

ABSTRACT

RICH, WESLEY DOWLESS. Reducing Institutional Barriers to Minority Student Success at a Predominantly White University: A Qualitative Action Research Study. (Under the direction of Dr. Kevin Brady).

This qualitative action research study investigates the common barriers encountered by successful undergraduate ethnic minority students enrolled in majors that serve as a pipeline for professional health sciences. Through specialized focus group interviews and individual interviews, this study explores the perceived barriers to student success encountered by successful undergraduate ethnic minority students. Student strategies for success are also examined and discussed. A review of the related literature on student retention in college and characterizations of barriers faced by undergraduate minority students is included. This study employs action research methodology in an effort to communicate the experiences and proposed solutions of successful undergraduate minority science students at a small, predominantly white, private university in rural North Carolina. Study findings indicate that participants encountered barriers related to communication, prejudice, resources, academic preparation, family responsibilities and connections with students of the same ethnicity. Findings from this study also indicate that participants used several broad strategies to ensure their success which include networking, joining campus clubs and organizations, taking reasonable risks, accessing on-campus support services, and being persistent about getting their needs met. Recommendations are provided to the focal university aimed at reducing the barriers identified by participants in this study. Finally, a number of suggestions are provided for future research.

Reducing Institutional Barriers to Minority Student Success at a Predominantly White
University: A Qualitative Action Research Study

by
Wesley Dowless Rich

A dissertation submitted to the Graduate Faculty of
North Carolina State University
in partial fulfillment of the
requirements for the Degree of
Doctor of Philosophy

Educational Research and Policy Analysis

Raleigh, North Carolina

2009

APPROVED BY:

Dr. Kevin Brady
Committee Chair

Dr. Paul Bitting

Dr. Bonnie Fusarelli

Dr. Kevin Oliver

DEDICATION

To my wife, Laura and daughter, Ellie: You are my motivation and inspiration. Thank you for your unwavering support and love. No man has ever been more blessed than this – I love you both dearly.

BIOGRAPHY

Wesley D. Rich was born July 10, 1979 in Bladenboro, North Carolina to Ted and Sandra Rich. He has one younger brother, Corey and is married to Laura Thompson Rich, of Clarkton, North Carolina. Wesley and Laura welcomed their first baby girl, Ellie, into the world on New Year's Day 2009.

ACKNOWLEDGEMENTS

This dissertation would not have been possible without the encouragement and support of many colleagues, friends, and family.

First and foremost I owe a debt of gratitude to my amazing wife, Laura. Without your support, advice, and love I would have never made it through this process. You have been exceedingly gracious and patient with my constant absence and scattered state of mind during this project. Your sacrifices have not gone unnoticed or unappreciated.

To my family, Mom and Dad, Corey, Rick and Carolyn, Mike and Becky: You have been a wealth of support and encouragement throughout my academic career and I am without words to express my thanks for believing in me – even when I did not.

To my closest friends, Jody, David, Chris, and Nick: Many thanks for engaging me in critical dialogue for so many years. I am all the better for the time we've spent debating and arguing – among other things! Sorry for the lousy practice schedule, but it looks like my evenings have just opened up a bit!

To my dissertation committee, Dr. Brady, Dr. Bitting, Dr. Fusarelli, and Dr. Oliver: Without your guidance this endeavor would not have been possible. Thank you for all of your advice and input during this project. Dr. Brady, many thanks for pushing through with me on this. Dr. Fusarelli, the recommendations and suggestions certainly made this dissertation stronger! Dr. Bitting, thank you for challenging my assumptions, the lessons I learned in your course have impacted me well beyond the academic realm. Dr. Oliver, thank you for your willingness to serve and provide support during this project!

TABLE OF CONTENTS

| | |
|---|------|
| LIST OF TABLES | vii |
| LIST OF FIGURES | viii |
| CHAPTER ONE | 1 |
| Background | 1 |
| Statement of the Problem..... | 7 |
| Purpose..... | 7 |
| Definition of Terms..... | 8 |
| Site Description: Background, Culture, and Current Status | 9 |
| Overview of the Approach..... | 11 |
| Significance of the Study | 12 |
| Summary | 13 |
| CHAPTER TWO | 14 |
| Introduction..... | 14 |
| Astin’s Student Involvement Theory | 15 |
| Tinto’s Theory of Student Departure..... | 17 |
| Raymond Padilla’s Expertise Model of Minority Student Success | 20 |
| Barriers..... | 28 |
| Discontinuity..... | 28 |
| Prejudice Barriers..... | 30 |
| Resource Barriers..... | 33 |
| Academic Resiliency in Minority Students | 34 |
| Stereotype Threat | 35 |
| Summary | 36 |
| CHAPTER THREE | 38 |
| Overview of Topic and Purpose | 38 |
| Research Questions | 38 |
| Appropriateness of the Approach | 39 |
| Overview of Methods | 43 |
| Site Selection and Sample..... | 44 |
| Participant Eligibility | 46 |
| Recruitment..... | 46 |
| Data Collection | 47 |
| Data Analysis | 49 |
| Validity and Reliability..... | 50 |
| Subjectivity Statement | 52 |
| Associated Risks and Ethical Issues | 55 |
| Limitations | 56 |
| Summary | 57 |
| CHAPTER FOUR..... | 59 |
| Introduction..... | 59 |
| Barriers..... | 68 |

| | |
|---|-----|
| Communication..... | 68 |
| Racially Linked Barriers | 73 |
| Financial Resources | 80 |
| Discontinuity..... | 85 |
| Family Responsibilities..... | 87 |
| Difficulty Connecting | 89 |
| Strategies for Success | 90 |
| Networking | 91 |
| Clubs/Organizations..... | 95 |
| Commitment | 98 |
| Reasonable Risk..... | 100 |
| Accessing Campus Support Services..... | 101 |
| Persistence..... | 103 |
| Facilitating Factors..... | 104 |
| Open-Door Policy | 104 |
| Welcoming Religious Atmosphere | 106 |
| Summary | 109 |
| CHAPTER FIVE | 112 |
| DISCUSSION AND CONCLUSIONS | 112 |
| Introduction..... | 112 |
| Summary of Findings..... | 113 |
| Research Question One..... | 113 |
| Research Question Two | 119 |
| Discussion of Findings..... | 121 |
| Research Question One..... | 122 |
| Research Question Two | 127 |
| Facilitating Factors..... | 128 |
| Limitations | 129 |
| Recommendations for Policy and Practice | 131 |
| Directions for Future Research | 136 |
| Summary | 139 |
| References..... | 141 |
| APPENDICES | 153 |
| Appendix A. Focus Group Letter..... | 154 |
| Appendix B. Focus Group Question Guide | 155 |
| Appendix C. Biographical Statement Prompt..... | 156 |
| Appendix D. Individual Interview Letter..... | 157 |
| Appendix E. Guiding Questions of Individual Interviews | 158 |
| Appendix F. Participant Demographic Matrix..... | 159 |
| Appendix G Informed Consent – Individual Interview Participants | 160 |

LIST OF TABLES

| | | |
|---------|---|----|
| Table 1 | Focus Group 1 Participant Demographic Matrix..... | 61 |
| Table 2 | Focus Group 2 Participant Demographic Matrix..... | 62 |
| Table 3 | Focus Group 3 Participant Demographic Matrix..... | 63 |

LIST OF FIGURES

| | | |
|----------|---|----|
| Figure 1 | The “Black Box” approach to the college experience..... | 21 |
| Figure 2 | The campus experience: A geography of barriers..... | 22 |
| Figure 3 | Raymond Padilla’s Expertise Model..... | 24 |

CHAPTER ONE

Background

Millions of dollars are spent each year on minority retention and recruitment programs aimed at increasing the disproportionately low representation of minorities providing professional health care (Good, Halpin, & Halpin, 2007; Guion, Mishoe, Taft, & Campbell, 2006; Illinois State Board of Higher Education, 1995; Ricketts & Gaul, 2004). Programs often vary in breadth, depth, level, and funding sources, yet all seek to prepare and ensure the success of minority students in the health sciences (Good, et al.; Guion, et al.; Illinois State Board of Higher Education). According to Ricketts and Gaul, the federal government has increasingly provided funding through Title VII and VIII programs designed to increase the representation of minorities providing professional health care since the 1970s. These programs served as a series of “interventions intended to modify the pipeline into the health professions” (Ricketts & Gaul, p. 382). Such programs have been significant for North Carolina because they provide support for family medicine residencies, Area Health Education Centers programs (AHEC), and minority recruitment programs such as the Health Careers Opportunity Program (HCOP) (Ricketts & Gaul).

Despite the substantial resources devoted to these programs, efforts have fallen short. Overall, underrepresented minorities made up approximately 25% of the nation’s population in 2004, but only 10% of all health professionals (Ricketts & Gaul, 2004). More recently the Association of American Medical Colleges (AAMC) reported that underrepresented minorities made up less than 6% of the physician workforce compared to 30% of the total U.S. population (Rumala & Cason, 2007). A contemporary study confirms these findings,

stating that minority physicians make up only between 3% and 5% of the total physician workforce in the United States, but they serve between 23% and 30% of the total minority population (Gabard, 2007). Similarly minority pharmacists made up only 12% of the pharmacy workforce in the United States during 2006, but served a much greater percentage of the minority population, above 40% (Hayes, 2008). In 2006 only 12% of students enrolled in Doctor of Pharmacy programs were identified as minority students: African American--7.4%, Hispanic--4.2%, Native American--0.4% (Hayes). For North Carolina these deficits may be even more sobering given that minority representation in the health professions reflects the national rates, yet the proportion of minorities in the state population in 2004, approaching 27%, was higher than the national proportion, 25% (Ricketts & Gaul).

A recent national study found that one in five people in the United States lives in an area with inadequate health professional coverage (Gabard, 2007). The disparities noted by Gabard were also confirmed by Young (2005), who found that Hispanics, African Americans, people with less than a high school education, and the poor were the groups most adversely affected by inadequate health professional coverage. Her study also revealed that Caucasian doctors often had inappropriate expectations of African-American patients' acceptance of certain types of treatments and care.

In further evidence of the disconnect between minority patients and Caucasian healthcare providers, Young (2005) writes, "On the other side of it, minority patients may not be as trusting and may not be empowered enough to communicate with their providers, ask questions about their care, ask about alternatives, and ask whether the treatments are available to them" (p. 886). Betancourt and Maina (2007) further emphasize trust as "a

crucial element in the therapeutic alliance between patient and healthcare provider” (p. 89). Their telephone survey of 3,884 minority patients found that significant mistrust for healthcare providers existed, with 36% of Hispanics and 35% of African Americans stating that they felt they had been treated unfairly in the healthcare system based on their ethnicity, as compared to only 15% of Caucasian respondents. Even more respondents were afraid of being treated unfairly in the healthcare system in the future, based on their race--65% of African Americans and 58% of Hispanics as compared to 22% of Caucasian respondents (Betancourt & Maina). Such distrust often exists between Caucasian pharmacists and minority patients, leading to an exacerbation of current health problems or the emergence of new ones when patients are reluctant to ask questions about prescriptions and drug interactions (Hayes, 2008).

Additional evidence reveals that significant deficits in healthcare outcomes exist between minority patients and Caucasian patients. Barr (2008) found that, after taking into account differences in SES, minority patients continue to have significantly worse health outcomes than Caucasians. This was attributed to effects of decreased social capital associated with residential racial segregation across the range of SES. Additionally Barr quotes the Institute of Medicine (IOM) as stating that “bias, stereotyping, prejudice, and clinical uncertainty on the part of health care providers may contribute to racial and ethnic disparities in healthcare” (p. 201).

A survey conducted in 2006 by the Council on Graduate Medical Education found that minority health professionals were much more likely to locate their practice in an underserved area than non-minority health professionals (Gabard, 2007). Rumala and Cason

(2007) confirmed that minority physicians are much more likely to provide care to minority, underserved, disadvantaged, and low-income populations, and recommended that schools of medicine should implement recruitment strategies targeting underrepresented minorities.

The 2004 Sullivan Commission, an organization of health, business, and legal professionals partnering with Duke University Medical School, explored the issue of underrepresented minorities in professional healthcare and found the lack of diversity was placing approximately one-third of the nation at risk (Mangan, 2004). The Sullivan Commission released three guiding recommendations central to its findings:

1. To increase diversity in the health professions, the culture of health professions schools must change. Colleges, universities, health systems, and other organizations must examine the practices of their own institutions.
2. New and nontraditional paths to the health professions must be explored. Major improvements in the K-12 educational system are needed, but health professions schools cannot remain stagnant while these improvements take shape.
3. Commitments must be made at the highest levels. Change can happen when institutional leaders support change.

Furthermore one of the major recommendations of the Institute of Medicine (IOM) report on racial disparity in healthcare was to increase the proportion of minorities providing professional healthcare nationwide. The IOM report urges that the “recruitment, retention, and promotion of minorities at all levels of the academic ladder become a mainstream

admission and promotion policy” (Betancourt & Maina, 2007). The goal of developing a diverse healthcare workforce not only impacts direct clinical care and demographic/geographic health care disparities, but also will provide leadership in health system design and research that will address these issues systemically (Betancourt & Maina).

Smedley (2007) suggests that there are several advantages when patients who prefer healthcare providers of their own ethnicity are able to select such providers:

1. Increased availability of providers who understand the needs of underserved communities and are committed to meeting those significant healthcare needs.
2. Improvement in several healthcare variables, including quality of communication, depth of patient understanding, satisfaction with care, and greater likelihood of follow-up or referral.
3. Greater diversity of health profession students and faculty in both academic and experiential settings, leading to improvement in the cultural competency of *all* students as well as the cultural competency of the overall healthcare system.
4. Greater diversity of healthcare professionals and scientists, aiding in building trust and recruiting minority clinical research participants.

Additionally, minority healthcare providers are often able to address the cultural and linguistic barriers that significantly influence the quality of communication and ultimately the healthcare outcomes of minority patients (Smedley, 2007). Although Smedley cautions that diversity in healthcare professions “in and of itself cannot be assumed to lead to more culturally competent health systems,” he contends that “racial and ethnic minority health professionals are often able to bring diverse and underrepresented perspectives to both health

policy and health systems leadership, which may lead to organizational and programmatic changes that can improve the accessibility and cultural competence of health systems” (p. 129).

Not surprisingly, the failure to realize greater diversity in health professions can be traced to the inability of educational institutions at all levels to provide equitable opportunities for minority and low-income students (Smedley, 2007). Even when minority students succeed against the odds and are admitted to colleges or health professional schools, they are often unprepared for the rigor of the curriculum and pace of study (Smedley). Hayes (2008) claims that schools of pharmacy are confronted with several challenges in their efforts to increase the number of minority pharmacists practicing in the United States, which include inadequate numbers of minority faculty members to advise, teach, and mentor underrepresented minority students; increasing costs of higher education and declining levels of financial aid; unsupportive institutional cultures; lack of sufficient funding for student support services; and lack of administrative leadership to guide the development and implementation of sustainable programs to address recruitment, retention, and graduation of underrepresented minority students. Hayes’s assertion that financial aid, lack of minority representation at the faculty level, institutional resistance to diversity, and restrictive admissions policies hamper efforts to increase diversity at post-secondary educational institutions is extended by Smedley to include the range of schools from two-year community colleges through graduate professional programs.

As suggested by the Sullivan Commission and stated earlier, “Major improvements in the K-12 educational system are needed but health professions schools cannot remain

stagnant while these improvements take shape” (Mangan, 2004). Therefore, it is the responsibility of colleges and universities offering pre-professional and professional healthcare programs to examine and eliminate barriers to minority student retention (Seidman, 2005a).

Unfortunately the task of increasing minority student retention, particularly in areas of science, technology, engineering, and mathematics (STEM) majors, has met with little success. Approximately 65% of minority students leave STEM majors entirely within the freshman year as compared to 37% of Caucasian students (Good, et al., 2007). The high rate of attrition among minority students in the STEM majors serves as a “leaky pipeline” for the healthcare profession (Ricketts & Gaul, 2004; Smedley, 2007).

Statement of the Problem

Curiously, given the desire for a substantial increase in the number of minority healthcare providers coupled with the significant amount of money, time, and resources allocated to minority recruitment and retention programs, little research has focused on the success of minority students in undergraduate programs. The bulk of the research on minority student recruitment and retention at the undergraduate level has focused on why students fail or leave (Clark, et al., 2007; Ford-Edwards, 2002; Hernandez, 2000; Hrabowski, 2004; Kuh, 2005; Padilla, 1999, 2001; Sleet, 2000; Thompson, 2005; Wirth & Padilla, 2008).

Purpose

Therefore, it is the purpose of this study to determine how ethnic minority students enrolled in undergraduate programs that serve as a pipeline for professional health sciences

have been successful at a predominantly white, private university in the southeastern United States. This action research study will seek to answer the following questions:

- 1) What barriers, if any, to student success have minority students encountered at the focal university?
- 2) What was necessary for minority students to successfully navigate these barriers?

Definition of Terms

Success, for the purpose of this study, shall be defined as eligibility to participate in the summer bridge program for professional health sciences at Vance University (pseudonym). Undergraduate students eligible for this program must have an overall GPA of 3.0; be first generation college students, underrepresented in professional health science; and already hold a Bachelor of Science degree or be classified as a junior or senior upon the commencement of the summer bridge program. This definition is based on professional health science graduate school admission standards at Vance University. Admission to the Vance University School of Health Sciences (VUHS) is quite competitive. Over 2,000 applications are received each year for 100 slots in the entering class, with average GPA of 3.4. What constitutes undergraduate success is already pre-defined by professional health science graduate schools, through their admission standards. Summer bridge participants are already successful by Vance University School of Health Sciences admissions standards; therefore much can be learned by studying their success.

It is also necessary to mention that, in this study, the term *minority* delineates any racial group typically underrepresented in professional healthcare practice, administration, or

research. These include, but are not limited to, African-American, Hispanic, Native American, and Asian-American students. Although historically underrepresented in the professional health sciences, women are not included as a specific group in this study.

Many scholars assert that race is simply a “social construct” deeply embedded within society by “oppressive legislation, educational practice, as well as in the distorted portrayals of “others” in academic scholarship” (Ferri & Connor, 2005; Gabard, 2007). It could be argued that, by operating within the confines of this purely imaginative construct, this study is simply perpetuating and confirming an already oppressive and restrictive ideology. Admittedly, the topic of race as a social construct is pertinent to this study, although only to the extent that it explains the presence of institutional barriers that have historically existed as a part of educational institutions.

Although it may be argued that this study is confirming such an oppressive construct by specifically defining a group based on race, it does in fact seek to operate within this construct to make explicit and clear, the voices and experiences of those who this very construct of race, and consequently educational institutions, have marginalized.

Site Description: Background, Culture, and Current Status

Vance University is located in the southeastern United States, situated in rural North Carolina. Originally founded as a community school in the late 1800s, with fewer than 25 students, Vance eventually gained university status in the late 1970s. Historically the university has been affiliated with the Baptist tradition, only recently severing ties with its organized convention. The school’s values and mission remain focused on the Christian

principles on which it was founded; however, in recent decades the university has become increasingly moderate to liberal.

With Christian-centered values and strong Baptist heritage comes a fierce commitment of the university to the small surrounding community. Vance University has persisted as a strong liberal arts school, granting bachelor of science and bachelor of arts degrees in various disciplines. Part of the reason for this persistence in spite of the school's proximity to much larger public research institutions stems from the commitment of the faculty and staff of the university. The vast majority of faculty and staff live in the surrounding community, where university life and community life seem to melt into one another. Unlike many larger public institutions, Vance University often hires its own graduates as faculty after they have gone on to pursue doctoral degrees. These faculty are celebrated as having "come home to Vance." While this ensures commitment to the mission of the university, it also keeps the university somewhat inertia bound. Recently, however, with the passing of a president who served for over thirty years, the campus has begun to change--to reach out and embrace newer ideas, technologies, and innovations. These changes have come about as a result of a new president who is eager to build a legacy, in combination with more stringent standards imposed by various accrediting bodies.

Although total current enrollment of the entire university is more than 9,400 students, the main campus only hosts 3,900 students, including approximately 2,500 undergraduates and 1,400 graduate students. Students come from all fifty states and over forty countries; however, 66% of students are from North Carolina. The faculty-student ratio is 1:12, with professors, not graduate assistants, teaching all courses. This has been one of the hallmark

successes of the university--small classes and intimate interactions with faculty. Vance is a predominantly white university, with less than 10% ethnic minorities in the student body on the main campus. Even fewer ethnic minority students attend the graduate school. The vast majority of faculty are Caucasian and consider themselves Protestant.

Graduate programs were developed beginning in the late 1970s and have grown to include masters programs in social work, education, business, divinity, and criminal justice. Vance University also boasts a law school and a school of health sciences that offers the Doctor of Pharmacy, Master of Clinical Research, Master of Pharmaceutical Sciences and most recently Physician's Assistant programs. With the recent expansion of the school of health sciences, the university has partnered with nearby public research institutions to offer joint degrees and gain grant support. Recently, the Vance University School of Health Sciences received several hundred thousand dollars in grant money to design and implement bridge programs aimed at recruiting and retaining ethnic minority students in the health sciences.

Overview of the Approach

This qualitative study employs action research methods. Action research seeks to solve problems situated in a given context through “democratic inquiry” in which the researcher “collaborates with local stakeholders to seek solutions to problems of major importance to the stakeholders” (Greenwood & Levin, 2005, p. 54). This methodology uses naturalistic methods to collect data, usually involving observations or interviews--individual or group (McTaggart, 1991). For this study, focus groups will serve as a forum for successful ethnic minority undergraduate students to relate their experiences to one another and

recognize those experiences as a common bond, a method yielding a much richer understanding of minority student success than isolated interviews. Subsequently, separate individual interviews and document analysis were conducted in order to triangulate the data collected from the focus groups.

Specifically, thirty of the students eligible to participate in the Vance University School of Health Sciences Summer Bridge Program 2009 were invited to participate and those who agreed to take part in the study were divided into three groups of 8 – 10 students. Participants engaged in approximately one-hour focus group sessions. The focus group sessions were audio and video taped, transcribed, and analyzed using open coding techniques to identify themes within the data related to the students' experiences with barriers to their success. To further refine the model, five past program participants who are now enrolled in the Vance University School of Health Sciences were interviewed based on the emergent themes. Guiding questions for the study are:

- 1) What barriers, if any, to student success have minority students encountered at Vance University?
- 2) What was necessary for minority students to successfully navigate these barriers?

Significance of the Study

The refined themes of the data may provide greater understanding of student success that can be used to appropriately allocate resources for minority recruitment and retention as well as reduce institutional barriers that restrict minority student success at Vance University.

Although the specific results generated will not be applicable to all institutions, the application of the process may be replicated to generate site specific information at other institutions.

Summary

This chapter presented the background information, conceptual framework, research purpose, and significance of this qualitative participant action research study. This study investigates solutions to barriers encountered by successful minority undergraduate science students. This study also seeks to advance the relatively scant existing literature regarding minority student success.

CHAPTER TWO

Introduction

For decades the United States has struggled to increase the representation of minorities providing professional healthcare, yet minorities remain underrepresented at all levels of the profession. As previously discussed in chapter 1, there is an urgent need for scientists, practitioners, faculty, and government leaders from the minority population in order to address the healthcare disparities existing between Caucasian and minority patients (Capomacchia, 2004). The National Institutes of Health (NIH) strategic research plan to reduce and eliminate health disparities in the United States emphasizes that one of the most effective ways to reduce these disparities is to increase the number of minority health professionals providing health care services to the minority population (Capomacchia). This shortage of minority healthcare professionals is due, in large part, to the lack of minority students in the undergraduate pipeline as well as ineffective or non-existent programs at both historically black colleges and predominantly white colleges to provide support for the development of minority students (Capomacchia). According to Holmes et.al (2007), the retention and graduation of minority students are some of the greatest concerns in higher education since relatively few students persist to graduation.

This action research study seeks to explore the barriers that successful minority undergraduate students, in majors that serve as a pipeline for professional health programs, have faced at a private, predominantly white university. The study examines the things these students found necessary to overcome these barriers. This literature review includes a

discussion of general theories of student retention and their utility in regard to minority students, followed by related research on barriers to minority student success in college.

Multiple theories of student departure from college have been developed from economic, psychological, organizational, and societal research, but only the theories that are most paradigmatic in their explanatory power have persisted (Seidman, 2005b). In particular, two theories have been widely used to study college student retention: Astin's 1984 Theory of Student Involvement and Tinto's Theory of Student Departure (A. Astin, 1999; A. W. Astin, 1993; Tinto, 1993a). These theories focus mainly on the departure of minority students from college and the factors that predict their failure.

The research on minority students in college has only recently focused on their successes rather than the reasons they fail or leave (Nagasawa & Wong, 1999; Padilla, 1999; Padilla et al., 1996). Therefore a third, and comparatively newer, theory, the Expertise Model of Minority Student Success by Raymond Padilla, is included in this chapter. (Padilla et al., 1996; Padilla, Trevino, Trevino, & Gonzalez, 1997). This review of the literature will examine the Astin, Tinto, and Padilla models as they build upon one another. Chapter 2 then moves from retention theories into a more specific treatment of the barriers faced by minority students identified by recent research.

