totally different environment. I was far from home. I learned that New York School that they didn't really much prepare me to actually go into like... because I want to either go into Med or Dental school. They didn't really prepare me and tell me the prerequisites and tell me what courses I would have to take so being in this program I kind of felt disappointed because I felt like that is something my college adviser should have explained to me as soon as I stepped in. She just told me a whole bunch of classes and said "Take this, take that, take this, take that." So, AMDPP [AMDPP: summer program for pre-med students from underrepresented groups] gave me the opportunity to take two of the hardest courses that I would need for either med or dental school. But I feel so much better I took the program. I am about to tear up because I was like if it was not for this program I would not know what I would have done once I stepped inside a classroom.

Learning Experiences: Illness and Healthcare

The majority of participants were able to describe experiences with illness and healthcare that left a lasting impression and had relevance for their career development. Certainly, there is a vast variety of experiences that contribute to career development; however, experiences with illness and healthcare, especially those that brought with them an awareness of misfortune and poverty, left a lasting impression that contributed to the career desires of more than half of the participants. Most of the
participants described past experiences, both positive and negative, with illness and hospitals that influenced their desire to become an MD or researcher. In some cases these experiences made known to the participant the type of doctor or researcher they wanted to become. Positive experiences with healthcare and doctors resonated with some, while others were emotionally motivated to fix parts of a broken healthcare system. The desire to help the underserved was very strong for many of the participants. Following are several exemplary quotes that illustrate the relevance of experiences with illness to career development.

306: Arielle- Okay, so, um, when I was younger, my grandfather was really sick, so he was like in and out of the hospital um and just like being surrounded by like doctors and stuff growing up and like just seeing how um, how influential they are in improving someone’s health and stuff like that and, and overall well-being, really um struck something with me and made me want to look into pursuing the career in becoming a doctor. My interest matured through um my experiences with my grandfather and then further in high school with summer programs and then even further with the shadowing and recent traveling, so.

316: Toni- My, um, my grandmother, she has dementia and then her sister, she passed away from Alzheimer’s. The research part is actually like really interesting just ‘cause of the topics, like Alzheimer’s and dementia, it’s interesting because you have family members with that and it’s also like you just get to learn more about what your family has and it’s become like an epidemic really so. I don’t know. …when you’re younger, and you see your family go through that, you don’t really understand. And then when you get older, you actually like start to see why and then you start like raising questions, so…You just don’t want to see other people go through it.

Others experienced situations and roles in healthcare that they could identify with, in which they felt successful.

309: Jeremiah- I basically got to do some shadowing with my cousin and so there and then I actually got to be in a real experience and see what it actually took, more so. And it was an awesome experience and
I was like, "Man, I just see myself doing this." And also I got to see angioplasty, it was really awesome. "I can really see myself like...doing this. This is really awesome!" Granted, like, things come up and stuff like that, but, like, nothing that would ever deter me from doing this.

315: Winston- You know, I try, I tried to change it [career focus] as many times as I could, but no matter how, by the time I started college, it all came back to, you know, the pre-med route. It all came back and that's what kind of stuck with me. I, I helped out in fairs, you know, hospital health fairs. I, um, volunteered at nursing homes, um, and, and, and it's just, I don't know. Those experiences kind of stuck with me. …when I did health fairs, I educated some of the kids and family members of, um the right ways of eating or healthy ways of eating, and so forth, and they kind of, you know, I felt like most people didn't even know that, and so I was talking, being like, "Oh, how you doing?" and that. And, you know, so, being able to educate, um, and provide primary care, I think it's important, especially under represented areas, um, and I think that kind of stuck with me. And wanting to do more and wanting to help in that capacity. I was like, "Dude, yeah, I feel like this is where I would feel more comfortable, at ease". I was like, I'm actually really helping and really doing something.

For some, experiences with a broken healthcare system stimulated a passionate desire to improve healthcare, especially for those who are underserved. The emotional impact of witnessing the unmet needs of others, or worse yet, seeing negative social bias in healthcare, served as a strong motivator for number of the participants to pursue a career in medicine. The following stories from two pre-med students illustrate this point:

302: Leah- …I volunteer at the hospital. And the way they treat the patients is like terrible. I don’t want to … like, I like a doctor … the ones that welcome, warm smile, with a conversation. They’re like … some of them are cold, like act like, um, they’re not people that can’t look you in the eye. I saw one lady, she was literally a couple of inches from death. She like her … the only thing keeping … they said, keeping her blood flowing, and her heart beating, was like the medicine they had in it. So they needed a bed somewhere else, so they took the lady off the machine and left her in the hallway. Some families were walking by, watching this lady. I was … it was terrible. I was like,
“Why? What kind of treatment?” I guess it made me want to be a better physician, like this is what I don’t want to be like. I guess that environment influenced the type of physician I want to be. I was able to see what kind of physician I did … did want to be … did want to become, and um, but then I was like, “This is what I don’t want to be.”

314: Dominique- My surroundings encourages me to go for science because if I didn't witness half the things I witnessed being growing up in my society I wouldn't be able to be like "Hey, this is very interesting. I should go for it." Growing up a lot of people were sick, so growing up, we have like a local hospital and the hospitals you don't have insurance, the hospital is not going to pay much attention to you. I watched my own grandfather's bed outside of a patient room, outside in like a medical hallway because like the doctor was like "I am going to get back to you soon." And my grandpa doesn't really have... he has okay insurance but not as good as other people so my grandpa is suffering. He has prostate cancer so when I was watching him, they just left him in the hallway I was furious. I was like "Where are the doctors? Why are the doctors not helping? What is going on?" Just sitting there! We sat there the whole night and like my blood was slowly boiling as time went on, hours passed… I wanted to cry. I was like "Mommy, this is not fair! We should not be treated like this!” My Mom was saying "Domini, this is life." When she told me that, it just stuck with me. And when my mom told me that it just pretty much has just stuck with me and I was like “You know, I am going to get my education and I am going to go through like medical or dental school and I am going to be able to help and understand what I am supposed to do and not do this to people.”

And for other students, the desire to eliminate healthcare disparities through diversification of the health care workforce was evident:

304: Íñes- Well I mean it’s all something [MD] I hope to be one day, but, um, I try not to let my race like define me, but I would like to be like one of the, like a top, like African American doctor in the state or someth-, you know, but I just really wanna give back to the community and really like help people of my race like, you know, like not everyone, but I mean ...I don't wanna like, it seem like I don't care about everyone else, but, you know, I just wanna like help the community in general. Whatever community I'm in I just wanna help the community. You know. Especially people of like minorities that are struggling from healthcare and for prescriptions, ’cuz like I've been there, done that. I definitely wanna like help people, you know. I
know with black people in particular they feel like sometimes you don't, for certain specialties, you don't listen to the white doctor, you go to the black ... like I had a face problem so I went to a black dermatologist, you know what I mean? So like I just wanna be able to have more of a connection, you know. Be like someone they trust. Especially with older people, you know? Mm-hmm (affirmative), they really have like a distrust with certain races, so.

External Contributions: Summary

There are a multitude of external influences and experiences that have relevance to career choice. This section highlighted two of the most talked about by participants: parents (family) and experiences with healthcare and illness. In many ways, the participants’ parents played a role in shaping their career behaviors. They received explicit as well as subtle career messages from parents. The effects of the presence or absence of emotional, material, and cognitive support from parents and the contribution of each to their career development were noted. The coaching participants received and the ideas they have internalized about race and culture have a bearing on confidence, motivation and career development. For participants with little cognitive support from parents, formal enrichment and counseling programs were crucial to their confidence and academic achievement. And finally, examples of experiences with healthcare and illness that informed the participants’ career interests were presented. Exposure to illness in their families, experiences shadowing and volunteering in hospitals affected participants’ sense of self-efficacy and in some cases, deepened their resolve to fix a broken or biased healthcare system.

Theme 2: The Ideal Career: Profession with Power

The third research question, “What are the career ideals of African American undergraduate non-nursing science majors?” was intended to explore the participants’
career aspirations and desires. The following theme, *The Ideal Career: Profession with Power*, describes the aspirations for attainment, and ultimately power, that participants hold. Participants often stated that a career in medicine or research was motivated by the overall desire to help others, affording one the power to improve the quality of life or find a cure for disease. There are many references to careers in medicine in this section, as 17 of the 20 undergraduate science majors interviewed are hoping to gain admission to medical school after graduation. This group of participants perceives that careers in medicine will afford them the power to pursue the highest degree of lifestyle freedom and would grant them unlimited opportunities to help others and personally affect change. Perhaps even more important and specific to African American students, all of the participants endorsed the belief that the title of doctor would afford them the necessary status to become a positive role model and contradict, or even disprove, negative stereotypes about African American race and culture.

The title of doctor is supremely powerful to the participants and their families. Following are some verbatim examples of significant statements that (a) convey the universality of the image of MD as powerful and (b) offer insight into participants’ attraction to careers in medicine and how they may have developed their perceptions of power associated with the title “physician.”

**Image of Medical Doctor: Universally Powerful**

Participants’ statements indicated that the title and image associated with MD superiority is cross-cultural and universal. The following exemplary quotes convey the idea that there is worldwide recognition of the physician as the image of success, attainment, and accomplishment of the highest degree possible:
Therese- Everybody thinks doctors ...Are just the cream of the crop. That's like the ... It's like if you look at the political ... If you look at the, kind of like the economic ladder, you would put ... If you're Haitian, you just put doctors number one and it's just kind of like a perception that especially ... And it's not even just Haitians because I've talked to people from this program [AMDPP: summer program for pre-med students from underrepresented groups]. We have people from you know, all over the world and I, um, a lot of people who were African were also told like “Doctor!”, like everybody wants, their parents ... Like everybody wants you to be a doctor.

One participant noted that accomplishing her doctorate in research would pale in comparison to an MD degree.

Toni- I mean, they [family] would be, my Dad would be really excited, really happy and he’ll be like, “Wow! You did it. Like you said you were going to go get your PhD, like, I knew you could do it.” But then like, I think my other family would still say like “Good job,” but I don’t think they would know what I would be going into. With them, they will be like, “Well, are you a doctor or?” Like, I am a doctor, but I’m a doctor working in the, in Psychology. So I think it’ll be like, “What, so, you’re not a doctor?”

These notions of physician/MD superiority and power have become embedded over the course of the participants’ lifetimes. The desire to become an MD seems to have blinded the participants, and possibly their parents, to other career choices.

Winston- That [MD title], (laughs) um, that's pretty big, too. (laughs) Um, that means a lot, um, I think just because, um, the way I see the, um, they [family] sort of value my uncle [who is an MD] and appreciate or respect him, um, not just as a person, but, not just because of his coll - medical degree, but I think, um, as a person, 'cause it is more to being a doctor. It's the characteristics, uh, your traits, um, there's just a lot more to it …

Arielle- I always had the dream of becoming a doctor. I can’t picture myself doing anything else…like I have no idea what I would even do …if someone told me like (laughs) …that I couldn’t be a doctor! It’s like what else can I see myself doing? There’s nothing, so.
Parents and others respond favorably to a child who says “I want to be an MD.” Participants internalized messages about attainment and accomplishment from the reaction of parents and others when they verbalized an interest in medicine.

302: Leah- Yeah, I remember I expressed interest about being a doctor. Any other career, he [father] would be iffy about. But when I expressed my interest in medicine, he was … he would always be excited.

310: Candace- So I would just say … I'll major in this [medicine] just to sound important. Like I'm going to do something and be high and successful and prove it. Um, I mean as a kid it sounded important.

One participant noted that as a child, she would say that she was interested in a career in medicine to placate her parents and avoid a debate:

307: Therese- Uh, well, being African in some, in some households like you’re either a doctor, lawyer or engineer. Yeah, something up there, like just one of those things. Anything besides that like you would have to have a really good reason for why you wouldn’t want to do that. Like or they will be like, "Oh, why do you want to do that?" They would comment, comment on it at all times, “You're going to make a bad decision like, why do you want to do that?” Like I say, it was just going to be like too much conversation about it so I just said “doctor.” I was like, "Oh, no, I want to be a pediatrician," so I said that for the longest but I really want to be like a writer.

Participants noted that having a child who becomes a physician is often thought to be a reflection of good parenting.

313: Amy- But yeah, they’re, they’re, I don’t think they’re happy about it [major switch from biology to anthropology]’cause I think parents always want, um, that whole prestige thing as well and, um, when I say I’m gonna do anthropology and I’m gonna go to Africa and build churches, she [Mom] just kind of like (chuckles), um, “Where’s, where’s your, where’s your honor in that?” I think she’s, she’s pretty prideful and she cares a lot about what like her friends think and stuff like that. They want me to be a doctor or something that's honorable in this country...
319: Chiamaka- I know that in the Nigerian community and also African community um, that the parents kind of like have competition, like other families with their children. My child has to be you know, I ...I don’t know if it is a competition, but they are very proud of their children, especially if their children succeed. And they, it's expected of their children to do well, to be well, to be the best. I feel like my parents, my parents also I, kind of do it for them because I know that they would want me to be a doctor.

Power: Autonomy and Lifestyle Freedom

Most of the participants, especially those who were interested in a career in medicine, commented on the independence they thought they would enjoy as a result of their career choice. An advanced degree, especially a degree in medicine, in their view, would allow them the power to work and live in any manner they choose. Participants, especially those with limited hospital experience, perceive that MDs are at the top of the healthcare hierarchy and are largely answerable to no one other than themselves, thus affording them with maximum choice about how they manage their professional careers and live their personal lives.

Autonomy

In the following significant statements, participants note the leading role they assume that they will play as leaders and chief decision makers in their chosen field.

304: Iñes- And I'm a leader. I really like leading and I just feel like being a nurse that's another reason why I wanna be a physician, not even a physician assistant 'cuz I don't like to... like I can take orders from people, but I don't like to feel like I'm always here, I wanna be here, you know [motions with hands highest position].
**Lifestyle Freedom**

All of the participants associate an advanced degree in science with lifestyle stability and security. Those who are hoping for careers in medicine expect the freedom to choose, for their families and themselves, any lifestyle they desire.

317: Eden- They [doctors] get to go on vacation more and um you now, have more time to themselves I guess. I know doctors can take off a lot more that nurses can. And uh honestly you get paid more to be doctor. The pay cut [nurses’ salary] that, that would kill me because you can make like three figures as a doctor, like a high three figures, which is more appealing. And like I think it would help me more in the long run if I want to have a family and you know live more luxurious lifestyle, so. I feel like as a doctor, you probably can be like, “You know what? I’m only going to work Monday through Thursday and have Thurs, I mean Friday um to the weekend off.” or something like that. Like the doctor I know, I know she takes off Fridays most of the time and like doesn’t have to work. Like that would be so nice just not to have to work certain days if you didn’t want to. Or if you have a surgery only plan them on a certain day and then you’re free to do whatever you want. I know I will love my job, but I know I would need to take care of myself more. I’d rather have a few long days rather than everyday being like a long day, tiring day because I’d rather be able to take off you know go see my kid’s play or whatever, because I can.

306: Arielle- Um, for example, um you can pick what days you want to work …you can be in like a surgical center or you can have your own private practice, I think it is. Maybe it’s not private practice, but something like that where like you’re basically your own boss, but like you work for like a hospital or something. … like something that’s really, like I want more than I want to be a doctor, is like a family and to be married and like have kids, so like it’s really important for me that I’m not living my entire life at work, you know so I really want the balance and I think that would offer a good balance.

**Power: Help Others and Affect Change**

Many participants described their desire to be the person, regardless of their field, who affects the greatest change (locally and globally) and saves the lives of individual people.
313: Amy - I think what I want to do is I want to build churches and build orphanages and ... I want to help people, and I want to have, um, an impact on this world and do things that actually people will like remember me by.

302: Leah - I wanted to do ... get my ... a joint degree in medicine and law, because that’s why I did the health policy; because I wanted to combine the two and go into health care policy work with the government, to like change the laws and policies that have to do with each other. So I see myself as a physician ... but then I want to work with government officials to get policies changed, because you can't improve medicine, I feel like, if you don’t change the policies. So, to go to the root of the problem; that would be my ideal career.

303: Faith - Like, just ... I think being able to like ... I think the greatest thing will be to just, I don’t know, just be having someone say thank you for helping them. It’s not even about like, oh, I finally made it. The fact that someone can be like, “You saved my brother, blah, blah, blah’s life. Thank you!” Like, I feel like that is worth more than I will ever get paid. Do you know what I mean? I’ve been dreaming of this for so long and it’s finally here. It’s in my hands.

318: Ryan - Like, being a pediatrician, but overall doctor I would say what I like about it is just like being able to put smiles on faces, even though you can't all the time and being able to know that you're helping someone, like, live longer or doing whatever you can to make sure someone is living and knowing that you can save a life and provide a healthier world. It means the world to me. It means I’ve achieved a lot in my life and I'm happy about it and I have a career that I love. I get to go to work and save lives every day. And be a hero to someone. That's what it means to me. I’m not in it for the money to be honest. Yes I like, I have expensive tastes, I'm not going to lie. I work for everything I have now. But I'm not in it for the money. The money for me would be a plus. I'm not doing it for the big paycheck. I'm doing it solely because I want to help people and I want to save lives.

Participants described some very dramatic experiences with individual MDs and shared their beliefs about how the MD has the ability to directly impact the lives of others. These experiences and beliefs about the power of MDs to improve the lives of others sparked or furthered their determination to become physicians.
One participant gave an emotional account about the power of the MD, after witnessing his cousin who is an MD, save not only the physical, but also the eternal life of one of his patients:

309: Jeremiah- And one of the other things that is just so influential- We go to the ICU unit and my cousin had this patient for maybe like 30 years, he was talking to him. And basically he even got the opportune time more so because the guy was dying, to basically ask him, like, if he wanted to accept Jesus, and things of that nature. And that was like huge for me! Right then and there, and the guy died a little later on. He accepted, and I was like, "Wow. That's, that's incredible." You know? Like…that’s…I mean, granted, you not only changed someone’s life you changed their eternity as well. So I'm like, "Whoa." That's something that I can't even, I can't even, um, imagine that like, “Wow!” Like, that's, it was just something that was amazing for me to watch…

Power: Role Models

Participants acknowledged the impact that successful experiences with role models had on their career ideals. Experiences with positive role models inspired them to pursue their career ideals and in some cases, fueled the desire to give back to their communities and become role models to others.