Astin's Student Involvement Theory

Colleges and universities have long struggled with the complex issues regarding the success and retention of minority students attending predominantly white (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999). Researchers studying minority students on predominantly white campuses have found that minority students generally find the campus

environment to be “hostile and unsupportive of their social and cultural needs” (Holmes, Ebbers, Robinson, & Mugenda, 2007, p. 80). Specifically, minority students have difficulty establishing interpersonal relationships with faculty, most especially non-minority faculty. In addition, however, social isolation, alienation, and lack of congruency between student and institution have also greatly contributed to the negative experiences of minority students on predominantly white campuses (Holmes, et al., 2007; Loo & Rolison, 1986). Astin’s Student Involvement Theory directly addresses the interaction and involvement of students with faculty and social aspects of the institution.

Astin’s theory suggests that, the greater the level of student involvement with both academic and social aspects of college life, the more they actually learn (A. Astin, 1999; A. W. Astin, 1993). Astin developed his theory from a study--involving longitudinal data from 24,847 students at 309 different institutions--that focused on the ways institutional characteristics influence the student experience (A. W. Astin). Involvement is defined as spending significant amounts of time on campus, expending significant amounts of energy on academics, being actively involved with campus organizations, and interacting often with faculty. Astin categorizes the energy expended as either “physical” or “psychological” (A. Astin). Therefore, “the amount of personal development realized and the effectiveness of the institution’s policies and practices were directly related to the level of student involvement” (Ford-Edwards, 2002, p. 23). This is particularly true of the amount of time students spend interacting with faculty and their peer group (A. Astin).

Seidman (2005b) points out that Astin’s theory is comprised of five basic tenets:

1. Involvement can be generalized (e.g., the student experience) or specific (e.g., preparing for a test);
2. Involvement occurs on a continuum that is distinct for each student at any given time;
3. Involvement possesses both qualitative and quantitative aspects;
4. The amount of student learning and personal development associated with any educational program is directly influenced by the quality and quantity of student involvement in that program;
5. The effectiveness of educational policy/practice is directly related to its capacity to increase student involvement.

The level of involvement varies, however, depending on the student and the amount of energy that the student is able to expend on a given domain, either physical or psychological. This duality is always in flux; however, Astin does note that the university or college can play a key role in the type and frequency of opportunities that are provided for the student to be involved, although ultimately students must exploit the opportunities (A. Astin, 1999; A. W. Astin, 1993; Ford-Edwards, 2002).

Tinto's Theory of Student Departure

While Astin's Theory emphasizes the importance of student involvement in both academic and social structures of the university, Tinto's model takes into account student characteristics as pre-entry variables (e.g., family background, individual attributes, and pre-college schooling experiences) (Ford-Edwards, 2002; Seidman, 2005b; Tinto, 1993a, 1993b).

These pre-entry variables often determine the extent to which students are committed to the institution and whether or not they persist to graduation (Seidman, 2005b).

Like Astin, Tinto emphasizes the importance of student integration into the dimensions of the college community; dimensions he classifies as both structural (explicit college standards) and normative (how well a student identifies with the normative structure of the system) (Tinto, 1993a). Contrary to Astin's focus on the formal aspects of integration (academics, interactions with faculty/peers, etc), Tinto asserts that social integration occurs at both the university level and within the subculture of the school (Seidman, 2005b; Tinto). Furthermore, the student's initial levels of commitment (both to the school and to the goal of graduation) are directly influenced by how well they have achieved academic and social integration.

As previously mentioned, Tinto held that students' pre-entry variables greatly influenced the degree to which they were able to mitigate entry into the academic structure as well as the social structure (Tinto, 1993a). Therefore Tinto's model provides a much more complex picture of student departure, and as such, has been hailed as the predominant theory of student retention--cited by over 775 studies and articles (Seidman, 2005b).

Tinto's model is not, however, without critics. Several researchers have claimed that this model is not appropriate for the study of minority students because it fails to account for cultural variables (D. Guiffrida, 2005; Kuh, 2005; Rendon, Jalomo, Noral, & Braxton, 2000; Tierney, 1999). Tinto's original model drew from the work of van Genep (1960), who argued in *Rites of Passage* that transition (or integration for Tinto's purposes) occurs in three stages: separation, segregation, and incorporation (van Genep). Consequently, Tinto asserts

in his model that, in order to be truly integrated into the academic and social structures of the college, students must separate themselves from past associations and traditions (D. Guiffrida, 2005; Tinto, 1993a).

Yet Guiffrida points out that, although this model may be adequate to describe developmental progression of majority white students into college, applying this model to minority students is inappropriate since such an action for minority students amounts to assimilation rather than integration or developmental progression. The traditional university is based on Eurocentric frameworks which tend to differ from the cultural backgrounds and norms of minority students (D. Guiffrida, 2005). According to Holmes (2007), the competitive learning styles of the dominant European Anglo-Saxon culture, on which the United States educational system is built, make assimilation very difficult for minority students whose learning styles are often more collaborative in nature. Therefore, the very process of assimilation devalues the minority student. Furthermore invoking Van Gennep's theory could be harmful to minority students by encouraging separation from supportive relationships (D. A. Guiffrida, 2006). Kuh, Rendon, and others maintain that this particular aspect of Tinto's theory ignores bicultural integration, which allows individuals to retain their cultural identity while still connecting with and participating in larger society (D. Guiffrida; Kuh, 2005; Nora, 2002; Rendon, et al., 2000).

Numerous studies have established the importance of maintaining connections to cultural heritage so that minority students can garner support from their homes and communities (Cabrera, et al., 1999; Delgado, 2002; Eimers & Pike, 1996; Gloria, Kurpius, Hamilton, & Willson, 1999; Gonzalez, 2002; D. Guiffrida, 2005; D. A. Guiffrida, 2003,

2006; Hendricks & et al., 1996; Hurtatdo, 1997; Murguia & et al., 1991; Nora, 2002; Nora & Cabrera, 1996; Padilla, et al., 1997). Therefore, Tinto's model, though more robust and explanatory than Astin's, is not only insufficient to describe and characterize the successes of minority students at a private, mostly white institution, but according to research, may be entirely inappropriate due to the flawed assumptions underlying social integration of minority students.

Raymond Padilla's Expertise Model of Minority Student Success

Raymond Padilla argued that the bulk of research on minority students in college focuses on failure and attrition rather than the successes of students who complete their degree programs (Padilla, 1992, 1999, 2001; Padilla et al., 1996; Padilla, et al., 1997). He posits that much of the theory on student retention from such researchers as Astin and Tinto tends to view the college experience as a "black box" (Padilla, 2001). The black box is defined as a phenomenon in which the inputs and outputs are fairly clear, but little is understood about the process in between (Bothamley, 1993). Padilla points out that in this approach, the single input consists of incoming students with two possible outcomes, as demonstrated in figure 1.

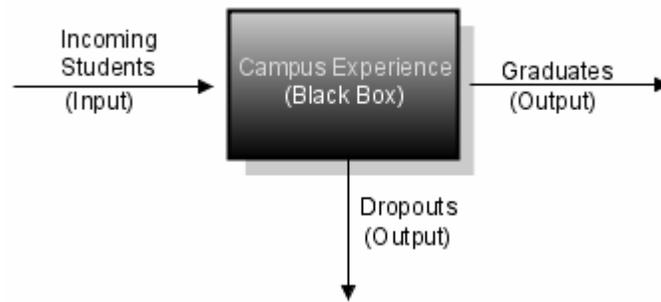


Figure 1. The “Black Box” approach to the college experience (adapted from Padilla, 2001)

Indeed, Tinto focused heavily on the inputs, such as student characteristics and how well they predicted departure; very little of Tinto’s theory, however, actually deals with the process of the campus experience. Padilla argues that while “we can characterize in great detail the experiences and background that college students bring to campus, as well as the profiles of students who leave college without obtaining a degree, we do not know how students arriving at a particular campus are transformed over time into either successful or unsuccessful students in terms of degree attainment” (Padilla, 2001, p. 134).

In focusing on the process rather than just the inputs, it is useful to assume that the campus experience for most “represents a geography of obstacles and barriers that must be overcome by the student in order to attain a college degree” (Padilla, 2001, p. 135). Figure 2 illustrates the geography of barriers existing within the black box. Students who successfully navigate these barriers exit through the graduation channel, while students who cannot overcome these obstacles exit through the dropout channel and are, therefore, considered unsuccessful. Although there are some barriers commonly faced by all students, other barriers only exist for a particular individual or group of students.

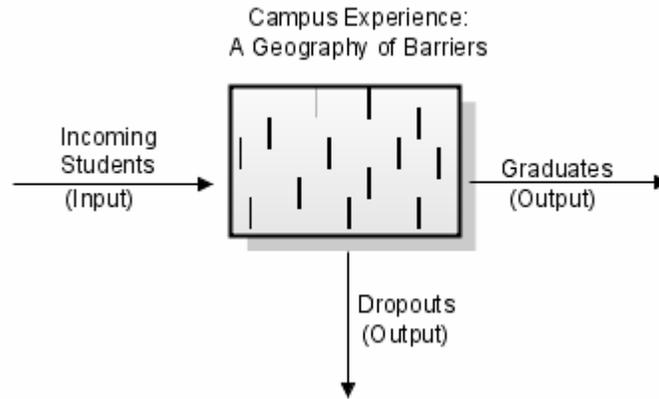


Figure 2. The campus experience represented as a geography of barriers (adapted from Padilla, 2001).

Padilla poses the question: “Given that not all students on a particular campus are successful in overcoming campus barriers to the extent that they complete the degree program, what might account for the difference in outcome between successful and unsuccessful students?” (Padilla, 2001, p. 135). To answer the question, Padilla suggests that we further assume that successful students take particular actions to overcome specific barriers. These actions are based on specific knowledge of the barrier (Padilla, 1992, 1999, 2001; Padilla & et al., 1996; Padilla, et al., 1997).

For Padilla, knowledge exists in three forms: Compiled, Theoretical, and Heuristic. Basing his model on “Expert Systems” theory formulated by Harmon and King, he indicates that compiled knowledge is considered the composite of both theoretical and heuristic knowledge that is “organized, indexed, stored in such a way that it is easily accessed and readily available for problem solving” (Harmon & King, 1985; Padilla, 1992). Theoretical knowledge consists of “information that is typically chunked as definitions, axioms, and laws

that are often expressed as principals or theories” (Harmon & King, 1985; Padilla, 1992). This type of knowledge is gained through formal study and learning in school.

Theoretical knowledge alone, according to Padilla as well as Harmon and King, is a necessary but insufficient condition for success (Harmon & King, 1985; Padilla, 1992). According to Harmon and King, formal axioms tend to generate problem spaces that are too large to search. Padilla holds that both theoretical and heuristic knowledge are necessary conditions for effective solutions. Heuristic knowledge is stored as rules of thumb and is domain specific and learned from experience or a mentor rather than from formal study (Padilla). These rules of thumb help to make search spaces more manageable (Padilla). Heuristic knowledge allows students to focus on key patterns in a given domain, thus creating more competent problem solvers who can concentrate on the important facets of a problem (Harmon & King).

The Expertise Model of Student Success places the two different types of knowledge on two separate vectors, as demonstrated by figure 3.

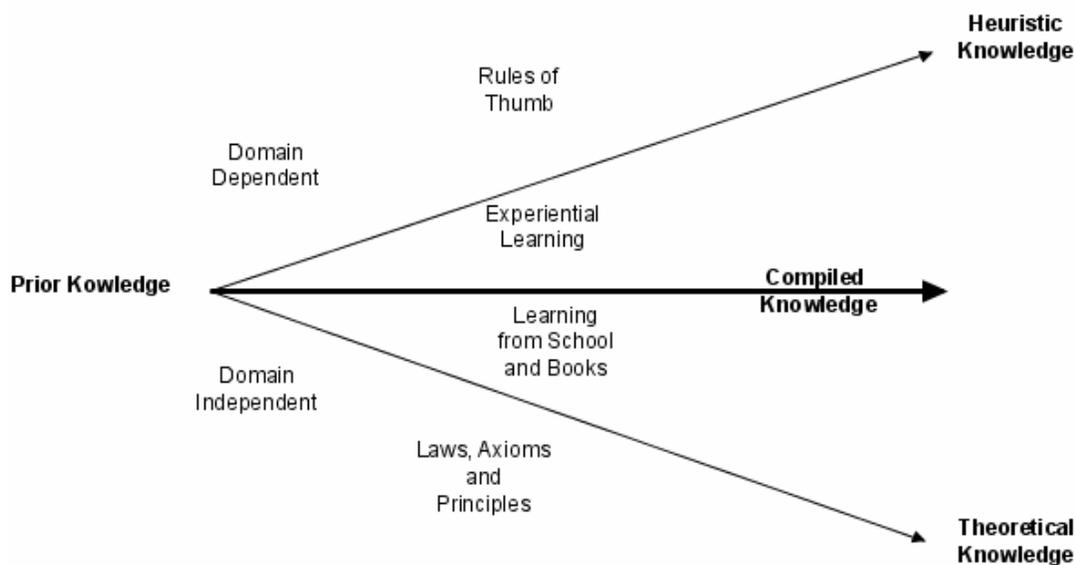


Figure 3. Raymond Padilla's Expertise Model (Adapted from Padilla, 1997).

Since both heuristic knowledge and theoretical knowledge are equally important to student success in college, the resulting vector of compiled knowledge leads to graduation and degree attainment. Padilla acknowledges that colleges, by design, already do a good job of imparting theoretical knowledge; however, very few institutions formally address heuristic knowledge (Padilla et al., 1996).

Heuristic knowledge is localized and experiential in nature; therefore, a student actually has to be there to understand the “nuances, ambiguities, and assumptions” of the situation (Padilla, 1992, p. 135). This type of knowledge is based on the philosophical notion of *verstehen*, which means “experienced reality” that is specific and concrete. In this way, heuristic knowledge is bound to a particular domain and cannot be generalized beyond the local situation (Padilla)). It includes such rules of thumb as knowing when to drop a class rather than fail it, scheduling classes, and gaining access to financial aid dates and

information. Theoretical knowledge is considered abstract in nature and can be applied to various domains. Since heuristic knowledge cannot be generalized, it cannot be assessed as theoretical knowledge would be. To do so (to create some instrument to measure heuristic knowledge, such as a test) would prove ineffective because “it largely ignores the two salient features of heuristic knowledge: its localism and the experiential mode of its acquisition” (Padilla, 1992, p. 136). Padilla (2001) suggests that a more effective assessment of heuristic knowledge would be to develop a procedure that:

1. Assesses the heuristic knowledge that is relevant to a particular campus (as opposed to just the individual).
2. Provides an experience to students that helps them acquire the relevant heuristic knowledge.

In essence, the Expertise Model suggests that heuristic knowledge must be gained early and in great detail in order for a student to persist to graduation.

This model affirms Tinto’s claim that social integration is vital to persistence to graduation (Padilla, 2001; Padilla, et al., 1997). However, Padilla advances the understanding of social integration (among other aspects of college) by focusing on the campus specific barriers that students have faced and overcome in their college experiences.

Padilla applied this model to study the heuristic knowledge of successful minority students to yield a campus specific model. His model begins with an empty matrix which is gradually filled with data that is subject to interpretive analysis (coding) to create a concept model for explaining the phenomenon that is being studied, such as minority student success in college (Padilla et al., 1996). The first component of the matrix consists of barriers,

followed by knowledge and then actions. Padilla conducted three one-hour focus groups, each consisting of 5 -10 volunteers who were self identified as ethnic minority students at a large, predominantly white, southwestern university. In order to participate in the study, students had to be at least sophomores. The understanding of success for Padilla's study was not predetermined but was allowed to emerge from the discussion; therefore, a high GPA was not a prerequisite for participation in the study. Padilla began by asking students to list barriers they had experienced on campus, followed by the knowledge they needed to overcome the barrier and the subsequent action they took based on the knowledge concerning the barrier (Padilla et al.).

Padilla's work represents a sharp departure from the works of Tinto and Astin. While insightful with its focus on minority student success and application of the black box approach, his model becomes problematic in its treatment of knowledge. Padilla's model focuses mainly on heuristic or experiential knowledge. Ironically, even though Padilla emphasizes that the particular kind of knowledge under study is contextual in nature, he treats knowledge and actions as separate entities. Knowledge in this instance is treated as conventional knowledge, which is described by Greenwood and Levin (2005, p. 49) as "individualistic cognitive phenomenon of very little use in the social sciences and humanities". To separate knowledge from actions ignores the way in which much of our knowing is implicitly expressed by our actions, also called "tacit knowing" (Greenwood & Levin). Greenwood and Levin emphasize that tacit knowing "connotes the hidden understandings that guide our actions without our ability to explicitly communicate what the knowledge is" (p. 50). Padilla's treatment of knowledge as distinct from actions severely

undermines his purpose by only focusing on knowledge that minority students are able to express in conventional terms. Since the progression of data collection is relatively linear, discussion of actions in Padilla's model tends to only correlate with the knowledge listed in the collection matrix earlier in the discussion. This treatment of knowledge probably impedes the discussion of relevant actions students have taken that they cannot directly relate back to a particular traditional knowledge point.

Alternatively, the idea of *phronesis*, which originated with Aristotle, is a practice that simultaneously involves all stakeholders, both researchers and local actors, who have legitimate claims to tacit knowing and share an interest in the outcomes of the collaborative effort to improve their local situation (Greenwood & Levin, 2005). In this sense, tacit knowing, also referred to as "knowing how," must merge with theory and technique so that stakeholders "know how to act" in order to achieve desired outcomes (Greenwood & Levin). Greenwood and Levin maintain that desired outcomes will never be realized unless local actors "learn how to act in appropriate ways and use suitable tools and methods" (p. 51). Therefore, knowledge, or more appropriately "knowing," cannot be generated from passive reflection but must emerge through the active struggle to "know how to act" in the natural world with real-world materials (Greenwood & Levin). Padilla's model could be a great deal more relevant to universities and colleges struggling with the retention of minority students if it abandoned the reductionist, positivist approach to knowledge generation by simply focusing on the actions of successful minority students.

This study utilizes the conceptual model and assumptions of the black box approach, but it does not employ Padilla's understanding of knowledge. The study addresses barriers

that minority students have faced, and it seeks to determine what was necessary for students to overcome those barriers. Without the arduous task of separating knowledge from actions, the natural flow of discussion may yield richer, more revealing experiences by allowing students to focus on their story rather than trying to fit their experience into a predetermined model.

The remaining portion of chapter 2 will provide an overview of the common barriers encountered by minority students in college established in the literature that has applied the black box approach. Though difficulties exist with Padilla's treatment of knowledge, studies by Padilla and other researchers employing the black box approach to retention have consistently identified several broad categories of barriers faced by minority students on college campuses. The taxonomy of barriers will be used to organize the review of research literature regarding factors that impede minority student success in college.

Barriers

Padilla's original study involved three separate one-hour focus groups, each incorporating between 5 and 10 minority undergraduate students at a large southwestern research institution. In this study the students identified three broad categories of barriers: 1) Discontinuity Barriers, 2) Prejudice Barriers, and 3) Resource Barriers (Padilla et al., 1996).

Discontinuity

Discontinuity barriers were identified as barriers that impede the smooth transition from high school to college. Padilla found that minority students typically overcame these barriers by "mental conditioning" prior to arriving on campus. Students develop an "exceptional stance" regarding college in that they expect the experience to be challenging

and very different from high school. As part of this conditioning, successful students expected that, being part of a minority group, they would not receive the same emotional support that they received while living at home (Padilla et al., 1996). Students recognize the intrinsic and future economic value of the degree; therefore, they “shrink the social world of the university to make it more manageable and less overwhelming” (Padilla et al., p. 11). One way students were able to accomplish this was by building a support base on campus that would enable them to receive the emotional support they no longer received by living at home (Padilla et al). Padilla found that successful students also:

- 1) Joined or created clubs relating to their ethnicity;
- 2) Promoted independence in decision making and were willing to take “reasonable risks” early during college;
- 3) Acted as “informed consumers” regarding their major/career and the profitability of that decision (Padilla et al.).

Sleet also found discontinuity barriers related to support systems. Her study of an urban campus in St. Louis found that successful students also perceived the transition from high school to college as different and challenging. These students also approached college with an “exceptional stance” and determined that the benefit of the degree was worth the sacrifices they would make (Sleet, 2000). Students in this study also cited academic preparation as a discontinuity barrier. These students felt that the disparity between their academic experience in high school and academic expectations in college was far too great compared to their white peers. In order to meet these expectations, students realized early on that they must make sacrifices that would limit their involvement with family and friends

back home (Sleet). Successful students set clear goals and realistic objectives for themselves but were open and honest with friends and family about these goals and the effort necessary to attain them (Sleet).

Thompson's study of African-American doctoral degree completion found that even at the doctoral level, African-American students struggled with preparation and transition into research. Successful students pointed out that their previous coursework in methods did little to prepare them for a program that was based heavily on theory. As with Sleet, these students understood the level of commitment required to be successful and made necessary sacrifices in order to persist (Thompson, 2005).

Wirth also conducted a study of successful minority students in a large community college and found that students identified barriers related to study skills and academic preparedness. Successful students sought out on-campus support structures upon the suggestion of peers and faculty. Additionally students tended to form study groups that met around their schedules since all students commuted and worked at least part time (Wirth, 2006).

Prejudice Barriers

This category of barrier is made up of two subcategories labeled "Lack of Nurturing" and "Lack of Presence." Lack of nurturing barriers stem from the absence of resources on campus that support the adjustment and development of minority students. Similarly, lack of presence barriers are related to the absence of minorities in the curriculum as well as under-representation of minorities in university programs and at the faculty/staff levels (Padilla et al., 1996).

Padilla writes, “Prejudice barriers refer to institutional culture and practices that tend to marginalize, devalue, and omit ethnic minority students” (Padilla et al., 1996, p. 12). Successful minority students recognize that they must be self-nurturing and also acquire nurturing from others. Students self-nurture by “knowing their self-worth, depending on themselves, and being persistent about meeting their own needs” (Padilla et al., p. 12). In addition to self-nurturing, students sought nurturing from others by accessing ethnic student organizations or seeking out a mentor (Padilla et al.). Most students created a “family” on campus that was supportive of their endeavors, or they made a strong effort to involve their biological family in their college experience (Padilla et al.). Padilla surmises that successful minority students on this particular campus ask about and actively seek the ethnic presence that is already established on campus. They are aware of the need to be grounded in their own ethnicity in order to “inoculate” themselves against the lack of minority presence (Padilla et al.).

A recent study confirms that the minority presence on campus, particularly of minority faculty, aids in the retention of minority students (Rogers & Molina, 2006). In this study, the 11 predominantly white universities with the highest minority retention rates tended to have an average of 15% minority faculty members. Additionally, programs with greater than 20% minority student enrollment had higher graduation rates than programs with fewer minority students.

In Sleet’s study, students overcame lack of nurturing barriers by also seeking out campus groups and creating “fictive families” that would support their goals. Additionally, students came to campus expecting to encounter racism and prejudice since the university

was a predominantly white institution (Sleet, 2000). To cope, students also grounded themselves in their ethnic identity and drew strength and support from their fictive family and biological family but ultimately decided that the benefit of attending and graduating from this particular university would far outweigh the prejudice that they encountered (Sleet).

Thompson (2005) also found that African-American students at an Ivy League university found it difficult to integrate into the social structures of the university, stating that they never really felt like a part of the school. Students cited the school's mission as being inclusive, but the perception was that diversity was not truly embraced. Successful students recognized the politics of the program and networked with appropriate faculty to overcome the circumstance of being an outsider (Thompson).

Another study found that African-American students attending a private, mostly white university felt isolated and alone early in their college experience. Students in this study by Ford-Edwards (2002) specifically mentioned the lack of minority presence on campus as discouraging; however, successful students tended to form informal ethnic organizations that supported their efforts. One student, for example, bonded with the only other two African-American students in her engineering program in order to gain and provide nurturing and support (Ford-Edwards). Successful students also took a unique stance pertaining to commitment to the organization. While many students considered the university to be prejudiced against minorities, thus affecting their commitment to it, their commitment to their goal of graduation and degree attainment was very high (Ford-Edwards). Finally, more than one third of the respondents in the study (21 students) had formed fictive families

on campus or had actively engaged their biological family in their college experience in order to gain nurturing (Ford-Edwards).

Resource Barriers

The final category deals with resources and lack of money. Successful minority students tended to network with staff and other students who understood the financial aid process, to prepare early for financial aid deadlines, and to develop methods of time management (Alon, 2007; Loo & Rolison, 1986). Additionally, minority students understood the importance of good academic performance in order to be eligible for scholarships (Padilla et al., 1996). Students in Thompson's study also identified money and financial aid as a barrier. Several students mentioned not being able to afford books and often going to the library in order to use their hard copies for class. Financial aid deadlines were cited by several students as a barrier. Since the information provided was so vague, many students missed important deadlines for applications. Successful students networked with professors in the department to find out about graduate assistantships and grants that would fund their education (Thompson, 2005).

Wirth also found that money and resources served as barriers to minority student success at a community college. Most students worked full or part time, but jobs seemed difficult to obtain and often conflicted with class schedules. Additionally, there was more competition for resources since many students also had families for which to provide (Wirth, 2006). Successful students were quite frugal with their money but made it a point to learn the financial aid process early to capitalize on the limited assistance available (Wirth).

Academic Resiliency in Minority Students

The previously discussed taxonomy of barriers and the solutions generated by successful undergraduate minority students in response to those barriers are often contextual in nature – that is, a given barrier may only exist in a particular local instance. Likewise, the solutions to such barriers may not necessarily be transferable to another campus, school, or student body. However, it is important to note that researchers have identified psychological factors common to successful minority students which need not be necessarily contextually limited that may aid in the understanding of the ability of minority undergraduate students to persist in college.