305: Adessa- So like my community it’s not until I went to (Northern Pennsylvania town) that I started to get like involved and started to actually get achievements and everything so it’s just like they have given me so much like …I don’t see I, I practically became the person I am because of this community. Mm, so there’s a school it’s started in elementary school and the principal there her name is Marie Rodriguez um she was like a mentor to me in a way, um she’s very she’s all about leadership and she’s a good lady a good … So she helped to introduce me to the community. She definitely was like she’s always willing to help me out she was one of the people that helped me on this path …So um, I see myself as like just gettin’ involved. I want to get more involved in the community …Yeah um and just be like offer as much help as I can [as an MD] and like I like have these life talks with them and tell them what’s up.

96
Power: Contradicting Stereotypes

Messages about race and ethnicity, direct or implied, strengthened the participant’s resolve to become a professional role model that would represent African American race and culture in a positive light, one that would give back to the community and encourage others to do the same. Participants who were raised in the U.S. and in countries abroad shared similar sentiments. The following exemplary quotes and participants’ stories demonstrate their awareness of negative racial stereotypes and their motivation to contradict or disprove them:

305: Adessa- I definitely I feel that a lot [pressure of racial stereotypes] and I use to be like my freshman year I used to feel as if like um always… I feel like Caucasians are always smart well Asians are always smarter and then Caucasians and then African Americans. Um it’s I know that’s not a decent way to think of, but when you attach um I guess economic classes to it you usually see like, okay, African Americans usually fall into the lower category. …I don’t know like I feel as if it’s something I just has always been. I have to prove myself because not only am I a woman, but I’m an African American woman …

302: Leah- Um, I remember when I was volunteering, like when I first started volunteering, the … there was a … I was in the emergency room speaking to a lady, and we were about to take a patient escort. And she was like, “Oh, so you volunteer here. You’re in high school?” She started asking me questions like, “Oh, so you want to be a nurse?” I was like, “Why is she doing that? Why does she just assume I wanted to be a nurse, rather than a doctor?” And she was like, “Oh, wow.” And then like her attitude changed when I told her I wanted to be a doctor. She was like, “Oh, that’s going to be really hard.” It was like, what about when you thought I wanted to be a nurse? So that was like, I knew … I mean I was expecting that, because I mean I … I hear it, not to me too often, which is probably why it took me by surprise when I did hear it. Her attitude changed. It was like, “Oh.” She was like, “Oh, this is like a dream.” That’s what it sounded like, in her attitude. I think it’s definitely my race. I don’t think, um … I mean I feel that. I mean, it happens to people. Um, I don’t know, maybe my Dad, because he told me. He was like, “People are going to say that to you, so you can’t be surprised.” Because the lady was elderly, so I was like,
“OK, she … I mean, this is what she grew up with.” I wasn’t too fazed. I know she seemed … but you know, it didn’t bother me too much. It kind of, that’s why it motivates me….Maybe I don’t want to like fall into that category people put me in in their minds. I want to like, “I’ll prove them wrong. Prove to them I can do more.”

310: Candace- I was going to the college prep, it was mostly … Um, actually, it was all Black students. It was run by an entirely Black staff and they’re just trying to empower students to get-- to go to college. And it was ... It went ... It escalated so quickly. I was like, "Well, Black people are these and Black people are these" so I felt the need to try prove myself. So I would just say “I'll do something. I'll major in this just [medicine] to sound important.” Like I'm going to do something and be high and successful and prove it.

The following exemplary quotes convey the participants’ thoughts about the title of doctor as the most esteemed avenue to channel their desire to become a positive role model for other African Americans, especially those who may feel limited by the stereotypes about their group. The title “doctor,” especially MD, provides others with an instant read that automatically speaks to one’s intelligence, education, accomplishments, and power.

306: Arielle- Um, so I think that goes back to me [as an MD] wanting to be a role model to others, because um, when I was in high school, junior year, um, we were in class and we were talking about slavery and stuff like that and then one of the kids in my class raised his hand was like, you know, “I don’t like Black people, because they’re all stupid, dumb, incompetent and loud.” and that’s like word for word what he said and it kind of struck me like “Wow.” Like, I didn’t know people still think like that and I wasn’t angry, more so disappointed that he um, you know, doesn’t give, doesn’t give African Americans a chance um at anything and, you know, just doesn’t talk to us and, and that like really hit me and it was like, you know, the reality is a lot of people do think this way and a lot of people who are minorities hear something like that and they feel shackled. They feel like they can’t break those stereotypes, and you know, that’s what they need to be and so I think that’s influenced me in that I want to be a role model and show people like, “Hey, those stereotypes don’t apply to you!” You know, “You can break free of those stereotypes and those prejudices and judgments that people pass on you.”, and I think that some people
don’t necessarily realize that and they need to see someone um, successful and someone who’s like been through where they want to be, you know, to look up to them, so I think that’s how um, my ethnicity and my background has influenced, um, my goals that I want to have in the future.

I really want to be a role model and mentor to people. I always had the dream to becoming a doctor. I can’t picture myself doing anything else. I think a lot of the reason, I think, when I really sit there and think about it, a lot of the reasons why I want to become a doctor is that I can be a role model to other people. A lot of people have had an influence on my life and um on the path I want to consider and it’s just, I think there needs to be more people in the, in the world like that for the future generation of doctors. … So like that’s my, me trying to make a difference before I can actually make a bigger difference.

313: Amy- And I think part of it [desire to become an MD] is like, oh, I want to be, um, one of the few that have actually made it in this field, and I want to like pave the way for, for other women, other Black women.

303: Faith- Ah, because I … I think it fits really well because it’s like … like I’m like not many … Because it’s like, when I go to the doctor, all I see is Caucasian. I mean, I see … And like … and when I see like a female Caucasian, I get really happy on the inside, because it’s like, “Oh my God, yes. Like, they made it! Yay!” But, like, I … I’ve like … I’ve seen like African American and like Asian like doctors, but like it’s never in the female form. And the … to like … To have a little girl look at you and be like, “I can be her someday” and it’s like, I don’t know … There’s something about like seeing some of your own skin who did it and being like, it’s more comfort … it’s more comforting …… so it’s like, just like the Black just keep breaking that stereotype. Like, it gives me hope that other people will follow.

On member checks, all 15 participants unanimously agreed with the statement, “For this group of STEM students/science majors, the desirable career is one that gives one the power to be a positive African American role model and to disprove negative stereotypes about one’s racial/ethnic group.” Even though they may have been raised to retain the values of their respective cultures, students of African and
Haitian descent were also in agreement that society/dominant culture does not make the same distinction between ethnic groups, as Michael’s statement implies:

301: Michael- I definitely feel that way [desire to convey positive image of African American culture]. To me, growing up in an African household, I don't know if I should say it. I think there is a major distinction to feel like African and African American, that there are in the United States, compared to someone that comes straight from Africa, is a major distinction because the Africans are more, those people that come from Africa, like I said, are more zealous because they're like “Oh, we have the opportunity, we're going to utilize it. Try to make something out of it.” You feel like one person … that can actually make something out of themselves, become like a doctor or a lawyer, then that's helping convey a positive image of the Black culture. Yeah, I would say, I would agree with that strongly.

Yeah, I still feel that way. Even if I'm from another country. I'm from Ghana, but I live in the United States. It's not going to be different. I'm going to be classified in that category of Black, and all that stuff. If I'm able to make something and get a career in the medical field, I feel that's going to, in some way, it's going to help create that positive stereotype that I guess all your participants were talking about. So yeah.

There were two female participants who during their interviews, stated that they did not believe that race or ethnicity had any bearing on their career choice. One of the women during her interview commented:

312: Cayla- It’s [race/culture] not something … I, uh, don't really think about it until people bring it up which I find kind of funny. Um, a lot of … a lot of my friends will say that I act White and I'm like … I'm pretty sure I act like a person. So I'm not sure if there's any sort of … it's not really relevant for me. It's more of just a thing that, you know, some people choose to look at more and for me, it's kind of like I am who I am and I'm going to do what I want to do regardless of what color I came out as.
However, both women, on member checks, also agreed that a career in medicine would allow them to disprove negative racial stereotypes about African Americans and position them to similarly empower others.

Career Ideals: Summary

The perceived reward of a career in medicine or research is power. For this group of participants, degrees in medicine and research are synonymous with higher education, greater knowledge, independence and autonomy, lifestyle freedom, and the ability to personally help others and affect real change. In addition, the title of doctor affords one the status necessary to model a positive image of African American race; one that is powerful enough to contradict and disprove negative stereotypes of African American race and culture and empower others to attempt to do the same.

Theme 3: Perception of Nursing: A Limited Profession

The fourth research question, “What perceptions do African American undergraduate non-nursing science majors hold about the nursing profession and nursing careers?” necessitated the exploration of the participants’ general ideas about the nursing profession and nursing as a career option for themselves. Theme 3: Perception of Nursing: A Limited Profession best describes and summarizes the perceptions that the majority of the study participants hold about nursing careers. Participants noted some favorable aspects of nursing; however, in most cases, those positive perceptions were tempered with ideas about limited respect for the profession and its perceived lack of power.

All of the participants spoke favorably of nurse caring, noting the amount of time nurses spend with patients and the positive aspects of the nurse-patient
relationship. However all of the students described perceived limitations associated with the profession that make careers in nursing a less desirable choice for them. In terms of nursing’s image, participants commented on negative portrayals of nursing in the media; however, the majority spoke about the invisibility of nursing in the medical shows that they watch. Participants’ responses indicated that the image of nursing is eclipsed by that of the physician. They tended to speak about nurses in the context of hospital bedside nursing, almost as if nursing is a location. In general, all but a very few demonstrated little awareness of career mobility in nursing. The majority of the participants had limited or no knowledge of advance practice roles, nurses in leadership positions, or nursing science and research. In fact, some participants grouped certified nursing assistants (CNAs), licensed practical nurses (LPNs), medical assistants (MAs) and even veterinary technicians in the same group as registered nurses (RNs).

All of the participants engaged in making nurse-doctor comparisons, almost as if they were at a loss to describe nursing without utilizing medicine and the physician as a point of reference. Participants commented on nurses’ limited power to diagnose and treat patients, which in the view of some, made nursing’s contributions to healing the patient less important and less visible. Participants frequently described nursing by recounting a list of the most basic tasks that nurses sometimes perform that range in description from perfunctory, ordinary, and boring to unpleasant. Most participants perceived that nurses earn an acceptable salary, but that they work long hours and have limited freedom to choose their lifestyle. The majority of the participants, in addition to making RN to MD comparisons, commented on the notion of a hierarchy in medicine/healthcare, in which the MD is at the top and the nurse somewhere below,
making nursing a subordinate profession that commands limited power and limited respect. Those who had had the most direct contact with nurses, especially nurses in advanced roles, had the most favorable impression of nursing.

None of the participants at the time of their interview desired a career in nursing, however several viewed nursing as a career option if their dreams of getting into medical school could not be realized. On member checks, all 15 participants agreed that nursing provides the path to professionalization for some, but for themselves, all but one participant indicated that a career in nursing would mean that they did not realize their full potential and that they fell short of their dream of becoming an MD or a researcher.

Respect for Nursing: Limited by Stereotypes

All twenty of the participants stated that nurses do not get the respect they deserve. During their interviews and in member checks, participants agreed that nursing is a stereotyped field. They used words such as negative, common, stigmatized, and subordinate to describe the word that most closely approximated the kind of stereotype that they felt best described nursing. ‘Limited visibility’ may be the phrase that best describes the image of nursing that this group of participants holds. They spoke about nursing’s limited visibility in the media, and demonstrated the tendency to label any female caregiver below the rank of MD as a nurse. There was a general lack of awareness of nursing opportunities and leadership roles amongst the participants in general. It was also very clear that for this group of participants the image of the MD eclipses that of nursing. However, participants who had the most direct experience with nurses, especially nurses in advanced practice roles, had a more positive and nuanced view of the nursing profession, demonstrated an awareness of
avenues for career mobility in nursing, and tended to hold a more favorable image of nurses than their peers who had less involvement with nurses.

**Limited Respect**

Participants’ responses to the question “What about nurses and respect?” were fairly consistent. As noted, the majority of participants responded that they believed that nurses do not get the respect or credit that they deserve. Most indicated that while they themselves have respect for nurses, that sentiment is not always shared by the general public, patients, and doctors. Participants described the level of respect that they have for nurses, how they imagine the general public and patients view nurses, and their perceptions about how nurses are treated by physicians.

The following significant statements from the data convey the participants’ firm assertions about the unreasonable lack of respect for nursing.

318: Ryan- I just think that they don’t get the respect that they, um, deserve. They deserve more. You know, nurses are there all the time.

319: Chiamaka-I don't think that they're appreciated as much as they should be. I don't feel that people really notice how much it is that they do. So, I don't think they're appreciated, yeah.

Several participants were fairly candid about their own limited respect for nurses and shared the following thoughts.

301: Michael- I see a lot of nurses, especially in the hospital. I feel like they get the respect that they need. Maybe not as respected as the doctors, of course, but they get their respect. It's just the job and the status, just because he went to school more and he does more, especially like in certain situations, they’re not going to get the nurse, they’re going to get the … If it’s a serious situation, they’re going to get the more qualified person to do it, so probably that’s why he gets the more respect … or she …
310: Candace- OK. Um, I think it’s a respectable position but I also feel like it’s very, it’s very common.

313: Amy- I might have said that I respected nurses back then [previous meeting with interviewer], but I think deep down I was very self-righteous. I was like, “Oh, I’m, I’m above that kind of thing!” you know? I’m, it’s like I kind of thought that nursing was something for people who couldn’t do engineering or like the biology and stuff like that, which was completely terrible of me but, um … but nursing, it’s like anyone can do it, so I think I was just thinking that if anyone can do it, then why, why should …I respect it?

Other participants, while reconfirming their beliefs that nurses deserve more respect, described the lack of respect for nursing and the poor treatment of nurses by the general public and patients.

304: Iñes- Uh, my Grandma, she's been a nurse [is actually a CNA] since forever, a really long time. She, I just hear her stories like she gets so like frustrated sometimes with the people. They talk to her nasty, like my grandma's the sweetest lady ever and like I couldn't imagine someone like being mean and nasty to my grandma.

312: Cayla- Um, from what I heard and I think for certain patients who aren’t appreciative and a certain patients who definitely don't recognize all the things that nurses will do and the work that they put into people or during like the storms… My mom was pretty much called into the hospital to be there for the entire weekend for the hurricane or things like that. So … So in putting their life on the line for … other people, I don't think people recognize that.

319: Chiamaka- So, I don't think they're appreciated, yeah. I don't, they're just nurses, like what like they're not doctors. Like they're just, I don't even know how to put that in words. “Like oh, it's just a nurse,” and like okay, “She, she helps the doctor out. She's underneath the doctor. There is someone above her.” type thing.

The following quotes from the data convey the degree to which the participants believe that nurses are respected by doctors. Participants indicated that they are aware of or have witnessed nurses being mistreated by physicians.
Winston - I feel nurses are - don't get as much respect as they deserve. Um, and I'm just basing that off of this young man, this older man who I met in college. His wife, um, well, his wife's an anesthesiologist and she has, um, nurses, um, working with her, and she, he tells me she calls, she calls them incompetent, uh, yeah, she, she started yelling, “I don't know if they're just giving nurses license these days!”, or you know, I feel like nurses deserve a little bit more respect for all that they do. They are really, there are good nurses out there. Um, and it’s like, they should get more respect than they do get.

Ryan - Um, nowadays I think nurses do not get respect they need....I feel like doctors underestimate nurses because they went through more schooling but with my time shadowing an ICU nurse for a year, nurses can sometimes know way more, especially know way more with a patient because they go in and see the patient on a day to day basis, hour by hour, and I don’t like it when doctors undermine nurses because, "Oh I went through, like, 15 more years of schooling than you." Like, I don't care. They deserve the amount of respect that you get too.

Leah - As I went around … these hospitals, the doctors will get upset with like African American nurses. I don’t know. Maybe it’s just me, with what I see. Um, I saw it, like my last shadowing experience, there was a lot of eye-rolling at the (nervous laughter) … at the nurses, both black and white, so …I feel like they’re put down, like “You’re not … I went through 4 years of medical school, you didn’t, so I’m higher up than you.”, and I don’t like that attitude.

Faith - I don’t like how they’re treated. Respect. Not in terms of like power, but in terms of as a human being, and, um, uh …It’s like, I see, um … It’s just, just because you went to school more and you get a higher paycheck doesn’t mean you get to treat them like they aren’t human.

One participant described the relationship between his physician cousin and the nurses he works with at the hospital. The participant, while trying to convey support for nurses, commented on the lack of respect he perceives nurses receive. Nurses were described as the property, or even metaphorical parts of the physician. This participant’s view of the need for the MDs to provide care and affirmation for the nurses they work with, almost as if nurses are an oppressed group, was noted.
309: Jeremiah- I don't think they're [nurses] more so respected enough. I think I see my cousin [who is an MD] and how he respects his nurses and things of that nature he treats them very pristine. Because of the fact that basically, they help out, they're the ones, they're the hands and feet of the doctor before they [MDs] get in the room. And they [nurses] really need that, uh, they really need that respect. That they know basically that they are there to help in that process. And the fact that they are needed just as much as the doctors are needed and even more sometimes you know, through that process. And I think the, the respect of a nurse is not where it should be at this present moment in time. I've seen other doctors treat nurses really, really bad. And just treat them like they’re basically stepping stools and nothing, but in actuality we [MDs] need these people to survive.

And finally, participants commented on the lack of respect that nurses have for one another.