Educational resilience in regard to successful minority undergraduate students may best be described as “students who despite economic, cultural, and social barriers still succeed at high levels” (Cabrera & Padilla, 2004, p. 152). Resilience research examines the interaction between protective factors and high-risk populations (Prince-Embury, 2008). Specifically, resiliency theory identifies common factors that “exist in the lives of individuals who have managed to thrive in the face of adversity compared to those who did not” (Prince-Embury, p. 4).

Three broad categories of protective factors have been recently identified to include Personal Factors, Social factors, and Environmental factors (Morrison & Allen, 2007; Prince-Embury, 2008). Common personal factors are intellectual ability, easy temperament, autonomy, self-reliance, sociability and pro-social bonding, effective coping strategies and communication skills. Social factors, particularly family issues, also serve as protective factors for resilient individuals and include family warmth, cohesion, structure, emotional

support, positive styles of attachment and close bonds with caregiver(s) (Prince-Embury). Finally, environmental factors such as positive school experiences, good peer relations, and positive relationships with other adults also act as protective factors for resilient individuals (Prince-Embury).

Stereotype Threat

In contrast to the protective factors that may contribute to the resiliency of undergraduate minority students, other researchers have identified a psychological factor that may help explain the failure, or underachievement of otherwise capable undergraduate minority students known as “stereotype threat” (Aronson, 2002; Steele, 1999). According to Aronson, stereotype threat occurs “in situations where a stereotype about a group’s intellectual abilities is relevant – taking an intellectually challenging test, being called upon to speak in class, and so on” (p. 114). In these situations, “Black students bear an extra cognitive and emotional burden not borne by people for whom the stereotype does not apply” (p. 114). This causes African-American students to experience performance-disruptive apprehension or anxiety regarding the possibility of confirming a deeply negative racial inferiority (Aronson).

Stereotype threat impacts academic achievement by inducing anxiety. Studies have induced stereotype threat by asking students to indicate their race on the test booklet of standardized tests (i.e., GRE or SAT). Performance for African-American students in these studies was severely undermined when race was emphasized, however when tests were portrayed differently – as nondiagnostic of ability – the performance gaps between African-Americans and Caucasians were virtually eliminated in many cases (Aronson, 2002).

Additionally, both self-reported anxiety levels as well as measured by elevated blood pressure were significantly higher for African-Americans under induced stereotype threat.

Stereotype threat also may cause “disidentification”, or disengagement from achievement that is used as a coping strategy to help students cope with the threat of underperformance in particular domain. In order to maintain self-esteem, students tend to identify with domains in which they are successful (Aronson, 2002). Therefore, in order to maintain self-esteem, one must either be successful in an endeavor or disidentify from it so that the threatened domain is no longer used to determine one’s self-esteem (Aronson).

There is evidence which indicates that, at least in part, because of stereotype threat African-American students are much more likely than their Caucasian counterparts to disidentify from academics (Osborne, 1995). Since identification is assumed to be “crucial to success in college, any force or set of forces that frustrates this psychological engagement can be a serious barrier to achievement” (Aronson, 2002, p. 115). Both responses to stereotype threat – anxiety or disidentification – “can critically depress students’ performance in college” (Aronson, p. 115).

Summary

This chapter cited research literature on student retention and undergraduate minority student success. The literature review examined major student retention theories, the expertise model of student success, and barriers encountered by minority undergraduate students. This chapter serves as a foundation for the research that will aid in the identification and explanation of emerging themes throughout the study. Chapter 3 will describe the

research design employed in this study and give detailed descriptions of the data collection, participant selection, ethical issues, limitations, and data analysis.

CHAPTER THREE

Overview of Topic and Purpose

This action research study examines the ways in which successful undergraduate ethnic minority students in majors that serve as a pipeline for professional healthcare have managed to overcome barriers to their success at a private, predominantly white university. Currently, one of the main priorities of colleges and universities hosting professional healthcare programs is to mend this leaky pipeline in order to retain minority students in undergraduate programs leading to graduate professional healthcare education (Betancourt & Maina, 2007; Reichert, 2006; Williams, 2007). The aim of these efforts is to drastically reduce, and eventually eliminate, the significant health care disparities that exists between ethnic minorities and Caucasians in the United States by greatly increasing the number of minorities providing professional health care (Gabard, 2007; Williams, 2007). Relatively little research has explored the experiences of successful undergraduate minority students – most research focuses on causes of attrition (Clark, et al., 2007; Ford-Edwards, 2002; Hernandez, 2000; Kuh, 2005; Padilla, 1999; Sleet, 2000; Thompson, 2005; Wirth & Padilla, 2008). Therefore, the purpose of this study is to examine the experiences of successful undergraduate minority students that relate to their perceived barriers to success as well as to their solutions.

Research Questions

In order to ascertain how ethnic minority undergraduate students have managed to overcome barriers to their success at a private, predominantly white university, the following research questions guide this study:

- 1) What barriers, if any, to student success have minority students encountered at Vance University?
- 2) What was necessary for students to successfully navigate these barriers?

The information gathered by these research questions may allow the focal university to identify and reduce or eliminate common barriers encountered by minority students through allocating resources more appropriately. Additionally, solutions generated by students may provide specific strategies to the focal university for addressing these barriers.

Appropriateness of the Approach

Since this action research study seeks to examine the perceptions and experiences of participants, a qualitative research design is more suitable than a quantitative approach. Qualitative methods are remarkably well-adapted at investigating issues dealing with multiple realities and experiences, providing a rich, thick description of the “how?”, “why?” and “in what ways?” types of questions that quantitative studies simply cannot address (Lincoln & Guba, 1985). Considering the purpose of this study is to examine perceived barriers to success and the ways in which minority undergraduate students overcame them, quantitative methods would likely inhibit the depth and quality of the data by forcing a participant’s responses into a pre-determined framework. Qualitative inquiry provides a more “complex, detailed understanding of the issue that can only be established by talking directly with people, allowing them to tell the stories unencumbered by what we expect to find or what we have read in the literature” (Creswell, 2007, p. 40).

The emergent nature of qualitative research provides additional advantages over quantitative research in that questions can be refined, added, or deleted as the issue under

study unfolds. According to Creswell (2007), qualitative research should be conducted when the goal is to hear the voices of the participants.

This participatory action research study addresses the “what”, “how”, and “why” of the experiences of successful minority undergraduate students regarding the ways in which they managed to overcome perceived barriers to their success (Yin, 2009). Since the emphasis of this study is on solutions to perceived barriers, this research study lends itself well to the use of action research. Action research seeks to engage people in a collaborative relationship through dialogue surrounding practical and pressing issues in the lives of people situated in a given context (Reason & Bradbury, 2006). Reason and Bradbury describe action research as “a living, emergent process”(p. xxii). It is this flexibility combined with its synergy with qualitative methods and inherent mandate for social justice that guides the selection of this methodology.

Action research studies have not evolved from one particular qualitative tradition, but exist as a “family of approaches” that encompass multiple methods to include interviews, focus groups, document analysis, and even quantitative methods such as surveys (Reason & Bradbury, 2006). The emphasis of any action research study, regardless of employed methodology or paradigm however, remains the same – to conduct research *with* rather than *on* participants in an effort to positively shape the lives of the stakeholders (Reason & Bradbury). Reason and Bradbury cite several important characteristics that describe action research as

1. a response to practical and often pressing issues in the lives of people, organizations, and communities.

2. collaborative relationships that open new communication spaces where dialogue and development can flourish.
3. drawing on the many ways of knowing.
4. strongly value oriented, seeking to address issues of significance regarding the conditions of human persons, their communities, and the wider ecology in which we participate.
5. a living, emergent process that cannot be predetermined but changes and develops as those engaged deepen their understanding of the issues to be addressed.

Traditional research has most often “privileged knowing through thinking over knowing through doing” (Reason & Bradbury, 2006, p. xxv). However, proponents of action research emphasize that action research “explicitly rejects the separation between thought and actions that has characterized social research for a number of generations” (Greenwood & Levin, 2007, p. 5). Greenwood and Levin go on to claim that this pseudo-split has been the main culprit responsible for deforming the social sciences (Greenwood & Levin). Reason and Bradbury (p. xxiv) maintain that “qualitative, constructivist approaches to inquiry and critical theory overlap significantly, sometimes to the point of being inseparable”. Therefore, action research represents a distinct departure from much of traditional research in that it emphasizes the importance of action and its relationship to conceptual insight (Reason & Bradbury).

In a broader sense, some methodologists have classified action research as an iterative approach (Grbich, 2007). According to Grbich (p. 20), “iterative approaches involve seeking

meaning and developing interpretive explanations through processes of feedback.” This type of approach involves more than one cycle of data collection to ensure that each cycle is guided by the previous cycle until no new data are apparent, reaching a level of saturation. Again, however, the flexible and emergent nature of qualitative approaches allow “considerable variation in methods” (Grbich, p. 23).

Given the collaborative, emergent nature of action research, with its emphasis on improving the situation of all stake holders, and the flexibility to include various qualitative methods, it seems appropriate for primary data to be collected through multiple focus groups. Morgan and Krueger assert that focus groups are appropriate for exploring and understanding complex human behavior and motivation by comparing differing points of view that are exchanged during the session which allows researchers to examine motivation in more depth than is typically available with other methods (Morgan & Krueger, 1993). Denzin concurs that groups create their own structure and meaning during the dialogue, providing the researcher access to clarifying arguments and diversity of opinions or experiences (Denzin, 1978). Other researchers support the use of focus groups for studies that are both exploratory and confirmatory in nature, employing semi-structured, open-ended questions that permit flexibility in responses (Frey, Fontana, & Morgan, 1993). The use of multiple focus groups provides an inherent opportunity to assess reliability that is not readily available with other qualitative methods. Statements can be compared within and across sections indicating the reliability of the data collected (Knodel & Morgan, 1993).

Therefore the primary data collection consists of three separate focus groups each consisting of 8—10 participants that will last approximately one hour. Between 8 and 10

participants is ideal for a focus group session, providing enough diversity of experience to yield a rich description of the issue under study without overwhelming the researcher and participants (Greenbaum, 1998). As suggested by Frey, Fontana, and Morgan (1993), semi-structured, open-ended questions will be used during the focus groups.

Overview of Methods

This participatory action research study is a qualitative study of successful undergraduate ethnic minority students enrolled in majors that serve as a pipeline for professional healthcare education at a private, predominantly white university. The focus of this study is on the ways in which successful minority students have managed to overcome perceived barriers to their success. To investigate these issues, three separate focus groups of 8—10 students serve as the primary method for collecting data, followed by five individual interviews with minority students currently enrolled in the graduate health sciences program at Vance University. Additionally, document analysis was conducted on students' biographical statements (part of the admissions process) in an attempt to triangulate findings.

Participants were contacted through email asking for their participation in the study (see Appendix A for the email). Once participants agreed to participate in the study, they were scheduled for a single, one-hour focus group session that best fit their schedule. All focus groups took place on campus in the Vance School of Health Sciences Executive Boardroom between 6pm and 9pm on a Monday, Tuesday, or Wednesday evening during the latter half of the 2009 Spring semester. The facilities have the capability to videotape the sessions in an unobtrusive manner, and all participants were informed of this before agreeing to participate. Semi-structured interview questions (see Appendix B) guided the focus groups

initially; however, the researcher added questions for clarification or further exploration as the session unfolded. Consistent with the emergent nature of iterative qualitative methods, results from the first focus group session prompted revision or refinement of the interview questions for the second focus group, and so on (Grbich, 2007). Following the thematic analysis of the focus group sessions and document analysis of students biographical statements, five ethnic minority graduate students currently enrolled in the Vance University School of Health Sciences who previously participated in the summer bridge program were interviewed. Open-ended, semi-structured interview questions were also used for the individual interviews (see Appendix E). All names used in this study are pseudonyms, including the focal university name.

Emerging themes in the data may provide a more complex, in-depth understanding of the experiences of undergraduate minority students on this particular campus. From these experiences, perceived barriers to minority student success may become more apparent. Most importantly, the solutions generated by students who have successfully navigated the perceived barriers are made available to the focal university, possibly allowing more appropriate allocations of resources supporting efforts to increase undergraduate minority student retention in programs that lead to professional healthcare.

Site Selection and Sample

This participatory action research study is a qualitative study of successful undergraduate ethnic minority students enrolled in majors that serve as a pipeline for professional healthcare education at a private, predominantly white university. The focus of

this study is on the ways in which successful minority students have managed to overcome perceived barriers to their success.

Since this study seeks to examine a select type of undergraduate student, purposeful sampling was used to select a group of students who were self identified as ethnic minorities, enrolled in undergraduate majors that serve as a pipeline for professional healthcare education, and are considered successful. Success in this study is defined as having an overall GPA of 3.0, eligible for participation in the Vance University School of Health Sciences summer bridge program. According to Creswell (2007), purposeful sampling means that “the inquirer selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon under study” (p. 125). Creswell further emphasizes that it is essential that all participants have experiences regarding the issue to be studied. Homogenous sampling for Creswell is a purposeful sampling technique that “focuses, reduces, simplifies, and facilitates group interviewing” (p. 127). This study employs Creswell’s definition of purposeful, homogenous sampling.

Action research requires that the researcher and participants all have a stake in the outcome of the issue being investigated and be members of the same community or organization (Greenwood & Levin, 2007; Reason & Bradbury, 2006). Since the researcher is both employed by the focal university to provide programmatic assessment of its graduate programs in the School of Health Sciences as well as an alumnus of the university, he shares an interest in proposing solutions to barriers encountered by minority students on this particular campus. Additionally, the selection of a predominantly white campus is appropriate since more than 80 percent of all minority college students are enrolled in

predominantly white institutions, and 75 percent of bachelor's degrees earned by African-Americans come from these schools (U.S. Department of Education, 2000).

Participant Eligibility

Participants included in the study were recruited from the pool of students *eligible* for the Summer bridge program at the Vance University School of Health Sciences. This program is designed to enhance the scientific knowledge as well as to prepare motivated, underrepresented minority students for the rigors of admission into the professional School of Health Sciences. It offers an intensive, week-long summer curriculum for students interested in potential careers in professional health sciences. Between 30 and 50 students typically participate in the program each year. In order to be eligible to participate in this program, students must meet or exceed the following criteria: minimum 3.0 GPA; be at least a second semester junior (in terms of credit hours); obtain the recommendation of at least two professors; earn a letter grade of "A" in Calculus, Physics, Anatomy/Physiology, General Chemistry I & II, Organic Chemistry; and have taken at least one of the following: General Biology, Microbiology, Immunology, Cell Biology, or Biochemistry.

Students participating in the individual interviews were current graduate students enrolled in the Vance University School of Health Sciences who have previously participated in the summer bridge program.

Recruitment

A list of eligible students, including demographic information, was provided by the student affairs office for the university. For this study, all eligible students were invited to participate in one of three separate focus group sessions, or individual interviews by email

that detailed the purpose of the study, including benefits and risks associated with the study. A statement emphasizing the voluntary nature of participation provides assurance to the participants that their status in the summer bridge program, as well as their potential entry into the School of Health Sciences are in no way related to their participation in this study. Contact information of the researcher was included so that potential participants could gain clarification before deciding to participate in the study. Students who responded to the initial email wishing to participate were telephoned to follow up on the invitation as well. A copy of the recruitment email is available in Appendix A.

Data Collection

Once participants were scheduled for focus group sessions or interviews, they received an informed consent form via email (see Appendix G) that provides information regarding the study's purpose, procedures, and any potential risks to participating. Additionally, the consent form explained that all focus group sessions will be videotaped, transcribed, and kept in a secure location available only to the researcher. All names, including the university, used in this study will be pseudonyms. Another copy of the consent form was distributed and signed by participants prior to the actual focus group or interview.

All focus groups lasted approximately one hour, and were originally intended to consist of 8—10 participants, and took place on campus in the Vance School of Health Sciences Executive Boardroom between 6:00 pm and 9:00 pm on a Monday, Tuesday, or Wednesday evening during the latter half of the 2009 Spring semester (April—May). However actual focus group was twenty students with six students participating in the first focus group and seven participating in both focus groups two and three. Semi-structured

interview questions (see Appendix B) guided the focus groups initially; however, the researcher added questions for clarification or further exploration as the session unfolded. If able to do so, the researcher may took notes during the sessions. Sessions were also videotaped for later transcription.

Following the completion and analysis of the focus groups, separate individual face-to-face interviews were conducted (at the convenience of the participant) on campus, in a small conference room with four current ethnic minority students who are currently enrolled in the Vance University School of Health Sciences who previously participated in the summer bridge program. Although the original intention was to interview five participants, one opted out due to time constraints. These approximately one-hour interviews also employed semi-structured, open-ended questions that allow the researcher to follow the flow of the conversation by adding additional questions for clarification (see Appendix D). All interviews were audio-taped for later transcription. All transcription was done by the researcher.

Additionally, the student biographical sketch (see Appendix C) that is required for admission was collected for document analysis in an effort to triangulate findings. However, the submission of this document was not necessary for participation in the study. The actual utility of this document was marginal at best. Overall, one student biographical statement provided useful information.

Data Analysis

In general, qualitative data analysis involves three main steps: 1) preparing/organizing the data, 2) reduction of data into themes by coding, and 3) representing the data in figures, tables, and/or narrative (Creswell, 2007). Creswell goes on to state that these core elements of qualitative data analysis consist of “coding the data into meaningful segments and assigning names to the segments, then combining the codes into broader categories or themes, and finally displaying and making comparisons in the data graphs, tables, charts, or discussion” (p. 148).

Many qualitative researchers agree that the researcher should be immersed in the data and read the interview transcripts in their entirety several times before attempting to analyze the data (Bogdan & Biklen, 2007; Creswell, 2007). Grbich (2007) suggests that a good subsequent step to the organization of the data is to undertake open coding. The process of open coding involves the questioning of the data “word by word and line by line to identify concepts and categories which can then be dimensionalised (broken apart further)” (Grbich, p. 74). Grbich also suggests attaching “in vivo” codes (generated from within the data) and attaching concepts from the specific discipline to those codes. While this process involves a constant critique of the data, induction, deduction, and verification, Creswell suggests that a combination of “a priori” coding and emergent coding is possible. Essentially, “a priori” coding means using prefigured codes that are typically found in a theoretical model or the research literature. Creswell advises the researcher employing “a priori” coding to be open to emerging codes during the analysis as well. Creswell (p. 153) also suggests the identification

of no more than five to seven themes which can be viewed as “families of themes with children, or sub-themes.” This “winnowing of the data reduces them to small manageable sets of themes to write the final narrative” (Creswell, p. 153).

For this study, Creswell’s combination of “a priori” and emerging coding guided the analysis of the data. The codes are reduced to salient patterns/themes and represented in narrative forms. The data were organized, indexed, and analyzed by the researcher using the qualitative software package Atlas.ti.

Validity and Reliability

For any research study, the need to establish “trustworthiness” is paramount. Particularly, qualitative studies must involve ways to ensure both rigor and trustworthiness (Merriam, 1995). Merriam argues that the rigor and trustworthiness of qualitative studies must be viewed in the light of the questions they seek to answer. Since it is the nature of qualitative studies to investigate experiences, perceptions, and subjective matter, the essential question of validity and reliability becomes “How well does this particular study do what it’s designed to do?” Merriam further suggests that validity and reliability must be addressed from the perspective of the paradigm guiding the study.

Greenwood and Levin (2005, p. 54) have addressed validity and reliability specific to action research, claiming that “validity, credibility, and reliability in action research are measured by the willingness of local stakeholders to act on the results of the action research - cogenerated contextual knowledge is deemed valid if it generates warrants for action”. Ladkin (2005, p.121) claims that since action research is situated in the “real world”, then the “nature of truth revealed through such inquiry will necessarily be located, limited, and

emergent”; however, she goes on to say that action research “if undertaken rigorously and with keen attention, will have a depth of quality and insight into those particular contexts which may be missing from more generalized approaches”. Therefore, that depth of insight may afford an understanding which mobilizes effective action (Ladkin).

Merriam (1995) also provides two ways in particular to address validity in qualitative studies: triangulation and a statement of the researcher’s biases, assumptions, and experiences. Triangulation refers to the use of multiple data sources, perspectives, or data collection methods to confirm the findings. Reason and Bradbury (2006, p. 302) agree that the use of multiple sources in action research studies provides inherent “checks and balances” to researcher bias. Merriam asserts that a statement detailing the researcher’s known biases, assumptions, and experiences may help the reader better understand how findings were interpreted in a particular manner.

Therefore, this study uses multiple data sources (focus groups, individual interviews, and document analysis) to triangulate findings. The use of multiple focus groups provides an inherent opportunity to assess validity that is often not readily available with other qualitative methods. Statements can be compared within and across sections indicating the reliability of the data collected (Knodel & Morgan, 1993). The use of focus groups, personal interviews, and document analysis in tandem provides additional evidence for reliability through triangulation. Knodel and Morgan further suggest that the accuracy of interpretive analysis is also enhanced by the extent to which the analyst is also involved in the data collection since it eliminates the distance between the analyst and the subjects under study. Therefore, all

focus groups and interviews were conducted by the researcher. Additionally, the researcher has included a subjectivity statement as suggested by Merriam (1995).

Subjectivity Statement

It is important to note the personal and professional background of the researcher that has formed and informed this approach to research. I grew up in rural North Carolina on a family farm, attending public school k—12 and graduating from a small town high school with less than 100 students in the graduating class. I am also a first-generation college student. Although my performance in high school was well above average, college proved to be a challenging and somewhat overwhelming experience. Eventually, I “found my stride” in college and was quite successful. However, the aspects of college I found most challenging were not the classroom portion, but the arduous task of navigating a large, complex social structure. Relying on tips from upperclassmen and roommates made a big difference in accessing necessary support systems.

Upon the successful completion of college, I taught in a low SES middle school in central North Carolina for six years. Here, I encountered the inconsistencies and ambiguities that severely restrict the access of poor minority students to quality learning experiences and advanced opportunities. For example, poor minority students from the nearby housing project were almost always lumped together in Math/Language Arts classes and given only remedial instruction, regardless of their capability. Certain teachers and even some administrators were quite adamant that these students were “no good and would never amount to anything”. Seldom did these students have anyone advocate for quality educational experiences. Interestingly, affluent parents who were well known in the local community would fight to

have their child put in the “gifted” class and would succeed by threatening to call a particular board member that they knew, or go to the superintendent. Administrators almost always caved to these sorts of demands. Minority students generally received more stringent consequences for breaking rules as well. On more than one occasion, I would “butt heads” with teachers or administrators over the treatment of students who I felt were being treated unfairly. During my fourth year, a new administrator accompanied the move of the school to a brand new facility. This move and the advent of a new administrator marked a fundamental shift in the culture of the school. Although several teachers resigned over the course of the following year, minority students and low SES students began receiving more equitable treatment from the administration. Eventually the administration and faculty began searching for programs to address the obvious disparities that had been so ingrained in the school for so long. The school received a grant for a pilot program and chose to implement the AVID program. AVID (Advancement Via Individual Determination) is a comprehensive program that pulls capable students (often minority students) out of the remedial courses to which they have been relegated and enrolls them in advanced mathematics and English courses. The program provides a comprehensive support system during the school day that consists of intensive tutoring, team building, writing workshops, and motivational programs such as visiting college campuses and talking with admissions staff. Given the researcher’s background and affinity for working with the underserved population, it was a logical progression into the role of AVID teacher, then Coordinator, and finally District Director. In this final role, the researcher helped to establish a program and funding that helped to

eliminate the barriers that prevented capable minority and low SES students from accessing higher education.

Now in a new position in an institution of higher education, I am still seeking ways to eliminate barriers and open access to capable persons who have been otherwise marginalized. Although I cannot truly empathize with the experiences of the subjects in this study, I am committed to revealing the inconsistencies and barriers that students have faced and use their stories to empower future generations of students to be successful.

The experiences and background of the researcher certainly influence the way meaning is generated from the data. To the extent possible, consistency among/between the focus group sessions and interviews will mitigate the subjective lens. The intent is to tell the story of the subjects; however, as Ladkin (2005) has noted, the interplay between the subjective lens and the objective lens is in constant flux—a balancing act. She suggests that both “truth” and “meaning” are necessarily intertwined with “subjectivity” being the foundation for “knowing” (Ladkin, 2005; Stake, 1995). Indeed, “No evaluation can examine all the nuances of worth, but the study that ignores them to concentrate on objective measures is potentially irresponsible” (Page & Stake, 1979, p. 46). Therefore, the researcher has strived to allow participant responses guide the analysis. However, Ladkin (2005) encourages action researchers to pay special attention to the frame of reference they use as they engage with the research. A process known as “bracketing” is an attempt to put aside one’s “preconceptions, expectations, or culturally determined interpretations” (Ladkin, 2005, p. 120). This awareness allows the researcher to “see beyond the immediate, programmed reading of the situation to a more open perception of the other as they are in the here and

now” (Ladkin, 2005, p. 119). Therefore, I have attempted to remain aware of my own “frames” as I endeavored to collect and interpret data in this study. A reflective journal was kept in an effort to become aware of my biases as the study progressed.

I identify most closely with the post-positivist tradition, having had experience with quantitative methods and empirical history research. Creswell (Creswell, 2007) points out that those who identify themselves with post-positivist approaches often embrace the concept of multiple realities as opposed to a central “truth”. Indeed, this study seeks to document the experienced, multiple realities of participants.

Associated Risks and Ethical Issues

In considering the position of the researcher, it is important to note that he has no direct connection with the Vance University School of Health Sciences summer bridge program or its activities. The program is externally funded by a government grant and coordinated by the student affairs office. Additionally, the researcher has absolutely no role in the admission of potential students, nor does he have the power to exercise any influence over the process. Participant confidentiality will be maintained. Although the group interview sessions were videotaped, only the researcher had access to the video data file which was recorded to CD and locked in the filing cabinet of the researcher’s office. Upon completion of this study, all data will be erased or otherwise destroyed. To further ensure confidentiality, no identifiable information has been included on transcripts of the focus group sessions. The researcher transcribed the audio sessions to ensure confidentiality and refers to all participants as well as to the focal university using pseudonyms.

Although confidentiality is of the highest priority, absolute anonymity is not possible due to the use of focus groups. Every effort has been made to ensure that participants understand the potentially sensitive nature of the topics and agree to keep all discussion confidential. This study has received approval from the North Carolina State University Institutional Review Board.

Limitations

This action research study is limited by the specific nature of the inquiry. Qualitative studies—specifically action research studies—by design, are situated contextually (Creswell, 2007; Greenwood & Levin, 2005, 2007; Ladkin, 2005; Reason & Bradbury, 2006). Therefore, the findings of this study may not be generalizable to other institutions or settings. However, the results may contribute to the existing research on minority student success at predominantly white colleges. As Ladkin and others have pointed out, the primary instrument used in qualitative research to gather data is the researcher. Subjectivity, then, becomes the basis for “knowing”, and, although efforts to “bracket” the subjective lens of the researcher have been made, those efforts are not infallible. Certainly, the lack of comparable experiences will affect the interpretation of data and the findings of the study; however, a subjectivity statement has been provided in an effort to provide insight to the reader regarding the experiences and philosophical stance of the researcher. It is also likely that responses may be less candid or limited due to the participants’ comfort level and unfamiliarity with the researcher. The use of video recording may also inhibit responses, as may the presence of other participants in the focus groups. There are also limitations associated with the use of focus groups regarding dominating voices. It is possible that less

articulate or apprehensive participants may engage less frequently in the discussion than others.

Additionally, only 30 students are included in the focus groups with an additional five interviews conducted with graduate students. This hardly represents the perspective of every student on campus. No comparative data were collected from Caucasian students on campus to compare perceptions of barriers or saliency of solutions generated. Additionally, this study does not collect data on or provide comparisons with unsuccessful undergraduate minority students.

Data collected are based solely on perceptions and students' reported experiences. No direct observation of the events depicted by students in their accounts has been made. Alumni, faculty and staff perspectives are also not included in this study, although the five graduate students enrolled in the Vance University School of Health Sciences have either completed their bachelor's degree at the focal university, or are enrolled in a 3 + 2 program that allows them to finish their graduate and undergraduate degrees simultaneously.

Summary

This study utilized a qualitative action research approach to examine the perceived barriers to success encountered by successful undergraduate minority students in majors that serve as a pipeline for professional healthcare at a private, predominantly white university. This study seeks to make explicit the perceived barriers encountered by minority students on a specific campus, as well as the ways in which they overcame these barriers in an effort to generate solutions that may reduce or eliminate those barriers. Focus groups and individual interviews were used to investigate this issue (see Appendices B, E for interview guides).

Participants were recruited from the existing undergraduate population of the focal university based on their eligibility to participate in the Vance University School of Health Sciences summer bridge program. This group of students was selected because they are considered successful by the admissions standards of the Vance University School of Health Sciences, and much may be learned from their experiences—particularly since most research tends to focus on causes of attrition rather than strategies for success.

Focus groups were videotaped and interviews were audio-taped. All video/audio data was transcribed verbatim by the researcher. Subsequently data were coded using “a priori” and emerging coding techniques in Atlas.ti.

Chapter Four of this study will address the findings of the research conducted. It will examine the perceived barriers to success as identified by successful minority students as well as ways they overcame these barriers to ensure their success. Solutions put forth by participants that may reduce or eliminate these barriers will also be examined.

CHAPTER FOUR

FINDINGS

Introduction

The purpose of this action research study is to examine the ways in which successful undergraduate ethnic minority students in majors that serve as a pipeline for professional healthcare have managed to overcome barriers to their success at a private, predominantly white university. Understanding the barriers faced by minority students on such a campus, as well as how they navigated those barriers to ensure their success, may allow the focal university to more appropriately allocate resources to reduce or eliminate those barriers for current and future students. This chapter presents findings from three focus groups consisting of current undergraduate ethnic minority students enrolled in majors that may lead to professional healthcare. Subsequently, four interviews were conducted with ethnic minority graduate students who are currently enrolled in professional healthcare programs. Additionally, students' biographical statements were analyzed and compared to the emerging themes generated from the focus groups and graduate student interviews. All names included in this study, including that of the focal university, are pseudonyms. The guiding questions for this study were:

- 1) What barriers, if any, to student success have minority students encountered at Vance University?
- 2) What was necessary for students to successfully navigate those barriers?

In order to gather information from the perspective of the participants, three separate focus groups were conducted using semi-structured questions. Participants were purposefully

sampled, and 31 names, with email addresses and contact information, were obtained through the university office for student affairs. Individuals agreeing to participate in the study received informed consent forms prior to the actual focus group session. Although eight participants initially agreed to attend the first focus group, only six participants actually came to the session. Nine students agreed to participate in the second focus group session, but one student did not attend, and another student opted out of the study at the very beginning of the session. Seven students agreed to attend the third focus group session, and all seven students participated. Follow-up emails and phone calls to the students who did not show were made in an attempt to reschedule them for another time slot but were largely ignored. Across the three focus group sessions, 20 students participated. All focus group sessions took place on campus in a conference room and were videotaped for later transcription.

Upon completion of the focus group sessions, individual interviews were conducted with current graduate students enrolled in the Vance University School of Health Sciences. Originally, five students agreed to be interviewed, but one student did not keep the appointment and sent an email declining further participation due to time constraints. Offers to conduct the interview by phone were turned down, bringing the total number of participants in the individual interviews to four. All interviews took place on campus in a small “break-out” room in the Vance University School of Health Sciences building and were audio-taped for later transcription. In all, 24 ethnic minority students participated in this study. Tables 1 through 3 below contain demographic information and biographical quotes taken from the focus group participants’ biographical statement. A full participant demographic matrix is available in Appendix F.

Table 1

Focus Group 1 Participants

| Participant (Pseudonym) | Biographical Statement Quote | Year | Major | Gender | Age | Ethnicity |
|-------------------------|---|--------|----------------------------------|--------|-----|--------------------|
| Tiffany | "My favorite subject has always been science, specifically Chemistry. I am interested in professional health care because I have a desire to help people." | Junior | Pharm. Sciences | F | 20 | African - American |
| Charlene | "Overall, education has always been my utmost priority and I am the first one in my family to go to college. This has given me much determination to achieve my goals. I believe that God has a plan for everyone, and with the qualities and characteristics he gave me, I believe the health profession is the right path for me." | Junior | Biology | F | 28 | African - American |
| Olivia | "Waking up every morning since childhood to loud yelling has forced me to think about the tremendous impact that a drug can have on an individual. My uncle was born a mute and his physical and mental handi-cap resulted from a prescribed drug given to my grandmother before she gave birth. It has shown me that the value of proper medical care should never be taken for granted. Therefore I believe it is my obligation to dedicate my life to the health professions." | Senior | Pre-Med/Biology | F | 21 | African - American |
| Mary | "After graduating early from High School I enrolled in community college to save money. While completing my associate's degree in nursing, I worked as a pharmacy technician at Walmart. I am now a lead pharm tech and work nights while I finish up my degree at Vance." | Junior | Biology | F | 21 | African - American |
| Joshua | "I have always had a passion for caring for people. When I was younger I would tend to my brother's bruises. At night I would always remind family to take their medication, I even memorized their dosage." | Senior | Clinical Research | M | 20 | Bi-Racial |
| Joseph | "I remember discussions of medication costs between my grandmother and her friends. They would often discuss choosing whether or not to purchase the medication or buy food instead. Many times when my grandmother could not afford her medication her condition would get worse. These experiences have stuck with me and that is why I want to help people better manage their health care plans." | Senior | Pre-Professional Health Sciences | M | 21 | Hispanic |

Table 2

Focus Group 2 Participants

| Participant (Pseudonym) | Biographical Statement Quote | Year | Major | Gender | Age | Ethnicity |
|-------------------------|---|--------|----------------------------------|--------|-----|-----------------|
| Brandon | "Often people tell me that I am a good listener and am very responsible. I believe these qualities will benefit me in my chosen career in health care." | Senior | Pre-Professional Health Sciences | M | 20 | Hispanic |
| Martha | "In eighth grade my father explained to me how my baby sister died. She was given the wrong medication in the hospital. Although the case went to court nothing ever came of it. I decided then that I wanted to be a health professional to prevent harm from befalling families like mine again." | Senior | Biology | F | 22 | Native American |
| Jacob | "One summer in High School I attended a seven week shadow of a cardiologist. I even attended Saturday classes that were offered at a Medical School in order to learn more about the medical field. This is when I realized how much I loved medicine." | Junior | Biology | M | 20 | Native American |
| Raymond | "I have excelled in education at every level. I have always been first or second in my class, even in college. I am interested in effective therapeutic management plans and believe I can contribute greatly to the health care profession." | Junior | Pharm. Sciences | M | 20 | Hispanic |
| Mariah | "I consider myself to be ambitious, passionate, and filled with dreams. To be successful I believe that it is imperative to set goals for myself. I am the type of person who is open minded and eager to learn new things." | Senior | Biology | F | 23 | Hispanic |
| Jessica | "I transferred to Vance University to study Athletic Training, however I soon wanted to know more about the science-body relationship. I believe the health professions is the right place for me to study and explore this relationship." | Senior | Pharm. Sciences | F | 24 | Hispanic |
| Crystal | "Coming from a small town I have seen the poverty and how it impacts health and disease. My goal is to change how society works by helping these people through medicine." | Junior | Biology | F | 22 | Hispanic |

Table 3

Focus Group 3 Participants

| Participant (Pseudonym) | Biographical Statement Quote | Year | Major | Gender | Age | Ethnicity |
|-------------------------|--|--------|----------------------------------|--------|-----|--------------------|
| Richard | "As a young child I enjoyed playing doctor. I ran around with my small stethoscope listening for peoples' heart beats and made sure everyone on the playground had a band-aid for their cuts and scars. I knew from a young age that I wanted to help people." | Junior | Pharm. Sciences | M | 21 | Hispanic |
| Melinda | "Shortly after this [high school graduation] my father passed away from a cancerous tumor in his head. This immediately thrust me into the unexpected position of helping my mom to care for the family emotionally, physically, and more importantly financially. This shifted a majority of my focus from schoolwork to family matters." | Senior | Clinical Research | F | 22 | Other |
| Rose | "While working at an internship I was exposed to many aspects of research and development. I also worked part-time at CVS where I saw people who were in great need of their prescriptions. I also saw people abuse medications in a dangerous fashion. I want to help people avoid mistakes such as these." | Junior | Clinical Research | F | 21 | Hispanic |
| Tonya | "In high school I could have been classified as the typical "nerd". I did all of my homework assignments and even enjoyed extra practice problems. I also played soccer and basketball while taking advanced level courses". | Senior | Bio-Chem | F | 21 | African - American |
| Lydia | "I have worked in my family's business since I was thirteen years old. Although it wasn't a difficult job, I was taught the value of being on time and to treat every customer with respect. I feel that my parents have taught me and influenced me to participate in events that will better my future". | Senior | Pharm. Sciences | F | 20 | African - American |
| Bonita | "I truly believe in helping those who cannot help themselves. I have always been drawn to the helping professions and I feel that my personality is well suited for the health professions." | Junior | Pre-Professional Health Sciences | F | 21 | African - American |
| Amanda | "My mother's health problems have inspired me to become a health care professional. After watching the way she has been treated by various doctors (both good and bad) I believe it is my responsibility to treat every patient with respect and caring". | Junior | Pharm. Sciences | F | 20 | Other |

Focus group discussions and interviews were transcribed verbatim by the researcher.

Additionally, all 20 students who participated in the focus group sessions provided their

biographical statements (a requirement of the application process for the summer bridge program) for document analysis. All transcripts and documents were loaded into Atlas.ti 6.0.23 (Development, 2009), a qualitative data analysis software package. This software program assists the researcher in organizing, categorizing, filing, and sorting data (Bogdan & Biklen, 2007).

As suggested by Creswell (2007), the transcripts and documents were analyzed for emerging themes by coding the segments of the documents. The researcher employed a combination of “open coding” and “a-priori coding” for all data sources. This constant-comparative approach allows saturation of the categories by continually searching the data for instances of each category until no new information is apparent (Creswell). Through several cycles of analysis, the code scheme and categories were collapsed into larger themes, providing insight into the participants’ experiences as well as fodder for the final narrative that can be compared against relevant literature (Creswell).

From the focus groups and individual interviews, several themes regarding barriers and ways in which students successfully navigated those barriers became apparent.

Specifically, six major barriers emerged from the study:

- 1) Communication: Many students indicated that communication from the university was problematic and there was no centralized repository of information regarding requirements, deadlines, and campus resources. Participants found the financial aid system at Vance to be quite difficult to navigate, often providing incomplete information to students or ignoring inquiries altogether.

- 2) Racially Linked Barriers: Students cited under-representation of minorities on campus as a major barrier to their success. Additionally, several students described experiences with prejudice on campus. These experiences were varied and took place both in the classroom and in the residence halls.
- 3) Financial Resources: Actual availability of Financial Aid to pay for tuition, fees, and books was cited as a significant barrier. Students also discussed personal lack of financial resources as a barrier to their success.
- 4) Discontinuity: High school preparation for several students was identified as a factor that impeded their smooth transition to the university. Students perceived the coursework at Vance as more challenging and rigorous than high school had prepared them for. Study skills were mentioned in tandem with academic preparation as inadequate.
- 5) Family Responsibilities: A few students were also single parents and the primary “bread winners” for their families. Other students were responsible for caring for sick and ailing parents or grandparents while also attempting to complete their degrees.
- 6) Difficulty Connecting: A few students also described an inability to connect to students of the same ethnicity on campus. Generally, if students did not have a connection outside of the university (i.e., went to high school together), they did not seek out, or were not receptive to making

connections or building friendships with, other students of the same ethnicity.

Along with barriers, participants discussed several strategies that they employed to ensure their success at Vance University. These strategies emerged through the focus group discussions, subsequent graduate student interviews, and document analysis of participants' biographical statements:

- 1) Networking: The majority of successful students attributed much of their success to their efforts to network with other students in their majors. These connections allowed them to build support systems and gain access to study groups. Additionally many students made an effort to network with faculty members in their major.
- 2) Clubs/Organizations: Many students joined clubs related to their majors that allowed them to make the transition to the university easier. Participants also stated that they formed close friendships with other students whom they met through the clubs and organizations related to their major.
- 3) Commitment: Minority students were aware that they might encounter prejudice on campus and ultimately used their commitment to the completion of their degree program to inoculate themselves against instances of prejudice that did occur.
- 4) Reasonable Risk: Early in their degree programs, successful minority students recognized the need to set aside their apprehensions and take risks

in order to make connections with other students who did not share similar backgrounds.

- 5) Accessing Campus Support: Successful students also utilized on-campus resources such as tutoring, group review sessions, and financial aid sessions.
- 6) Persistence: Participants also emphasized the need to be persistent in order to get their needs met.

Beyond student strategies for success, participants regularly cited two characteristics of the university that they felt significantly facilitated their success: (a) Faculty have an open door policy, and (b) although it is a private Protestant university, the culture is non-judgmental of different ideas or religions.

Each of the themes will be discussed with details to support each finding. First barriers will be presented in descending order of significance, followed by strategies for success, also in descending order of significance. Finally, two effective facilitators of success that are inherent to Vance University and that emerged from the data are presented. Like all qualitative inquiry, it is the goal of this study to document the broad range of experiences expressed by the participants in their own voices in an attempt to provide a “rich, thick description” (Denzin & Lincoln, 2003). Illustrative quotations taken from interview transcripts will be used to express the multiple participant perspectives in an effort to relay the complexity of the barriers and successes described by the students. Data from focus groups is woven together with graduate student interviews throughout this chapter. Chapter four concludes with a summary of the findings.

Barriers

Communication

The primary finding of this study is that minority students perceive communication with and from the university as a significant barrier to their success. Students feel that the information is out there but that the university is not structured in a way that facilitates easy transmission of the information.

Raygan (African American Female), one of the current graduate students enrolled at Vance, expressed her frustration about information in general: “Nobody is willing to help you unless you go ask. You have to find your way up. Like, they're not going to be receptive unless you take an initiative. That was the main thing.” Regarding her search for information, Raygan also characterized the website as “not helpful at all...I would just rather call.” Joshua agreed, saying, “Just from the broad perspective information regarding everything like they can't provide--like they have the information. They have means to provide us information; it's just that transition phase doesn't occur.”

Other students described similar frustrations with their search for more specific types of information such as financial aid. One of the participants said,

Or like and also on this topic is like financial aid or any kind of help that the school can give you. I go to them and I'm just like, "Okay, what can I get to go for financial aid?" And they just like tell me the generals like loans or like I have maybe like a scholarship already or something like that. But they don't tell me, like, anything else. So there's nothing else that Vance could do, can't lead me anywhere to go to get North Carolina--'cause I'm not a North Carolina resident--or I just got my residency, but like

I never--I don't know what North Carolina has to offer. Nobody, like, took really the initiative to tell me, "Oh, if you go to this web site, you can look at all these different options." (Martha, Native American, Female)

Brandon (Hispanic Male) felt like his inquiries regarding financial aid were being ignored: "Like, you know, it is real like there isn't--there's no way that, you know, we can't get any financial aid or nothing because they have something, but we just don't know about it." Another student had a similar experience with financial aid on campus:

I go to the financial aid, they just give me the help person from the grant and they tell me you are not a resident so you cannot get the full percent of the grant....we also need information like how can we get a loan from somebody because if we had to have a cosigner, but I'm not sure, you know, I ...they just--I don't know they're trying to ignore me. (Raymond, Hispanic Male)

In response to Raymond's comment, Martha became visibly angry and frustrated with the process and the lack of information. She also indicated that she felt like the financial aid office was not taking her requests seriously:

I know in [Out of state], like where--I'm from [Out of state]. And they have, like, *** it's like ***** State Association for the--something. But they--assistance for college the ***** State Assistance for College or whatever. So they--and you go on their website, and they have a whole booklet of all the scholarships that you can apply for, and so it's like why--where do I find that? Or I tried going--I went to financial aid. What else can I do!? I'm willing to write essays and write whatever I need to do to get money. But they're like, "Oh, no you can't..." They don't--they didn't tell me nothing.

They're like, "Oh, you already have the loan, that's all you can get." I'm like, "What? That's ridiculous!" (Martha, Native American Female)

Mariah (Hispanic Female) echoed similar difficulty navigating the financial aid office on campus, explaining, "I was saying like they should provide minority students more grants and not just loans and more financial aid.... like I'm not informed of a lot of stuff that I can get." Another student further explained that the few scholarships on which the financial aid office provides information are only useful to students of a certain Protestant denomination:

I was flipping through the scholarship book that Vance has because we are a faith based college a lot of them now require you to be a particular denomination, not a lot that didn't, but I did see some that only required you to be a Christian. (Jessica, Hispanic Female)

In addition to difficulties with communication from the financial aid office, some students were unaware of the resources available on campus that provided support in case of sickness and hospitalization:

I got really sick when--my fall semester of sophomore year and it was--I was in and out of the hospital the whole semester, and my grades kind of dropped. So that--what that ended up doing is that pushed me back a little bit since I have to retake some of the classes. And I would have graduated a semester early, but now because of that I'll graduate the normal time. I mean luckily I was taking a lot of classes and had put me ahead, but getting sick didn't really help me. I didn't know that they [Vance] could have done anything 'cause I don't know--I don't know like, honestly I couldn't tell you what is it that they could have done to make that easier--'cause I didn't think I

could even ask for support. By the time that I felt like my grades were dropping, I couldn't concentrate; when it started getting worse, like it was past the time where I could actually withdraw passing. Cause my friend she had--she got into a car wreck, and they didn't let her finish it up later on or something. So I didn't know if there was anything I could have done. (Joseph, Hispanic Male)

Other students similarly expressed frustration with such a lack of this type of information. In general, students only became aware of the support available for students with sickness/hospitalization through the experiences of their friends:

My friend got sick in the middle of the semester, and what he did is he got medical leave of absence so those grades didn't go on his transcript. So I think there is like a medical withdrawal if you get it approved; that way it doesn't go on your transcript. That student did that, and then he took the class--but he still went to the classes 'cause he still paid--you still pay the tuition; that's the only thing. But at least that doesn't go on your transcript. So he still went to the classes, but he would just sick--when he could but so he could get some experience, and he retook--he just took them later on.

One student particularly expressed outrage at the complete failure to refer students to support resources. He also became seriously ill during his freshman year, and none of his professors referred him to student support services at the university:

So I say that if that--those kind of information were available to me, I would have been like--they could make that more available then. Like try to make that available to students 'cause that's something you don't--they don't just tell us that. Oh, like--I understand that's not a topic you're just going to bring about. But say the teacher

knows that student is having a problem 'cause I know my teachers knew that 'cause I've talked to them regarding this problem, but they--I mean they...did nothing!

(Richard, Hispanic Male)

Although there are academic support structures and programs in place, many students were not aware of the programs, deadlines, application requirements, or who to contact for further information, as indicated in the following statement:

I wish people would tell you more upfront about things. Like in my case I wish I would have known about this summer bridge program last year because I tried to apply last year for graduate school, and so far this PCAT, like, summer bridge has helped me so much for my PCAT. I know I'm going to do a lot better 'cause I needed this like structured detailed thing. And so if I would have had that last year and now I took the PCAT for this year, I would have known like where I kind of stand for real. Like I know I could do way better than I did, but I just need help with it. So I wish that they would have told us last year about it. So the resources or anything that goes on campus or stuff like that, I just feel like I'm not informed or somebody else comes about and they tell me something--how'd you know, like why don't I--why can't I get informed like that? (Mariah, Hispanic Female)

That's true though about the resources. I mean I talked to Dr. [Name Removed] about that, like the first day of this semester. I was like, "I've been at Vance for four years, and this is the first time I've heard about the program." So I'm like, "I wish I knew

like two semesters ago, like, you know, a year ago; it would have helped me a lot.”

You know it would have got me on track in a lot of things. (Brandon, Hispanic Male)

You go every day to the--like I went every day to the--like, I went all the time to see my status on my graduate school application, and I talk to all the people in the office, and not one of them told me about this program. All of them knew that I took the PCAT in October. I didn't do well, as well as I could have done. So I'm going to take it again in January. Well, by looking at my scores, saying "This girl needs some help," you know, "We should offer, you know, do--like the summer bridge program.” They did not offer me the program then. And then I finally found out about it after it was like in, I think, March by the time they finally told me about my application status to graduate school, and I talked to the director about anything I could do to strengthen it. (Jessica, Hispanic Female)

Participants in this study often expressed their frustration with the failure of the university to communicate opportunities and programs such as the Summer Bridge Program. This theme seemed to be consistent throughout the focus groups and interviews.

Racially Linked Barriers

Student participants in this study also described experiences of discrimination on campus. Participants encountered instances of prejudice from faculty members, campus offices, and other students. These experiences are classified as either underrepresentation, or institutional ignorance. Underrepresentation barriers refer to the underrepresentation of minorities at the faculty level and within the participants' own majors. Institutional ignorance

barriers refer to an aspect of the campus culture that may devalue the culture of minority students.

Underrepresentation

The campus was described as having few minorities, particularly African-American students. This underrepresentation for some participants was difficult because they came from mostly minority high schools:

I feel when I first got here, you know, coming from the high school I came from, I didn't really have a lot of diversity in that school. So it was definitely a different feeling being around different race people, like almost completely. And that kind of scared me a little bit and made me want to retreat to other majors that kind of had more of the African-Americans in it, you know, like business and stuff like that. I didn't; but I wanted to, 'cause it was uncomfortable at first when you're not used to it. (Olivia, African American Female)

Well, when I first come out here as a freshmen at Vance, there wasn't a lot of minorities out here at all. I mean, it was hardly no black people or anything like that. There just recently was an increase in minorities here at Vance. Mostly because they was getting a ***** team, I seen more minorities come in here again. But before that, they was nobody here at all that was a minority. It was like a handful of people, there wasn't a lot. (Charlene, African American Female)

Specifically, participants felt conflicted with the lack of minorities in their majors. Shanda (African American Female) explained that "it's just like you feel different because I am the only African-American student in my class. There are some students that yes, they

help me, but they don't mind doing stuff for others. They prefer not to have anything to do with anybody that is not their ethnicity. It just makes me a little bit different." Some students even considered changing majors so that they would have a larger network of support and more opportunities to socialize with students of the same ethnicity:

I think when you first get here, you want to make friends, so you attach yourself to other black people. And most of them aren't science majors. So when we're studying, everybody else start partying. And if your friends are gone, your science--maybe you shouldn't stay in, you go with them, your grades drop, or you change majors to PE, or you know, something easier. They can like drag you down. Not saying drag you down, but they don't need as much focus to do what they do, and so you kind of lack focus yourself. So if you have those friends--it'd be harder to be minority science--they usually don't study. Because we go towards the other black people who aren't science majors. That's what they do, unfortunately. (Tiffany, African American Female)

Well, let's see, I'll tell you the hardest thing for me at Vance, when I got here I didn't know a lot of people. And there weren't a lot of Native Americans here, obviously. So 'cause it was a dominant Caucasian campus. So it was hard for me to make friends, and it didn't make a transition from leaving home and staying on campus. It even made it that much harder. It was just really different, 'cause where I come from it was the majority was Native American in high school, so I really didn't never have to relate or talk, have discussions with anyone else. And I mean, in the lifestyle that I

lived, and that they live, are different. So but when I come here, so that was a big transition for me. (Will, Native American Male)

However, some students were surprised by the number of students of a similar ethnicity. Rose was worried that she would be all alone but said, “When I came here like I was like, oh my gosh, I’m going to be the only Hispanic at this school and then, but when I got here I saw that there’s other like, you know, Hispanics and, you know, there’s other people, so I was like, okay I’ll make friends.” Interestingly, one student described her experience quite positively, having transferred to Vance from a much larger public institution:

Well, my first day at Vance, I didn't expect, like--it's very friendly, in my opinion.