312: Cayla- I know, uh, one of my friends in my freshman class wrote a paper, her mom was a nurse, … nurses are pretty much bashing nurses in the workplace and how there is pretty much bullying going on or just nurse against nurse or being … I know a bit more about that. Um, because I have heard about it from that and read about it before and, um, I discussed that topic, with my mom. You know, it's definitely true. It does happen...

Limited Visibility: Television

Most of the participants acknowledged watching televised medical shows such as *Grey’s Anatomy* and noted that there are negative portrayals of nursing in the media; however, most commented on the lack of visibility of nursing in those shows. Several spoke of a nurse-centered television show, *Hawthorne RN*, and although they tended to see that one nurse as exercising some power, they also noted (and praised) her struggle against multiple forces to provide care for patients. Participants mentioned unflattering portrayals of nurses, commenting on their negative behaviors, behaviors that tend to be exhibited by those who feel oppressed (i.e., seeking revenge against doctors). However the majority of the participants commented on the general
nonexistence of nurses in those shows, and often made comments about how the image of nursing was often overshadowed by that of the doctor.

301: Michael- Um, to be honest like a show like Grey's Anatomy, it is mostly centered on the doctors, so the nurses are kind of seen as the doctors’ helpers. The main characters are only doctors so you don't really... There's a couple episodes where a doctor has a relationship with a nurse, so you get to see the nurse ...but ...Um, other than that, the show, most of the main characters are doctors.

316: Toni- Um............you know....., they are, they’re portrayed [on Grey’s Anatomy] as like, they’re not really portrayed as lower because the show revolves only around doctors. So like, you don’t even get the nurses point at all. You just sort of, it’s like you see the nurses, you see them there, you see them there, you see them working, you know. Um, well, they’re cleaning...Taking blood... that’s about it.

Most participants did mention one television show which was centered on an African American nurse. Their comments about that show seemed to indicate that this nurse was devoted, selfless, loyal to the hospital and patients, and was regularly embroiled in struggles for professional recognition and power.

314: Dominique- In Hawthorne, Jada Pinkett, she should be a doctor (laughing) She makes all the decisions. Even when the doctor is like "You are not authorized to do that." She is like "But the patient is supposed to... you are not supposed to go based on what your supervisor tells you. You have to think about the health of the patient." They kind of make nurses seem like very inferior but Ms. Hawthorne in the show she is just like "You are not going to make me feel inferior because I am here to also help the patient because if the patient needs help and this is what the patient needs. I am going to get it for the patient, no matter what you say. I can alter your decision because if the patient dies. It is your fault." And watching that show I am just like "Yeah!" ...she is a very strong, mighty woman ...I feel like watching that show empowers women, it empowers... and she is African American also, so I think more African Americans should watch that show because it will help you see that you know if something is wrong, say something. Have a voice. Don't hide and say "I am scared because the doctor is either going to fire me or tell the supervisor and I am going to lose my job and it is the only thing I have."
307: Therese- I actually watch this one show. It's called *Hawthorne*, it's basically about nurses, like um, and they're just definitely portrayed as key factors, overworked, extremely busy but like necessary…

One participant commented on the invisibility of nurses in the news, while others commented on the ads for nursing education and the confusing messages that they send about nursing.

318: Ryan- You never hear …like something bad happens to someone and it's on the news and they go to a hospital; you never hear anything from nurses. You only hear from the doctors, because I feel like they think all the doctors are the only ones who are important.

317: Eden- Yeah. I’ve seen some few ads. They [nurses] were like um the arms usually crossed. They have a stethoscope around their neck. Cuz like um I was going to … my agency wanted me to do like a modeling shot where they will have like my arms crossed basically like white scrubs and like, so they could you know use this for any kind of medical thing. But like that was basically like iconic like nurse pose, or maybe like the pointy hat with a cross on it. That’s basically like how they portray them. Probably stressed and like [laughing] like arms crossed is like “Come on, like I have a little bit of attitude right now. I’m like I’m at work all day.” Or if they’re smiling I guess it’s still like “I have a lot of power or I’m like in control.”

**Perception of Limited Opportunities**

Participants had little awareness of the scope of nursing practice and were often at a loss for words when it came to identifying or describing opportunities for advancement in nursing.

307: Therese- Career advancement? I don't know. Career advancement. I never thought about that. I don't know if there's car... I mean, I guess you could be the charge nurse. I can't really think of like any other like career advancements.

319: Chiamaka- Um, I know I ... I don't think a lot of ... I think that once they become nurses, that they don't have plans to do more. Like they're okay with just being, a nurse. Like after they get up to like, they're fine. Well people I know, like the nurses I know they’ve been
nurses forever. They never like said anything about school. And after they get to a certain level and they’re fine and they’re comfortable, they're good. … After they get to where like to a point where they're comfortable enough that they make enough money, they're good.

316: Toni- Yeah- see, that’s the thing that I wouldn’t know is, is how advanced they can, like I mean, I’ve, I mean, I looked up like different types of nurses, like surgical nurses and how like there’s like the head and then there’s like, you have a, a registered RN. Other, other than that, I wouldn’t really know about, like, career advancement for nurses. Like…before even like talk, speaking to you, I didn’t even know like about like a PhD in Nursing.

Perhaps participants had little knowledge of the opportunities for advancement in nursing because they know very little about the scope of nursing, and few realize that there are nurses with advanced degrees who are involved in research and advanced practice. Participants were vague on various nursing job titles and in general, positions within the healthcare field.

301: Michael- I’ve heard of Nurse Practitioner but I’m not like 100% … I don’t know exactly what their job entails but I do know that the difference between the PA and the nurse is because like PA, you have to go to school more, you require more training to get certified and I think you get paid more. Obviously, you’re doing, your status is higher than being a nurse.

304: Iñes- Oh, um, well for nursing I know, again, it's something that's in need always. I know you could be like a, the highest I think is like a registered nurse, maybe. Mmm, I know nurses are like knowledgeable from my grandma, but I just don't see them doing like cancer research or, I mean they have the abilities to 'cuz they work with cancer patients, they know about it.

316: Toni- I guess nursing, for me, I know that there’s a need for it and you can make a living off of it, but I don’t know if I would be like, happy doing it. I would just want to be able to have my own, like, clinic basically. Like I don’t, I didn’t, I don’t think with nursing, where at least I don’t know, that you can do that.

317: Eden- Um, I don’t know. I know you can get, you can go back and get more certification because my roommate’s mom was also a nurse,
and I think she’s going back to school I think to get more certification, but I don’t know what that actually does. Like I don’t know what the next step is after that. I mean, I guess you would get paid more, but I don’t know if your responsibilities increase or not. Um I think, can they can prescribe things?

**Role Confusion**

The role of the RN and scope of nursing practice was not clear to participants. As noted, few had any substantial knowledge of advanced practice roles or nursing leadership. In fact, it was not uncommon for participants to refer to any female caretaker in the healthcare field as a nurse, including CNAs and LPNs. It was difficult for participants to articulate the opportunities nurses have to advance their careers, given the fact that they had limited awareness of professional nursing, and they were often unable to differentiate professional nurses from others who provide hands-on care to patients.

310: Cara- I heard of those [nurse practitioners]. Yes. I just hear nurse and I kinda group them [all nurses] together. I know that there's different kinds. But I don't know specifically what they do. So, I group them together.

307: Therese- I know a little bit like the difference between like I don't really know the difference between RN and LPN that much 'cause I know my Mom, my Mom is a CNA …So, and only it's like the difference between an RN and LPN but I don't really know what the difference is. I believe an LPN is a little more higher up than RN, I think or is it the other way? Was that an LPN [asked if she knew about nurse practitioners]? What is a nurse practitioner?

**Image of MD Eclipses Nursing**

Participants were largely unable to describe or discuss nursing without making RN to MD comparisons. The superior image of the MD as being the most
knowledgeable and authoritative member of the healthcare team was highly prevalent. Conversely, nurses are described as being busy and working hard.

304: Iñes- Mm, I feel it’s a so-so situation like some people see nurses as like “Oh it’s an easy job.” but I don’t think it’s easy. Um because sometimes you have nurses’ doing more than what the doctors doing so they’re always with the patient and everything and that’s a hard job.

307: Beth- The nurses are very ... are interactive and stuff but there were just something about like, I don't know, there are just something about watching the medical students and the residents and the attending that really, that I don't know. I don't know what it was. I guess it's like the authority or just like knowing all the symptoms that one, like one sickness could have or how several sicknesses can have similar symptoms and then trying to figure out with your team what they could have, then you go to each patient that you're given and just ... I don't know something about it…

Experiences with Nurses: Improves Visibility and Counters Negative Images

Participants who had personal connections or direct contact with nurses in their work setting tended to have the most respect for nurses, were better able to articulate the nurse’s role, and based their opinions of nursing on real-life observations of nurses.

318: Ryan- So, probably shadowing, getting that hospital experience. We followed nurses. I kind of started developing a relationship an ICU nurse and she kind of took me under her wing. Senior year I requested just to work with her. So, I came in like every single day for 5 straight months, Monday through Friday, for 3 hours with this ICU nurse, [nurse’s name], and she showed me the ropes. … She allowed me to listen to a patient breathing, like to hear the sound of the lungs, stuff like that.

302: Leah- Well I think I’m a little bit more understanding now that I’ve volunteered at the hospital. I think that was one of the few more ...bigger lessons I’ve seen … I’ve learned. Because like after watching TV, nurses are given one impression, the mean, cranky people in the hospital, like, that don’t really do anything, they’re not as high as
doctors. But when you volunteer at the hospital, go see or meet a nurse … my grandmother is a nurse. It’s like, they’re … they’re the people who run the hospital, work with the patients. The patients see them all the time, the ones with patient care. So I have a lot more respect than I did before I started working … volunteering at the hospital. (laughter)

Participants who had family members who worked in nursing as advanced practice nurses or RNs who are pursuing advanced degrees tended to be more aware of opportunities for advancement in nursing.

315: Winston- Oh, I, I, there's definitely growth, there's definitely room for growth, uh, in my opinion. I feel like, uh, well, I guess it depends. I, I, I think of it as in terms of advanced degrees, um, I’ve heard of. Anesthetic nurses now, um, I've heard of the nurse practitioners, like my aunt. You can definitely continue that route. Now there's like the PhD for nursing, or Doc, something. I mean, you are in that program, or something, yeah. So um there's uh, there's a lot of room for growth, there's the masters in nursing, there's teaching. Um, basing it off of, um, um, rather my au - what my aunts have done. Um, or cousins who have um actually been - went to nursing school. I have three who went to nursing school, um, some of them continued for their masters…

Power: Perceptions of Nursing

Participants describe nurses as having maximum patient interaction but with limited professional autonomy, and therefore, less power to affect change. Many of the participants noted that nurses have the most interaction with patients and in some cases know them best; however, they indicated their belief that in the end, the MD has the ultimate responsibility and the power to affect the outcome of the patient’s care.

Nurse-Patient Relationship

All participants were aware of the nurse-patient relationship and had generally positive things to say about this aspect of nursing and nurse caring. The following significant statements are representative of the positive sentiments most participants shared about nurse caring in the nurse-patient relationship:
316: Toni- I would say, um, nurses …they’re the first representatives within the health field … the person you call on when you need something they're the ones providing you comfort. Um, ease your pain, and depending on your situation, they're like the ones who are monitoring you, 24 hours, almost. During their shift they are the ones you kind of lean on…I'm just basing it off of what I've seen when I either volunteer, or when I am visiting a friend in the hospital…but the nurse is always there, protecting and monitoring throughout, so.

306: Arielle- Um, so I think that they’re very, they’re like good support for helping them [patients] get better and also a good emotional support. Um, like I know my sister, she kinda got really close with one of the families. She works in Pediatrics, so one of them um was in there for a while, unfortunately and the family would always be there and she kind of got close to them and …um, you know, when he passed away like, she was like really upset about it, you know, drove ...to the hospital like 3 in the morning to go and console the family and I think that’s something ...that physicians don’t necessarily, not all of them do, because, you know, they’re seeing so many other patients, they don’t really have the time to connect with the family and make them feel um, empathize with them ...and um, so yeah, I think that’s like an important role of a nurse, other ...than you know, doing the ...necessary care and giving medications and stuff ...

Perceptions of the Nurse’s Power to Affect Change

Many participants noted that in spite of the time nurses invest in patient care, it is the physician who is empowered to take responsibility for the case and the outcome. The following quotes describe the nurse’s role as a helper and the perceived limits of the nurse’s power and autonomy to diagnose and treat patients and receive credit for affecting a change in the patient’s overall condition.

304: Iñes- … you’re limited to what you can do because you’re a nurse or in my head I think you’re limited, but …sometimes as nurses you know what’s better for the patient. And you know you have like 4 or 5 doctors in there to see one patient who they don’t really know and you [nurses] try to offer your advice, but at the end of day the doctor like actually writes them a prescription or whatever …
307: Therese- I kind of like the process of going in there seeing what the patient has, seeing kind of figuring out that puzzle piece and making, putting the puzzle pieces together. I think that also too just kind of because I, like I feel like doctors get a little more like respect as far as that [diagnosing patients]. I do like the idea of you know, kind of like having that [MD authority].

Other participants perceive that RNs might downplay their knowledge, either abdicating their power to physicians in the service of improving patient outcomes or staying within the limits of their role to keep the peace.

318: Ryan- A lot of it seems likes it would be coming from the doctor, like "These are the orders I want do." But some of those nurses, especially with experience, I've seen when I was in my internship in high school, nurses kinda have to play down, "Hey doctor, this is what's going on the patient. Looking at their chart, these levels went up. I'm reading the test results. You know, I think we might have to look at this. This might be going on. We might need to look at this medication." Blah, blah, blah, blah, blah. They're thinking, "Hey this is the problem. We need to think it through."

Nurse-Doctor Comparisons: The Medical Hierarchy

As previously noted, all participants, including those who did not desire a career in medicine, described nursing in comparison to medicine. RN to MD comparisons influenced participants’ image of nursing, but also informed their perceptions of nurses’ power. Participants often attempted to answer the question “What is a nurse?” by describing what nurses are not, especially in comparison to physicians. Participants, when talking about nursing, regularly used words which connoted a lack of power, limited respect and those that indicate a lower position in the medical hierarchy. Words such as “less,” “just,” “assistant,” “lower,” and “underneath” were regularly used in their descriptions of nurses and nursing. While participants used words such as “subordinate”, “lower,” “under,” “less,” and “under” to describe nursing, they used words such as “higher,” “top,” and “more” to describe
MDs. In the medical hierarchy, nurses are described by participants as having less credibility, authority, autonomy, and power.

302: Leah- Because I feel like, they [physicians] put them [nurses] down… but it’s like you can feel the hierarchy when you go into the hospital, and … they [nurses] are definitely lower, for sure.

310: Candace- It makes nursing, I guess, almost… not subordinate I would say to doctors?… what deterred me from it was the fact that I could never be in charge… I felt like if I were to become a nurse I would always have to work under someone…

One participant gave an example of nurses acting negatively in response to their own lack of power in the medical hierarchy:

306: Arielle- Um, but also I find like sometimes the nurses, well, not really, but like I guess it’s kind of because I’m like a med student, like when I go and shadow, so like, there’s a lot of ranks there, so like sometimes the nurses feel they’re above you and I think everyone should be on the same playing field, but um, they’ll feel like they’re above you and, you know, they’ll kind of talk down to you and stuff like that and so I mean, I feel like it goes both ways and it kind of depends on the person who’s … I feel like it has to do with them having the authority and maybe they don’t necessarily feel the authority when the physicians are around, so when someone else is below them, like, you know, on the rankings, um, they feel like oh, now is my chance to get back at them and even um talking to doctors, they say like, you know, when you’re going through your residencies and your med school and stuff like that, like people are going to treat you so bad, including the nurses, and I think it also to do with the rankings, so.

**Perceived Limits of Autonomy and Lifestyle Freedom**

The question “What is a nurse?” was frequently met with descriptions of very basic tasks, generally performed under the direction of another, within a limited work environment. Participants almost exclusively described nurses as being in hospitals, clinics, or doctor’s offices. Most of the participants perceived that nurses earn a
comfortable wage; however, they frequently commented on the long hours and lack of flexibility in nurses’ schedules as being problematic to lifestyle freedom and balance.

Perceptions of Nursing: Task-Oriented

As noted, few were able to articulate the nurses’ role, and tended to describe nursing in terms of tasks, environment, and work schedules. The following exemplary quotes demonstrate the participants’ attempts to describe what a nurse is by describing perfunctory, low-skilled tasks, which often included being the doctors’ assistant. Words such as “just,” “busy,” “stressed,” “tired,” and “running” are commonly associated with nurses and nursing tasks. The nursing tasks as described by the participants require little scientific knowledge, and often are performed under the orders or direction of another.

304: Iñes- Like throughout high school I did like 1000 hours of service in the hospital, so like I’d get a first-hand look at nurses too and for me it just seems like their job is just to give pills, change people, sponge bath, you know. I just see a lot of nurses, they're really busy. Like if I have, if I have to ask a question I try not to ask the nurse ‘cuz they're really busy. Like getting pills together, they're telling this one look at this chart, time to walk this one someone here, push 'em to therapy or I see them running around doing a lot of work. They looked stressed out to be quite honest.

301: Michael- I feel like it’s just … Nurses are just there to kind of help the doctor get the patients situated, whatever they need and all that so the doctor comes and does what he also needs to do in there. Sometimes I feel like the nurses are the ones that are doing the labor, kind of the hard part of the work and the doctor just comes and like signs off, or looks, does something real quick and then, yeah. Yeah, I know that nurses are assistants, especially in taking care of the patients to PAs and the doctors. I know some nurses give injections. Ah……you know…..Just help take care of the patients as another assistant to the PAs and the doctors, yeah.
310: Cara- They’ll do like, uh, they'll take my weight and stuff. They made me pee in a cup. And they'll give me shots. But I think that's pretty much it.