Because I came here, and I was lost. And somebody actually came here and dropped me here. And from here, they gave me a tour of campus. They walked with me to Admissions and things like that. And it never happened to me in a state university, because there are so many minority people. They're, like, "Oh, you're just one of them." You know, here, they take care of you. (Raygan, African American Female)

Institutional Ignorance

Participants in this study discussed their experience with discrimination and prejudice that they had experienced in the classroom on campus, as well as in the dormitory. Participants cited actions by both faculty and other students that were hostile to minority students.

Shanda expressed her concern about coming to a predominantly white university, saying that “There aren’t many minority students graduating from here. And I’m from a city

where it's primarily black. And like wow, you know, am I really gonna fit in? Are they gonna make it harder for me?" She was worried that faculty members would grade her more harshly than her Caucasian peers.

Conversely, several students cited inconsistent, and often lower, expectations of minority students from faculty members:

And I think some of the teachers don't expect a lot from some of the minority students. I've actually heard them say that in class. They expect some, I know a particular group of students, they are insisting that they cheat. I've heard them say in class. So sometimes they expect minority students to cheat, or not do good, or show up late for class, stuff like that. (Mary, African American Female)

Some of them they used to treat us like we're still--in fact, I'm the only black in my class, and one of my teachers has come to me and, "Are you okay?" "Yeah." I mean, I'm the only one here, and I have a degree. And an associates degree, and so I can do it. I worked in a lab already, so it's--I mean, he doesn't know that. I'm not going to ever tell him that. I mean, if he want to treat me like those people, that's fine, as long as I get an A, what I deserve, you know? But they do, they'll treat you like you're stupid. (Tiffany, African American Female)

Other students cited experiences with professors who had lowered expectations of attendance as well. In particular, one student's grade was significantly reduced, from a B to a D, because the professor was inconsistent with roll taking and record keeping. The professor

claimed that the student had missed too many classes and arbitrarily assigned the student a much lower grade:

So but sometimes she misses black people or oh she's like, "Oh, I didn't realize you were here." And she would switch it, so that created a lot of confusion. I mean I understand I was late a couple of times, but that's it, and I already explained that to her. And I was like, "Listen I have a lab right before this. If my lab is going to run 3 hours and 15 minutes, I can't stop my experiment, and you've got to understand that. And my major is science, it's not religion. I'm not going to be a preacher or monk or whatever or a priest after this." So I mean I'm going to be a scientist. So the problem that I had with this is.... like, I tried to explain myself with her, and she did not agree. And she was like, "No, you're keeping your D." (Joshua, Bi-racial Male)

Participants also cited instances where employees of the university had been discriminatory towards minorities. One example provided by a participant described how he observed a minority student being pulled out of class by a university employee because he owed money to the business office:

I see Mr. [Name removed] coming in class and pull people out in the middle of class. And, you know, he pulled out one of my friends one time, I was like, you know, "What's going on with you?" He was like, "Man he pulled me out to tell me about how much I owe on my account and money and blah, blah, blah." And I'm like, "Well I mean come on, I understand you owe them money, but that's not presentable. Like if he wanted you, he could have like sent a notice or something in the mail or something, 'Please come to the office and speak to me.'" (Joshua, Bi-racial Male)

Students also described a recent incident where someone (other students) posted racial slurs on the doors of minority students in a dormitory on the Martin Luther King Jr. holiday:

There was a lot of tension. 'Cause the whole--the guy who's over African-American, some kind of African-American group here, he spoke about it. 'Cause I knew nothing about it. But he talked about it in our class that day, and I was like, "Dang." And this white guy sitting beside he, he talk to me every day. On Wednesday we had classes. All of a sudden, he's just like, "Oh, my god." I'm like, "Well, you didn't do it, did you?" <laughter> He was like, "No." And I said, "Alright then, we still cool!" You know, I mean, seriously, he just, "God, oh my gosh, you gonna be mad at me now." "No, I'm not mad at you; you didn't do it, you know?" And he's like, "Oh, I'm sorry." He apologized for whoever else, "I'm so sorry." I'm like, "It's okay, some people still have to learn." (Charlene, African American Female)

Because like on Martin Luther King Day we had that little racist, whatever happened out here, something stu--it hurt. You know, not just a white person, or just like--well, somebody non-black who hadn't--probably hadn't been around a lot of black people. I've heard a lot of dirty, ugly comments the day we had our meeting. You know, "We don't need to hear about no stupid Martin Luther King." I heard, "What the heck we having a Black Day for?" I mean, just stupid stuff. (Mary, African American Female)

Participants also felt that the university response to the incident was disingenuous. Students were frustrated that an African-American professor was asked to address the issue instead of the university administration:

And in our meeting, when they talked about it, like one of the only Black professors here.....he got up and talked about it; he apologized for it. But it was not saying--you know, it's somebody important saying it, you know? This guy, we never see him. He's like a professor in the Davis building. He never comes to this or anything. And I felt like, you know, why'd you have to pull him out just for that? Why couldn't the same people that always get up in front talk about it? I thought, they don't want to deal with it. And a lot of black people are like, you know, they say, "Oh, we're gonna find out who did it or whatever," but we knew nothing would become of it. (Olivia, African American Female)

From the data, it is evident that students were both critical of the university response to instances of racism, but were quite pessimistic about the university commitment and capacity to deal with such incidents.

Financial Resources

Two categories of barriers regarding resources emerged from this study: Financial Aid and Lack of Money (personal resources). These two categories are related; however, participants seemed to draw distinction between resources such as financial aid, which allowed them to pay for tuition, and personal resources, which allowed them to subsist.

Financial Aid

Communication regarding the university financial aid office has already been identified in this study as a significant barrier to participants' success. Students also pointed out, however, that the limited availability of money to pay for tuition, fees, and books posed a sizeable threat to their degree completion. For example, one participant expressed his frustration with a lack of scholarship money, even after a thorough search:

I didn't get the scholarships that I thought I would, being a minority, Native American. My freshman year in college I applied for 50 scholarships. I really needed the money to go to school. And like some of them had different levels, and you would make different cuts, and I made a few cuts, but I didn't even--I didn't get not one of those 50 scholarships. (Will, Native American Male)

Still, other students were lost as to how most scholarships even worked. Richard explained, "Yeah, like, I don't know how scholarships work because, like, I applied to many of the scholarships, but I got rejected from that. But others like my friend, he applied and he got it." Another participant was confused as to why she couldn't obtain any more scholarship money after doing well in her undergraduate program:

I was like okay if I keep--because in a lot of schools, on one student I think it was [a state university] but she got a 3.5, and since she has such good grades in the sciences they gave her like a really good scholarship while you were in school. And I was like, okay well I have a good GPA in the sciences; how come my scholarship was based on my high school thing, and I don't get anything while I'm in college for these good

grades? I don't get it how come I can't get anything else. (Martha, Native American Female)

One participant described how frustrating it was to have to deal with the business office when he ran out of money during the semester. He felt that the person assigned to his account was rude and unwilling to help:

It drove me nuts. It drove--like to be honest, I went and I was like I want to report this guy. And I just don't appreciate the way that he handled that. I mean I understand this is not a free school. I understand they need money for that. But I also understand why, I mean, if I'm trying--like if I have my heart in this school, you don't say something like that. You don't--even you can bring it in a nicer way like well maybe if your finances don't help you right now, take a semester off, try to figure it out. I mean that I can kind of understand which I would rather for you to be like, "Okay well, let's try to work something out. Let's try to find you a scholarship. Let's try to find you a loan." Not, "If you don't have the finances then you don't go to school." (Joseph, Hispanic Male)

Although most students described financial aid as a barrier, one student did have a positive experience and was able to get all of the aid he needed to remain in school:

From my side with scholarships and stuff like that I was able to get scholarships. And that's because I kept at it you know, I did this and I did that. And I went to financial aid, and I did search on my own too. Because if you do a lot of the searches on your own, like if you go to fafsa.org, or something, but that was a governmental. Like, they'll tell you all about all the opportunities are there. And so I was able to do that,

and Vance did give me a lot of benefits and stuff like that. (Jacob, Native American Male)

Lack of Money

Many participants worked full or part time during the school year to earn money both for school and simply to subsist—to pay for food, gas, and other expenses that most college students incur. Participants described the majority of Vance students as having a substantial financial support system from their families. Mariah explained, “They [Caucasian students] don't have to worry about all the other things that come along if you have to pay for it yourself and your parents aren't paying for it. You know, the stress and the levels that you have to do it yourself.” Another participant also described the difference between minority students and Caucasian students regarding financial support from home:

I mean minorities in general--I mean you got to think about it, private school so you are going to get more white people than black people or Hispanic or Indians or whatever. So and then you got to think, "Okay well how much does this school cost, or it's a private school.” So the main groups that come to this or the main group that comes to this is white people and they're--the income that they get, it's probably like, their parents probably have money and they sent their kids and more than likely don't even need financial aid or support. (Raymond, Hispanic Male)

Crystal also describes a lack of financial support from her family, explaining that minority students, in general, have a much more difficult time due to work responsibilities on top of school. In her situation, she had to work to pay for school and all other necessities because she couldn't get student loans large enough to cover everything:

You have a job, working stuff. So I think minority students has a difficult time. And then as far as family wise, I think sometimes students don't get enough support from their family financially and aren't able to pay their way. And they don't--can't also get--they cannot also get the bigger loans because they don't have enough credit, and that's what holds them back. I'm not able to pay my bills, so I can't go to college. I had to do everything by my own. And for a couple of years I didn't get any money because I had no credit. (Crystal, Hispanic Female)

Other students described how it was difficult and even impossible to ask their families for money for school. Participants expressed frustration at having to work while their more affluent classmates did not; however, participants also expressed pride in their efforts to support themselves:

The main thing for minority students too, like--I had to ask for money from my dad. And to ask for like one dollar isn't easy anyways. So it is too expensive for my dad. And here like we are getting like \$2,000 scholarship per year and the fees are really--you know, there are--year by year they are always like, you know, keep going up. (Brandon, Hispanic Male)

You know, the white people that go here, their parents might be paying for it. But, like, in my case, I'm paying for it. I take out loans. My parents have not paid one cent on my college, literally not one cent. So I pay for it and I see--I can see how you can generalize that 'cause all my friends drive Lexuses, and it's like I'm like they don't work. I work while I go to school, so that's how I pay for college and help pay for

books and all that stuff. But like they stay on campus, they don't work, they just do solely school, and their parents are paying for it. (Martha, Native American Female)

One participant explained that he must work to pay for school and other needs; however, working lowers his performance in class and divides his focus. Brandon goes on to say that “Like during exams sometimes I'm don't get off from work until late. It is very hard to work from like seven in the morning to late in the night and then study, like, focus on my studies and then give 100 percent. It is a very hard thing to do so of course yeah.”

Discontinuity

Academic preparation and study skills were specifically mentioned by some students in this study as a considerable barrier to their early success in college. Participants perceived the college coursework to be rigorous and the pace demanding. Participants described their experiences regarding this barrier:

For me, definitely like high school preparation was a barrier. A lot of people that come here and are successful in science majors did AP in high school, they did the Honor stuff in high school, so they know something already when they come here. And a lot of people that just jump in from like, you know, regular high school, doing regular classes, they don't make it. (Olivia, African American Female)

'Cause I didn't take any like advanced science and math courses in high school, because I was gonna do cosmetology first when I came out of school. Like I didn't--I wasn't thinking about science at all, so I have to study like a whole lot more to get the stuff. I have to study like a lot in undergrad, because I didn't take any of those preparation courses in high school, because I just knew I was gonna do hair and that's

it. So you know, it was kind of hard. You just have to study more and be more focused. (Mary, African American Female)

In high school, I thought I was prepared. I graduated with like a 3.6, but then I got to college and I found out that I really wasn't prepared. In high school, I didn't have to study much, and in my first semester in college, I got a 2.0. So I was like wow. That was a big shock, so I had to learn and work harder to pull that up, but it was a big shock, a kind of rude awakening. (Shanda, African American Female)

Students who transferred to Vance from other institutions perceived the instructors as demanding. Keeping up with the course load required focus and dedication. Tiffany explained, "The teachers here are a lot more harder. This being like a private university. I think it's a harder workload. You have to definitely study a whole lot. So I think that takes from outside life, because you have to study all the time here, you know. I think they expect more here." Specifically referring to her major courses, Tiffany also said, "So I don't think Vance has an easy major. I think music and everything, you still have to work hard for whatever you get. But yeah, I definitely think the science, anything in science here is hard, a lot more than somewhere else rather."

Another participant also described a difficult academic transition from high school to college. He also transferred credits from another institution and found the course load at Vance to be more challenging:

I really wasn't challenged in high school at all. I didn't study, so I had no study skills. I didn't know what to expect from the college. I mean, my teachers in high school, they'd push me, but they really didn't prepare me for college. My high school did not

prepare me for college. And I don't know if Vance just that higher caliber school, or because when I took summer classes at the University of *****, which is where I'm from, the courses, the science courses wasn't as tough as it was here at Vance. I don't know if it was just 'cause I was taking summer classes, and I was only taking a couple of classes instead of taking a whole semester of the classes, but it was just a big step. So I mean, I really had to learn to study on my own. (Will, Native American Male)

Participants also perceived the pacing of courses at Vance to be much quicker than experiences at other institutions.

Family Responsibilities

A few participants in this study also cited family responsibilities as a barrier to their success. These students had the challenge of meeting expectations from family members while simultaneously completing their degree program at Vance. In describing her challenges, Jessica—a single mother—explained, “When you're pregnant and you have a child, a lot of your devotion goes towards that child, and you have to make sacrifices. And I feel like that is a barrier.” Because it was obviously an emotional topic for her, Jessica declined to further elaborate on her situation; however, another participant had a similar situation and described her mother and family as supportive of her endeavors:

I'm an only child, and I'm a single mother. My father died when I was young. And my mom's been nothing but supportive of me. She didn't go to college, so she was limited. By the time I was in high school, she was definitely limited in how she could help me, but she's always supported me. I'm the first grandchild, and my mom has

two brothers and five sisters, and I'm the first one to graduate from college. (Shanda, African American Female)

Other participants described how they were expected to contribute to the family budget and care for ailing and elderly family members:

It is hard for my parents to let their girl leave home. It's okay to go to college as long as they can see you every night and you can work and help care for my grandmother. So it took me, I mean I literally ran away from home to come to Vance. I was kind of like, "Oh I bought my ticket, I have an appointment, I'm sorry I'm leaving." They, you know, and she was kind of like shocked kind of thing and yeah it was--I pretty much almost had to like trick her. It's like, "I'm accepted, I'm in, I'm gone, I'll call you tomorrow." So it was--I mean it's really hard. Like I come from [out of state], my parents are in [out of state], University of [out of state] was natural because it's like 45 minutes from where I live, so if I go University of [out of state] no problem, but they don't have my program, and I can't focus there, I don't want to go to University of [out of state], I want to go to Vance. "Oh, Vance is not in [out of state],--yeah, you have to be like within driving distance, or it's not possible." That was a big barrier for me, was kind of like I had to dash out of there. (Bonita, African American Female)

Shortly after this [high school graduation] my father passed away from a cancerous tumor in his head. This immediately thrust me into the unexpected position of helping my mom to care for the family emotionally, physically, and more importantly financially. This shifted a majority of my focus from schoolwork to family matters.

While struggling to adjust and yet highly motivated to succeed, I continued to work hard and improve my grades. Unwilling to give up my pursuit of my goals, I learned to balance two jobs and schoolwork. (Melinda, Other Female—from her biographical sketch)

Although not all students in this study explicitly stated that they dealt with such family expectations, when the discussion surrounding these expectations took place in the focus groups all participants would nod their head or comment that they understood the pressures described by the other students.

Difficulty Connecting

A few of the participants also mentioned a difficulty making connections with those of their own ethnicity. Charlene characterized her experience by stating,

I mean, honestly, I think the white people are more friendly than the black people here. I don't know why we do that to each other, but that's how it is. And I'm the only black in my program at this time that's at the same level. So I mean, the blacks that I do meet that do come into the program, it's like we're non-existent to each other.

Other participants also explained that they have created closer bonds with students of other ethnicities on campus:

They're hard to talk to. That is, unless you came from the same high school or town or something, that's kind of difficult. Because I've had black people that they act like they're going to speak, but then they kind of push themselves away. But I don't think—I've only spoken to maybe two or three black people here that are actually carrying

on a conversation, because most of them just kind of like whatever. (Tiffany, African American Female)

I agree with what she's saying. I mean, initially the shock, but once I got used to it, I found it easier. Like now, I don't really hang out with anybody that's not, you know, that is black. You know, I mostly hang out with Indian people, white people, because they're a lot nicer and it is easier to talk about stuff, and to communicate with them.

Once you get to know them, I think. (Olivia, African American Female)

In an effort to make connections with other minority students in her major, one participant attempted to start a club specifically for minority students but met with little success. She attributes the club's lack of popularity to a sort of racial stigma:

I think they look down upon it. Because yeah, I've been doing it for three years. And yeah, they do look down upon it. Like, "No way I'll join that. It's a black group," so they don't join it. But that just shows how people view it, too. Like, everybody will join Kappa Si or PDC, but nobody's willing to join a minority group. Yeah, so that like right there, it shows you. (Raygan, African American Female)

This discussion seemed to be limited to a few African-American students in the study. Very few Hispanic participants discussed this topic or nodded in agreement with other participants regarding this barrier.

Strategies for Success

Focus group discussions, individual graduate student interviews, and document analysis of student biographical statements revealed several common ways in which

participants sought to ensure their success. These strategies were not necessarily identified as such by students but generally arose from the conversation regarding the barriers they faced during their undergraduate experiences. Interestingly, some of the strategies discussed by the participants were similar yet were applied to very different scenarios. Therefore, it would be incorrect to assume that those strategies correspond only to a given barrier, but rather are best characterized as applicable in a number of situations described by the participants. It is also important to note that those strategies are the result of collapsed categories within a coding scheme. As with the previous section, where possible, categories exhibiting significant overlap have been combined under a common heading. However, that is not to say that overlap does not still exist between or among the strategies.

Networking

Participants in this study described networking as a major way in which they sought to ensure their success during their undergraduate programs. In general, students were willing to network with other students, regardless of their ethnicity. Charlene explained that “It’s really just easier when you get to know people. Especially in your major classes. I can talk to anybody in my class now, compared to my freshman year--I talk to everybody that’s in my classes.” Shanda explained that she formed a bond with “people who want the same things from class. And it’s a diverse group actually. Like my roommates were all the same year in school. One was white, one was Vietnamese, and me, I’m black, so it was like a total mix. It took some adapting, but we respected each other’s boundaries, and we were fine.”

Participants also networked with other students in their major classes in order to gain access to study groups and other resources, such as old tests:

And a lot of times it's those people [students of other ethnicities in her major classes] that are studying, and you know, if you want to succeed, they're the ones that, you know, they got the old tests <laughter>. So let's just get together tonight. You know, they're the ones that are studying, so, you know, they're not partying, they're studying. So you're trying to get in so you can study. So I'll talk to anybody, I don't care what color they are <laughter>. When it comes time for test time, I'll be like, "What's your number?" <laughter> You know? (Tiffany, African American Female)

You know, because certain things I understand, they don't. So we lean on each other. You can't have all your friends, you know, over here and not talk to anybody in class. You have to have support in your own class. Because other people are going to help you through in studying, and trying to get stuff. Because tons of people who have important--not just friends in general. Those are important, too, but like friends in your own major. That's how you succeed everybody. Because what you don't know, somebody else will. You know? I'm telling you, that's how it works. And if they don't know, they know somebody. <laughter> (Olivia, African American Female)

Some students also attributed the size of the campus as a facilitating factor in their efforts to network with other students in their majors. For example, as Sarah (Other Female) put it,

I guess like the first couple of weeks in the freshman year, we would just meet in like the dorm, meet people in our major. And I mean I know that Vance is a smaller

school, so you recognize people's faces so easily 'cause you see 'em all the time since you'll bump into 'em a few times around campus just 'cause it's a small campus.

Regarding sharing information through networking, Sarah also remarked, "But as far as sharing resources, I don't know. I guess as friends we kind of stuck together so everything that I knew about, they knew about."

Most participants agreed that making connections to other students within one's major was key to their success. One participant who transferred from a public university warned that the failure to network and make connections with students and faculty in one's major courses could have far reaching implications for professional opportunities after graduation:

If you're not a people person--It's kind of difficult. I mean, if you're just here to not-- if you're in college just to kind of get your degree and--'cause I know some people, I went to [a public university] before I came here, and one of my good friends, she was in her room all the time. She studied. That was it. She never went out, she never did anything extra-curricular, she just studied. Which was fine, you know. We ask when we're doing--I talk to her from time to time, but she didn't network, she didn't do anything, but--and when she graduated, it was like, "Where do you want to go now?" You know, and I have friends all over the place, because I did get out, and I did socialize and try to network with a few people. But she's kind of stuck. I mean, she can--I mean, 4.0, I mean, smart, smart, smart girl, but she just went nowhere after she graduated, because she didn't network, she didn't get out. So you have to be

somewhat of a people person and try to push yourself towards at least meeting--or getting in good with the teachers. You know, whether they like you or not, it's--you can crack in there <laughs> you know? So it's, I guess personalities trying to overcome shyness or whatever problem. (Mary, African American Female)

Another participant also cautioned that the failure to network with both students and faculty could limit opportunities in the future. As a current graduate student, this participant recognized the value of networking to the extent that she even volunteered during the interview to act as a mentor for minority undergraduate students:

I, actually, have a lot of friends who are very shy and didn't talk to people. Like, they're very--they have had a bad experience. So they don't open up. And then, they end up not getting into graduate school, changing their major, or whatever. So I suggest that if they have, like, a peer mentor when they come to Vance, somebody to guide them through. Like, let's say, I know my way around here. So, like, if they assign me to a student, I can help them out. (Raygan, African American Female)

Some participants perceived the culture of the university as one in which faculty perceptions of the students made a big difference in the types of opportunities made available to that student. Regarding his pending application to graduate school, one student remarked:

Since I know Dr. [Name removed] he recommends me to the rest of the board [admissions]. And Vance has that thing where it's good and bad, where if one teacher says something that's it. It falls pop, pop, pop. Everybody, you know, I mean this teacher said so, okay that's fine. I'm not stepping on his toes. But it's good that if you're known--if you're trying to prove yourself and you're trying, you know, if you're

trying--introduce yourself and then this teachers says, "Oh he's good, just trust me on that." So that other professor just says, "Okay, that's fine." (Joshua, Bi-racial Male)

Another student had a similar understanding of the value of networking. In her efforts to gain admission to graduate school, she made connections with faculty in the department prior to her application:

And that's what I hear, too. That's also what I did. I went to the professors, got just to know them so they saw my application and shook their hands and this is—"my name is Martha". Yeah I did network 'cause they told me that just so they know you. They want to know you and if you don't take initiative to go know them--so then I went up in their offices talk to the, you know. I don't know who's on the board or not or whatever. But I went up and made the initiative so they would know me and put my face to my application. (Martha, Native American Female)

Networking is presented as a running theme that emerged from the data. However it should be noted that this strategy is very much related to the next strategy discussed regarding clubs and organizations.

Clubs/Organizations

Many participants in this study also joined clubs or organizations that were related to their majors or intended profession. Through these clubs and organizations participants made connections with other students in their majors. These connections often blossomed into tight friendships and allowed participants to gain access to study groups and other informal support structures. This strategy is presented separately from networking although an interaction of the two certainly exists inasmuch as clubs and organizations served as

officially sanctioned university events that actually facilitated networking. Several participants in the study emphasized the need to take advantage of these opportunities and drew a distinction between the effort to network with such a facilitating factor and the effort to simply make connections with other students in class.

Sarah found that joining a club made her transition much easier and provided a small group of close friends on campus. Sarah (Other Female) explained,

I was primarily really involved in the pre-med club since I knew I wanted to go to graduate school. And so you see the people in class and then you see ‘em at club meetings and you see ‘em at activities that the club does. And so that’s definitely who my strong group of friends are.

Participants described the friendships they were able to make through joining clubs and organizations related to their majors:

I don’t know. It kind of just happened like, I met a girl, she was a psychology major, totally different major. But she had a friend that was a science major, or pre-med major. And I realized, hey, they’re in my classes, got to know them. Pre-med club...lets you get to know people that way. And it’s like just the smoothest connection--how it happened. When you have a club and stuff with the same people all the time, you get to know them. (Olivia, African American Female)

And they try to have all these clubs and stuff like that. So that you can be at--like, I’ve seen all kinds of different clubs so that way you can mingle with your major or you can invite other members to come in. I mean they just make the programs, the

transitions; it's like really great with all the other barriers besides some of the other things that we mentioned. (Jacob, Native American Male)

Well, I will say we actually started--we both are doing, wanting to do, a Master's right now, and we actually started a program. Me and her [a friend from the pre-med club] started the clinical research club, and I was president, and she was the vice president. But we actually brought a different variety in the club, and we had more than 50 students join in the club. And we did different activities throughout the whole year. We did make some communications and contacts with some companies and friends from other classes like we get to know the freshmen, juniors, seniors, everybody. (Crystal, Hispanic Female)

One of the current graduate students recounted her experience joining clubs, describing how it allowed students with diverse experience to share perspectives and form bonds even at the graduate level:

And I guess the clubs if you're into that because it helps you form a group of students that you're more comfortable with. And my class is pretty--we're diverse in our ages and where we've come from, like professions, so we have a lot of students that were already in a career field and knew how to work with diverse groups, so I think that kind of pulled us together. And just our different takes on life just merged together. (Shanda, African American Female)

On the other hand, the clubs and organizations mentioned by participants were major-specific and not necessarily related to ethnicity. One graduate student expressed dismay at

the lack of clubs and organizations aimed at bringing together students of the same ethnicity, but provided a suggestion as to how to better support minority students in the sciences:

I think also maybe, I don't know how many Native Americans come to Vance University, but if there was like a club or a group. I know we have an International Club, they have that, but that's not what I mean. So but if that--I mean, that would be pretty nice if they could do that. And we talked about that in the pre-med group, like we could make up a club, be around, or something like that, or extend it to graduate school where minorities, not just Native Americans, but any minority, could have-- like a retreat, a place to come and talk and share issues with and ask questions. So if they had like a support team like that, man that would be beneficial. (Will, Native American Male)

Commitment

This strategy refers to a particular frame of mind in which minority students draw strength from their dedication to their goal of graduation. This is not to say that those encounters with prejudice on campus did not affect the students negatively; nonetheless, when asked how these events impacted participants, their responses consistently emphasized their resolve to move forward and graduate. Earlier in this chapter several instances of prejudice were explicated by participants' responses. In many of these instances, the participants' own words provided evidence of their commitment to graduation and a determination to work around prejudiced individuals or actions. For example, Charlene's interactions with a Caucasian student in her class regarding the racial slurs posted on doors in one of the residence halls demonstrated that her perception of the campus and most

Caucasian students was still positive—as if this event were an exception. Charlene reassured the student that her relationship with him was still positive when she said,

All of a sudden, he's just like, "Oh, my god." I'm like, "Well, you didn't do it, did you?" <laughter> He was like, "No." And said "Alright then, we still cool!" You know, I mean, seriously, he just, "God, oh my gosh, you gonna be mad at me now." "No, I'm not mad at you; you didn't do it, you know?" And he's like, "Oh, I'm sorry." He apologized for whoever else: "I'm so sorry." I'm like, "It's okay; some people still have to learn." (Charlene, African American Female)

Other participants also demonstrated commitment to their goal of graduation when they were asked if these experiences with prejudice affected them negatively. Statements such as Tiffany's, who said, "No, we know we've got to get up out of here," or Mary's, who remarked, "We've gotta do something, so I'm like... Yeah, keep on moving," exemplify a resolve to use their goals as motivation. Lydia further elaborated, "I'm a very non-impressionable person, like I'm going to do what I want to do and like my goal drives me. So I can ignore a lot of things a lot."

One participant explained that, although he expected to feel like an outsider, he was not truly prepared for the reality of it, but reported that he relied on sheer will and determination to get through:

I knew I would be--from the beginning I would be somewhat as an outsider. I didn't expect it to be that great, and that difficult to overcome. And I thought I would be prepared, because I knew it was coming, but I really wasn't. I wasn't prepared like I thought I was....but I mean, the will and determination, that's really all I need, as

long as I have that. That's the way I saw it. That's the way I approached it. I was in college to get a degree, and I was gonna get that degree at any cost. And I wasn't looking for any favors. I don't want anybody to be handing me--and me not earning it. I want to earn every bit of whatever I'm successful at. (Will, Native American Male)

Data regarding commitment from the focus groups tended to revolve around students' reactions to racially linked barriers, although students such as Will did make mention of commitment as a driving force instead of a response to a particular barrier.

Reasonable Risk

Early in their degree programs, participants in this study realized that, in order to be successful, it would be necessary for them to set aside their apprehensions in order to make connections with students and faculty of different backgrounds. Again, that strategy is not unrelated to networking. Participants pointed out that the decision to take reasonable risks was a significant event that facilitated their subsequent efforts to network. Will described that decision as:

Just coming out of my shell, basically. And just giving people a chance, and not stereotyping people. So basically, just me approaching them, and initiating things. And really get to know that person, and just be open about it. I think that's why I really broke that barrier [referring to the lack of presence barrier].

Other participants explained the reasons that they came to a similar conclusion:

Yeah, cause if you don't talk, they ain't gonna talk to you. You got to get out, go to clubs, and I mean, you either have to meet in class, you have to try to get people to

study with, and talk to people and stuff, 'cause they ain't gonna talk to you if you don't talk to them. They probably thinking the same way you thinking, you know?

(Tiffany, African American Female)

Yeah, and you can't do it, you can't revert to your old, you know, you can't just--be drawn to one type of people. I mean, one type of person. You have to get outside your comfort zone, and get to know everybody, you know, 'cause I depend on my classmates so much when I don't understand things. (Olivia, African American Female)

Another way to describe this strategy might be as “calculated risk”. Students somehow possessed the skill that allowed them to determine whether an action was worth the associated risk.

Accessing Campus Support Services

A few participants in this study also mentioned that they used on-campus academic support services. Mostly participants utilized tutoring services and review sessions to supplement lecture courses in which they were struggling. Unlike most of the previous strategies discussed by participants, this strategy was only discussed in conjunction with Discontinuity barriers that dealt with inadequate academic preparation and study skills. Although much discussion in the focus groups and interviews revolved around a systemic lack of communication regarding resources and support, students seemed to be aware of the tutoring and review sessions. One participant remarked that he was made aware of the

tutoring services through regular announcements on the closed circuit on-campus cable channel:

Just announcements, basically. Announcements. The little programs on the T--you know how they have a Vance TV channel? I would see support services, free tutoring through peers. Like what we done in the biology class, there was a few of us that was having a problem on that second section, so there were three of us that just went there at the same time, and we got in a group together, and had our tutor sessions. (Will, Native American Male)

Still another participant who accessed on-campus tutoring services stumbled upon the information in a different way:

I'm trying to think. I think I saw a sign. You know how in the cafeteria they have these little papers? I think I just saw that. Or maybe my friend maybe noticed it. Then when I went over to Student Support Services for one subject, they said they were having additional classes for tutoring or whatever. It was a combination of it. It was good. (Sarah, Other Female)

Besides the flyers posted on campus and the television announcements, individual professors often mentioned the tutoring and group review sessions in their classes. Melinda explained that, "Oh, also the teachers are good about letting us know--I don't know how, who gets appointed, but they form a group, like, study sessions or review sessions, I guess, for the particular class outside of class time, like a weekly tutor session."

Persistence

A few participants also mentioned the need to be persistent in order to get the information or access to resources they needed to ensure their success. As with most of these strategies, persistence was not discussed separately from barriers, nor was it made explicit by most of the participants, but rather arose naturally from the experiences told by the students. It is evident from their stories that persistence was necessary for a few students. For example, one student described her experience searching for scholarship money during which she found that she was eligible for a Vance University scholarship that is given to all students who qualify based on GPA, but for some reason she had been passed over for it:

And I found out on my own they don't, like, tell you. You have to find out about it and do more research. Because I was on the Presidential list for scholarships, and I didn't get my scholarship, which I'm supposed to get, even though I had that GPA. So they back paid me, because it was a mistake on their part. But, like, I had to work. I went up to dean's office to make an appointment. I'm, like, "What's wrong with my financial aid?" Because I'm doing so good. I have to get some kind of help--I'm doing great in school. I have to get some kind of funding, since I'm a good student. And then, they give me money. (Raygan, African American Female)

As with any endeavor the ability to persist is vital to success. However Raygan's attempt to rectify the oversight of her scholarship may have been further facilitated by the faculty open-door policy.

Facilitating Factors

Open-Door Policy

Participants in this study were asked to describe what aspects of Vance University significantly contributed to their success. In essence, students described, in their opinion, what Vance does well. Overwhelmingly, participants cited the faculty “open-door policy” as a cogent facilitator of their success. Vance University faculty, like faculty at most colleges and universities, keep regular posted office hours. Yet many of the on-campus, full time faculty spend much more than the required office hours in their offices grading papers, meeting with students, preparing for meetings, etc. Although not an official university policy, it seems to be part of the culture at Vance that students are encouraged to drop by faculty offices without prior appointment to ask questions, clarify assignments, or just seek guidance in general.

Participants consistently described their experiences with the open-door policy as having a positive impact on both their academic and social life on campus:

Okay, one thing that kind of caught me off-guard is how much the professors are here to help. An open-door policy. I mean, most of them didn't come from where I come from, or maybe didn't experience some of that, experience what I experienced, but they experienced different things, but they try their best to relate. And it means a lot. Maybe they don't relate exactly. I mean, I can understand where they're coming from, and I can really relate it back to my life and what I'm going through. So eventually, I started going to the office and talking to them, and so that was like a stepping stone to getting--to being successful and getting to the point where I needed

to get, where I'm more comfortable on campus. And so I started with faculty first, and my professors, and then I made my way to the students. So I would--if I had a problem, I would go to them, like with school. And then I got where I had a relationship with my professors, so I could talk to them about other things also, like, "I don't really know anybody around here, and I don't really have anyone to talk to outside of class." And so I mean, I had a few professors that would just--they would give me pointers and stuff, and they would just encourage me to be bold and just approach people, and they would communicate back. And it's really not as hard as I think it is. But I just wasn't raised like that. (Will, Native American Male)

Okay. Every single--I would say, with the exception of one, majority, I would say the vast majority of all my professors have been extremely, extremely nice. I mean their door is always open. I get emails back from them within 24 hours. They offer themselves all the time, like especially in the sciences. You'll see them there until late at night. I mean I feel like I know them on a personal level. I mean I know how they met their wives and like the school they went to. And I mean that's definitely number one on the list is professors. (Sarah, Other Female)

Participants also explained that the open-door policy made it possible for students who are apprehensive about asking questions in class to do so in a safe and non-judgmental environment. Crystal, for example, remarked,

Can I say the professors here they have an open door policy, so that really helped when a student is not really outgoing and he or she feels like I want to talk to you. I mean sometimes in the--here almost every professor has their own office.

Another participant also felt more comfortable meeting with professors outside of class to clarify concepts and ask questions:

They have their own office, so if you feel like you don't want to interact with your professor in front of all the students, they do have an open door policy that you can walk into their door as long as their door is open, you can go in and talk to them and there are no actually questions that, you know, I mean like why are you here at this time, or anything like that. You're always welcome. Any questions that you have, they're always there to answer. I think each student also has their advisor, appointed advisors so they actually guide you through what classes do you register for and if you want to go to certain point, how you need to make your path, which I think I really like about Vance that you are actually kind of known from the crowd and not just being, you know, a number. (Lydia, African American Female)

Again, student descriptions of their interactions with faculty were generally positive and overwhelmingly consistent across focus group sessions as well as interviews. This fact alone indicates the impact of this facilitating factor.

Welcoming Religious Atmosphere

All participants in this study were asked if, before arriving on campus at Vance, they expected to face any particular barriers that, once they arrived, they actually did not face on campus. Interestingly, this question drew very consistent responses across all focus groups and interviews. Most participants expected that, because Vance was historically a faith-based institution, they would be expected to conform to a particular religious doctrine. Yet not a single participant reported such an experience:

Well the point about being, you know, this is a Baptist college I did--and I'm not a Christian I will say that. And I really don't have anything against Christianity. I really don't. And I did expect a lot of people coming up to me trying to convert me, trying to tell that my religion ain't worth anything, you know. This--the Christianity is above all, but I actually did not face that. My friends that go to other colleges, they told me they were like, "You're going to come across that." And I was--I told them that actually I didn't, and they were surprised. And I was surprised myself. Yeah, like I just figured it to be like people just coming up to me and telling me like, you know, trying to convert me. (Joseph, Hispanic Male)

I haven't really--it's been very kind of like an easy transition as far as that goes [religion] I would say. It's not so bad because Vance doesn't force, like I said, religion on you. And they don't like, "Well, what religion are you?" "We're all Baptist and you should be too." Because I think I was looking at the statistics wrong. If I'm not mistaken, it's actually not many are--like not everybody is Baptist. It's like a mix, a very big mix, so it's not so bad. (Martha, Native American Female)

Vance University does require undergraduate students to take at least two religion courses as part of the general college curriculum requirements, and many students expected those courses to be heavily biased and geared mostly toward conversion. On the contrary, students were very surprised to find that the environment was very open to different ideas and even encouraged students to explore different faiths. Participants explained that Vance presented religion from a very academic point of view:

When I came here, I was expecting that I'm going to a faith-based school, so I was worried that I would have to go to church every, I mean it will be required for me to attend religion functions or whatever Vance have here or you have to read the Bible every day and things like that, but actually it was not pressured at all. In fact I had a professor for my religion class that was great. I guess I learned a lot from the Christian, Christianity class. So I really like the fact that on that particular, even the-- they say that they are a Christian Baptist, particularly Baptist school, but you don't necessarily have to follow it. (Crystal, Hispanic Female)

I'm taking a religion class right now, I'm not sure if I'm like Christian or not Christian <laughs>. Like I'm biased, the book that we use I was kind of like, I don't understand, like they really do not sway your decision any way or the other, they're just--they present Christianity almost like history, you know, kind of thing. And I thought that was pretty cool. I mean it gave me another perspective of religion... (Bonita, African American Female)

And then I took the world religion class, so it makes me more like, you know, understand other religions and stuff, right, to understand my religion more, like Buddhist stuff more and the Hinduism more and stuff like that, and Christianity like that. So I mean it's very interesting to know another culture, stuff like that, a really good approach. (Richard, Hispanic Male)

Summary

The purpose of this action research study was to examine the ways in which successful undergraduate ethnic minority students in majors that serve as a pipeline for professional healthcare have managed to overcome barriers to their success at a private, predominantly white university. Understanding the barriers faced by minority students on such a campus, as well as how they navigated those barriers to ensure their success, may allow the focal university to more appropriately allocate resources to reduce or eliminate those barriers for current and future students. This chapter presented findings from three focus groups consisting of current undergraduate ethnic minority students enrolled in majors that may lead to professional healthcare. Using rich descriptions provided in the participants own words, findings from the focus groups were interwoven with findings from four individual interviews with ethnic minority graduate students currently enrolled in the Vance University School of Health Sciences as well as document analysis. First, barriers were presented in descending order of significance, followed by strategies for success and facilitating factors.

From the data several themes regarding barriers emerged. Primarily, participants described a systemic breakdown and overall lack of communication from the university regarding resources—particularly financial aid. Participants also relayed their experiences with discrimination on campus stemming from underrepresentation of minorities in the sciences and elements of the University that were perceived as hostile to minority students. Monetary resources in the form of financial aid and personal finances were also discussed in this study as a threat to participants' success. Participants also cited discontinuity between

their high school academic preparation and the rigor of college level course work. Some students expressed family expectations and responsibilities as a barrier to their success. Finally a few students described difficulty making connections with students of their own ethnicity on campus.

Emerging from the discussion surrounding barriers, students provided insight into the ways in which they ensured their success. Those strategies for success were explicitly discussed as well as implicitly derived from the data. The lion's share of participants attributed much of their success to their efforts to network with other students and faculty in their own majors. Similarly, students joined clubs or organizations that facilitated their ability to make connections that would grant them access to informal supports such as study groups. Participants also indicated that their commitment to their goals drives them and provides a positive perspective when faced with obstacles. Students in this study also realized that, in order to be successful, they would have to put aside apprehensions and take reasonable risks in order to make connections and network. Some participants accessed on-campus resources such as group review sessions and tutoring when they had trouble with classes or concepts. Finally, a few students exhibited persistence in obtaining the resources they needed to ensure their success in college.

This chapter concluded with a presentation of two endemic factors that participants credit as significant facilitators of their success, faculty open-door policy and a welcoming religious atmosphere. The next chapter presents a discussion and interpretation of these findings in relation to previous research. Additionally implications for practice and

suggestions for further research will be provided, along with recommendations to the focal university.

CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

Introduction

For over 30 years the federal government has increasingly provided funding through Title VII and VIII programs designed to increase the representation of minorities providing professional health care in the United States (Ricketts & Gaul, 2004). However these efforts have not been as successful as originally hoped. The Institute of Medicine (IOM), the Council on Graduate Medical Education, and the 2004 Sullivan Commission all maintain that ethnic minorities continue to be severely underrepresented in professional health care. (Betancourt & Maina, 2007; Mangan, 2004; Reichert, 2006). They also contend that the overall cultural competency of the healthcare system must be improved in order to effectively treat underserved minority populations. Therefore one of the highest priorities of the colleges and universities that provide professional healthcare programs is to recruit, retain, and graduate qualified ethnic minorities in programs that serve as pipelines for professional healthcare.

Unfortunately the task of improving minority student retention, particularly in areas of science that serve as a pipeline for professional healthcare programs, has met with little success. Approximately 65% of minority students leave these majors entirely within the freshman year, as compared to 37% of Caucasian students (Good, et al., 2007). While most research has focused on why these students are unsuccessful in college, relatively few studies have focused on successful undergraduate minority students. Therefore, the purpose of this

action research study is to examine the ways in which successful undergraduate ethnic minority students in majors that serve as a pipeline for professional healthcare have managed to overcome barriers to their success at a private, predominantly white university. This study employs the assumptions of the black box approach that depicts the college experience for most as “a geography of obstacles and barriers that must be overcome by the student in order to attain a college degree” (Padilla, 2001, p. 135). Understanding the barriers faced by minority students on such a campus, as well as how they navigated those barriers to ensure their success, may allow the focal university to more appropriately allocate resources to reduce or eliminate those barriers for current and future students.

This chapter begins with a summary of the study’s major findings, organized by the research questions. Next the implications of these findings are discussed. This chapter concludes with recommendations for policy and practice at the focal university and suggestions for future research stemming from this study’s findings.

Summary of Findings

Research Question One: What barriers, if any, to success have minority students faced at the focal university?

Making these barriers explicit is a good first step in identifying potential areas for improvement by the university. Additionally, at least some of the impact of these perceived barriers is made evident by the participants’ experiences. Using qualitative inquiry that allows the participants to tell their story in their own words provides another dimension of understanding that the university may need to take into account when considering ways to address those potential barriers. While quantitative methods such as surveys could easily

identify the frequency of occurrence of these barriers, such methods may not necessarily yield evidence as to the severity of the barriers.

The findings from this study indicated several barriers that were commonly perceived by participants as threats to the successful completion of their degree. The most frequent barrier discussed by participants was communication and information access. Across the focus groups and interviews, participants discussed both specific instances of a lack of communication, and a general lack of communication. The frustration with a systemic lack of communication was best expressed by Joshua when he said, “Like they have the information. They have means to provide us information; it's just that transition phase doesn't occur.”

Beyond the general lack of communication, students discussed specific areas in which information was not available or communication was cumbersome or conflicting; those areas included financial aid and student support resources. This lack of communication negatively impacted students academically as well as financially. Such frustrations are not uncommon in colleges and universities. A recent study of several undergraduate institutions discovered that colleges are often plagued by fragmentation of departments and programs, leading to the creation of information silos (Petrides, 2007). Petrides contends that having so many “gate-keepers” of information only frustrated and confused students by isolating individuals and departments from one another, resulting in dissatisfaction with the accessibility of information, and ignorance concerning the type of information available to both students and faculty. The findings of this study provide additional credence to those of Thompson (2005), who found that minority students often had trouble accessing financial aid and sometimes

missed deadlines because of incomplete or conflicting information provided by the focal university.

Another significant barrier that emerged from this study concerned racially linked barriers on campus. Students discussed two major types of racially linked barriers: (a) “Underrepresentation” barriers that dealt with the underrepresentation of minorities in their major as well as at the faculty level, and (b) “Institutional Ingorance” barriers that dealt with institutional structures, policies, and administration or faculty that were hostile to minority students. Participants initially found the university to be uninviting to minority students, based on the low representation of minorities on campus. This was particularly true within students’ major courses, causing some participants to consider switching majors. The findings from this study indicate that, at least initially, minority students experience some social isolation on the focal campus. To some extent, this is consistent with the research on minority students attending predominantly white institutions, which contends that social isolation, alienation, and lack of congruency between the student and institution have greatly contributed to the negative experiences of minority students on predominantly white campuses (A. F. Cabrera, et al., 1999; Holmes, et al., 2007; Loo & Rolison, 1986). Though students initially expressed feelings of isolation, all participants were quick to point out that those feelings soon passed as they became more involved with campus life, clubs, and academics.

In addition, most of the experiences cited by participants regarding instances of discrimination were generally perceived as the exception rather than the rule. Nevertheless, students felt that the university response to those occurrences was inadequate. Participants

felt that the university simply wanted those incidents swept under the rug. The findings from this study regarding prejudice also concur with other studies of minority students on predominantly white campuses. Padilla (1996), Rogers and Molina (2006), Sleet (2000), Thompson (2005), and Ford-Edwards (2002) all found that minority students on predominantly white campuses encountered prejudice from both students and university officials and participants perceived this barrier as a viable threat to their success in college.

This study also confirms that, for minority students on the focal campus, financial resources are perceived as a major barrier to success. Actual availability of financial aid and scholarship monies were problematic for participants in this study. Participants also worked either full or part-time to earn money to support themselves or their families. This lack of resources caused significant stress and often divided the energy, time, and focus of the students in the study. This particular finding provides additional evidence to support Wirth's (2006) findings that minority students often work full or part-time schedules to obtain the money for tuition and basic needs. Wirth contended, as did the participants in this study, that working often conflicts with class schedules and reduces the time and energy that students are able to devote to course work.

Participants also discussed academic preparation as a barrier that impeded their transition from high school to college. These findings are similar to those of Sleet (2000) and Wirth (2006), who found that minority students felt that the disparity between their academic experience in high school and academic expectations in college was much greater than that of their Caucasian peers. Participants in this study perceived the rigor and pacing of the college coursework at Vance to be much greater than they had expected—particularly those

individuals who transferred from a community college or public university. Participants who did transfer in credits from another college or university were typically not full-time students until they came to Vance. Therefore it is possible that this perception is based on their previous experiences with much lighter schedules and lower level courses.

Another barrier that emerged from this study, although to a lesser extent than the previous barriers, revolved around family responsibilities and expectations. Some students were single parents or were responsible for providing financially for their immediate family in order to make ends meet. Other students discussed having to care for sick or ailing parents or grandparents. Students who cited this as a barrier not only lacked a financial support system from their family, but also were expected to provide support to the family while simultaneously attempting to complete their degree. This type of barrier is not uncommon in the literature on minority college students. First generation college students often struggle with the expectations of home. Many times these students come from interdependent families that rely on all capable members of the family to contribute to the financial stability and care of the family as a whole (Dennis, 2005). In these families, sacrifices of the individual are deemed necessary so that the family unit may continue to subsist. Participants in this study reacted to this expectation in different ways. Some participants were living at home, working to support their family, and commuting to campus. Others were expected to drop everything at a moment's notice to come home and help out whenever called upon. One participant, however, explained that she had completely rejected that expectation and left home against the wishes of her family so that she could concentrate on school without the added burdens of working and caring for her ailing grandmother. In any case, each of the participants was able

to cope with this expectation by either sacrificing time and energy at the expense of school, or rejecting what they considered to be unreasonable family expectations.

The final barrier concerns minority students' ability to connect with students of their own ethnicity on campus. Many participants cited underrepresentation of minorities in their majors and on campus as a barrier to their success. Much of the research on minority students attending predominantly white institutions supports this finding and further emphasizes the need for minority students to make connections with students of their own ethnicity in order to ground themselves and maintain their cultural identity (D. Guiffrida, 2005; Holmes, et al., 2007; Kuh, 2005; Rendon, et al., 2000; Sedlacek, 1999). However the findings from this study indicated that some participants had much greater difficulty establishing connections with peers of the same ethnicity than with Caucasian students. This could stem merely from the low numbers of minority students on campus with whom participants in this study could interact—and this may be true for some of the participants in this study. However, some participants explained that they felt that it was just easier to get to know Caucasian students. Still other participants made an explicit decision to avoid making connections with other minority students for fear that those students might be a bad influence or cause the participant to lose focus and motivation. Regardless of the reason for not pursuing those connections, contrary to what the literature would suggest, participants in this study remained successful on a predominantly white campus.

Research Question Two: What was necessary for students to successfully navigate the barriers that they encountered?

Understanding the ways in which students were able to succeed in the face of obstacles may allow the focal university to capitalize on those strategies for current and future students. Additionally, those findings may contribute to the literature regarding successful minority students attending predominantly white institutions.

The most common way in which participants sought to ensure their success was to network with other students in their majors, as well as the faculty within their department. Students in this study understood the importance of gaining access to a support system by making connections. In doing this, participants were privy to shared resources and information from a network of students in their majors and across campus. This finding is similar to that of Wirth (2006), who also found that successful minority students networked with faculty and made connections with other students in their own majors.