Some participants explained that nurses perform tasks, sometimes referred to as “dirty” or “grunt” work, that doctors or others do not want to do, or are too busy to do.

303: Faith- Um, when I think of a nurse, I just think of like …humble good people, like … Because it’s like, they’re almost like doing the dirty work and the doctor gets to do the pretty stuff. Um, that’s what I think.

313: Amy- ‘cause they [nurses] kind of just do the, the dirty work that… it’s just like the easy stuff that the doctor doesn’t really need to do. Um, I think it doesn’t require as much, um, I guess like analysis as … ‘Cause I mean my interpretation of nursing is someone who does like kind of like the smaller, like just like dresses the, the wounds and does kind of like the smaller, um, immediate care …

317: Eden- And that’s kind of like they’re getting the grunt work of what doctors don’t want to do basically. They’re like, “Oh do the BP and EKGs” and they are taking them and pushing patients around. So I feel like it’s, it’s probably more work less pay basically, less liability too, so.

Perceptions of Nursing: Limited Location

Nurses were usually described as being in hospitals, by the bedside, in doctor’s offices, and in clinics. Many participants noted that in most settings, patients see the nurse before the MD. In other words, nurses are generally in places where there are doctors.

317: Eden- Um, doctor’s office, hospitals, ERs because you usually see a nurse in any setting before you even see a doctor, so.

304: Íñes- Um, the majority of the time I see them [nurses] working in hospitals, around like little clinics. Um… they [nurses] like they basically setup everything and then the doctor comes in and then you as their nurse has to put down on the chart the vital signs, and then they
speak to the patient for a little bit, and then they [doctors] come up with a diagnosis.

307: Therese- Like I generally picture them [nurses] mostly in hospital environments ...That's ... Or nursing homes. Those are the two big ones that I would picture them in. Um, mostly nursing homes.

Perceptions of Nursing: Limited Financial Compensation

Participants noted that nurses earn a decent salary and perceive that there will always be a need for nurses. Therefore they believe nursing is a stable career; however, compared to the salary of an MD, it is less adequate.

310: Candace- Safe as in I know there’s always a need for nurses. I feel like because their job is so important in hospitals, I feel like a hospital would be stupid to turn away nurses.

317: Eden- It does [nursing affords one the opportunity to work with one’s hands], but it’s also the pay cut that, that would kill me because you can make like three figures as a doctor, like a high three figures, which is more appealing. And like I think it would help me more in the long run if I want to have a family and you know live more luxurious lifestyle, so.

Perceptions of Nurses’ Schedules: Limited Flexibility

Participants regularly mentioned their perceptions of the hours and schedules that nurses work and noted the lack of flexibility to be deterrent to choosing a career in nursing.

313: Amy- It’s real … I didn’t realize how kind of rigorous it was until she always [mother who is a nurse] would come home with all these stories about how she had to lift patients, and her back was hurting and, um, all these things, and I know they work really, really hard shifts. Like ‘cause she’ll, she’ll, usually when she goes in, she’ll work for 12 hours. Like she’ll go to work at like 7 in the morning, and then she won’t come back until 8:30 at night. So I know it’s, I know it’s very demanding and I don’t think they get enough, um, respect.
They … you usually see more nurses than you do doctors for the most part because I think that nurses have like more on call schedule, like they are always there in the office and then doctors have like a more loose schedule in there. I feel like nurses have to be like at the job like every single day and they probably don’t have much of an option. Um, I do know a few nurses…like some work like overnight shifts. … and like I honestly would never choose to have like late night anything. Yeah. I just don’t think it fits with maybe my personality. Like I need time to myself more than a nine to five kind of thing.

Desirability: Nursing Careers

The majority of participants indicated that they would not want a career in nursing for themselves. For most of these students who have aspirations for careers in science and medicine, and who may have been groomed for those career paths, a decision to enter nursing would be regarded as a personal failure by themselves and their parents. Most of the participants in this study agreed that both they and their parents would see nursing as falling short of their career and life goals. However, all participants agreed that a career in nursing provides an attainable path to professionalization for others with less resources, persistence, or academic inclination. On member checks, all 15 agreed that nursing is a negatively stereotyped profession. Several noted that nursing could be a backup plan if they failed to be admitted to medical school; however, those who discussed backup plans spoke about the physician’s assistant (PA) as being the most acceptable alternative to a career in medicine.

Participants’ Perceptions: Desirability of Nursing Careers for Self

None of the participants was entirely negative or completely biased against nursing careers, and in fact, several indicated that they would consider nursing as a backup plan if they could not gain admission to medical school. Although participants
gave “help others” as their reason to enter medicine, only three participants had ever seriously considered nursing as a possible career. Four additional participants noted that they had had fleeting thoughts of becoming nurses; three of those four indicated that their parents had quickly discouraged them from that thought. The quote below illustrates parental persuasion at an early age to go beyond nursing:

302: Leah- Um, actually, I … I thought about it [nursing career] like when I was younger; more when I was younger. When people … when I thought of medicine, I did think of nurse initially, not a doctor. That’s when my Dad was like, “Oh you can … why not a doctor, then?” So um, yeah, I thought about it, because it was like less school. So … but um, then that’s when my dad was like, “No, if you can be a … Why be a nurse, when you can be a doctor?”

Confusion about the role of the professional nurse, the perceived limitations of nursing in terms of power (autonomy, leadership, and image), and the unappealing tasks associated with nursing translated into the disinclination to pursue nursing for these participants. Below are significant statements that illustrate reasons that a few of the other 17 participants gave for not considering nursing:

307: Therese- Um, I guess the good sides [to a career in nursing] would be the money, helping people, um, schooling isn't that long, um, getting to be around my family more [shorter time in school]. The cons would be whether I'm doing it because I'm passionate about nursing, um, whether I like all the things that nurses do…like, um, shots, um, cleaning people... I felt like I could do more, not that nurses don't do enough, but I wanted to be able to be at the top.

304: Iñes- It just, to me it just didn't seem like something I would want …Something that I would get bored of, you know. That same routine, I don't like. That's something I don't like. So, and it's just not for me. And I'm a leader. I really like leading and I just feel like being a nurse that's another reason why I wanna be a physician, not even a physician assistant 'cuz I don't like to, like I can take orders from people, but I don't like to feel like I'm always here, I wanna be here [motioned with hands to indicate higher position], you know? So, I like being leader
and I just feel like being a nurse you have to like go under the doctor's order, yada, yada, yada. Well why not just be the doctor, you know, so.

310: Cara- In high school, my school had like a RN program ...Um, and I just said, "I'll do this." But then we did a tour of it and like, "Oh, you have to dress old people and wipe their butt and then do all this stuff." I said, "I don't want to do that (laughs)." I was just, "I'm not doing that." I was like I ... “No.”

Parent Perceptions of the Desirability of Nursing Careers for Their Children

Participants reported how they believe that their parents would respond to a major change to nursing. Most parents, according to the participants’ accounts, would encourage, if not demand, that their pre-med children stay the course and work to obtain their medical degree or doctorate.

302: Leah- Um, he [father] probably wouldn’t like that [switch to nursing major]. I mean not … he … because he … his … because he told me over the phone, he was like, “I want you to be the first doctor.” And we have nurses in our family. He … it’s just … I don’t think he would be … I don’t know. I … I … he definitely wouldn’t be jumping for joy, because he wants me to be a doctor. …He would persuade me otherwise. I know that.

313: Amy- I don’t think they’d be disappointed per se, but they’re just kind of … They would think that I didn’t fulfill my total potential.

307: Therese- Like, my mom will not understand at all [career in nursing]. She would convince me out of it and she'd be like, "You're spending all this money to go to nursing. All this money in college go to nursing." She would not understand at all, at all. She's like, "No, no, no, no.” You'd be working all the time hours upon hours upon hours. It's terrible, you're not doing it."

Parents would be more supportive of a career in nursing for the sister of this male participant than they would for him:

315: Winston- I, I think, I think that they’ll [parents] be, um, supportive [of a career in nursing]. I think so. Um, I think because probably it’s been so long where I kind of brought up this idea of this, this being,
becoming a physician, and so forth. So it would kind of be, “Oh, do you know what happened here?” (laughs) Um, uh, I think maybe if my older sister said that [conveyed interest in nursing], they’d probably be thrilled, like “Oh, that’s great! That’s great!” you know?

Parents would be more supportive of a career in nursing for this participant’s less focused sister than they would for this female pre-med student:

319: Chiamaka- Um, they wouldn't, I don't think they would like it at all. I mean, they wouldn't like it, like that's not what I had discussed that I wanted to be. They would tell me to keep going, definitely. “This is not what…” it's like, “This isn't what you want.” They would want me to keep pushing. “This is not where you see yourself, keep going. This is not what you said you wanted to be, keep going.” Yeah, I thought my sister though, like my younger sister, if she wanted to be a RN, it's fine for them, they have no problem. My sister now, she's all over the place. She's 16, she just turned 16. She's gone from like, she's in ROTC now, but she's gone from like, physical therapist, to teacher, to nurse, to police officer.

A few students indicated that their parents would support any choice they made, as long as they would be happy and obtain a college degree. One participant indicated that her father is desperate for her to finish school as quickly as possible so that she can return home, work, and help him support their family in the absence of their mother: In her father’s mind, a career in nursing for his daughter is more quickly attained, and the financial compensation she would receive would help his struggling family. In this last example, this participant’s father views a career in nursing for his daughter as a practical remedy to financial and familial instability.

308: Beth- My Dad was like, "Just do nursing." My aunts are like, "Oh, just do nursing." My Dad is kind of, so he’ll be like, "Oh, just do nursing." Because my Mom wasn't at home and my Dad was the only one there… They wanted me to be like the second Mom to my brothers so they wanted me to finish up with schooling and support myself so that I could go home and be with, raise my brothers.
Path to Professionalization for Some

Participants in this study seemed to view nursing as a practical career that is easily and readily attainable and requires less time and money spent on education. However, some indicated that nursing careers were common and better suited for those with lower academic aspirations or fewer resources. Nursing’s popularity as the path to professionalism for immigrants was validated on member checks. Participants from countries other than the U.S. agreed that nursing provided friends and family members who immigrated to the U.S. with the opportunity to live the American lifestyle, and noted that nursing is a good career for those who came here with fewer resources.

One participant enthusiastically stated that nursing would have been a wonderful career for his mother given the limited resources she had coming to the U.S., but not for himself, considering the greater opportunities he has in the U.S. In the statement below, this participant describes the advantages he perceived his family could have had had his mother been able to pursue a career in nursing, and describes feeling that he himself has to do more to capitalize on the advantages he has here in the U.S.

Member Check 301: Michael- Yeah, oh yeah, I totally agree. It's definitely a step upward for some people. I know my mom, if she had gotten a chance, she would have hoped to be a nurse. To her, that was like, that would be the best case scenario because in her circumstances [African immigrant/single parent], if we had gotten here earlier, she would have been able to go to school and get her nursing degree. That would have been a major, oh yeah, like a Bachelor's degree or something? I could have had a family and lived comfortably. That would have been a great, that would have been great for her. I think under other circumstances, it's going to be a step forward for a lot of people. Probably not in my case because now that I'm here [in the U.S.], I'm the only, I have no excuse. I should be able to do something greater, and so I'll probably be able to be a doctor.
Others confirmed that a career in nursing, if not appealing in terms of career mobility for themselves, is still a step up for some.

310: Candace- OK. Um, I think it’s a respectable position but I also feel like it’s very, it’s very common. Like I see more and more of my, um, former high school friends are there, like, where [her high school] actually not so many people went to college. Going into nursing …people that I went to high school with, that’s their career aspiration. So I think, yeah, I think by the, I think it’s respected in, you know, my demographic…

319: Chiamaka- My mom… her also being [a nurse], I have lots of like family who were in the healthcare business. My aunts, I have uncles like literally all my aunts are like either nurses. My pastor’s wife is a nurse, um. There is a lot of so, so it's just nurses everywhere. Everywhere, literally. Everyone [Nigerian community], I don't know if they find it the most easy or I don't ... I think it's more promising like they will definitely get a job. There is always jobs in healthcare. It's like everyone who comes here is like “Oh, I'll just be a nurse.” It's like everyone who comes here is like “Oh, I'll just be a nurse.” I think it’s easier…Definitely.

**Reverse Career Momentum for Others**

Nursing might provide the path to professionalism, or be a step up for some. However, for most of the participants in this study, and in some case their parents, a career in nursing would represent failure, as the following exemplary quotes illustrate. At best, a career in nursing would be considered a fallback plan if their plans to become MDs and researchers did not materialize.

301: Michael- Nursing has crossed my mind as a career path but I just always felt like a doctor, so I don’t know. I didn’t really like look into being a nurse but I’ve always looked, researched about nursing, how much they make, what the job entails and stuff like that. It’s something, if all else … If I don’t get into anything [med school], it’s something I would definitely consider doing. …if I had no choice of being a doctor … it’s just not a career that I picture myself being in… just because I just see myself as a doctor. I like to be the major roles,
I’m just … I want to be like major big position type of person. I feel like I would have more to offer, I guess…

**Experience with Nurses: Helps or Hinders Desirability?**

Participants who had prolonged experiences with nurses, especially those in advanced practice roles, tended to be the most positive about the nursing profession. Nurses in family may help or hinder the perceptions of nursing, possibly depending on whether that person is a “nurse” or an RN. In some cases direct observation or personal relationships with RNs enhanced their respect in the eye of the participants. Direct and prolonged contact with RNs, especially those in leadership and advanced practice roles, enhanced the respect for and desirability of nursing careers.

318: Ryan- I think from patients, that's different. I think a lot of patients, because they're the one sitting in the bed most of the time, calling for the nurse and the nurse is always there to respond to them. I think they realize like, "Wow, you are a miracle worker. You're there all the time. I appreciate your company too. You're helping." Because being in the hospital because of my cousin or being in a hospital myself, you know doctors kind of take a long time sometimes. I mean, they're busy. They have a lot of other patients. They have to do other things. But you rarely see the doctors. They come in and out. In my experience, doctors are never on time. Sometimes I've never seen a doctor. I had to stay in the hospital once for a week. My doctor didn't come in for two days. I didn't get to see him. You know, nurses are there all the time. So, when you're a patient I kind of think that you eventually, kind of, after seeing it from that perspective you're like, "Wow, they do work their butt off." And "They are awesome." I feel like patients do, eventually if they already don’t, they gain the respect.

Other participants are put off of nursing careers because of stories they have been told or by the way “nurses” (often referring to CNAs and LPNs) in their families have been treated.

304: Íñes- …my family members are nurses too, or like nurse's assistants, and like the way they get talked to is just like ... because
their job is like cleaning people, you know, and sometimes they get talked to really inhumanely, you know. So, and it's just not for me.

319: Chiamaka- She, yeah. She [mother who is an LPN] used to come back and like tell about her crazy patients and she would always would come in like disheveled like, everyone would be like “How was your night, how was your day?” She would be like “Oh, I don't even want to talk about it right now. It's too long, like I just ... I just thank God I was able to make it home. These people are crazy. There're trying to kill me.” And like, not even the patients, the nurses themselves there's a lot of drama in there. The cattiness, like it's, it's heavy in there. …she was never really around too a lot when we were younger. We were with our dad. She was always at the hospital. She either worked 3-11 or like 11-7, so she was always at the hospital.

Perceptions of Nurses: Limited Effectiveness as Role Models

On member checks, all 15 participants agreed that in their view, nurses are under-respected and that as a profession, nursing is not especially powerful in terms of its ability to improve the image, contradict or disprove negative stereotypes of African American race and culture. See section headed “Member Checks,” subheading “Comments on Theme 3.”

Summary: Perceptions of Nursing

The participants in this study characterized nursing as a limited profession. The majority of study participants commented favorably on the nurse-patient relationship. Their less positive observations about nursing tended to focus on issues of respect, power, and career desirability. The results indicate that for this group of participants, nurses are barely visible beyond the bedside, and that there is a lack of clarity about professional nursing. The role of the RN is overshadowed by that of the MD, and often confused with that of any female caregiver in the healthcare arena. The participants perceived nurses to be doctors’ helpers, with limited ability to influence
patient care decisions and treatment outcomes. Although the participants believe that nurses earn a decent salary, they noted that they are inadequately compensated for the hard, and sometimes ‘dirty’ work, and difficult work schedules. Therefore, they tended to view nursing as a less than ideal career option. At the outset of this study, none of the participants desired a career in nursing, however, on member checks, they agreed that for others, nursing might be a step-up or an accessible path to a professional career. The majority of participants in this study indicated that they, and in many cases their parents, would view a career in nursing for themselves as their failure to attain the ideal career.

**Member Checks**

Member checks were completed with 15 of the 20 study participants. Each theme from the study was read to the participant and each participant was asked for her or his reaction to that theme. Not only did participants validate all of the themes of this study, in some cases, they offered additional information which clarified, strengthened, or continued the discussion for certain items. The first two themes about the internal and external influences of career behavior were mostly descriptive in nature; therefore, all of the participants tended to accept them as being valid without offering much in the way of further comment. The themes that concerned career ideals and perceptions of nursing tended to generate the most conversation. The participants’ responses to the study themes are recorded in Figure 3. A “Y” in the column connotes agreement with the corresponding theme. A “Y” with an attendant hyperscript number indicates that the participant made a specific comment on that particular item or theme. The participants’ comments follow Figure 1.
<table>
<thead>
<tr>
<th>Participant ID</th>
<th>30</th>
<th>30</th>
<th>30</th>
<th>31</th>
<th>30</th>
<th>30</th>
<th>31</th>
<th>31</th>
<th>31</th>
<th>32</th>
<th>31</th>
<th>31</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Theme 1: Career Development: Internal and External Contributions</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>3. Theme 2: The ideal career: Profession with Power to:</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>- Live and work with a high degree of autonomy</td>
<td>Y1</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>- Personally affect change and help others</td>
<td>Y2</td>
<td>Y1</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>- Be a positive African American role model</td>
<td>Y3</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>- Disprove negative stereotypes about African American culture</td>
<td>Y4</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>4. Theme 3: Perception of Nursing: A Limited Profession</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>- Negatively stereotyped profession</td>
<td>Y1</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>- Path to professionalization for some</td>
<td>Y2</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>- Reverse career momentum for others</td>
<td>Y3</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>- Limited power: RN to MD comparisons related to power differential</td>
<td>Y4</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1  Member checks: Participants' responses to themes.
Comments on Theme 2: The Ideal Career: Profession with Power

There was unanimous agreement amongst the 15 participants on member checks about the power of a career in STEM or in medicine to position oneself to enjoy professional autonomy and lifestyle freedom and to affect change in people’s lives. All 15 participants agreed that the title MD or PhD would afford them with the opportunity to be a role model for others, especially other African American students. The participants verbalized enthusiastic support for the idea that a career in research or medicine would afford them the opportunity to be a positive role model and a source of encouragement for other African American students. All 15 participants, when specifically asked, unanimously agreed that this positive role model theme could be extended to include that a career in medicine or other STEM field allows them to disprove negative racial stereotypes about African Americans. They also agreed that careers in fields that required advanced degrees, especially those that bestow the title “doctor,” effectively disprove negative stereotypes of African American culture. Comments about the importance of disproving negative stereotypes of African Americans through attaining careers that afford them professional power ranged from:

302: Leah - “I agree 100%!”

to:

312: Cayla - “Yeah … It’s not something that is my driving force [disproving stereotypes], but I would say if it happens I would be overjoyed with that too. I think it’s important…”

Following are some additional comments that participants made during member checks, expanding on the idea of MD as the quintessential role model with the most power to stand in contrast to negative racial stereotypes:

306: Arielle\(^1, 2\) - My personal opinion, I think a physician [more powerful than RN to disprove stereotypes]. I don't know if I'm biased,
I just know that seeing… I guess it's the authority position …seeing an African American, or somebody who may have battled stereotypes to get where they are, just really is empowering. For me, it's, "If they can do it, I can do it too." Whereas, as a nurse, I feel like it's a little bit easier to get there. To become a doctor, you have med school, you have multiple hurdles to go through. I think with nursing, you go to undergrad, and then you take a test and you become a nurse. I guess that's just how I look at it. It's more of an accomplishment, I guess you could say, becoming an MD. I guess because, it's more of an accomplishment because you had to put in more work, you had to sacrifice more things, and do all that. It makes it a little more powerful to see somebody of color, or a minority, or somebody you look up to in that position. It makes you really want to follow in their footsteps. Yes, I am for sure [motivated to break stereotypes].

302: Leah\(^1\)- I would say that, yes. I think it's cultural [motivation to be an MD] because well you don't see a lot of people who are in these positions…African Americans in these positions [medicine], so you're motivated by those externally. Yeah [agrees with themes], especially the last one [agree that disproving negative stereotypes is motivator]. Yes, I agree. I do, I really do. You did a good job. That was good, it was spot on. Yes, because I know stereotypes seem to be a huge. Like here (name of school) people approach me saying I talk like a white person or I sound white and if you think about it, that's really an insult because what does sounding black mean to them? That…it’s interchangeable with sounding uneducated which is insulting. So I guess it's leading by example…so like proving that um…what defines you type thing…

305: Adessa\(^1,\(2\)- I think that... That part is like … there is a lot of truth to that part [African American MD has power to be positive role model and disprove stereotypes], because I know people ... The way to get people is through like visuals, and they won't believe you until they see it, until like once you get into that type of position where you're like successful, and you'll be able to provide a positive image, because people can believe you because they've seen it. You're living proof that it can be done. Yeah. I would definitely go further [beyond being just a role model, that MD disapproves stereotypes] to say an African American, or any minority, in that case, because you don't see a lot of minorities in that position [MD], or in a type of leadership role…You don't usually see that in this career [African Americans in medicine].
301: Michael\textsuperscript{1, 2} - Yeah, there's respect that comes with it [title of MD]. Do I want to convey that to others in the Black culture? Yeah, I do feel that way. I definitely feel that way. So yeah. It does have more power [MD title], being a medical doctor than actually being a nurse.

Comments on Theme 3: Perception of Nursing: A Limited Profession

All 15 participants agreed on member checks that they see nursing as a limited profession and a negatively stereotyped field. All agreed that nursing is perceived as less powerful, especially in comparison to physicians, yet most reiterated that nurses spend the most time caring for patients, and therefore the nursing profession should be more respected. Following are two additional comments that are representative of those that participants made during member checks about limited nursing power:

309: Jeremiah\textsuperscript{1, 2} - I don't think that nurses have the same type of influence [power to affect change and disprove stereotypes], even though the nurses spend more time with the actual patient than the doctor does.

317: Eden\textsuperscript{4} - I would say that it's [nursing] less powerful. People see it as lesser because you don't need as much education to do it than to be a doctor or PA. People just see the more education that you have, the more prestigious it is, the more power you have. That's probably what people are thinking.

All participants agreed that for some individuals, nursing careers provide a path to professionalization, but most agreed, not for themselves. Thirteen participants agreed that switching their major to nursing would constitute reverse career momentum. However one participant indicated during member check that she had changed her major to nursing over this past semester and another maintained his steadfast allegiance to nursing as a respectable career option throughout this study, having had a positive experience with a nurse mentor. Several participants commented that nursing is becoming more respected as the knowledge of advanced
practice roles increases. Below are several participants’ responses to the idea that nursing provides a career path to professionalization for some, while for others, a career in nursing could be viewed as reverse career momentum or a step backward:

302: Leah\textsuperscript{2, 3} - I remember my Dad was the one that was like, "No, you're not going to be nurse. Don't come back here saying that. You got to be the highest." So yeah, I would agree with that [reverse career momentum]. And I think that being a woman too has something to do with it because back when my grandma was younger, that's what women would do in the hospitals; they were all nurses, there were no men. And I remember she was a nurse but it wasn't ... she didn't have a lot of money...my Dad and my uncles had to temporarily go into foster care. So that didn't seem like it was a position of power, especially when so many other women were nurses. So I think that's where my Dad gets that idea from, that nurses are not the ultimate goal to reach.

317: Eden\textsuperscript{2, 3} - Oh I agree. I think it's [nursing] a good living. It's a step up from a retail job or anything like that. It's more money, and I guess have a little bit more freedom. I don't know, sometimes in the back of my mind, well even if he wanted to be a PA that is 2 more years. Why don't I just go through with that and then make more money?

Several participants, during member checks, volunteered that they believe that nursing’s image can or will change.

305: Adessa- If you were to ask this question a couple of years ago, I would have said “Yes. Doctors are at the top, and nurses are somewhere underneath that.”, but personally I think it's starting to change. Sometimes you won't even get to see a doctor when you're in the emergency department. You see the nurse, and then they tell you what's going on, and then that's how it goes, and then the doctor comes in briefly, writes out the prescription, and then you go. So, personally, in my mind is that it's going to change, and that's what I think.

316: Toni- I feel like now since I actually know more about nursing, especially since after I had talked to you previously during the summer because now you're getting your PhD in nursing. I didn't know that and now learning more about what a PhD is, you have the power to do and research anything that you really want to. I think now after actually knowing about it and not being ignorant to it, I'm able to understand going into nursing is just as powerful as going into a different field.
because then at the end of the day, you'll be able to research whatever you want to or do whatever you to.
Chapter 5

SUMMARY AND DISCUSSION

As noted in Chapter 1, scholars suggest that the problem of health disparities might be addressed, in part, through diversification of the healthcare workforce (IOM, 2011). Stakeholders in nursing education have undertaken various initiatives to recruit and retain African American students, as well as students from other underrepresented minority groups, to collegiate nursing programs. Much of the literature about diversification of the nursing student body focuses on preventing the failure and attrition of students from underrepresented, and often times disadvantaged, racial and ethnic groups. The recruitment and retention literature suggests that many of the students who are recruited from underrepresented racial and ethnic groups struggle with college-level courses, due, in part, to inadequate academic preparation. Unknown is how African American undergraduates, especially those who have been preparing for careers in non-nursing science or STEM fields, view nursing as a profession and career option for themselves. The perceptions of African American undergraduates who demonstrate an aptitude for math and science and are non-nursing science and STEM majors may offer insights that could inform strategies to attract similarly prepared students to nursing science.

Therefore, the purpose of this study was to explore the career behaviors and elicit the perspectives held by African American undergraduate non-nursing science STEM majors about nursing careers. The internal and external motivators of career choice and the career ideals of African American undergraduate non-nursing science
majors were described, providing information about the lens through which this group of students perceived careers in nursing. The goals of this study were to (a) add to the existing body of knowledge about the recruitment of African American students to baccalaureate nursing programs, (b) obtain insight into the career behaviors and ideals of this group, and (c) gain information that might inform strategies to enhance the recruitment of academically talented African American science majors to nursing.

This study sought to answer the following five research questions:

1. What are the person inputs and internal, self-directed cognitive processes (i.e., values, worldviews, and beliefs) associated with African American undergraduate non-nursing science majors’ career behavior?

2. What are the external influences (i.e., parental support, community, environment, culture, and learning experiences) associated with African American undergraduate non-nursing science majors’ career behavior?

3. What are the career ideals of African American undergraduate non-nursing science majors?

4. What perceptions do African American undergraduate non-nursing science majors hold about the nursing profession and nursing careers?

5. What strategies gleaned from the perceptions of nursing held by non-nursing science African American undergraduates could nurse educators implement to attract students from this underrepresented minority group to nursing?

As previously noted, 20 African American non-nursing science majors from colleges in the U.S. completed semi-structured face to face (in person or via Skype) interviews, and 15 of those participated in member checks with the researcher. Data
collection and analysis spanned approximately six months. Miles et al.’s (2014) methods were used to analyze the data.

Three themes were identified in this study:

1. Career Development: Internal and External Contributions
2. The Ideal Career: Profession with Power
3. Perception of Nursing: A Limited Profession

A review and discussion of the study’s themes follows in the next section.

Discussion of Results

Theme 1: Career Development: Internal and External Contributions

Lent et al. (2002) noted that social cognitive variables are the mechanisms by which individuals exercise agency, and that these cognitions, which become the building blocks for career development, do not arise in a vacuum. Fouad and Bingham’s Spheres of Influence model (1995) illustrated that career behavior is shaped by gender role expectations, family expectations and values, racial and ethnic group identity, and the expectations of the dominant culture. For the participants in this study, career behaviors emerged as the result of the interplay between internal and external forces such as the ones described. Personal attributes, person inputs such as gender, race, and ethnicity, and external contributors such as parents (family) and experiences with healthcare and illness had implications for career behaviors.

The narratives of the participants in this study highlighted the contributions of person inputs, such as health status, gender and race, and personal attributes, to the development of their career ideals and perceptions of nursing. Over half of the participants in this study described a striking connection between their spiritual beliefs
and their career choice. Their desire to provide care for others, for some participants, has become a higher calling.

There are multiple external influences and experiences that have relevance to career choice. However, in this study, the two most talked-about external contributions to career behavior included parents (family) and experiences with healthcare and illness. There are images of families uninvolved in the education and success of their children; however, the participants in this study noted the substantial contribution of families, especially that of parents, in their career development. They described the contribution of career messages from parents and the effects of the presence or absence of emotional, material, and cognitive support from parents on their career behavior. Messages they had received from parents and family about race and culture also had a bearing on the participants’ career behavior, and learning experiences related to healthcare and illness also contributed to the development of participants’ desire to become doctors and researchers.

The internal and external contributions to the participants’ career behavior in the context of existing knowledge and the relevance to nursing will be discussed.

Internal Contributors: Age, Gender, Race/Ethnicity, Personal Attributes, Spirituality

Age has a bearing on perceptions of careers. The findings of this study are consistent with the research of others who noted that career ideals and images of nursing are dependent on age (May, Champion, & Austin, 1991) and those who noted that youth frequently have a singular career focus (Hemsley-Brown & Foskett, 1999). However, the process of career development is complex (Lent et al., 2002; Fouad & Bingham, 1995) and there may be flexibility in the final choices young people make.
Participants in this study described the evolution of their career interests, and several have changed their majors even after entering college. All of the participants in this study were focused on obtaining terminal degrees in research and medicine; however, several discussed the need to remain flexible and acknowledged the need to consider backup career plans, especially if their plans to attend medical school cannot be realized.

Hemsley-Brown and Foskett (1999) noted that the medical knowledge and skill associated with nursing was invisible to “virtually all young people” (p. 1347). Participants in this study were, at best, only able to discuss nursing in terms of basic tasks and RN to MD comparisons. In addition, the findings of this study suggest that students’ perceptions of nursing may become less positive as they become older and as they become more aware of issues of status and respect (Hemsley-Brown & Foskett, 1999). Several of the participants in this study had considered nursing as a career option in their formative years; however, at this point in their career development, as undergraduate students, they have come to view nursing as a profession with limited status, respect, and power.

In this study, male and female participants alike viewed nursing as a negatively stereotyped career field dominated by women. Several authors noted that men, especially those who are younger (Hemsley-Brown & Foskett, 1999; Campbell-Heider et al., 2008), are disinclined toward nursing, viewing it as a feminine career. The results of this study support the finding that young men perceive nursing as a field most suitable for women, which for some, makes it an undesirable career option. However, one male participant considered a career in nursing after a prolonged shadowing experience with a nurse. The women in this study tended to view nursing
as a stereotypic career for women, which, consistent with the research of Seago and colleagues (2006), may have contributed to their disinterest in nursing and their tendency to label nursing as a ‘common’ and ‘subordinate’ career. Combined with racial stereotypes, this compound stereotype made nursing unappealing to most of the study’s female participants.

Spiritual beliefs can be motivating and sustaining for undergraduate students who intend to pursue advanced degrees and careers in medicine. All of the participants in this study noted their desire to help other individuals and groups, and over half described a spiritual dimension to their caring ethic and their career choice. Whether motivated by a sense of obligation to improve the lives of others, or the belief that God wants them to serve others in the role of physician, approximately half of the participants described their career choice as a vocation. For this group of participants, the belief that there is a higher power at work in their lives and career trajectory not only motivated them to pursue careers in medicine, it also helped them to persevere in the face of uncertainties, challenges, and obstacles. Perhaps undergraduate nursing majors are motivated by a similar spiritual calling. What is unknown is whether or not non-nursing science majors who desire careers in research and medicine would perceive nursing as fulfilling the need to connect with a higher power to provide service to others.

The primary motivation of students who pursue nursing is the desire to help others (Helmsley-Brown & Foskett, 1999). All of the participants in this study also described being motivated by a strong caring ethic, and consistent with the findings of others (Helmsley-Brown & Foskett, 1999; Mendez & Louis, 1991; Reiskin & Haussler, 1994), their desire to care for others has not translated to a decision to enter
the nursing profession. When directly asked, the participants were aware of nurse caring and were able to see nursing as a field in which they could channel their desire to care for others; however, they indicated that it a career in nursing was not what they were seeking. Mendez and Louis (1991) noted that the image of nursing does not favorably compare to that of students’ ideal careers. The reasons for their preference to provide care for others in a field other than nursing varied and will be discussed in a subsequent section. However, as a whole, students’ perceptions of nursing as a career with limited respect and power were a deterrent to choosing it as a career.

**External Contributors: Parents and Learning Experiences**

Parents’ interest in education and career aspirations for children was identified in this study. Parents expected their children to obtain a college education. Consistent with earlier research, students’ awareness of the importance of financial and job security frequently comes from parental coaching (Helmsley-Brown & Foskett, 1999). All of the participants, regardless of socioeconomic status, noted that their parents expected that their child’s education, at a minimum, should afford them with financial and job security, if not upward social mobility. Some parents desired more than career stability for their children and were quite vocal about those expectations. The parents who wanted careers in medicine for their children seemed to be, based on the comments of the study participants, as captivated by the superior image of the physician as were the participants themselves.

Consistent with earlier nursing research (Mendez & Louis, 1991; Campbell-Heider, Sackett, & Whistler 2008), most of the students in this study indicated that their parents would not enthusiastically encourage them to pursue an undergraduate degree in nursing, especially those participants who parents thought them to be more
academically proficient than their siblings. Several participants noted that their parents would question the need to finance four years of education for them to obtain a nursing education that could be completed in a two-year Associate’s degree program. Campbell-Heider, Sackett, and Whistler (2008) noted that parents did not always understand the benefits of a baccalaureate degree in nursing. Perhaps they do not view nursing as a profession or the RN as a white-collar professional.

Emotional, material, and cognitive support from parents (Higginbotham, 2001) was found to be instrumental in the participants’ career behaviors and crucial to their ability to successfully navigate academia and remain on their chosen career track. The majority of the participants in this study indicated that they had the emotional support of at least one parent or guardian. Consistent with the findings of Higginbotham (2001) and Blackmon and Thomas (2014), the participants in this study who had cognitive support in the form of academic coaching and parental advisement about navigating dominant culture and intergroup interactions proved to be effective networkers and had a stronger sense of confidence in their career pursuits.

As noted in Social Cognitive Career Theory, learning experiences contribute to career behavior. Participants could recount, in startlingly clear detail, experiences that had a direct bearing on their career choices. These experiences fell under three broad categories: heroic physicians, ill family members, and a broken or socially biased health care system. These experiences left lasting impressions that contributed to participants’ desires to help others and affect change in their roles as future physicians and researchers. Interestingly, the role of the nurse was rarely mentioned in any one of the participants’ stories about experiences with health, which highlights the poor visibility of nursing.
It is worth noting that participants reported very little input from teachers, guidance counselors, and other school officials about careers. Mendez and colleagues (1991) noted in their study of college students’ career choices that a large percentage of the students were unable to answer how their guidance counselors might respond to nursing as a career choice. Several participants in this study noted faculty members in high school who were friendly or generally supportive; however, none reported receiving tangible career advisement from this group of professionals. One participant noted that a biology teacher advised her to pursue biomedical engineering. However, she found this advice to be poorly suited to her given her limited skills in advanced mathematics. Further investigation may be warranted. Is this group of students reluctant to seek help and advice? How well are they known and do they have nurturing, supportive relationships with teachers and school officials? Are they overlooked in school? Is this experience typical of most high school students?