Participants also joined clubs and organizations related to their majors. This allowed them to make friends and provided a structured, university-sponsored environment in which students could network. Interestingly, the research on minority students on predominantly white campuses indicates that successful minority students do indeed join clubs and organizations; however, those clubs are most often related to ethnicity, and students join them in an effort to maintain a connection with their cultural identity (Ford-Edwards, 2002; Padilla, 1999). The findings from this study, on the other hand, indicate that most participants joined clubs in order to network for the purposes of gaining access to study groups,

professional opportunities, etc. Still, there were cases in this study in which students attempted unsuccessfully to start new clubs based on ethnicity. One of the graduate students, Will, lamented the lack of an organization on campus for minorities. He felt such an organization would provide a safe place to discuss the issues minority students face on campus.

In response to prejudice barriers, participants in this study drew strength from their commitment to their goal of graduation. Not surprisingly, successful minority students in this study have a unique perspective regarding their goals that tends to strengthen their resolve to complete the degree and graduate. Ford-Edwards (2002) also found in her study that, although the students considered the university to be prejudiced against minorities, their commitment to their goal of graduation remained strong. Likewise, other researchers have shown that “non-cognitive factors (that is, self-concept, an understanding of racism, and the ability to cope with it) play a critical role in shaping academic performance and persistence among minority students in college” (Nora & Cabrera, 1996, p. 120).

Successful students in this study also pointed out that it was necessary to take “reasonable risks”. Those risks generally referred to their efforts to network and get to know other students and professors. Students learned to set aside apprehensions about new or different people or situations based on the recognition that the potential benefit of taking those risks outweighed any potential negative outcomes. Students also realized that, after taking those risks, much of the apprehension wasn’t actually warranted at all, as is explained by Tiffany, who said, “You have to try to get to know people to study with, and talk to people and stuff, ‘cause they ain’t gonna talk to you if you don’t talk to them. They probably

thinking the same way you thinking, you know?” This finding was also reported by Padilla (1999), who found that successful minority students learned quickly how to take calculated risks in order to ensure their success.

Although most of the participants in this study cited communication and information flow as one of the major barriers threatening their success, a few students in this study actually were aware of campus resources such as tutoring and group review sessions. This study also provides additional evidence to support the findings of Wirth (2006) that successful minority students accessed on-campus tutoring. It was important because it helped students to be aware of how well they grasped the curriculum and concepts covered in class. When students felt like they were beginning to lose their grip, they immediately sought out on-campus support systems such as tutoring to ensure their success.

Finally, the findings from this study indicate that students must be persistent in order to obtain the resources, support, and information necessary to be successful at Vance University. Padilla (1996) also found that successful students were persistent about getting their needs met. Likewise, students in this study continually searched for financial resources, questioned faculty, and even approached university administration in order to be successful.

Discussion of Findings

The purpose of this study was to examine the ways in which undergraduate minority students have managed to overcome barriers to their success at a private, predominantly white university. The research questions sought to determine what common barriers, if any, participants had faced at the focal university and had perceived as posing a significant threat

to their success. Additionally, the research questions sought to make explicit the ways in which students ensured their success.

Research Question One

Considering the design of this study, it is difficult to discern which of these barriers are common only to minority students on campus. Admittedly, no comparison that would provide insight to this issue is available for Caucasian students, alumni, or faculty. For example, it is quite possible that many students at the focal university, regardless of ethnicity, struggle with the lack of communication and information flow on campus. And the results of such a systemic lack of communication likely impact all students negatively.

Likewise, the availability of resources and the need to work in order to subsist along with academic preparation (discontinuity) cannot be assumed to impact only minority students on campus. It is possible that socio-economic status is the commonality rather than just ethnicity, although researchers have pointed to the correlation of socio-economic status and race (Roscigno & Ainsworth-Darnell, 1999). However, the perceptions of participants in this study were that most of their Caucasian peers had the financial support from home to stay on-campus and focus only on school. Similarly, participants perceived the expectations of their family to be vastly different than that of their Caucasian peers. Participants faced expectations from home that were, in their own assessment, not common expectations of college students. The literature confirms that many minority students face additional stressors not encountered by most Caucasian students, such as financial difficulties, family pressures, lack of academic preparation, and a lack of a critical mass of students with similar ethnic backgrounds (Seidman, 2005b; Smedley, Meyers, & Harrell, 1993).

Another barrier that emerged from this study dealt with the participants' difficulty connecting with other students of their own ethnicity. While much of the research would suggest that minority students must make connections with other students of the same ethnicity on campus in order to ground themselves in their cultural identity, some of the participants in this study made explicit decisions not to pursue such relationships. Certainly these students, by all academic standards, were successful regardless of the absence of such connections on campus. The question now becomes, *How have minority students' self-concept and cultural identity been affected by this decision?*

Literature on minority students' self-concept points to a relationship between the minority students' self-concept and their ability to adjust and be successful on predominantly white college campuses (Bayer, 1972; Bohn, 1973; Deslonde, 1970; Dixon-Altener & Altener, 1977; Gruber, 1980; Sedlacek, 1999; Sedlacek & Prieto, 1990). In addition it is important to minority students' self-concept to see themselves as part of the institution (Sedlacek & Brooks, 1976). Furthermore, it has been suggested that identification with the university is more crucial to the retention of African Americans than for other students (A. W. Astin, 1982). Researchers suggest that cultural adaptation also influences the self-concept of African-American students (Burbach & Thompson, 1971). For minority students on predominantly white campuses, researchers have also suggested that cultural adaptation (the ability to view oneself as part of the institution), which subsequently influences minority students' self-concept, may also impact the students' racial identity (Smith, 1980). According to Sedlacek (1999), there are four stages of racial identity:

(a) *pre-encounter*, when a student perceives the world as the opposite of his or her ethnicity; (b) *encounter*, when the student's life experience challenges this perception; (c) *immersion*, when only things relating to the student's ethnicity are considered of value; and (d) *internalization*, when it becomes possible for the student to focus on things outside of his or her ethnicity.

Could it be that students in this study were already well grounded in their cultural identity and, as Sedlacek (1999) might suggest, participants had reached the stage of internalization that made the connections with students of their own ethnicity less necessary? While participants were obviously successful and, contrary to much of the literature, did not make connections or form strong relationships with students of their own ethnicity, was this success attributable to a positive self-concept? If so, did the university play any role in developing this self-concept? From the data, no definitive answer could be discerned. In any case the very fact that students perceive this difficulty in connecting with students of the same ethnicity to be a barrier would indicate that, on some level, participants have been negatively impacted by it.

Racially linked barriers faced by students in this study were perceived by the participants to be exclusive to minority students. These barriers faced by students on campus evoked different reactions from different individuals in this study. Some seemed to take it in stride while others described being hurt by instances of discrimination or prejudice. One participant explained that he tried to reason with his instructor regarding her inconsistency in attendance record keeping but was unsuccessful. He felt that he had been victimized by a stereotype. Other students also described lower expectations of minority student by

instructors on campus. Sedlacek (1999) confirms that one of the most common forms of racism on predominantly white campuses takes the form of lower expectations of minority students by faculty. Research on minority college students attending predominantly white campuses has shown that successful minority students often have differential responses to instances of racism, taking action when it is in their best interest and not taking action when they believe action will cost them more than it is worth (Sedlacek). Additionally minority students respond differently depending on whether instances of racism are individual or institutional. According to Sedlacek minority students are less likely to choose to respond to individual instances of racism than they are to institutional forms of racism. Likewise in this study, participants seemed less concerned about the isolated incident involving racial slurs on the doors in residence halls than they were with the lower expectations of minority students by some faculty or university staff.

These experiences may also be related to Steele's theory of Stereotype Threat (Steele, 1999). In essence, successful minority students pay a price for their success by bearing the burden of the anxiety of the possibility of proving a negative stereotype. Academic performance and social adjustment are inhibited by the fear that failure will only reinforce negative assumptions about their ethnic group. The danger of stereotype threat is the disidentification of minority students with academics. Minority students may disengage from academic achievement as a coping strategy to deal with the threat of underperformance in a particular domain (Aronson, 2002; Osborne, 1997). It is unclear from this study exactly how these stereotypes impacted students—there are no quantitative measures provided herein that can measure anxiety produced by these incidents. Studies by Steele (1997, 1999) and

Aronson (2002) artificially induced such anxiety in students to test their theory and found significant effects of stereotype threat on minority student performance on standardized tests. However, this present study allows participants to speak in retrospect regarding real world experiences, and therefore cannot judge with any certainty to what degree those experiences impacted participants. It can only be surmised that participants did, in fact, view those experiences as a barrier to their success.

The racially linked barriers that students faced on campus notwithstanding, participants persisted and were quite successful considering that the inclusion criteria for this study required participants to have a 3.0 GPA or above. Having experienced such incidents of discrimination, and acknowledging that stereotype threat may be in play, what could account for these students' success? Researchers have identified several psychological factors, common to successful minority students, that may be pertinent to this question. These factors are said to contribute to the academic resiliency of minority students who "despite economic, cultural, and social barriers still succeed at high levels" (N. L. Cabrera & Padilla, 2004). Personal factors such as intellectual ability, effective coping strategies, and communication skills have been found to act as protective factors for minority students. Additionally, social factors such as family warmth, cohesion, structure, and emotional support all contribute to the resiliency of minority students. Environmental factors may also act as protective factors that include positive school experiences, good peer relations, and positive relationships with other adults (Morrison & Allen, 2007; Prince-Embury, 2008).

Research Question Two

Findings from this study noted several strategies employed by participants to which they attribute their success in college. Those findings, related to research question two, are comparable to the protective factors of resilient minority students. Participants in this study networked with other students and faculty for a myriad of reasons. These efforts to network were further facilitated by available campus organizations and clubs. Efforts to network were also supported by the participants' willingness to take reasonable risks. In addition, students were persistent about getting their needs met and drew strength from their commitment to the completion of their degree. These strategies may be related to personal protective factors such as self-reliance, effective coping ability, and communication skills, or to environmental protective factors such as good peer relations and positive relationships with adults. The difficulty here is that it is impossible to determine from the data whether these strategies are a result of these personal protective factors, or the personal protective factors are a composite result of participants' invocation of these strategies over a period of time. From the findings, students tended to see their relationships with other students and faculty to be a direct result of their efforts to network. Still, sociability and the ability to communicate effectively may have precipitated those efforts. In any case, there seems to be a relationship between the findings of this study and the resiliency factors discussed in the current literature.

Facilitating Factors

This study also found two facilitating factors that, according to participants, contributed to their success. Students had access to faculty on a regular basis due to the informal open-door policy of the full-time faculty at Vance. These interactions with faculty provided the needed clarification and reassurance for minority students in this study. Research points again and again to the importance of frequent, quality interactions with faculty for minority students (A. Astin, 1999; Maton & Hrabowski, 2004; Seidman, 2005a). This finding is similar to that of Padilla (1996), who found that successful minority students sought out a mentor on campus, and to Rogers and Molina (2006), who found that interaction with faculty, especially minority faculty, increased minority students' likelihood of persisting in college. In most cases, research points towards relationships between minority students and minority faculty. However, the findings from this study indicate that minority students in this study felt comfortable approaching non-minority faculty. In fact, those relationships were described by participants as the main facilitating factor in their success at the focal university. Sedlacek (1999) contended that minority student interaction with faculty was a better predictor of academic success for minority students attending a predominantly white institution than for minority students attending historically black colleges. This may be better explained by Nora and Cabrera (1996), who found that positive interactions with faculty enhance the affective and cognitive development of the student, thereby causing the student to feel more committed to obtaining a college degree and subsequently more committed to the institution. Therefore, it could be that any positive interaction with faculty, regardless of ethnicity, serves to facilitate student success.

The second facilitating factor found in this study was a welcoming religious atmosphere. Most students expected to face challenges from the institution and conflicts with other students regarding religion. Historically a Baptist affiliated institution, Vance was perceived as threatening to students of different religions, as well as those who were closely aligned with Protestant traditions. The overwhelming apprehension was that students would be forced to attend church services, pray before each class, or be proselytized by faculty and students. However, students reported that they experienced nothing of the sort. In fact, students found the university's approach to religion to be historical, balanced, and academic.

Exactly how well this facilitated student success is not entirely clear. In fact, this finding was altogether unexpected. Even so, student responses regarding this factor were overwhelmingly consistent and emphatic across focus groups and individual interviews and, therefore, cannot be ignored. It is plausible that, because students expected to be bombarded by religion, the actual moderate stance of the university was a significant relief and provided for a much more inviting environment than students originally anticipated. This initial positive experience (or lack of an expected negative experience) may have precipitated higher initial commitment from the students to the institution. Unfortunately, from the data there was no clear way to verify that this was indeed the case.

Limitations

This study focuses only on the perceived barriers and ways in which successful undergraduate ethnic minority students sought to ensure their success. It does not address the perceptions of any other group, nor does it attempt to provide perspectives from non-minority students, faculty, or alumni. Admittedly, comparing the perspectives of Caucasian students

regarding the barriers and strategies that emerged from this study might provide insight as to the commonality of those themes across ethnicities. However, the commonality of barriers notwithstanding, the participants voiced the concerns and described the experiences that they felt most significantly impacted their lives.

Certain limitations stem from the data collection methods employed in this study. As with any qualitative study that employs interviews or focused group discussions, the questions designed to guide discussion are imperfect and induce a certain amount of bias. Feedback from the dissertation committee regarding the interview protocols was used in an attempt to reduce this risk.

Creswell (2007) points out that several concerns surround the reporting and writing of qualitative studies. Always of concern is the potential impact of the writing on the very participants of the study: Will they be further marginalized? Offended? Will they hide their true feelings and perspectives? In order to protect study participants, all names, references to programs, and the focal university included in this study are pseudonyms. The goal of this study is to reduce barriers to minority student success, not create additional barriers; therefore, this study was reviewed by the IRB of North Carolina State University and received approval. However, the possibility of participants not sharing their actual perspective or hiding their true feelings is certainly a possible limitation. This difficulty is associated with most qualitative research that employs inquiry methods such as interviews and is referred to as reflexivity (Yin, 2009). To some degree, this limitation can be mitigated by relying on evidence in the data that can be used to confirm or contradict. The use of multiple focus groups and interviews provides opportunities to triangulate findings.

The researcher conducted this study from a postpositivist perspective. According to Creswell (2007), those who identify with postpositivism have a tendency to take a scientific approach to qualitative studies. Creswell (p. 20) further states that “postpositivist researchers will likely view inquiry as a series of logically related steps, believe in multiple perspectives from participants rather than a single reality, and espouse rigorous methods of qualitative data collection and analysis using multiple levels of data, employ computer programs to assist in their analysis and write their qualitative studies in the form of scientific reports.” In this study the researcher attempted to collect and analyze the data so as to present the multiple perspectives of the participants in their own words. Although efforts were made to mitigate the subjective lens of the researcher, this study is still limited by the subjectivity of the researcher (see subjectivity statement on p. 48).

Recommendations for Policy and Practice

The following recommendations are based on the findings of this study. These recommendations may be helpful to the focal university in shaping policy and practice aimed at reducing institutional barriers to minority student success. It should be noted that the focal university should continue with activities and practices that have positively impacted minority students. Specifically the university should strive to maintain its welcoming approach to religion. It is evident from this study that such positive experiences have had a significantly positive impact on the participants. Interestingly, participants assumed a much more restrictive environment before arriving on campus. The perception did not necessarily match up with reality. Perhaps the university should consider promoting this aspect of their culture to future students.

Recommendation One: Create and promote a centralized information hub for students, faculty, alumni, and visitors.

Utilize available resources to identify the type, scope, and location of crucial information. This effort should involve all stakeholders but ideally should begin with students attending the university. As is evident from this study, the web presence of the university is severely under-utilized for delivery of information. Efforts to streamline communication flow should include frequently asked questions regarding certain topics, a lack of information about which can most significantly impede student success--financial aid, student support services, academic program requirements, calendars of events at the university level as well as the program level, student life, and student organizations.

A bottom-up approach would best suit this endeavor to ensure that access is clear and content is relevant to the user. This centralized hub of information should constantly be added to and revised on a regular schedule. Campus-wide promotion of this hub should include announcements in classes, emails, flyers, and links on the homepage of the university website. It is highly recommended that modes of communication utilized by students on a regular basis be included such as Facebook, Myspace, and mobile phone applications. Certainly, the models of communication used on other campuses should be reviewed and evaluated in an effort to identify a model of effective communication.

All efforts to enhance or increase the ability to communicate effectively with students should be evaluated on a yearly basis to ensure that content is pertinent, adequate, and accessible. Assessment activities should include student surveys and focus groups of cross

sections of the study body. Results must be reviewed and used to drive changes and improvements in the system.

Recommendation Two: Provide an institutional response to discrimination on campus.

One of the major findings from this study indicated that minority students experience instances of prejudice that are both individual and institutional. Findings from this study also indicated that minority participants were much more critical of institutional forms of prejudice. Participants considered the university response to instances of prejudice to be grossly inadequate and, in some cases, improper. It is important that the university articulate an authentic interest in reducing these sorts of incidents. Participants described being extremely frustrated with a response that seemed cursory at best. In order to combat both individual and institutional ignorance, the university must formulate a mechanism by which instances of prejudice can be brought to light, examined, and subsequently eliminated. An example of such a mechanism might take the form of a prejudice reduction committee (Barlaz & Bynes, 1999). Barlaz and Bynes proposed and instituted such a committee at Adelphi University; it was tasked with the mission

to foster effective programming aimed at specific constituencies in the area of prejudice reduction; develop specific training aimed at faculty, staff and administrators; effectively use current campus resources in combating racism and other acts of intolerance; and develop a response team comprised of a cross section of the campus population to handle the investigation and subsequent resolution of individual and collective acts of racism and intolerance. (p. 3)

Efforts to address racial issues at the institutional level should be reviewed regularly by all stakeholders to include faculty, administration, students, staff, and alumni. Focus groups and town hall sessions may provide useful venues for this assessment. Results must be used to inform the process regarding its utility, impact, and effectiveness.

Recommendation Three: Promote non-institutional scholarships, and provide training to students.

Provide resources by way of electronic access and specially trained financial aid staff to assist students in locating and applying for financial aid that is available beyond institutional scholarships and federal loans. Providing regular workshops for students may equip students with tools to search for, locate, and apply for grants and scholarship money for which they may be eligible. Findings from this study indicated that participants were mostly left to their own devices to work out their financial aid. The focal university financial aid office only provided information or suggestions for loans or requirements for institutional scholarships.

Vance University could develop a web-based resource accessible via university portal that would allow students to enter search criteria specific to their situation. This web-based resource could be used to identify types of financial aid such as scholarships and grants for which the student might be eligible. It would subsequently allow students to save searches and access application information for each type of aid. A web-based feedback form would readily allow students to provide feedback to the university regarding the utility of this resource. Comments should be used to drive continuous improvement and refinement of this system.

Recommendation Four: Capitalize on and promote networking for minority students; design and implement peer mentoring for minority students.

Participants in this study credited much of their success to their efforts to network with other students and faculty. The university should promote the ability of clubs and organizations to facilitate those efforts. In addition, the impact of the faculty open-door policy should be stressed to faculty and students so that both may take full advantage of this opportunity.

Findings from this study also suggest that minority student clubs and organizations should be established, supported, and promoted by the university. This may provide a way for minority students to make the connections with other students of the same ethnicity that seem to be lacking on campus. In the same vein, minority upperclassmen should be recruited to act as mentors for incoming minority freshman so that a support system and information source are immediately available upon admission. This suggestion was made by multiple participants in the study. Participants suggested that such a program would best take the form of a student mentor rather than just a faculty mentor. Recommendations from the literature regarding mentoring programs for minority college students provide confirmation that peer mentoring may be more well received than an assigned faculty mentor (Haring, 1999). Regarding traditional faculty-mentor relationships, Haring (1999) explains that

the tacit assumption in such a model is that the protégé needs assistance due to weaknesses or deficits. The situation that is thus created highlights an imbalance in position, experience, and accomplishment between mentor and protégé. Despite the

benevolent intentions of mentors, this situation is generally not empowering to protégés. (p. 7).

Additional recommendations on appropriate design and implementation of mentoring programs are available from Haring. This peer mentoring program could be evaluated with the use of yearly surveys to determine its impact. Additionally, comments and suggestions should be solicited from both Mentors and Mentees. As always, suggestions, comments, and survey results should drive positive change in the mentoring program.

Directions for Future Research

Like all qualitative research, this study raised additional issues that were beyond the scope of the research questions to address. As mentioned in the limitations, no perspectives from Caucasian students, faculty, staff, or alumni were solicited to compare to the findings from minority students in this study. Such perspectives may provide further clarification of which barriers are common only to minority students on campus. The perspectives of faculty and staff would provide useful insight and enrich the understanding of the ways in which barriers such as communication and prejudice impacted minority students. Additionally the strategies employed by the successful participants in this study may be added to or further elaborated upon by studying the perspectives of faculty and staff on campus.

Participants in this study described experiences of prejudice that were both institutional and individual. Responses were differential in nature, depending on the source of prejudice. Further study is needed to identify effective ways of dealing with prejudice on college campuses, particularly private, predominantly white institutions. A corollary to such

an inquiry might be “How do institutional forms of prejudice impact the self-concept and cultural identity of minority students?”

Likewise, further research is warranted to establish the impact of minority students not making connections with students of the same ethnicity on campus. What is the impact on these students’ cultural identity? Research has shown that such connections are needed for students to be successful; however, findings in this study do not necessarily support this assertion. Are these students in essence becoming assimilated into another culture? Are they able to maintain their own cultural identity, or must they break from these past associations in order to be successful in college? More study is needed to determine the long-term impact of this difficulty making connections with other minority students.

Specific directions for future research at Vance include the need to examine the relationship between the frequency and quality of faculty/student interaction and subsequent student achievement, development, and success. This would likely be more informative if it included a comparable group of Caucasian students for comparison.

In addition to faculty/student interaction, more information is needed to understand how successful minority students maintain their cultural identity on campus at Vance. Are there any ways in which they have grounded themselves in their cultural identity or are these students truly giving up their culture and embracing the mainstream culture of the university in order to persist? Have these students developed some ability to function in two different cultural environments at Vance?

What is still unclear from the data is how students learned to make strategic decisions regarding persistence. How did minority students at Vance learn to answer the question: Is

this worth the effort (to persist)? The ability to accurately make this assessment seems to be pivotal and primary to the use of the subsequent strategies for success or the interaction of the protective factors of resilient students.

The assumptions of the black box approach were useful in describing the experiences of minority students at the focal university. From the findings, barriers perceived as significant threats to minority student success on campus were identified. Additionally, several strategies emerged that allowed students to navigate these obstacles successfully. However, those strategies were broad in nature and often not specific to a single barrier, but applicable in a myriad of situations. The question of whether those strategies were a function of more personal characteristics, rather than solutions applicable to any minority student on campus, naturally materializes from this study. Resiliency factors available in the current literature on minority students may provide an explanation as to why, despite the odds, some minority students persist while others fail. Further study utilizing resiliency theory as the framework may provide valuable insight that could inform educators and educational policy about how those protective factors might be fostered in minority students at all levels.

Beyond the addition of Resiliency Theory as a potential framework for future studies, this study also identifies barriers and strategies that may need to be taken into consideration when discussing models of minority student success. This study certainly confirms that the interactions of faculty and students are pivotal in the persistence and success of minority students. However the taxonomy of barriers available in the current literature may be incomplete. This study proposes a refined model of barriers and student strategies for success that also includes barriers such as family responsibilities, difficulties with communication,

and institutional ignorance. Furthermore, facilitating factors that are indigenous to the focal university under study must be taken into account when investigating minority student success. The interaction of any potential facilitating factors and the potential strategies for success (or resilient characteristics) employed by successful minority students likely provides a much more intricate understanding of the student experience on a specific campus. Previous models have not always explicitly included those facilitating factors.

Summary

The purpose of this qualitative action research study was to examine the ways in which successful undergraduate ethnic minority students in majors that serve as a pipeline for professional healthcare have managed to overcome barriers to their success at a private, predominantly white university. Participants in this study faced barriers related to communication, prejudice, resources, academic preparation, family responsibilities, and connections with students of the same ethnicity. Findings from this study indicate that participants used several broad strategies to ensure their success, which include networking, joining campus clubs and organizations, taking reasonable risks, accessing on-campus support services, and being persistent about getting their needs met. Those strategies are broad in scope and may be related to personal protective factors of resilient minority students, a possibility that warrants further research.

Recommendations to the focal university include the creation of a central hub of information for students, the creation and implementation of a university response to prejudice that includes a committee tasked with the reduction of prejudice on campus, provision for additional financial aid resources and workshops for minority students beyond

the institutional aid offered to students, and, finally, the promotion of faculty open-door policies and the creation of a peer mentoring program for minority students.

Findings from this study and subsequent recommendations cannot be assumed to constitute a comprehensive reform of policy and practice at the focal institution. Rather these findings indicate areas for further study, and recommendations should be used to stimulate conversation within the university on how resources should be allotted so that policy and practice might be revised to best serve minority students.

References

- Alon, S. (2007). The influence of financial aid in leveling group differences in graduating from elite institutions. *Economics of Education Review*, 26(3), 296-311.
- Aronson, J. (2002). Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence. *Journal of Experimental Social Psychology*, 38(2), 113-125.
- Astin, A. W. (1982). *Minorities in American higher education: Recent trends, current prospects, and recommendations*. (1 ed.). San Francisco, CA: Jossey-Bass
- Astin, A. W. (1993). *Minorities in American higher education*. San Francisco, CA: Jossey-Bass.
- Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development*, 40(5), 518-529.
- Barlaz, A. H., & Bynes, D. C. (1999). *The phantom menace of why college campus racism will outlive us all*. Paper presented at the People of Color in Predominantly White Institutions meeting, University of Nebraska.
- Bayer, A. E. (1972). *The black college freshman: Characteristics and recent trends* (No. 3). Washington, D.C.: American Council on Education.
- Betancourt, J. R., & Maina, A. (2007). Barriers to eliminating disparities in clinical practice: Lessons from the IOM report "Unequal Treatment". In R. A. Williams (Ed.), *Eliminating healthcare disparities in America: Beyond the IOM report* (pp. 83-97). Totowa, NJ: Humana Press.