Career Development: Relevance of Findings to the Profession

Research suggests that youth have very little knowledge of nursing skills and that positive images of nursing erode as young people age and become aware of professional power (Hemsley-Brown & Foskett, 1999); therefore, it is important to make the full scope of nursing careers visible to middle school and high school students. The participants in this study described a caring ethic that is compatible with nursing. However, in their estimation, nursing does not provide the optimal avenue for the transformative caring that they desire to provide. Research suggests that there is flexibility in career development as students become more mature and experienced (Lent et al., 2002; Balogun et al., 2005). In fact, several of the participants in this study have changed career trajectories during their undergraduate years, and there may
be more who will adjust their career targets. It is possible that not all of the participants who desire careers in medicine will continue on to medical school. What is striking is that much of the care many of this study’s participants want to provide (i.e., primary care, family, community and public health) can be delivered by APNs; however, the participants in this study did not realize that APNs are predicted to be on the forefront of delivering this care (IOM, 2011). Perhaps if students were given information about the complexity of nursing careers and the variety of higher level opportunities that exist within the profession, those who are motivated to care for others in leadership positions might see nursing as a career option.

Students with an interest in medicine who were considering backup plans to medical school frequently mentioned careers as physician’s assistants (PAs). They heard about the role of the PA through friends and internet searches. None of the students in this group had considered advanced practice nursing as a backup plan, as for the most part, they were unaware of the APN role. For example, many of the students who expressed an interest in medicine were unaware that APNs have prescriptive privileges and are able to prescribe medications. It is unclear as to what the perceived advantages of the PA are over those of the APN, other than the participants who spoke about being a PA thought it was the next logical step down in the medical hierarchy, or the closest they might get to becoming a physician.

One male participant, Ryan, who had a prolonged shadowing experience with a critical care RN, did not dismiss nursing as a feminine career. The question must be asked whether or not other men could be interested in nursing careers if given the opportunity to participate in immersion experiences in nursing. Research supports the value of nurse role models (Grossman et al., 1989; Mendez & Louis, 1991; Kersten,
Bakewell, & Meyer, 1991; Kohler & Edwards, 1990; Cohen et al., 2004) and nurse shadowing programs (Porter, Edwards, & Granger, 2009) in the improvement of attitudes and perceptions of nursing. Would a prolonged shadowing experience such as the one Ryan described change the minds of men and enable them to see and consider careers in nursing?

Pool (2012) noted that nursing is invisible to students and parents as a positive career choice. It is just as important to make nursing visible to parents as it is to students. Parents must also be given current information about the full scope of nursing and opportunities within the profession. It is crucial that parents who send their children to college understand the difference between the associates (ADN) and baccalaureate (BSN) degrees in nursing, and the implications of each for future employment and advancement to APN and other leadership roles.

Experiences with health care and illness, both positive and negative, left lasting impressions on the participants in this study and contributed to their career behaviors. The absence of nurses in their memories of these events was noted, which attests to the decreased visibility of the nurse. Kersten et al. (1991) noted that “Nurses influence an individual’s perception of nursing and subsequently his/her choice of nursing as a career” (p. 32). Nurses need to remember, in the course of their interactions with patients and their loved ones, that they have the responsibility to represent the profession in a positive light and can serve as role models that encourages others to enter the profession.

Theme 2: The Ideal Career: Profession with Power

This theme describes the career ideals of the undergraduate non-nursing science majors in this study and depicts the lens through which this group of
participants views careers in nursing. The results of this study indicate that for this group of STEM-oriented African American non-nursing science majors, the most desirable careers are those that offer them the power to (a) live and work with a high degree of choice and autonomy, (b) help others and personally affect change, (c) be a positive role model of African American culture, and (d) disprove negative stereotypes about African Americans. The participants in this study were motivated to care for others, personally affect transformative change for individuals and populations, become a positive African American role model, and enjoy professional autonomy and lifestyle freedom. They perceived that the title of ‘doctor’ will represent them to society as highly educated men and women and afford them the power to accomplish and attain all of these things to a degree that the title ‘nurse’ cannot. The title of doctor, especially MD, in the participants’ view, has the power to disprove negative stereotypes about African American race and culture. However, many participant perceptions of MDs were as equally misinformed and misconstrued (albeit in a positive valence) as their negative perceptions of RNs.

Image of the Physician: Universally Powerful

The results of this study support the research of others who noted the worldwide prevalence of the superior image of the physician (Kalisch et al., 1982; Champion et al., 1987). The powerful image of the physician overshadowed other career options for many of this study’s participants, and contributed to the limited visibility and desirability of nursing careers. The results of this study also seem to suggest that the image of MD is powerful enough to obscure problems related to the medical profession. Participants, even when directly asked about the downsides to a career in medicine, demonstrated no awareness of the problems associated with
medicine (i.e., high cost of medical education/student loan burden, insurance and billing, healthcare administration, our litigious society, and the current economic climate that does not seem to support physicians in private practice). As one participant noted, doctors have nothing left to prove, other than themselves to other doctors. Participants’ positive images of medicine (as well as those held by their parents) may be as overinflated, superficial and as poorly informed as are their negative perceptions of nursing.

**Discussion of Pilot Research: Power**

As previously noted, the following five themes were identified in the pilot study co-investigated by this researcher:

1. *Blind to Nursing as a Career Option: Image of Medical Doctor (MD) Eclipses RN.*
2. *Nursing Exists within a Medical Hierarchy/Continuum.*
3. *Dependence/Independence Dichotomy: Nurse Practitioner as the Bridge.*

In this study, most of the themes from the pilot research remained relevant; however, their meanings were clarified and deepened. Most notably, the second theme, *Nursing Exists within a Medical Hierarchy/Continuum,* was found to be partially inaccurate. Although participants in this current study did tend to speak about the medical field in a very comprehensive way (i.e., include both MDs and nurses under the umbrella of ‘medical field’ during their discussions), they were in fact quite aware that nursing is a separate discipline.
In this study, it became clear that participants viewed nursing as existing on a lower level in the healthcare hierarchy, not as part of a medical profession continuum. As in the pilot study, students frequently described the work nurses do in relationship to the work of physicians, and engaged in comparing nurses to doctors in almost every career aspect: roles, tasks, patient engagement and respect. The tentative conclusions in the pilot study stopped short of the heart of the matter. The current study clarifies that when participants engaged in nurse-physician comparisons that they were actually describing the power differential, real and perceived, between the two professions. Again, the results of this study demonstrated that nursing is perceived as a limited profession and a negatively stereotyped field, especially in comparison to careers in medicine. The findings of this study suggest that nurse-physician comparisons are about perceptions of power, not discipline confusion, as originally suggested in the pilot study. The suggestion that nurse-physician comparisons is about the power differential of the two professions is supported by earlier research (Champion et al., 1987).

**RN-MD Comparisons: Power**

This study illustrated that the comparisons participants regularly made between physicians and nurses were largely about the power differential between the two professions. Champion and colleagues (1987) noted the cross-cultural image of nurses as being kind and active, and noted that these attributes ascribed to nursing have neither knowledge nor independence associated with them. The same researchers noted that the cross-cultural reputation of physicians was described as knowledgeable, independent, and powerful. However, across most cultures, kindness was not an attribute ascribed to physicians (Champion et al., 1987). As previously noted, the
participants in this study valued nurse caring and the nurse-patient interaction and many of them described wanting to become caring physicians. Therefore nursing should highlight the advantage that nursing has in terms of forming therapeutic relationships with patients and engendering healthcare consumers’ perceptions of nursing kindness and caring.

**Power and Role Modeling**

Fouad and Bingham’s Spheres of Influence model (1995) illustrated that career behavior is shaped by gender role expectations, family expectations and values, racial and ethnic group identity, and the expectations of the dominant culture. The influence of gender and family expectations has been demonstrated. The results of this study described one of the ways dominant culture has contributed to this group of participants’ career behaviors. The influence of dominant culture has inspired all of the study participants to not only contradict negative stereotypes of African Americans but also resolve to become role models who encourage and assist others from underrepresented (or even oppressed and disadvantaged) groups to attain similar levels of achievement. As noted previously, study participants perceived that the title of “doctor” will afford them with maximum credibility to be an influential role model, and very few believed that a nursing career would be as powerful or effective in this regard. The results of this study build on the findings of others about physician superiority and advance the suggestion that the physician’s image is perceived as having the power necessary to disprove negative racial stereotypes.
Ideal Careers: Relevance of Findings to Nursing Profession

The results of this study are consistent with the findings of others that indicated that the physician-nurse comparisons contribute to the erosion of perceptions of nursing (Degazon & Shaw, 2007; Seago et al., 2006; Helmsley-Brown & Foskett, 1999). Champion et al. (1987) ascertained that worldwide, physicians are not noted for kindness. Nursing should capitalize on images of skilled nurse caring and highlight nurse caring in leadership roles, public policy, and primary care.

As noted, some participants in this study were unsure of their ability to attain admission to medical school, and it seems likely that not all 17 of the participants with aspirations for careers in medicine will stay on that career path. It is also interesting that of these 17, only two were considering careers in surgery. Fifteen participants expressed an interest in careers in primary care, neurology, psychiatry, and anesthesiology, fields in which APNs are making a significant contribution. A nursing career might provide participants with the opportunity to channel their desires to care and provide help for others, and balance that with their desire to attain power and autonomy. Therefore, it is important for the participants and their parents alike to have accurate information on the full scope and benefits of nursing careers. The results of this study build on the findings of others about the desire for careers with power and advance the suggestion that careers with power carry the added prestige of challenging and disproving negative racial stereotypes.

Theme 3: Perception of Nursing: A Limited Career

Seventeen of the 20 participants in this study desired careers in medicine, and only three had considered nursing as a career possibility. As noted, the majority of the study participants made favorable comments about nurse caring and the nurse-patient
relationships, and all stated that nursing does not get the respect it deserves. In fact, most of the participants agreed on member checks that nursing is a negatively stereotyped profession and that neither they nor their parents perceive nursing as an ideal career.

**Respect and Power**

The results of this study indicate that to this group of participants, nursing is a less visible, task-oriented career and that the title and role of professional nurses are often confused with those of less educated healthcare staff. The participants value the nurse-patient relationship and believe that careers in nursing provide a decent living for some. They perceive that nurses have limited autonomy and few opportunities to personally drive and affect substantive change. The participants also indicated that the image of nursing is not one that is generally associated with higher education and prestige, and in that regard, nurses are not powerful role models. The results of this study also indicated that interpersonal and professional experiences with RNs, especially those in advanced practice roles, increased the awareness of the scope of nursing practice, and improved the participants’ image of professional nursing.

This particular group of participants described personal values that are compatible with nursing. For example, every one of the participants disclosed the strong desire to help others, and all of the students conveyed their respect for the nurse-patient relationship and admiration of nurse caring during their interviews. Still, as noted in earlier studies (Helmsley-Brown & Foskett, 1999), these favorable perceptions of nursing did not evolve into a determination to pursue nursing careers. The majority of the participants indicated that neither they nor their parents perceive nursing as an ideal career, and that almost every one of them perceived nursing as a
limited, subordinate, or negatively stereotyped profession. Participants acknowledged nurses for their hard work despite being underappreciated by physicians and the general public. The data from this study indicate that in spite of their positive comments about nursing, the participants generally perceived nurses as having limited power and a station that is relatively low in the medical/hospital hierarchy, performing the dirty or undesirable tasks the physician does not want to do. Nurses are all but invisible background players in today’s hospital television shows, and participants tended to define the profession by the most fundamental tasks that nurses sometimes perform. The participants perceived the nurse’s power to help others as being confined within the limits of the physician’s supervision.

It seems likely that the participants’ reluctance to enter nursing stems from their perceptions that nursing (a) does not get the respect it deserves from physicians and society, (b) is a career choice that their parents might not enthusiastically support, and (c) is a negatively stereotyped profession with little power. The participants viewed nursing as having limited power to (a) live and work with a high degree of choice and autonomy, (b) help others and personally affect change, (c) be a positive role model of African American culture for others, and (d) disprove negative stereotypes about African Americans. These perceptions of limited nursing power, in part, stem from the invisibility of nursing and a lack of information about the full scope of nursing practice. Reichelt (1988) noted: “In order for an occupation to attain the status and power of a profession, the public must perceive it as such” (p. 427).

**Nurse Caring: Respected Profession or Service Occupation?**

The findings of this study demonstrate that students value the caring ethic of nurses and the nurse patient relationship. These findings are consistent with the
findings of Cohen and colleagues (2004) and as noted by other researchers, the desire to care did not translate into the desire to become a nurse (Helmsley-Brown & Foskett, 1999; Mendez & Louis, 1991; Reiskan & Haussler, 1994).

Participants claimed to desire hands-on roles in healthcare; however, many labeled the tasks that nurses perform as mundane, unpleasant, and dirty. Other researchers noted that careers that involve the performance of tasks which are perceived as unpleasant and demeaning are often associated with service occupations (Helmsley-Brown & Foskett, 1999; Kohler & Edwards, 1990; Seago et al., 2006 Campbell-Heider et al., 2008). Researchers note that nursing is characterized as a kind and active career (Champion et al., 1987), while that of physicians is associated with knowledge and independence. The participants described nurses as “running around,” “busy,” and “stressed” in the performance of their jobs, which contributes to the participants’ sense that nurses are overworked and underappreciated, similar to those who are working in service occupations. Helmsley-Brown and Foskett (1999) noted that the selflessness associated with nursing contributes to the subordinate image of nursing. The findings of this study, that nursing is perceived as having little respect, especially given the stressful nature of the work nurses perform, support the findings of others that claim nursing may be negatively stereotyped as a subordinate, or perhaps even a service occupation.

**Nursing: Losing Ground on Prime Time Television**

Weaver et al. (2013) and Campbell-Heider et al. (2008) noted the positive influence that mass media and television could have on the recruitment of students to nursing. Others noted the negative and narrow portrayals of nursing as having a deleterious effect on recruitment (Kalisch et al., 1992; McAllister et al., 2014; Kalisch
et al., 2007; Weaver et al., 2013). What was most striking in this study was not the positive or negative effect of television on the participants’ perceptions of nursing, but rather, the general invisibility of the nurse on the popular medical television shows of today. Overall the participants seemed generally to be aware of positive as well as negative portrayals of nursing on television; however, they did not seem to indicate that they were unduly influenced by those images. Most of the participants noted that for viewers of their generation, nurses are not highlighted, and are all but invisible on today’s television shows such as Grey’s Anatomy. Most of the participants reported that nurses are seen in the background of medical shows, at best, performing routine tasks or standing with groups of others and outside of the action that is taking place around patient care.

Kalisch et al. (1982) noted that the quality of television portrayals of nurses trended downward between the 1950s and 1980s, and commented that “This has created a current crisis in communicating the world of nursing to the public via the most powerful form of mass communication, television” (p. 358).

The results of this study seem to indicate that the downward trend of the quality of nursing portrayals on television has continued to the point of nursing’s invisibility. This finding seems to align with the comment by Kalisch et al. (1992) that portrayals of nurses providing true nursing care became less common in the 1970s and have declined since that time. Therefore, the depictions of nurses on television did not help participants answer the questions “What is nursing?” or “What do nurses do?”

Four female participants mentioned a recent nurse-centered television show, Hawthorne RN (2009-2011); however, only three had ever actually watched it and
only one had particularly favorable comments about the portrayal of the nurse. One participant noted that in this show, the nurse was portrayed as an individual that went “far beyond” for her patients, becoming emotionally invested in their care, in spite of or because of the fact that she had a traumatic “backstory” of her own. Another participant described the nurse on this show as a positive and fearless role model, especially for African American women. However this participant’s description of Nurse Hawthorne made it seem as if this nurse was constantly embroiled in dramatic struggles for professional recognition and power.

**Nurse Role Models**

The findings of this study support that interpersonal and professional experiences with RNs, especially those in advanced practice roles, increases the awareness of the scope of nursing practice and improves the image of professional nursing. Those who had had more than superficial contact with nurses were more apt to make favorable and insightful comments about the desirability of a career in nursing and the role of the nurse. Positive nurse role models may have the ability to favorably impact the participants’ impressions of nursing; however, none of the participants in this study have changed career direction based on their experiences with nurses. Perhaps at best, experiences with nurse role models will enable non-nursing science majors to more readily consider careers in nursing, should their current career plans as physicians and researchers not materialize.

**Desirability**

The majority of participants in this study viewed nursing as a less than ideal career option. None of the participants, in the early days of this study, desired a career
in nursing. Although they themselves were not interested in careers in nursing, on member checks, all 15 participants agreed that for others, nursing might be a step-up or an accessible path to a professional career. The majority of participants in this study indicated that they, and in many cases their parents, would view a career in nursing for themselves as their failure to attain the ideal career.

**Nursing: Step Up, Safe Haven, or Step Backward**

In 1994, Reisken and Haussler suggested that African American and Latino females in urban high schools rated nursing more favorably than did their Asian and White peers. Degazon and Shaw (2007) noted that urban high school students of all races rated nursing as a less favorable option compared to their notions of ideal careers, especially in terms of power. The findings of this study of African American non-nursing undergraduate science majors support the findings of Degazon and Shaw, as well as Hine (1989), May et al. (1991), and D’Antonio (2004) who noted a decline in the popularity of nursing careers for women. The participants in this study did not view nursing as a pathway to professionalism and socioeconomic mobility for themselves. For this group of students, nursing is seen, at best, as a backup plan should their aspirations for medical school fail.

Perhaps the difference in the study results between 1994 and 2007, and the findings of the current study, reflect the fact that women of all races have a wider range of career options and opportunities to move into fields that were traditionally dominated by men. As noted, the appeal of nursing for this group of academically talented study participants was not strong. However, the participants did value the contribution nurses make to patient care and all agreed on member checks that a career in nursing could provide a step up for some. Participants noted that high school
friends or siblings with less academic inclination and career aspirations less ambitious than their own are finding nursing attractive; as one student noted, “It’s [nursing] a step up from a retail job.”

The reputation that nursing has, particularly in the African and Haitian participants’ communities, both helped and hindered their perceptions of nursing as a desirable career. Participants whose families had immigrated to the U.S. noted that nursing provided a safe haven and the opportunity for families entering the country to live the American dream. However, some of those family and friends that the participants referred to as nurses were actually CNAs and LPNs, who participants noted were regularly overworked and under-respected, with few prospects for career advancement.

**Perception of Nursing: Relevance of Findings to the Profession**

The findings of this study support the notion that participants’ image of professional nursing tends to be superficial and devoid of any sense of the complexities of nursing practice or opportunities for advancement. The image of nursing as a task-oriented, subservient career obscures the view of current-day nursing and seems to be as equally embedded as the image of MD superiority. This finding is consistent with previous research that suggests that task-oriented portrayals of nursing may exclude the image of the nurse as an educated professional (McAllister et al., 2014). The results of this study also indicate that the word “nurse” is liberally applied to less educated healthcare nursing, which confounds and weakens the image of the professional nurse. The multiple pathways to nursing and the different levels of education add to image confusion, which causes some to believe that nursing degrees
can be easily obtained with little academic skill/effort, thus adding to the perception that nurses are undereducated.

Students and their parents are likely to be negatively affected by inaccurate or superficial images of nursing, as are healthcare consumers and policymakers who enact legislation. There is a dire need for nursing’s professional organizations to intervene in the creation of television shows that include depictions of nurses. In order to enhance the image of nursing in such a way that it becomes a useful recruiting tool, portrayal of nurses in mass communication must depict nurses practicing to the full extent and scope of their practice. Images of nurses working in settings outside of the hospital, including education, practicing in expanded roles and engaging in scholarly activities, especially those that are nursing-led, are necessary to educate the public about the complexity of the nursing profession.

**Power, Culture and Careers: Implications for Nursing**

On member checks, all 15 participants agreed that they are motivated to pursue careers which will allow them to live and work with a high degree of choice and autonomy and to personally drive and affect change. All 15 participants unanimously agreed that they strive to be a positive role model of African American culture and believed that careers in medicine and research would enable them to disprove negative stereotypes about African Americans. Research question number five asks, “What strategies gleaned from the perceptions held by non-nursing science African American undergraduates about nursing could nurse educators implement to attract students from this underrepresented minority group to nursing?” Suggestions to enhance the recruitment of African American students who are proficient in science to undergraduate nursing are discussed in the following section.
Recruitment to Nursing: Addressing Perceptions of Nursing Power

Several participants, on member checks, noted that if the full scope of nursing practice was more visible, perhaps they and others would have considered careers in nursing. Nursing leaders must address the problems related to nursing visibility and power by:

- Distinguishing the role of the RN from CNA, LPN, etc.
- Highlighting and educating the population at large about nursing advanced practice and nursing leadership
- Highlighting nursing opportunities outside of hospitals and clinics
- Highlighting and providing mentoring opportunities for men in nursing
- Highlighting nurse leadership roles in public policy and healthcare legislation
- Standardizing the path to professional nursing: The BSN should be the entry-level qualification. The participants in this study equated education with power. Nursing will continue to be an unpopular career choice for academically inclined students as long as nurses are seen as undereducated.
- Exploring the attraction of the PA role, especially for men, and articulating the differences between the PA vs. APN
- Highlighting nursing role models (especially those from racially concordant groups): APNs and nurse leaders
- Providing nursing experiences for pre-college students in the form of camps, shadowing experiences (including opportunities outside of hospitals and experiences with nurses in APN roles)
- Involving and educating BSN students in as many places in the community as possible. Take nursing education to the people, expand nursing
education to settings outside of the school walls, and increase exposure of nursing students

- Building on nursing’s strengths: Highlight the nurse-patient connection and cultivate a moral community of caring in the schools of nursing.

It may also be important to correct the misperceptions of students and parents about the glorious nature of the medical profession.

In summary, study participants during interviews and member checks affirmed that a career in medicine or research will afford them the freedom to live a comfortable lifestyle and the power to make positive changes in the lives of others and society, to prove themselves as educated and bright and contradict and disprove negative stereotypes of African Americans. They perceive that a career in medicine or research will allow them to make their mark on society in a way that a nursing career cannot. However, on member checks, some participants offered that nursing, in terms of career desirability, could become more competitive if the complexities of nurses’ work and opportunities for advancement in nursing were more visible.

**Limitations**

This study is not without limitations. First, although not the researcher’s intent during the sampling phase, the majority of the participants in this study were “pre-med” students. Perhaps the fact that so many of them aspired to a career in medicine was a factor in their perceptions, or heightened the frequency of RN to MD comparisons in their narratives. Second, the researcher relied on self-reported major and cumulative grade point average, and defined the participants as academically talented non-nursing STEM majors based on current enrollment in a university as a college major. Perhaps a more objective measure (student transcript) could have been
used to verify the participants’ assertions. Third, it is not known to what extent the researcher’s own characteristics influenced participant responses. The researcher’s race and general age was known to many due to the face-to-face nature of the interviews, and the researcher’s identity as a nurse was known to participants. Although member checks were designed and conducted to address the lack of racial concordance between the researcher and the participants through the validation of themes (especially those concerning contributions of race to career development), it could be suggested that racial differences could have affected participant responses. In addition, when asked, each of the study participants indicated that she or he was aware that this researcher is an RN. Even though they were encouraged to be as forthright as they needed to be to answer questions candidly, the participants may have been cautious about the answers they gave, not wanting to insult the researcher with negative comments about nurses and nursing. Finally, this research was conducted as a descriptive, exploratory study; hence, claims about transferability must be made judiciously. Overall, however, based on their strength and participants’ validation, this study’s findings appear useful in informing strategies to recruit academically talented African American students to undergraduate nursing.

**Future Research**

This results of this study offered answers to the study’s research questions, while generating new areas of inquiry. Although there are a number of additional areas that could be explored, the ones listed below might be the most fruitful for informing strategies to recruit college-bound African American students to nursing.
• Secondary analysis of the data to examine the intersection of race/ethnicity, social class with academic preparation and success, and the contribution of each to the development of career ideals and perceptions of nursing

• A study of African American undergraduate non-nursing science majors, or pre-med majors who do not continue on in a pre-med major, or continue on to med school: What career paths emerge? What are the reasons for attrition, and what is the likelihood of this group of students choosing a career in nursing?

• African American parents’ perceptions of nursing careers

• Influence of high school officials on careers of African American students

• Spiritual dimension to African American nursing students’ career choice

**Contributions of This Study**

This study is unique in that it examined the topic, African American non-nursing science majors’ perceptions of nursing, in the context of ideal careers, and utilized career development theory as the underpinning framework. To date, no research was identified on the subject of recruitment of students from underrepresented racial and ethnic groups that suggests that African American students’ awareness of negative stereotypes of Black culture may have implications for academically motivated and talented African American students’ willingness to enter a field such as nursing, which they perceive to be negatively stereotyped.
REFERENCES


Evans, B. (2008). The importance of educational and social backgrounds of diverse students to nursing program success. *Journal of Nursing Education, 47*(7), 305-313.


Appendix A

SOCIAL COGNITIVE CAREER THEORY

Note: Direct relations between variables are indicated with solid lines; moderator effects (where a given variable strengthens or weakens the relations between two other variables) are shown with dashed lines.

Appendix B

CULTURALLY APPROPRIATE CAREER COUNSELING MODEL

Appendix C


## Appendix D
### INTERVIEW GUIDE

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Demographic Questions:</strong></td>
<td></td>
</tr>
<tr>
<td>Age:</td>
<td></td>
</tr>
<tr>
<td>DOB:</td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity:</td>
<td></td>
</tr>
<tr>
<td>Major:</td>
<td></td>
</tr>
<tr>
<td>Year:</td>
<td></td>
</tr>
<tr>
<td>GPA:</td>
<td></td>
</tr>
<tr>
<td>Home town/State:</td>
<td></td>
</tr>
<tr>
<td>Family info: parents, siblings, significant others</td>
<td></td>
</tr>
<tr>
<td>Generation college:</td>
<td></td>
</tr>
<tr>
<td><strong>2. Career Choice Interest/Goals Questions:</strong></td>
<td></td>
</tr>
<tr>
<td>What is your major at UD? Tell me about how you chose that major.</td>
<td></td>
</tr>
<tr>
<td><strong>3. High School Experience:</strong></td>
<td></td>
</tr>
<tr>
<td>What academic interests in high school contributed to selecting your college major?</td>
<td></td>
</tr>
<tr>
<td>What life experiences? What type of high school preparation did you have?</td>
<td></td>
</tr>
<tr>
<td>What courses did you excel in? What courses did you believe were important for the major you chose?</td>
<td></td>
</tr>
<tr>
<td>When did you know that you were going to pursue this particular academic/scientific path?</td>
<td></td>
</tr>
<tr>
<td>What deliberate actions have you taken to put yourself/keep yourself on this path?</td>
<td></td>
</tr>
<tr>
<td><strong>4. Development of Career Interest:</strong></td>
<td></td>
</tr>
<tr>
<td>When did you know that you were going to pursue this particular academic/scientific path?</td>
<td></td>
</tr>
<tr>
<td>What is your earliest memory of childhood career interests/desires? How old were you then?</td>
<td></td>
</tr>
<tr>
<td>Did your career interest change? If so, how?</td>
<td></td>
</tr>
</tbody>
</table>
5. Career Ideals/Self-efficacy and Outcome Expectations:
Tell me about how you picture yourself in this career/role? What do you see yourself doing after graduation? What are the “up-sides” to this choice? “Downsides?”

6. Views of Science:
Tell me about yourself as a scientist. What are your areas of interest, your unique talents and skills that led you to a scientific field?

7. External Influences:
Tell me how you believe (or perceive) others may have contributed to your choice of major. Cues and subtext questions: What persons or experiences led you to your choice of your current major? Friends, family members, teachers, guidance counselors, community members? Did environment play a role in career choice for you? If yes, in what ways? What generation college are you?

8. Internal Influences:
How good of a “fit” is your career choice with your: gender, personal values, family values, cultural values? Tell me about your perceptions of the degree of diversity of the field you are going into?

9. Nursing Questions:
Switching the topic to nursing, what do nurses do? How did you arrive at/what informs your views of nursing? Have you ever considered a career in nursing/can you picture yourself as a nurse?; if yes, what are your thoughts about nursing as a career? If no, what are your thoughts about nursing as a career?

a. Cues and subtext questions: Tell me how you view nursing careers in terms of:
   i. Career mobility
   ii. Respect
   iii. Scientific rigor
   iv. Economic attainment
v. Work environment

8. How would a nursing career fit with your: gender, personal values, family values, cultural values?

9. What are your views about how your family and friends might perceive nursing as a career choice for you?. Has the topic of nursing as a major or a career ever been discussed by your family or friends?

10. Do you know or have you had contact with any nurses personally? If yes, what can you tell me about them?
   a. Cues and subtext questions: What have been your experiences with nurses? What are your perceptions of nurses? In the kind of work they do? How do you view them as scientists?

11. What other sources of information have contributed to your perceptions about nurses and nursing?
   a. Cues and subtext questions; How are nurses portrayed in the media? (e.g., film, television, novels, newspapers/magazines) What do they do? How are nurses and nursing portrayed in history? In advertising to promote nursing as a career? Have you or a family member ever been the recipient of nursing care? What perceptions about nursing have you gained through your everyday life?
Appendix E