- Bogdan, R., & Biklen, S. K. (2007). *Qualitative research for education: An introduction to theory and methods*. Boston: Allyn and Bacon.
- Bohn, M. J., Jr. (1973). Personality variables in successful work-study performance. *Journal of College Student Personnel, 14*(2), 135-140..
- Bothamley, J. (1993). *Dictionary of theories*. London ; Detroit: Gale Research International.
- Burbach, H. J., & Thompson, M. A. (1971). Alienation among college freshmen: A comparison of Puerto Rican, black, and white students. *Journal of College Student Personnel, 12*(4), 248-252.
- Cabrera, A. F., Nora, A., Terenzini, P. T., Pascarella, E., & Hagedorn, L. S. (1999). Campus racial climate and the adjustment of students to college: A comparison between white students and African-American students. *Journal of Higher Education, 70*(2), 134-160.
- Cabrera, N. L., & Padilla, A. M. (2004). Entering and succeeding in the "culture of college": The story of two Mexican heritage students. *Hispanic Journal of Behavioral Sciences, 26*(2), 152-170.
- Capomacchia, A. C., & Solomon, G. T. (2004). Challenges of recruiting American minority graduate students: The coach model. *American Journal of Pharmaceutical Education, 68*(4), 1-5.
- Clark, M. A., Brooks, M., Lee, S. M., Daley, L. P., Crawford, Y., & Maxis, S. (2007). Factors influencing the educational success of minority pre-service educators. *Journal of College Student Retention: Research, Theory & Practice, 8*(1), 121-135.

- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five traditions* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Delgado, B. D. (2002). Learning and living: Pedagogies of the home. *International Journal of Qualitative Studies in Education*, 14(5), 623-639.
- Dennis, J. M. (2005). The role of motivation, parental support, and peer support in the academic success of ethnic minority first-generation college students. *Journal of College Student Development*, 46(3), 223-236.
- Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods*. New York: McGraw-Hill.
- Denzin, N. K., & Lincoln, Y. S. (2003). *The landscape of qualitative research: Theories and issues*. Thousand Oaks, CA: Sage.
- Deslonde, J. L. (1970). *Internal-external control beliefs and racial militancy of urban community college students: The "problem" of militancy*. Paper presented at the American Educational Research Association, New York, New York.
- Development, S. S. (2009). ATLAS.TI, The knowledge workbend (Version 6.0.23). [Computer software] Berlin: Scientific Software Development.
- Dixon-Altendor, C., & Altendor, A. (1977). The role of occupational status in the career aspirations of black women: *Vocational Guidance Quarterly*, 25(3), 211-215.
- Eimers, M. T., & Pike, G. R. (1996). *Minority and non-minority adjustment to college: Differences or similarities? AIR 1996 Annual Forum paper* (Report).
- Ford-Edwards, J. F. (2002). *Towards a theoretical model of minority student success: Successful black students and their perspectives on the variables that promote and*

- retard their retention*. Unpublished dissertation/thesis, Drexel University, Pennsylvania.
- Frey, J. H., Fontana, A., & Morgan, D. (1993). The group interview in social research. In Anonymous (Ed.), *Successful focus groups: Advancing the state of the art* (Vol. 1, pp. 21-34). Newbury Park, CA: Sage Publications.
- Gabard, D. L. (2007). Increasing minority representation in the health care professions. *Journal of Allied Health, 36*(3), 165-175.
- Gloria, A. M., Kurpius, S. E. R., Hamilton, K. D., & Willson, M. S. (1999). African American students' persistence at a predominantly white university: Influences of social support, university comfort, and self-beliefs. *Journal of College Student Development, 40*(3), 257-268.
- Gonzalez, K. P. (2002). Campus culture and the experiences of Chicano students in a predominantly white university. *Urban Education, 37*(2), 193-218.
- Good, J., Halpin, G., & Halpin, G. (2007). Retaining black students in engineering: Do minority programs have a longitudinal impact? In A. Seidman (Ed.), *Minority student retention--The best of the Journal of College Student Retention: Research, theory, & practice* (pp. 45 - 58). Amityville, NY: Baywood Publishing Company.
- Grbich, C. (2007). *Qualitative data analysis: An introduction*. London ; Thousand Oaks, CA: Sage Publications.
- Greenbaum, T. L. (1998). *The handbook for focus group research*. Thousand Oaks, CA: Sage Publications.

- Greenwood, D. J., & Levin, M. (2005). Reform of the social sciences and of universities through action research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 43-64). Thousand Oaks, CA: Sage Publications.
- Greenwood, D. J., & Levin, M. (2007). *Introduction to action research: Social research for social change*. Thousand Oaks, CA: Sage Publications.
- Gruber, J. E. (1980). Sources of satisfaction among students in postsecondary education. *American Journal of Education*, 88(3), 320-344.
- Guiffrida, D. (2005). To break away or strengthen ties to home: A complex issue for African American college students attending a predominantly white institution. *Equity and Excellence in Education*, 38(1), 49-60.
- Guiffrida, D. A. (2003). African American student organizations as agents of social integration. *Journal of College Student Development*, 44(3), 304-319.
- Guiffrida, D. A. (2006). Toward a cultural advancement of Tinto's theory. *Review of Higher Education*, 29(4), 451-472.
- Guion, W. K., Mishoe, S. C., Taft, A. A., & Campbell, C. A. (2006). Connecting Allied Health students to rural communities. *Journal of Rural Health*, 22(3), 260-263.
- Haring, M. J. (1999). The case for a conceptual base for minority mentoring programs. *Peabody Journal of Education*, 74(2), 5-14.
- Harmon, P., & King, D. (1985). *Expert systems: Artificial intelligence in business*. New York: J. Wiley.

- Hayes, B. (2008). Increasing the representation of underrepresented minority groups in U. S. colleges and schools of pharmacy. *American Journal of Pharmaceutical Education*, 72(3).
- Hendricks, A. D. (1996). A grounded theory approach to determining the factors related to the persistence of minority students in professional programs. *Innovative Higher Education*, 21(2), 113-126.
- Hernandez, J. C. (2000). Understanding the retention of Latino college students. *Journal of College Student Development*, 41(6), 575-588.
- Holmes, S. L., Ebbers, L. H., Robinson, D. C., & Mugenda, A. G. (2007). Validating African American students at predominantly white institutions. In A. Seidman (Ed.), *Minority student retention: The best of the Journal of College Student Retention: Research, theory, & practice* (pp. 79-96). Amityville, NY: Baywood Publishing Company.
- Hrabowski, F. A., III (2004). Leadership for a new age: Higher education's role in producing minority leaders. *Liberal Education*, 90(2), 26-33.
- Hurtatdo, A. (1997). Understanding multiple group identities: Inserting women into cultural transformations. *Journal of Social Issues*, 53(2), 299-328.
- Illinois State Board of Higher Education, S. (1995). *Health Services Education Grants Act: Fiscal year 1995 grant allocations* (Report).
- Knodel, J., & Morgan, D. (1993). The design and analysis of focus group studies: A practical approach. In Anonymous (Ed.), *Successful focus groups: Advancing the state of the art* (Vol. 1, pp. 35-50). Newbury Park, CA: Sage Publications.

- Kuh, G. D. (2005). *Student success in college: Creating conditions that matter*. San Francisco: Jossey-Bass.
- Ladkin, D. (2005). 'The enigma of subjectivity': How might phenomenology help action researchers negotiate the relationship between 'self,' 'other' and 'truth'? *Action Research*, 3(1), 108-126.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.
- Loo, C., & Rolison, G. (1986). Alienation of ethnic minority students at a predominantly white university. *The Journal of Higher Education*, 57(1), 58-77.
- Mangan, K. S. (2004). Report calls on colleges to reverse lack of racial diversity in the health professions. *Chronicle of Higher Education*, 51(6), A36-A36.
- Maton, K. I., & Hrabowski, F. A. (2004). Increasing the number of African American phds in the sciences and engineering A strengths-based approach. *American Psychologist*, 59(6), 547-556.
- McTaggart, R. (1991). Principles for participatory action research. *Adult Education Quarterly*, 41(3), 168-187.
- Merriam, S. B. (1995). What can you tell from an N of 1?: Issues of validity and reliability in qualitative research. *PAACE Journal of Lifelong Learning*, 4, 51-60.
- Morgan, D. L., & Krueger, R. A. (1993). When to use focus groups and why. In Anonymous (Ed.), *Successful focus groups: Advancing the state of the art* (Vol. 1, pp. 3-19). Newbury Park, CA: Sage Publications.

Morrison, G. M., & Allen, M. R. (2007). Promoting student resilience in school contexts.

Theory into Practice, 46(2), 162-169.

Murguia, E.. (1991). Ethnicity and the concept of social integration in Tinto's model of

institutional departure. *Journal of College Student Development*, 32(5), 433-439.

Nagasawa, R., & Wong, P. (1999). A theory of minority students' survival in college.

Sociological Inquiry, 69(1), 76-90.

Nora, A. (2002). The depiction of significant others in Tinto's "Rites of Passage": A

reconceptualization of the influence of family and community in the persistence

process. *Journal of College Student Retention: Research, Theory & Practice*, 3(1),

41-56.

Nora, A., & Cabrera, A. F. (1996). The role of perceptions in prejudice and discrimination

and the adjustment of minority students to college. *Journal of Higher Education*,

67(2), 119-148.

Osborne, J. W. (1995). Academics, self-esteem, and race: A look at the underlying

assumptions of the disidentification hypothesis. *Personality and Social Psychology*

Bulletin, 21(5), 449-455.

Osborne, J. W. (1997). Race and academic disidentification. *Journal of Educational*

Psychology, 89(4), 728-735.

Padilla, R. V. (1992). Using dialogical research methods to study Chicano college students.

Urban Review, 24(3), 175-183.

- Padilla, R. V. (1996). *The unfolding matrix: A dialogical technique for qualitative data acquisition and analysis* Paper presented at the American Educational Research Association, New York, New York.
- Padilla, R. V. (1999). College student retention: Focus on success. *Journal of College Student Retention, 1*(2), 131-145.
- Padilla, R. V. (2001). *Chicana/o college students: Focus on success* (Report): Hispanic Association of Colleges & Universities, San Antonio TX.
- Padilla, R. V., Trevino, J., Trevino, J., & Gonzalez, K. (1997). Developing local models of minority student success in college. *Journal of College Student Development, 38*(2), 125-135.
- Page, E. B., & Stake, R. E. (1979). Should educational evaluation be more objective or more subjective? *Educational Evaluation and Policy Analysis, 1*(1), 45-47.
- Petrides, L. A. (2007). The democratization of data in higher education: A case study of the challenges institutions face as they seek to improve student success. Retrieved from www.iskme.org, November 2007.
- Prince-Embury, S. (2008). Translating resiliency theory for assessment and application in schools. *Canadian Journal of School Psychology, 23*(1), 4-10.
- Reason, P., & Bradbury, H. (2006). *Handbook of action research*. London: Sage.
- Reichert, W. M. (2006). A success story: Recruiting & retaining underrepresented minority doctoral students in biomedical engineering. *Liberal Education, 92*(3), 52-55.
- Rendon, L. I., Jalomo, R. E., Noral, A., & Braxton, J. M. (2000). Theoretical considerations in the study of minority student retention in higher education. In Anonymous (Ed.),

- Reworking the student departure puzzle: Vanderbilt issues in higher education* (Vol. 1, pp. 127-156). Nashville TN: Vanderbilt University Press.
- Ricketts, T. C., & Gaul, K. (2004). Numbers of minority health professionals: Where do we stand? *North Carolina Medical Journal*, *65*(6), 381-384.
- Rogers, M. R., & Molina, L. E. (2006). Exemplary efforts in psychology to recruit and retain graduate students of color. *American Psychologist*, *61*(2), 143-156.
- Roscigno, V. J., & Ainsworth-Darnell, J. W. (1999). Race, cultural capital, and educational resources: Persistent inequalities and achievement returns. *Sociology of Education*, *72*(3), 158-178.
- Rumala, B. B., & Cason, F. D. (2007). Recruitment of underrepresented minority students to medical school: Minority medical student organizations, an untapped resource. *Journal of the National Medical Association*, *99*(9), 1000-1009.
- Sedlacek, W. E. (1999). Black students on white campuses: 20 years of research. *Journal of College Student Development*, *40*(5), 538-550.
- Sedlacek, W. E., & Brooks, G. C., Jr. (1976). *Racism in American education: A model for change*. Chicago, IL: Nelson-Hall.
- Sedlacek, W. E., & Prieto, D. O. (1990). Predicting minority students' success in medical school. *Academic Medicine*, *65*(3), 161-166.
- Seidman, A. (2005a). *College student retention: Formula for student success*. Westport, CT: Praeger Publishers.
- Seidman, A. (2005b). Minority student retention: Resources for practitioners. *New Directions for Institutional Research* (125), 7-24.

- Sleet, D. P. (2000). *Assessing knowledge and actions employed by African American college students in overcoming barriers to academic success: A local model based on Raymond Padilla's expertise model of successful minority college students*. Unpublished Dissertation/Thesis, Saint Louis University, St. Louis.
- Smedley, B. D. (2007). The diversity benefit: How does diversity among health professionals address public needs? In R. A. Williams (Ed.), *Eliminating healthcare disparities in America* (pp. 121-137). Totowa, NC: Humana Press.
- Smedley, B. D., Meyers, H. F., & Harrell, S. P. (1993). Minority-status stresses and the college adjustment of ethnic minority freshmen. *The Journal of Higher Education*, 64(4), 434-452.
- Smith, D. H. (1980). *Admission and retention problems of black students at seven predominantly white universities*. New York: National Advisory Committee on Black Higher Education.
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage Publications.
- Steele, C. M. (1999). Thin ice: "Stereotype threat" and black college students. *The Atlantic Monthly*, 284(2), 44-54.
- Thompson, P. F. (2005). *African American doctoral degree completers and the factors that influence their success in the Ivy League*. Unpublished Dissertation/Thesis, University of Pennsylvania.
- Tierney, W. G. (1999). Models of minority college-going and retention: Cultural integrity versus cultural suicide. *Journal of Negro Education*, 68(1), 80-91.

- Tinto, V. (1993a). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago ; London: University of Chicago Press.
- Tinto, V. (1993b). *Leaving college: Rethinking the causes and cures of student attrition. Second edition* (Report).
- U.S. Department of Education, N. C. f. E. S. (2000). *Research and development report: Entry and persistence of women and minorities in college science and engineering education* (Report No. NCES 2000-601). Washington, DC: U.S. Department of Education.
- van Gennep, A. (1960). *The rites of passage*. Chicago: University of Chicago Press.
- Williams, R. A. (2007). *Eliminating healthcare disparities in America: Beyond the IOM report*. Totowa, NJ: Humana.
- Wirth, R. M. (2006). *Student and advisor perspectives on student success in a community college in South Texas*. Unpublished Dissertation/Thesis, University of Texas at San Antonio.
- Wirth, R. M., & Padilla, R. V. (2008). College student success: A qualitative modeling approach. *Community College Journal of Research and Practice*, 32(9), 688-711.
- Yin, R. K. (2009). *Case study research: Design and methods*. Los Angeles, CA: Sage Publications.
- Young, D. (2005). Racial, ethnic minorities less likely to receive good cardiac care, studies find. *American Journal of Health-System Pharmacy*, 62(9), 886-889.

APPENDICES

Appendix A. Focus Group Letter

Focus Groups

* The following email correspondence letter will be sent to all potential participants of the focal university. Initial correspondence will take place at least 2 weeks before actual focus group execution.

Dear Mr./Ms. (Student Name)

I am writing to invite you to participate in a research study of successful undergraduate science minority students. You have been identified as a junior or senior with at least a 3.0 GPA. Congratulations on your success thus far in your academic career!

The focus of this study is to examine the barriers to success encountered by minority students on this campus. In addition to examining and classifying the barriers faced by minority students, this study seeks to use your experience to gain an understanding of how successful minority students overcame or avoided these barriers.

I hope that you will agree to participate in a relatively short, one hour focus group session of 8 – 10 students that will discuss and explore the barriers encountered by minority students on this campus and the solutions used to overcome those barriers. Your participation is voluntary, and no individual's identity will be in any way used in any draft or manuscript of this study. All participants will have a random pseudonym assigned for all drafts of this study. If you would like to participate, please respond to this email or call 910-893-1892.

This study has human subject's approval from North Carolina State University's Institutional Review Board and support/approval of Vance University. I sincerely hope that you will consider participating in this important study. I will contact you later this week by telephone to follow up and discuss your possible participation and answer any questions you may have.

Thank you,



Wesley D. Rich

Appendix B. Focus Group Question Guide

Guiding Questions for Focus Group Discussion

1. Can you tell me about your experience as an ethnic minority at a predominantly white university?
 - a. They can be any type of barrier from academic to campus culture or student life issues.
 - b. Be as specific as possible.
 - c. In your opinion, is this particular barrier faced by all students or just by certain groups of students (international students, minority students, first generation college students, etc.)
2. Reflecting upon your experience here on this campus, what types of barriers (if any) did you encounter that threatened your successful completion of earning a bachelor's degree?
3. How did you overcome this barrier?
 - a. Were there other ways to handle the situation?
 - b. Do you know anyone else who had the same experience?
 - c. What advice would you give to a student facing a similar situation?
 - d. How would you recommend that the University address this issue?
 - i. Solutions?
4. Were there any difficulties that you expected to face that you actually ***did not*** experience?
5. What "Good things" are happening on this campus? What is the school doing well?

6. Are there any other things you would like to discuss regarding your experiences?
7. Open ended: “I wish that.....” or “The perfect program would have...”

Appendix C. Biographical Statement Prompt

Prompt for brief biographical statement from Focus Group study participants. This prompt is taken verbatim from the requirements of the Summer Bridge Program application.

Please share with us your personal autobiography – please omit your name. Feel free to address your interest in science/health science, your future career plans, and what you expect to gain from your degree program. You may also want to include aspects of your life that have led you to seek a career in your chosen field. Please limit your statement to 1 – 2 pages typed, single spaced.

Appendix D. Individual Interview Letter

Individual Interviews

* The following email correspondence letter will be sent to all potential participants of the focal university. Initial correspondence will take place at least 2 weeks before interview execution.

Dear Mr./Ms. (Student Name)

I am writing to invite you to participate in a research study of successful undergraduate science minority students. You have been identified as a student who has previously participated in the Vance University Summer Bridge Program. Congratulations on your success thus far in your academic career!

The focus of this study is to examine the barriers to success encountered by minority students on this campus. In addition to examining and classifying the barriers faced by minority students, this study seeks to use your experience to gain an understanding of how successful minority students overcame or avoided these barriers. This information will be used to inform the university of ways to reduce/eliminate barriers to student success.

I hope that you will agree to participate in a relatively short, one hour, one-on-one interview session that will discuss and explore the barriers to success and how successful minority students overcame these barriers on this campus. Your participation is voluntary, and no individual's identity will be in any way used in any draft or manuscript of this study. All participants will have a random pseudonym assigned for all drafts of this study. If you would like to participate, please respond to this email or call 910-893-1892.

This study has human subject's approval from North Carolina State University's Institutional Review Board and support/approval of Vance University. I sincerely hope that you will consider participating in this important study. I will contact you later this week by telephone to follow up and discuss your possible participation and answer any questions you may have.

Thank you,



Wesley D. Rich

Appendix E. Guiding Questions of Individual Interviews

Guiding Questions for Individual Interviews

1. Can you tell me about your experience as an ethnic minority at a predominantly white university?
 - a. They can be any type of barrier from academic to campus culture or student life issues.
 - b. Be as specific as possible.
 - c. In your opinion, is this particular barrier faced by all students or just by certain groups of students (international students, minority students, first generation college students, etc.)
2. Reflecting upon your experience here on this campus, what types of barriers (if any) did you encounter that threatened your successful completion of earning a bachelor's degree?
3. How did you overcome this barrier?
 - d. Were there other ways to handle the situation?
 - e. Do you know anyone else who had the same experience?
 - f. What advice would you give to a student facing a similar situation?
 - g. How would you recommend that the University address this issue?
 - i. Solutions?
4. Were there any difficulties that you expected to face that you actually ***did not*** experience?
5. What "Good things" are happening on this campus? What is the school doing well?

6. Are there any other things you would like to discuss regarding your experiences?
7. Open ended: “I wish that.....” or “The perfect program would have...”

Appendix F. Participant Demographic Matrix

| <i>Source</i> | <i>Participant (Pseudonym)</i> | <i>Year</i> | <i>Major / Concentration</i> | <i>Gender</i> | <i>Age</i> | <i>Ethnicity</i> |
|---------------|--------------------------------|-----------------------------|----------------------------------|----------------------------------|------------|--|
| Focus Group 1 | Tiffany | Junior | Pharm. Sciences | F | 20 | African - American |
| | Charlene | Junior | Biology | F | 28 | African - American |
| | Olivia | Senior | Pre-Med/Biology | F | 21 | African - American |
| | Mary | Junior | Biology | F | 21 | African - American |
| | Joshua | Senior | Clinical Research | M | 20 | Bi-Racial |
| | Joseph | Senior | Pre-Professional Health Sciences | M | 21 | Hispanic |
| | Focus Group 2 | Brandon | Senior | Pre-Professional Health Sciences | M | 20 |
| Martha | | Senior | Biology | F | 22 | Native American |
| Jacob | | Junior | Biology | M | 20 | Native American |
| Raymond | | Junior | Pharm. Sciences | M | 20 | Hispanic |
| Mariah | | Senior | Biology | F | 23 | Hispanic |
| Jessica | | Senior | Pharm. Sciences | F | 24 | Hispanic |
| Crystal | | Junior | Biology | F | 22 | Hispanic |
| Focus Group 3 | Richard | Junior | Pharm. Sciences | M | 21 | Hispanic |
| | Melinda | Senior | Clinical Research | F | 22 | Other |
| | Rose | Junior | Clinical Research | F | 21 | Hispanic |
| | Tonya | Senior | Bio-Chem | F | 21 | African - American |
| | Lydia | Senior | Pharm. Sciences | F | 20 | African - American |
| | Bonita | Junior | Pre-Professional Health Sciences | F | 21 | African - American |
| | Amanda | Junior | Pharm. Sciences | F | 20 | Other |
| Interview 1 | Sarah | 1st year Grad Student | Pharmacy | F | 23 | Other |
| Interview 2 | Raygan | 2nd year Grad Student | Pharmacy | F | 24 | African - American |
| Interview 3 | Will | 2nd year Grad Student | Pharmacy | M | 23 | Native American |
| Interview 4 | Shanda | 2nd year Grad Student | Pharmacy | F | 25 | African - American |
| TOTAL N = 24 | | | | F = 17 (71%) M = 7 (29%) | | African - American = 9 (38%) Hispanic = 8 (32%) Native American = 3 (13%) Bi-Racial = 1 (4%) Other = 3 (13%) |

Appendix G Informed Consent – Individual Interview Participants

Consent for Individual Interviewees.

North Carolina State University
INFORMED CONSENT FORM for RESEARCH

Reducing Institutional Barriers to Minority Student Success at a Predominantly White University: A Qualitative Action Research Study.

Wesley D. Rich

Kevin Brady, PhD.

What are some general things you should know about research studies?

You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?

This study is being conducted to examine and make explicit the common barriers encountered by successful minority students in undergraduate science programs at a mostly white, private university. The study will also examine how minority students overcame these barriers. The study will include interviews of current graduate students who have previously participated in the summer bridge program at this university.

What will happen if you take part in the study?

If you agree to participate in this study, you will be asked participate in an individual, 1-hour interview regarding the barriers to success that you encountered during your undergraduate experience. Additionally, the steps you took to ensure your success will also be discussed. Your entire participation in this study should not be greater than one and a half hours, and the study will be conducted on campus in a room to be determined.

Risks

As a voluntary participant, the associated risks of being involved with this research study are minor. All participants will be assigned a pseudonym in all written drafts of the study. Additionally, the nature of the research study does not ask for the disclosure of sensitive information.

Benefits

No direct benefits exist; however, there are indirect benefits exist. Your participation in the interview process will aid in developing a model of student success that will benefit future generations of students attending Vance University by allowing them to capitalize on your experiences and solutions.

Confidentiality

The information in the study records will be kept strictly confidential. Data will be stored securely in the locked filing cabinet of the researcher's office – only the primary researcher has access to the office and filing cabinet.

No reference will be made in oral or written reports which could link you to the study. You will NOT be asked to write your name on any study materials so that no one can match your identity to the answers that you provide. At the conclusion of the study, all audio data and transcripts will be destroyed or deleted (by 08/09).

Compensation

None.

What if you have questions about this study?

If you have questions at any time about the study or the procedures, you may contact the researcher, Wesley D. Rich, at 1920 Oak Grove Church Road, Angier NC 27501, or [910-893-1892].

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514), or Joe Rabiega, IRB Coordinator, Box 7514, NCSU Campus (919/515-7515).

Consent To Participate

"I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may withdraw at any time."

Subject's signature _____ **Date** _____

Investigator's signature _____ **Date** _____