CODE DICTIONARY
<table>
<thead>
<tr>
<th>CODE: INTERNAL INFLUENCE</th>
<th>DEFINITION: Describes the person inputs, cognitive processes, values and beliefs that are associated with career behaviors</th>
<th>Significant Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subcodes</td>
<td>Definitions</td>
<td>Exemplar Quote</td>
</tr>
<tr>
<td>II: PI</td>
<td>Person Input: Age, gender, predispositions, health status.</td>
<td>308: &quot;Because I’m the only girl, his only daughter so he’s like ... 'Oh, don’t go too far'.&quot;</td>
</tr>
<tr>
<td>II: V</td>
<td>Values: Self-reported values that relate to career development</td>
<td>301: “Yeah, I feel like I would have more to offer, I guess, as the type of person I am, I feel like I tend to go for high roles because I feel like I can do those higher roles. I tend to push myself a lot, yeah.”</td>
</tr>
<tr>
<td>II: SE</td>
<td>Self-efficacy: Beliefs about one’s abilities</td>
<td>302: “I felt like was solving problems. I felt like I was good at it, so ...”</td>
</tr>
<tr>
<td>II: PA</td>
<td>Personal Attribute, Interests or Predisposition: Participant’s accounts of their interests, leanings, thinking styles, and other personal qualities</td>
<td>304: “And I always volunteer-, like my whole life like giving back to the community, like helping others, you know.”</td>
</tr>
<tr>
<td>II: S</td>
<td>Spirituality: Beliefs about religion, higher power as they relate to career development</td>
<td>307: “It’s kind of like the perfect thing to do because they always ask you like when you die like what do you wanna tell God like you did with your life?”</td>
</tr>
<tr>
<td>II: Child Secured Mobility</td>
<td>Educational experiences: examples of material and cognitive support from parents</td>
<td>308: “I'm kind of roughing it because no one really around me has gone into college...”</td>
</tr>
<tr>
<td>II: N</td>
<td>Needs: Participant’s description of psychological needs, i.e., need to feel secure</td>
<td>313: “My GPA I think after the first semester was like 2.6. ... I felt very alone kind of ...”</td>
</tr>
<tr>
<td>II: PT</td>
<td>Personality Traits: Personality traits that suit individual for a certain profession/career path</td>
<td>301: “I like to be the major roles, I’m just ... I want to be like major big position type of person.”</td>
</tr>
<tr>
<td>CODE: EXTERNAL INFLUENCE</td>
<td>DEFINITION: Background contextual affordances, people, and environmental factors that influence career behaviors</td>
<td>Significant Statement</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Subcodes</td>
<td>Definitions</td>
<td></td>
</tr>
<tr>
<td>EI: P</td>
<td>Parent contribution to education, attitudes, values and career choice</td>
<td>315: “They'd rather not get something for themselves...as long as they're able to provide, um, pay our tuition, so we go to school.”</td>
</tr>
<tr>
<td>EI: F</td>
<td>Family contribution to education, attitudes, values and career choice</td>
<td>305: “…my Grandmother moved from New York to take care of us...”</td>
</tr>
<tr>
<td>EI: SO</td>
<td>Another individual outside of family who contributed to education, attitudes, career choice</td>
<td>306: “…the anesthesiologist I shadowed was also a family friend...”</td>
</tr>
<tr>
<td>EI: SCHO</td>
<td>i.e., guidance counselor, teacher, official who contributed to academic/career direction</td>
<td>305: “…principal there her name is Maria Rodriguez... um she was like a mentor to me in a way, um she’s very she’s all about leadership...”</td>
</tr>
<tr>
<td>EI: E</td>
<td>Features in participant’s environment that had a bearing on career trajectory</td>
<td>304: “…And I’m always volunteer-, like my whole life like giving back to the community...”</td>
</tr>
<tr>
<td>EI: C, Community/community members</td>
<td>Other groups outside of family that had bearing on career trajectory</td>
<td>304: “...multicultural youth leadership club...”</td>
</tr>
<tr>
<td>EI: ASM</td>
<td>Emotional, material, and cognitive support from parents/adult family members</td>
<td>315: “And I’m being provided with, um, these opportunities. Going to great institutions, great schools, um, I don't have to work...”</td>
</tr>
<tr>
<td>EI: PE, Parent’s Education</td>
<td>Level of education; parents’ occupations influenced career choice</td>
<td>308: “I saw the way that my parents were struggling with not having money because they didn't have good education...”</td>
</tr>
<tr>
<td>EE: FI</td>
<td>Illness of friend or family that influenced career behavior</td>
<td>312: “…Um, one of my best friends in high school, um ... she actually has cystic fibrosis and we ended up becoming really close...she would call me the night before she had a procedure...”</td>
</tr>
<tr>
<td>EI: SE</td>
<td>School related influence on career behavior</td>
<td>312: “… I was technically home schooled, all of my classes are from accredited private University, um, college preparatory program.”</td>
</tr>
<tr>
<td>EI: FP</td>
<td>Programs outside of school that influenced academics and career behavior</td>
<td>308: “It was really this Upward Bound that gave me confidence to try.”</td>
</tr>
<tr>
<td>CODE: CAREER IDEALS</td>
<td>DEFINITION: Characteristics, descriptions, attributes of careers and career aspirations and ideals as described by participant</td>
<td>Significant Statement</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Subcodes</td>
<td>Definitions</td>
<td></td>
</tr>
<tr>
<td>CI: S Status</td>
<td>Career associated with prestige and power</td>
<td>307: “…everybody wants, their parent … Like everybody wants you to be a doctor.”</td>
</tr>
<tr>
<td>CI: I Image</td>
<td>Career readily identifiable as being positive or prestigious image</td>
<td>314: “Everyone should like want their kids to be a doctor. So like, a lot of Haitians are really, really pushing their children …”</td>
</tr>
<tr>
<td>CI: A Autonomy</td>
<td>Career compatible with desire to be able to practice and live as one chooses/sees fit</td>
<td>317: “I would rather want to act on it myself as opposed to like asking someone else to do it for me.”</td>
</tr>
<tr>
<td>CI: E Education</td>
<td>Career is the hallmark of an educated person</td>
<td>301: “doctors get to interact with more and …have more education.”</td>
</tr>
<tr>
<td>CI: R Role</td>
<td>Career is compatible with societal role one desires</td>
<td>305: “Because it’s a really it’s a bad community um just in the fact that they don’t have too many role models.”</td>
</tr>
<tr>
<td>CI: L Lifestyle</td>
<td>Career is compatible with desired lifestyle</td>
<td>317: “Like I’d rather have more time for myself, like I know doctors can take off a lot more that nurses can.”</td>
</tr>
<tr>
<td>CI: F Fit</td>
<td>Fit with Personal Values/interests</td>
<td>301: “I feel like I tend to go for high roles (medicine, pilot) because I feel like I can do those higher roles.”</td>
</tr>
<tr>
<td>CI: D Desire</td>
<td>Degree to which one is willing to persevere to attain certain career</td>
<td>307: “…I pray a lot.”</td>
</tr>
<tr>
<td>CI: EV Evolution</td>
<td>Evolution of career interests and ideals over time</td>
<td>309: “I actually had to reevaluate my motivation some time ago.”</td>
</tr>
<tr>
<td>CI: H Helping</td>
<td>Desire to help meet the needs of others and personally affect change</td>
<td>309: “I mean to watch them suffer, I think the mental, uh …watching people tolerate suffering…a little bit disheartening…”</td>
</tr>
<tr>
<td>CI: E Emotion</td>
<td>Emotional connection to perceived aspects of a certain career</td>
<td>318: “And, um, his doctor kind of like would always, kind of like, talk to me and I always, I just looked up to his doctor, kind of like a hero.”</td>
</tr>
<tr>
<td>CI: $Sec Financial Security</td>
<td>Career provides desired level of financial security</td>
<td>301: “I want to live that American lifestyle.”</td>
</tr>
<tr>
<td>CI: RM Role Model</td>
<td>Career enables one to become a positive role model</td>
<td>306: “a lot of the reasons why I want to become a doctor is that I can be a role model to other people…”</td>
</tr>
<tr>
<td>Subcodes</td>
<td>Definitions</td>
<td>Significant Statement</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>N: P Perceptions</td>
<td>Any idea or impression participant expresses about nurses or nursing</td>
<td>312: “Of course everyone thinks working in a hospital with patients, bedside care that sort of thing...”</td>
</tr>
<tr>
<td>N: EXP Experience</td>
<td>Any experience participant shares that involves interaction with nurses</td>
<td>312: “I ended up telling my friend [RN major] about our conversation [with mother APN] just by letting her know that she was not limited...”</td>
</tr>
<tr>
<td>N: M Media</td>
<td>Portrayal of nursing in media: TV, news, advertisements</td>
<td>312: “seems like the people who were nurses in that show are kind of their role is pretty much based on what the doctor did...”</td>
</tr>
<tr>
<td>N: DO Direct Observation</td>
<td>Comments that participants make about first hand observations of nurses</td>
<td>301: “I know when I’m going to the hospital for shots, the nurse gives it to me...”</td>
</tr>
<tr>
<td>N: F Nurses in Family</td>
<td>Participants’ comments about nurses in family</td>
<td>302 “my grandmother is a nurse. It’s like, they’re...they’re the people who run the hospital, work with the patients...”</td>
</tr>
<tr>
<td>N: I Information from Others</td>
<td>Information about nurses and nursing careers gleaned from others</td>
<td>303: “But my friends, they...they’re both going to nursing school...they want to be nurse practitioners...”</td>
</tr>
<tr>
<td>N: R Respect</td>
<td>Participants comments about respect for nurses</td>
<td>318: “Nowadays I think nurses do not get respect they need.”</td>
</tr>
<tr>
<td>N: V Value</td>
<td>Comments participants make that convey thoughts about the value of nursing</td>
<td>310: “I feel like because their job is so important in hospitals, I feel like a hospital would be stupid to turn away nurses.”</td>
</tr>
<tr>
<td>N: S Status</td>
<td>Participants’ perceptions of the image or status of nursing</td>
<td>310: “I think it’s a respectable position but I also feel like it’s very, it’s very common.”</td>
</tr>
<tr>
<td>N: POW Power</td>
<td>Participants’ comments that convey their perceptions of power associated with nursing</td>
<td>317: “Um I think, can they prescribe things?”</td>
</tr>
<tr>
<td>N: A Autonomy</td>
<td>Participants’ comments that convey the degree of professional independence of nursing</td>
<td>310: “I were to become a nurse I would always have to work under someone...”</td>
</tr>
<tr>
<td>N: CM Career Mobility</td>
<td>Participants’ perceptions about opportunities to advance in nursing</td>
<td>303: “You could go anywhere to be a nurse ... It’s always going to be in demand, right?”</td>
</tr>
<tr>
<td>N: WE</td>
<td>Working Environment</td>
<td>Participants’ perceptions of the environments that nurses work in</td>
</tr>
<tr>
<td>N: FIN</td>
<td>Financial</td>
<td>Participants’ perceptions of nurses salaries</td>
</tr>
<tr>
<td>N: SR</td>
<td>Scientific Rigor</td>
<td>Participant’s perceptions of nursing science; nurses as scientists</td>
</tr>
<tr>
<td>N: PA</td>
<td>Personal Attributes</td>
<td>Participant’s perceptions of personal characteristics of nurses</td>
</tr>
<tr>
<td>N: STEREO</td>
<td>Stereotypes</td>
<td>Comments participants offer that suggest stereotypes of nursing</td>
</tr>
<tr>
<td>N: CON</td>
<td>Considered</td>
<td>Comments participants offer about whether or not they have they would consider a career in nursing</td>
</tr>
<tr>
<td>N: EDU</td>
<td>Education</td>
<td>Comments about level of education of nurses</td>
</tr>
<tr>
<td>N: Parents</td>
<td>Parents</td>
<td>Parents’ perceptions of nursing and or desirability as career choice for children</td>
</tr>
<tr>
<td>N: T</td>
<td>Tasks</td>
<td>Describes nursing through tasks Identifies nursing tasks</td>
</tr>
<tr>
<td>N: AWARE</td>
<td>Awareness of scope of nursing/nurse roles</td>
<td>Comments that convey an understanding or lack of about scope of professional nursing</td>
</tr>
<tr>
<td>N: B</td>
<td>Boredom</td>
<td>Would become bored with the routine of nursing</td>
</tr>
<tr>
<td>N: FIT</td>
<td>Fit</td>
<td>Nursing’s fit with personal attributes, career goals</td>
</tr>
<tr>
<td>CODE: LEARNING EXPERIENCES</td>
<td>DEFINITION: Experiences associated with the development of values, self-efficacy beliefs, career motivation and career behaviors</td>
<td>Significant Statement</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Subcodes</td>
<td>Definitions</td>
<td></td>
</tr>
<tr>
<td>LE: S</td>
<td>Struggle</td>
<td></td>
</tr>
<tr>
<td>Struggles of others left a lasting impression about security/safety that affected career choice</td>
<td>308: “and I saw the way that my parents were struggling with not having money because they didn’t have good education...”</td>
<td></td>
</tr>
<tr>
<td>LE: FT</td>
<td>Family Teachings</td>
<td></td>
</tr>
<tr>
<td>Coaching or messages from parents and other family about careers</td>
<td>311: “…I guess it used to be pushed on by their parents. ... like education is an escape route. Like an escape from living a struggling life.</td>
<td></td>
</tr>
<tr>
<td>LE: Form</td>
<td>Formal Avenues of Information</td>
<td></td>
</tr>
<tr>
<td>Experiences with programs designed to address career development</td>
<td>317: “I think I was in the program of Better Chance which helps children get into private school...”</td>
<td></td>
</tr>
<tr>
<td>LE: ILL</td>
<td>Experience with Illness</td>
<td></td>
</tr>
<tr>
<td>Experience with illness, self, family, friend, made lasting impression that influenced career choice</td>
<td>314: “I watched my own grandfather’s bed outside in like a medical hallway because ...he has okay insurance but not as good as other people so my grandpa is suffering.</td>
<td></td>
</tr>
<tr>
<td>LE: E</td>
<td>Emotion</td>
<td></td>
</tr>
<tr>
<td>Learned that choices/statements about careers provoke emotion in significant other.</td>
<td>310: “I would be the first doctor in my family...it would be a sense of pride for my family to be like, “That’s my kid”, “She did it”.”</td>
<td></td>
</tr>
<tr>
<td>LE: T</td>
<td>Talents</td>
<td></td>
</tr>
<tr>
<td>Learning experience that confirmed/disconfirmed certain talents and abilities</td>
<td>312: “Um, watching the leaves on the PET Scan machine ...but it was in a more ... I don't know. It was just a very embracing environment I guess.”</td>
<td></td>
</tr>
<tr>
<td>LE: V</td>
<td>Volunteer</td>
<td></td>
</tr>
<tr>
<td>Engaged in volunteer work that influenced career behavior</td>
<td>301: “That’s the type of person that I am. I like interacting with patients. I’m volunteering at DE Hospital and the patient interaction’s really cool.”</td>
<td></td>
</tr>
<tr>
<td>LE: SHAD</td>
<td>Shadowing</td>
<td></td>
</tr>
<tr>
<td>Influence of presence or absence of shadowing experiences.</td>
<td>317: “…I tried out a few different fields like I shadowed anesthesiologists, I realized I’d rather do surgeries instead of putting people to sleep...”</td>
<td></td>
</tr>
<tr>
<td>LE: MED</td>
<td>Medicine</td>
<td></td>
</tr>
<tr>
<td>Access to experiences in medical field</td>
<td>317: “…, I knew her as a family friend like I'm friends with her son so and she, I mean he hooked us up so we could do a shadowing.”</td>
<td></td>
</tr>
</tbody>
</table>
| LE: HOSP                    | Experiences in hospital that influenced career behavior                                                                                           | 317: “It's Dr. [name of MD] is the one I shadowed who works at a
<table>
<thead>
<tr>
<th>Hospital</th>
<th>career behaviors/perceptions</th>
<th>Hospital University in Pennsylvania and [name of surgery center], so I think, she’s basically like my medical mentor.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE: REAL Realization</td>
<td>Experience which revealed something new, heretofore never considered</td>
<td>310: But the more I realized what teachers, it’s more like teaching the same material with the same student and that’s really what I didn’t want to do …”</td>
</tr>
<tr>
<td>LE: JOB Jobs</td>
<td>Job experience impacted career trajectory and perceptions of careers in healthcare</td>
<td>305: “I worked with geriatrics ... I love people like that...”</td>
</tr>
<tr>
<td>CODE: CULTURE</td>
<td>DEFINITION: Any reference to culture including participant’s heritage, discussion of race or ethnicity as it relates to experiences and career behaviors</td>
<td>Significant Statement</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Subcodes</td>
<td>Definitions</td>
<td></td>
</tr>
<tr>
<td>C: R Race</td>
<td>Participants’ comments about race in context of academics or careers or general development</td>
<td>305: “I used to feel as if like um always I feel like Caucasians are always smart well Asians are always smarter and then Caucasians and then African Americans.”</td>
</tr>
<tr>
<td>C: NV Norms/Values</td>
<td>Participant notes certain traits or values as being connected to her/his culture</td>
<td>308: “…the medical field is a field that they would want, my culture to want their children to be in the most.”</td>
</tr>
<tr>
<td>C: CO Country of Origin</td>
<td>Participants mention country of origin and relate it to academics and/or career behavior</td>
<td>301: “Most Africans either want your kids to be doctors or lawyers or pilots, just like really nice career fields.”</td>
</tr>
<tr>
<td>C: PC Parent coaching</td>
<td>Examples of parent teachings about race, culture</td>
<td>302: “my dad taught me that, too. Yeah, he’s like, “like, ………defy stereotypes.””</td>
</tr>
<tr>
<td>C: S Stereotypes</td>
<td>Stereotypes impact career decisions: confirm/disconfirm/motivate</td>
<td>303: “I don’t fit the typical black stereotype, and I don’t want to, um, like, because everyone just assumes that I’m stupid or like I can’t … Or when they first meet me, but it’s like, then I open my mouth, and then I’m like, “Yeah, I’m intelligent. I know how to read a book.””</td>
</tr>
<tr>
<td>C: RM Role models</td>
<td>Impact of presence absence African American career role models</td>
<td>305: “Because it’s a really it’s a bad community um just in the fact that they don’t have too many role models… So I wanted to use what I’m good at to try to make a least some sort of change..”</td>
</tr>
<tr>
<td>C: LACK Lack</td>
<td>Lack of resources associated with being part of underserved/underrepresented group</td>
<td>305: “biggest problem has been with financial stuff and then just family stuff like I know family's family, but even sometimes family can drag you down.”</td>
</tr>
<tr>
<td>C: AFRAMN African American Nurses</td>
<td>Nursing is the path for Africans, African/Americans to professionalism</td>
<td>308: “Everyone, I don’t know if they find it [nursing] the most easy or if there is always jobs in healthcare....”</td>
</tr>
<tr>
<td>C: PEER Peers</td>
<td>Peers’ of same racial ethnic group influence on participant’s career behavior</td>
<td>317: “... my best friend, she goes to the University of Pittsburgh, and she’s a Bio major, and she wants to be an OB/GYN, yeah, so.”</td>
</tr>
</tbody>
</table>
Appendix F

MEMBER CHECK GUIDE

Member Checks Guide
Nov. 2014

Study: African American non-nursing science majors’ perceptions of nursing. I wanted to put the students’ views of nursing in some context. I wanted to look at what drives career choice (internal and external factors) for the study participants and learn what their careers ideals might be. Then I asked questions about nursing. Ultimately I want to know what nursing needs to do to be an attractive career choice for African American STEM/science majors.

Please offer me your reactions and thoughts about the following themes:

Theme 1: Career choices for African American non-nursing science majors are influenced, in part by:
The fit between personal beliefs, attitudes, values and convictions and chosen career and that many of these personal beliefs, attitudes, values and convictions are the result of internalized messages from external sources.

Theme 1: Career choices for African American non-nursing science majors are influenced, to a significant degree by messages from parents, community (about expectations and culture) and learning experiences.

Theme 2: The ideal career for the students I interviewed was one that affords the power and ability to affect change and gain autonomy.
Image of MD has universal clout.
Career you have chosen will allow freedom to choose lifestyle and personally affect change for others.
Career you have chosen will allow you to become positive African American role model.
Career you have chosen will be effective in disproving negative stereotypes about African Americans.

Theme 3: Nursing is a career that has limits.
Nursing:
• It can be an easier path to a professional career for some students, or a step-up, or
• It can be regarded as a backward career move, or step-down for science majors/students in STEM (and in many cases their parents).

Most, almost all participants said nurses don’t get as much respect as they deserve.
Is nursing a negatively stereotyped field?
Most people view nurses as working in the hospital at the bedside working “under” doctors.
Almost all participants can’t describe nursing without comparing it to medicine in some way. Comparisons are about power. In terms of power nursing exists at lower levels of the medical hierarchy and has less autonomy, less ability to affect change, and is less a less powerful role model. The title RN has less power to be a positive role model/disprove negative stereotypes about one’s race.

RQ5: Careers, Culture and Power.
Please offer me your reaction and comments to this following interpretation:
For this group of STEM students/science majors, the desirable career is one that gives one the power to: a. Live and work with a high degree of choice and autonomy, b. Personally affect change and help others, and c. To be a positive African American role model and to disprove negative stereotypes about one’s racial/ethnic group.
Appendix G

DATA DISPLAY: PATTERN CODING DIAGRAM
Pattern Coding: Lens through which Participants View Nursing and Perceptions of Careers: Power

**Theme 1:**
Career Development: Internal and External Contributions

**Theme 2:**
The Ideal Career: Profession with Power

Lens through which Nursing is Viewed

**PERCEPTIONS OF NURSING**
Theme 3: Nursing: Limited Profession
Positive patient connection - Limited power

**NURSING:**
- Limits on lifestyle re: schedules, workload and pay
- Helper role
- Role confusion and poor visibility
- Step up/Save Haven/Step Down for some
- Limited effectiveness in contradicting stereotypes: nursing is stereotyped as a "subordinate" field

**PERCEPTIONS OF POWER:**
The ideal career
- Autonomy
- Personally Effect Change
- Positive Pole Model
- Disprove Negative Racial Stereotypes

**IDEAL CAREER:**
- Lifestyle Freedom and Choice
- Be the diagnostician/researcher that finds the solution/cure: "hero"
- Role model of success/attainment/education
- Title "doctor" contradicts negative racial stereotypes
Appendix H

INSTITUTIONAL REVIEW BOARD APPROVAL

IRBNet Board Action
11 messages

Nicole Farnese-McFarlane <no-reply@irbnet.org>  Mon, Jun 9, 2014 at 3:31 PM
Reply-To: Nicole Farnese-McFarlane <nicolefm@udel.edu>
To: Robbi Alexander <rkalexan@udel.edu>, Cynthia Diefenbeck <cynthia@udel.edu>

Please note that University of Delaware IRB has taken the following action on IRBNet:

Project Title: [618746-1] Nursing as a Career: African American Undergraduate Non-nursing Science Majors’ Perceptions
Principal Investigator: Robbi Alexander, MSN

Submission Type: New Project
Date Submitted: June 4, 2014

Action: APPROVED
Effective Date: June 9, 2014
Review Type: Expedited Review

Should you have any questions you may contact Nicole Farnese-McFarlane at nicolefm@udel.edu.

Thank you,
The IRBNet Support Team
IRBNet Board Action
8 messages

Nicole Farnese-McFarlane <no-reply@irbnet.org> Thu, Jun 26, 2014 at 11:13 AM
Reply-To: Nicole Farnese-McFarlane <nicolefm@udel.edu>
To: Robbi Alexander <rkalexan@udel.edu>, Cynthia Diefenbeck <cynthia@udel.edu>

Please note that University of Delaware IRB has taken the following action on IRBNet:

Project Title: [618746-2] Nursing as a Career: African American Undergraduate Non-nursing Science Majors’ Perceptions
Principal Investigator: Robbi Alexander, MSN

Submission Type: Amendment/Modification
Date Submitted: June 26, 2014

Action: APPROVED
Effective Date: June 26, 2014
Review Type: Expedited Review

Should you have any questions you may contact Nicole Farnese-McFarlane at nicolefm@udel.edu.

Thank you,
The IRBNet Support Team